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Planning and Financing Secondary Education Development in Sub-Saharan Africa

Keith M Lewin

Introduction

1 Secondary education in Sub-Saharan Africa faces several challenges. Most importantly the demand for access is dramatically increasing as primary schooling is universalised, the achievement of the Dakar and Millennium Development goals depends in part on expanded secondary systems, and economic growth is widely believed to be related to knowledge and skill above that provided by basic education alone. Investment in secondary education has been missing link in many recent education development plans.

2 This paper has been prepared for the Second Conference of the Secondary Education in Africa Programme of the World Bank.1 It has three parts. First, it reviews the case for enhanced investment in secondary education systems. For some policy systems this case has already been made and accepted, in others it serves as a reminder of why new approaches are needed. Second, the status of secondary schooling is described analytically to provide a topography of major dimensions of current issues and problems. Third, a number of ways forward are outlined which provide an agenda for policy dialogue and the development of strategies for growth.

Why Secondary Education?

3 There are at least nine reasons why it is timely to revisit the issues that surround investment at secondary level in Africa.

Primary Expansion

4 First, the programmes to universalise primary education launched subsequent to the Jomtien and Dakar World Conferences are now leading to rapid increases in the numbers of pupils completing primary school in much of SSA. In Uganda the number of primary school leavers is increasing from 400,000 to over 1 million; in Tanzania, primary school leavers will increase from 450,000 to 1.2 million. In Malawi the numbers will grow from about 200,00 to over 500,000. Existing secondary school systems cannot absorb such large increases without reform and increased resources.

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1 Currently there are three related case studies available on policy and financing issues. Akyeampong K 2003 on Ghana; Bennell P Bulwani G Musikanga M 2003 on Zambia;; and Debutou and Gnimiadi 2003 on Benin.
The issues of access to secondary school will become a major political and social preoccupation in those countries with low secondary enrolment rates and successful UPE programmes. Over the last decade secondary enrolment rates have not increased substantially in many of the poorest countries. There has been very limited forward planning to meet the challenges created by rapidly rising demand. Access remains highly unequally distributed geographically and in terms of the socio-economic backgrounds of those who participate.

**Millenium Development Goals**

6 **Second**, expanded access is necessary because the achievement of MDG2 (universalising primary access and completion) and MDG3 (eliminating gender disparities in primary and secondary schools) are both unachievable without expanded post primary enrolment. So also are other MDGs and the Dakar Goals (Annex 1).

7 MDG2 depends on transition rates to secondary being maintained or increased. If they fall dramatically, retention in upper primary will decrease as it becomes clear that for many there will be no progression to higher educational levels. Transition rates to secondary have been static over the last decade in much of SSA. They are falling where primary enrolment growth has been fastest. This increases the number of schools where no child succeeds in being promoted to secondary. It reduces the chances of achieving high primary completion rates.

8 MDG2 also depends on an adequate supply of qualified primary teachers (Lewin and Stuart 2003). Quality, achievement and persistence at primary level will suffer without adequate numbers successfully completing secondary schooling and electing to train as teachers, and pupil teacher ratios will remain stubbornly high. Ghana would have to triple its output of primary teachers if it were to reach universal primary completion. Malawi continues to suffer from an insufficient supply of qualified applicants for teacher training as a result of the low output of its secondary system which has meant being forced to accept into primary teacher training candidates with only two years of secondary schooling.

9 MDG3 (gender equity at primary and secondary) cannot sensibly be achieved without greater enrolments at secondary level. There are very few countries in SSA with Gross Enrolment Rates at Secondary (GER2) of less than 50% that approach gender parity or have more girls than boys enrolled. Those that do (e.g. Lesotho) have demographic circumstances and migration patterns that explain the differences. Most of those countries with GER2 greater than 50% have achieved parity or better. Girls, at least as much as boys, need role models to inspire them to continue their education and to reap the personal and social development benefits that this brings. Low GER2s (and hence low transition rates) limit the diffusion of these.
Gender differences in enrolment rates in SSA in favour of boys at secondary level are almost always greater than differences in the same systems at primary, until GER1 approaches or exceeds 100%. Achievement differences between boys and girls also often become more exaggerated at secondary level than at primary. MDG2 implies not only equal participation, but more equal levels of achievement. This is more likely with higher levels of participation.

Altogether there are eight MDGs and eighteen associated targets. At least six of the targets appear to depend directly on enhanced access to secondary schooling (Annex 2). Universalising primary schooling (T3), and gender equity (T4) have been discussed. Halving the proportion of people who live on less than a dollar a day (T1), reversing the spread of HIV (T7), implementing strategies for decent and productive work for youth (T16), and supporting the use of ICTs (T18) would all seem to require secondary schooling to be available to substantial proportions of the population.

HIV/AIDS

Third, HIV/AIDS (MDG6) is damaging prospects for development and has reached epidemic proportions in the worst affected countries. The consequences permeate all aspects of educational development. HIV/AIDS increases morbidity and mortality amongst teachers, creates unprecedented numbers of orphans in and out of school, and suppresses economic growth through its impact on the labour force.

Secondary schooling has special roles to play in influencing informed choice related to sexual behaviour, increasing tolerance and support for those infected, and through the reduced risk associated with higher levels of education. The pandemic is complex. What is known is that seropositive rates generally peak in the mid to late twenties (earlier for young women than young men), rates for secondary school age children tend to be much lower than for those in their early twenties, those with more education tend to have lower rates than those with less, and that teachers (who have higher levels of education than the general population) are in many cases at lower risk than others.

Those in school are less at risk than those out of school (especially females) (Gregson et al 2001:481). HIV prevalence rates are considerably lower among both female and male teenagers who are in rather than out of school in Burundi, Eritrea, Mozambique, Tanzania and Zimbabwe. There

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3 Eight other targets appear to have indirect dependence. These include halving the proportion of those who suffer from hunger (T2), reducing child mortality (T5), improving maternal health (T6), reversing the incidence of malaria (T8), gaining support for sustainable development policies (T9), halving the proportion of people with out access to clean water (T10), improving the lives of slum dwellers (T11), and developing an open, rule based, predictable and non discriminatory trading system (T12). All these outcomes would seem to benefit from increased participation in secondary.

3 Thus in Uganda it appears that rates for those with primary education were nearly double those for those with secondary (AIDS Information Centre, Kampala,2000).
may be several mechanisms which generate these outcomes. Whatever the mechanism the simple conclusion is straightforward. Expanded access to secondary schooling, *ceteris paribus*, should reduce HIV/AIDS infection rates and increase the probability of achieving MDG6. It may also and incidentally reduce teacher mortality and reduce attrition making it more manageable to meet the demand for primary teachers which is central to the achievement of MDG2.

**Equity and Mobility**

15 Fourth, poverty reduction has direct links with investment and participation at secondary level. As primary schooling becomes universalised, it will be participation at secondary level that becomes a major determinant of life chances, and a major source of subsequent inequity. Access to, and success in, secondary will continue to be highly correlated with subsequent employment and income distribution patterns. Many groups are marginalized from attendance by high direct costs, absence of schools, and other historic disadvantages. This marginalisation will be increased not reduced if competition for scarce places in secondary increases.

16 In Tanzania it is likely that households outside the top two deciles of income are simply unable to afford a single child in government secondary schools. Participation rates of the richest 20% of households are more than 20 times those of the poorest 40% of households. In Uganda those from households below the second decile of household income are unlikely to be enrolled (Lewin 2002). In Ghana 40% of entrants to the University of Ghana originated from just 5% of the secondary schools, many of which were high fee paying private schools. The University of Science and Technology admitted 46% of its students from just 8% of relevant secondary schools. These heavily skewed patterns of access appear to be increasing over time (Addae-Mensah 2000).

17 In all countries on which there is data inequalities of access related to wealth increase by grade level. It is unlikely that any country will succeed in reducing unequal access to secondary without expanding access. Real improvements in the upward social mobility of the poor depend on this. Poverty is in part defined by denial of access to public services. Secondary schooling is a public good which should not be characterized by the exclusion of the disadvantaged. The more limited access, the more likely is this to be a reality.

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4 E.g. reduced opportunity for casual sex, greater understanding of causes and effects, recognition of safe sex messages, more motivation to remain healthy and invest in the future.

5 It is sometimes argued that investment at post primary level does not directly contribute to reducing poverty, is regressively financed by subsidies for the relatively wealthy, and is therefore not a priority. The reality is complex. The proposition that increased participation in post primary education is not poverty alleviating, or income enhancing, is not generally believed by the poor, who sacrifice disproportionate amounts of their income to have a chance of participating in post primary education. Neither do elites share this view, as evidenced by their general willingness to finance private schooling. If public subsidy is regressive, the solution is not simply to further limit access. More likely than not,
Economic growth

18 **Fifth**, national competitiveness, especially in high value added modern sector economic activity, depends on knowledge, skills and competencies associated with abstract reasoning, analysis, language and communication skills, and the applications of science and technology (Lewin 2000). Without this competitiveness, economic growth will stall, government revenues will stagnate, and public educational financing at all levels will problematic. There is much evidence to suggest that those with secondary schooling increase their chances of formal sector employment and informal sector livelihoods, acquire useful skills from secondary schooling, and that export led growth is associated more with investments at post primary than at primary level (Appleton 2001, Knight and Sabot 1990, Wood and Mayer 1999, Wood and Ridao-Cano 1996).

19 Recent longitudinal data from Malawi, Tanzania, Uganda and Zimbabwe indicates that the incidence of unemployment amongst university graduates was very low. Between 1 and 3 percent of graduates in the four countries were unemployed and looking for work, several years after graduating. Unemployment rates were also fairly low amongst secondary school leavers, with the exception of Zimbabwe. Between 5 and 10 per cent of 1990 secondary leavers were unemployed and looking for work in Malawi, Tanzania, and Uganda in 2001, with the majority in wage employment (Al-Samarrai and Bennell 2003). If there are signals of saturation, only a pessimist would take the view that over-education was the diagnosis and restrict access against a backdrop of skill shortages.

Curriculum

20 **Sixth**, there are widespread and legitimate concerns that secondary curricula often lack relevance and utility, are embedded in elite traditions of academic schooling unsuited to mass systems, use outmoded pedagogies, and are dominated by the narrow requirements of high stakes selection examinations, rather than led by demand related to livelihoods, jobs and social priorities. To the extent this is true it is a confirmation of the neglect of secondary schooling in the domestic and international policy debate.

21 In all the poorest countries textbooks and other curriculum materials are in short supply and much learning takes place without access to any printed material. Non salary budget allocations for learning material and to improve textbook quality and availability are often derisory. Few secondary curricula are outcomes based, rather than content driven, and

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this will worsen income distribution and exclusion. A more attractive conclusion is that the goal of poverty reduction will be served if more equitable access can be promoted through reductions of subsidies to the rich in favour of reduced costs of participation for the poor.
most offer more to those who continue to study than to the majority who exit before or at the end of the cycle.

Critically if secondary is to expand, the characteristics of learners will change, and what they learn may need redefinition. Most secondary systems are ill prepared for the transition and remain embedded in modes of learning and conceptualisations of secondary schooling which are based on limited access by highly selected students, leading to higher education and employment in small modern sectors with a high proportion of public sector jobs. The future looks different. It invites support for strategic curriculum reform that can encourage creative and effective innovations in learning and teaching, new methods of assessment capable of capturing valued learning outcomes, and selection of content and thinking skills that are more rather than less relevant for entrants to diverse labour markets, and relevant to a much broader range of learners. This is most true in relation to science and technology, information and communication industries, and for a raft of higher level intellectual, language and social competences that can be traded domestically and internationally. It is at secondary school level that the foundation for relevant competencies can most readily be laid, and where generic thinking skills can be developed.

Post Conflict

Seventh, investment in secondary may be especially critical in post conflict situations. The reasons are obvious. Where a generation or more has missed out on secondary schooling, the labour force will be lacking in members with more than basic education. Positions in the infrastructure of government and in productive enterprises, which require analytic skill, will be filled with those lacking formal education and training to an appropriate level. Demobilised militia left with unfulfilled promises of some sort of opportunity to re-enter available employment and livelihoods, may well experience exclusion and feel betrayed, with adverse social consequences.

Costs and Finance

Eighth, increased access and participation at secondary level is unattainable with current cost structures (Lewin and Cailloids 2001). The basic arithmetic of the dilemma is simple. Typical national budgeting patterns in low enrolment countries in SSA allocate relatively small amounts of public expenditure on education to secondary level. In Malawi, Tanzania and Ethiopia secondary absorbs less than 10%, and primary 65% or more. In these countries, where the GER at secondary level can be less than 10%, increases in secondary level participation to say GER2 50% would require allocations to increase dramatically. This is unlikely, especially where there are EFA and Fast Track related commitments to protect allocations to primary.

Public expenditure per pupil at secondary level across SSA countries averages about five times that at primary, and is as high as 8 to 10 times in some of the lowest enrolment cases. This fact alone means that substantial
increases in access will be difficult to finance in a sustainable way. Unit costs will have to fall if the development gains associated with expanded secondary are to be achieved.

There are several options. First, there is scope to increase the proportion of public expenditure allocated to secondary where this is exceptionally low. Where total allocations for secondary are less than those for the tertiary level (the case in several SSA countries) investment patterns may appear unbalanced. Allocations of more than 60% to primary also raise questions about what is foregone. Second, efficiency gains could contribute considerably to increased access. Pupil Teacher Ratios can be below 15:1 in SSA, and teacher workloads may be as little as 30% of timetable teaching time. Where class teacher ratios exceed 2:1, more could be enrolled with more efficient working practices. Third, selective cost recovery, with appropriate safeguards to protect the participation of the poor can ease the financial burden of expansion. Fourth, several low enrolment countries in SSA have seen a rapid growth in non state providers, though much of this growth has been concentrated in low cost, low quality schools (e.g. Chimombo et al 2003). Not-for-profit providers (NGOs, faith based organisations) have expanded, alongside for profit providers. The possibilities for the continued expansion of the non-state sector are uncertain (Rose, 2003). At some level, which may be quite low, effective demand softens for reasons of affordability (Lassibille, Tan and Sumra 2000, Lewin 2003) and in most countries non state providers are unlikely to open new schools in areas where there is least access, and least ability to support the cost of fees.

Policy Neglect

Ninth, secondary education is an area of policy neglect. Poverty Reduction Strategy Papers (PRSPs) are being developed for most poor countries. An analysis of 28 PRSPs from SSA confirms that policy on secondary is often at best an afterthought and a residual consideration, and at worst is conspicuous by its absence. More than half these PRSPs devote little or no attention to secondary level issues and identify no targets for secondary. About 25% refer to needs to expand secondary and improve quality but do so without linking developments at secondary level to the competing demands of other levels, or their resource implications. The remainder include some targets related to secondary, most often for increased primary/secondary transition rates and mostly without modelling of the impact of this on GER2, necessary budget shares for secondary, and the non financial constraints on expansion.

Problems related to balanced growth across the education sector may be exacerbated by the realities of movement towards Sector Wide planning and the conditionalities placed on development partner assistance. Thus the Fast Track Initiative (FTI) broadly viewed, identifies an indicative framework of targets that is focused on primary level indicators – 20% allocation of public expenditure on education, primary to absorb at least 50%, Pupil Teacher Ratios at primary of 40:1, non salary costs of 33% of
recurrent expenditure, average teachers salaries of 3.5 times per capita GDP and repetition less than 10%. It is largely silent on secondary investment, despite the many ways in which its development interacts with the achievement of FTI goals at the first level.

29 For all the reasons listed above policy on secondary needs revisiting. This should not detract from over riding importance of achieving universalised primary education (MDG2) and gender equity (MDG3). Rather, policy on secondary has to be seen as an integral part of strategies to reach these goals, and which also contributes to achieving several of the other MDGs.

A Status Report on Secondary Schooling in SSA

30 Secondary school systems exclude most of the population of the secondary school age children in SSA. Sub Saharan Africa has a total population of about 600 million. Of this population about 88 million are of general secondary school age. Gross enrolment rates at secondary average 25% (school age population weighted). On this crude basis about 65 million (75%) secondary age pupils are not enrolled across SSA. The proportion of those excluded is likely to be higher than this, since school places are occupied by repeaters. It seems likely that somewhere between 70 and 75 million are unenrolled, or over 80% of the total of secondary school age children.

31 In summary, the great majority of SSA countries have GER2s below 40%. Twenty two countries have a GER2 of less than 20%, and thirty six of less than 40%. In the former it is likely that no more than 10% complete secondary successfully, in the latter perhaps 20%. There is a noticeable gap between the nine countries which have GER2 of more than 50%, and the rest.

Basic Data and Enrolment Rates

32 SSA has a variety of patterns of secondary enrolment and enrolment rates. Table 1 provides an overview of the age range of secondary schooling, the size of the age group, numbers enrolled, the proportion of female enrolment, and values for Gross Enrolment rates in 1990 and 2000.

33 Secondary schooling is most commonly between five and six years long. Often the cycle is split in two (lower and upper), with the former lasting two to four years and the latter two or three years. The great majority of SSA countries (75%) define the relevant age group as starting at either 12 or 13 years of age.

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6 Estimated using UNESCO secondary cycle length and UN age specific populations
7 Derived from EMIS based returns to UNESCO
8 Based on 45 countries for which there is UNESCO data
9 In contrast in South Asia all major countries except Pakistan have GER2s of more than 45%. However, the size of their populations means that large numbers are excluded even with these higher enrolment ratios.
There is no simple relationship between GER2s and primary gross enrolment rates (GER1) in SSA (Figure 1). The average unweighted values for GER1 and GER2 are 85% and 28% respectively. Below GER1 = 100 it does seem the case that GER2 is related to GER1 i.e. the greater the level of primary participation the greater enrolment at secondary. For GER1 > 100 this relationship breaks down (see Figure 2). The most likely reason is that some of these countries are those which have been most successful in implementing EFA programmes. Primary enrolments have grown rapidly, without similar large increases in enrolments at secondary level. Malawi, Uganda and Rwanda appear to fit this pattern. In contrast South Africa, Namibia, Mauritius, Botswana and some others have high GER1 and high GER2 reflecting the fact that their systems developed earlier and growth has been more balanced across levels.

GER2 does have some relationship with GDP per capita in SSA. The highest levels of GER2 are found in the richest countries. However this relationship is not very strong for the group of SSA countries with GDP per capita below 400 USD. Figure 3 shows that among the lowest GDP countries there is a variation in GER2 of between less than 10% to over 30%. This suggests that policy choice is significant in these countries in determining participation in secondary education, and there is only a weak relationship between GER2 and GDP per capita.
### Table 1 Basic Data on Secondary Education in SSA

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Sch Age Pop 000</th>
<th>Tot Enrol 000</th>
<th>% Female</th>
<th>GER2 1990 %</th>
<th>GER2 2000 %</th>
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<td>31.1</td>
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<td>3 253</td>
<td>...</td>
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<td>United Rep of Tanzania</td>
<td>14-19</td>
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<tr>
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<td>283</td>
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<tr>
<td>Zimbabwe</td>
<td>13-18</td>
<td>1 898</td>
<td>844</td>
<td>46.8</td>
<td>48.2</td>
</tr>
</tbody>
</table>
Gender Differences

In most of SSA more girls than boys are enrolled at secondary level. Figure 4 shows the pattern for the Gender Difference Index (GDI). Over 80% of countries are located in the lower left quadrant indicating they have more boys than girls enrolled. The few countries that have GER2 more than 50%, mostly have gender parity or a preponderance of girls enrolled. Though this is not enough to demonstrate a causal relationship, it does suggest that gender equity is unlikely to be achieved until GER2 exceeds 50% in SSA. GDI favours boys in almost all the countries with GDP per capita of less than 1000 USD. Above this the GDI tends towards parity (Figure 5).
The relationship of GDI primary to GDI secondary is illuminating. It shows that secondary GDIs are almost always less favourable to girls than the GDIs for primary. Most cases fall below the line indicating GDI (primary) = GDI (secondary) (Figure 6). Only when GDI primary is close to one (equal participation) does the tendency reverse in favour of girls at
secondary level. In terms of participation, girls appear to be more marginalised at secondary level than at primary, amongst the cohorts of children who attend. The total numbers enrolled at secondary are generally much smaller than those at primary, especially where the GDI is least favourable to girls. An implication is that if gender equity is a goal it has to be tackled at secondary level, as well as at primary.

Figure 6

Transition Rates from Primary to Secondary

Transition rates from primary to secondary appear to have stagnated, and may be falling. The data from DHS surveys illustrates this. Figure 7 shows the crude transition rate (enrolments in the last year of primary divided by enrolments in first year of secondary) averaged across 22 SSA countries. For the older cohorts who were in school over the last 30 years, transition rates grew slowly, but then reached a plateau. For 15-19 year olds, some of whom are still seeking entry to secondary school, transition rates appear substantially lower. Though there is some adjustment upwards to the curve in Figure 7 that will occur as some of those above the age of 15 years succeed in entering secondary schools, it seems unlikely that this will be large enough to cancel out the apparent decline in transition rates amongst the latest group of secondary school age children. If transition rates are falling the most likely explanations lie in the more rapid growth of primary completers when compared with secondary school places.
Figure 7 also shows that on average urban transition rates are consistently much greater than rural ones, and that urban/rural differences have not been reducing. In strong contrast average differences in transition rates between boys and girls appear to have diminished. Amongst 15-19 year olds these differences on average disappear. This suggests that if differences in enrolment rates at secondary between boys and girls persist they are likely to be in large part the result of fewer girls completing primary, and subsequent differential drop out by older girls. They are generally not the result of differential transition rates.

**Figure 7**

![Transition Proportions SSA (Average) by Cohort](image)

**Growth in GER2**

Growth in GER2 over the last decade has been slow with some evidence of a quickening pace at the end of the 1990s in some of the SSA countries. South Africa, Mauritius, Cape Verde, Namibia and Botswana are amongst those where participation has been growing and is now high. For the majority of SSA countries GER2 has remained stable or grown by no more than about 1% percentage point a year. Figure 8 shows this. Overall GER2 in SSA appears to have risen from an average of about 21% in 1990 to about 25% by 1998\(^\text{11}\).

\(^{11}\) Based on data from the World Bank data set. This may be an over estimate and has yet to show up in available Household Survey data.
From the latest DHS data sets\textsuperscript{12} a slightly different picture emerges (Figure 9). As noted above average enrolment rates of 15-19 year olds were about 13% for grade 9 level achievement (and in reality somewhat more since some of this population is still in primary school and may succeed in reaching grade 9 before the age of 20 years). The proportions of 20-29, 30-39, and 40-49 year olds who reached grade 9 in the past are 21%, 19% and 13% respectively. This suggests that secondary level participation, proxied by the achievement of grade 9 or better, has improved only very slowly over the last thirty years. If no more than 21% of the current group of 15-19 year olds ultimately achieve grade 9 or better, then it will have stagnated.

Figure 8

\textsuperscript{12} Data sets are the latest DHS available most of which are between 1997 and 2002
Participation and Wealth

Patterns of participation at secondary level are heavily skewed by household income. The DHS data sets allow some analysis of these patterns and indicate to what extent poverty marginalises large proportions of populations from participation at the post primary level. For simplicity households in these data sets are divided into the richest 20%, and the middle and poorest 40%. Children from the richest 20% of households have on average more than 11 times the chance of reaching grade 9 than those from the poorest 40% of households. Gender is least important in explaining differences in enrolment amongst the richest 20% where boys are more likely to be enrolled in the ratio of 53% to 47%. Amongst the poorest 40% the ratio boys/girls is 79%/21% for participation at grade 9. Figure 10 shows this.

Participation is also strongly related to location. Figure 11 shows that urban children have about 10 times more chance of being enrolled in grade 9 than rural children Gender differences diminish for higher grades of attendance.

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13 Based on median values across countries in the data set for highest level of participation amongst 15-19 year olds.
These aggregations conceal very different patterns between countries which must be identified and considered before reaching general conclusions. Some illustrations of this from detailed analysis of the
country by country data suggest that, for example, in Mali and Benin it is clear that at all grade levels that the rich rather than those from poor households, and boys rather than girls, are much more likely to be enrolled. In contrast in Tanzania and Uganda rich girls are more likely to be enrolled than rich boys. In Tanzania this is also true of middle income girls. In Uganda there is no difference between middle income girls and boys for grade 9. In Kenya household wealth is the major determinant of enrolment only after grade 4. Here even those with middling levels of wealth are not much better represented than the poorest at higher levels. Zambia has a similar pattern where wealth is again determinant, with a serial decline in rates by household income group. Here gender seems relatively unimportant as a determinant of enrolment (Figures 12-15).

**Figure 12**
Figure 13

Tanzania - Participation by Wealth and Gender

Figure 14

Kenya - Participation by Wealth and Gender
Figure 15

Overview of Insights from the Data

Analysis of data and research and studies on the status of secondary schooling leads to the following observations.

First, enrolment rates at secondary level in SSA are substantially independent of primary enrolment levels and of GDP per capita within wide ranges across SSA. The implication is that to a significant extent secondary enrolment rates are influenced by the policy preferences of governments and their development partners.

The major determinants of enrolment rates in publicly provided secondary schooling are public expenditure allocated to secondary as a % of GDP, public unit costs at for secondary as a % of GDP per capita, and the proportion of the population in the relevant age group. The latter is a function of demographic realities which are not under the control of the policy system, and decisions about the structure (length, age range) of secondary provision which are a policy variable.

Analysis of these parameters in different countries leads to evaluations of whether low participation rates are the result of low public commitment to funding, or of excessive unit costs, or of both. Which pertains shapes the policy environment for growth.
49 So also do the direct costs of public schooling. Much secondary schooling in SSA is fee paying. Demand is partly a function of affordability. Where public schools operate at levels of direct cost to households which are high, the constraint may be more these costs, than those borne by government.

50 Second, overall participation rates include those enrolled in the unsubsidised non-government sector. There is a high degree of variation in how significant these enrolments are across countries, and a scarcity of reliable data. There are critical questions that surround the potential for growth of the non-government sector. Affordability is a key issue. In the poorest countries full fee paying institutions employing qualified teachers at normal salary rates generally operate at levels that exclude most beyond the twentieth percentile of household income. Low cost providers, especially those characterised as dwelling house schools and small family run commercial businesses, may provide lower cost schooling. Often they do so outside licensing and regulations frameworks designed to ensure minimum standards, and may offer very low quality as measured by success in public examinations.

51 Other questions concern the nature and motivation of ownership and financing of private sector non-government providers, and the extent to which their operations interact with public provision. Rapid growth in some countries of small scale providers in the wake of economic liberalisation appears a *prime facie* indication that commercial owners see attractive rates of return. The general unwillingness of domestic banking systems to finance private school start-ups suggests judgements that the risks are high and default on loans possible.

52 There is some evidence of destructive interference between private providers and public school systems. This can occur when proprietors have roles in both government and non-government systems, and where public school teachers work simultaneously in government and non-government schools. Local manifestations of the problems are complex, and may or may not be counter productive. Where non-government school growth is a response to declining public school quality as in Ghana and Malawi, there may be grounds for concern about the nature of the interactions.

53 Third, secondary enrolment rates in most of SSA have not increased over the last decade, with the exception of the more developed SSA countries\(^4\). Where enrolment rates have been static, the gap between these low enrolment rate countries and the others has widened. Consequentially, differences in the proportion of those in the labour force with completed secondary will also have widened. This is likely to have implications for competitiveness and future economic development.

\(^4\) Unlike in South Asia over the last decade where there have been significant gains in secondary enrolment rates, except in Pakistan.
Fourth, transition rates from primary to secondary school have ceased to grow in most of SSA, and may be falling in some cases\textsuperscript{15}. This is clearly the case where GER1 has grown rapidly. Transition rates are strongly differentiated by household wealth, and urban rural residence, and less so by gender.

Transition rate fluctuations can be misleading, and target associated with transition rates may be flawed. The rates are very sensitive to the numbers of primary completers passing primary leaving examinations and succeeding in gaining access to secondary schools. They may rise or fall independent of gross and net enrolment rates for secondary.

Fifth, very few countries in SSA with GER2 less than 50\% approach gender parity. Most of those with GER2 greater than 50\% have achieved this\textsuperscript{16}. Achieving gender parity with low levels of GER2 may leave untouched exclusion related to household income. It may only be possible through the use of quotas and incentives targeted on girls, which may or may not be equitably accessed. It is clearly not the most attractive strategy.

Gender differences in enrolment rates in favour of boys at secondary level are almost always greater than differences at primary, until GER1 approaches 100\% in SSA. Relative exclusion is therefore greater. This diminishes as secondary enrolment rates increase.

Gender differences in enrolment are often age sensitive. As systems develop it appear increasingly likely that transition rates reach or exceed parity, and age specific transition rates begin to favour girls. Increasing proportions of the differences observed between male and female enrolments then become attributable to disproportionate overage enrolment of boys, especially where average ages in secondary are high. If more girls reached secondary grades at younger ages (as a result of reduction in overage enrolment and repetition), gender differences would diminish.

Sixth, Wealth is generally a more important determinant of enrolment at secondary than either gender or location (urban rural). Household data sets show this across a large number of SSA cases. Patterns do vary with some cases indicating strong differentiation from Grade one. Most patterns indicate increased differentiation in higher grades, with greater differences for secondary schooling than for primary.

Household survey data provides clear evidence of the extent of exclusion of the poor from secondary schooling. Data also indicates that whilst gender differences in participation rates have been diminishing, those associated with wealth have not. Nor has there been much change in SSA in urban rural differences. The latter reflects the fact that in most cases it is

\textsuperscript{15} Most obviously where EFA has been most successful in universalising primary schooling.

\textsuperscript{16} In South Asia GER2 is above 45\% wherever gender parity has been achieved.
likely that the historic geographic disposition of secondary schools has not substantially changed17.

**Seventh**, data on curricula, pedagogy and learning materials is not systematically available. What there is suggests secondary curriculum revision has been a low priority in most of SSA. Syllabi and learning materials widely date from periods following independence, and the waves of investment in curriculum development in the 1970s. Learning materials remain in very short supply with several surveys indicating that the majority of learners have no text material available. Secondary teaching material in SSA is commonly expensive, based on imported books and/or domestically produced variants of variable quality, and orientated towards academic outcomes designed for highly selected groups of learners. Strikingly many curricula remain subject based and content driven, with few adopting outcomes based approaches linked to criterion referenced levels of attainment.

**Eighth**, teacher education for secondary schools varies across an enormous range. Many SSA countries retain ambitions to have secondary grades taught by university graduates. In most this is far from a reality, nor is it feasible with expanded provision in the short term. Training programmes at graduate level can be lengthy (four years full time is not uncommon) and there are many problems associated with low rates of take up of initial postings and subsequent attrition related to alternative labour market opportunities for graduates. Costs may be more than those for conventional undergraduates, and much more than for College based training.

Training curricula for secondary teachers are largely unresearched. Casual empiricism suggest that training curricula lag behind the modest rates of secondary school curriculum reform18, and many thematic areas of professional practice are at best lightly addressed (large classes, multi-grade teaching, outcome based learning, less didactic pedagogies). In Service Training and Continuing Professional Development for secondary may also have suffered relative neglect, especially where emphasis and external funding have been concentrated overwhelmingly on the primary level.

**Ninth**, examination reform, which is intimately linked to curriculum reality where assessment is high stakes, has not received much attention. Most public examination systems have moved towards multiple choice methods of summative assessment which can favour low level cognitive demand questions. Few systems have succeeded in adopting continuous assessment to broaden what is assessed, and therefore what is learned.

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17 i.e. disproportionate numbers of secondary schools are urban or peri-urban and recruit urban and town children
18 Thus although for example science curricula at lower secondary level are generally integrated, many pre service training systems still retain separate subject science programmes.
Achievement levels are difficult to assess in the absence of criterion referenced tests administered consistently within and across countries. Most poor countries have not taken part in international achievement studies. National examination data often indicates cause for concern in terms of pass rates and raw scores, but these are often not easy to compare over time. If the quality and relevance of secondary are to improve, and selection to be more valid and reliable, more competence based assessment would seem essential. So also is support to maintain the reliability, validity and integrity of national examining systems.

**Tenth** expanded access to secondary has many implications for recurrent financing (Lewin and Caillods 2001). These are both domestic and external. Some of the main dilemmas have been noted above. Secondary schooling in SSA has been relatively expensive both for public expenditure and for households. In several public systems private contributions (i.e. predominantly fees) exceed public subsidies per student. Direct costs to households are at levels that exclude all but the richest in public as well as private systems. Internal efficiency, closely connected with teacher utilisation, is often well below levels found in countries with mass access to secondary schooling, and skews in resource allocation often favour university entrance grades over investment at lower levels. Where community financing has been adopted this can have regressive urban rural characteristics.

Development financing in most low secondary enrolment countries in SSA has been preferentially allocated towards primary schooling, sometimes as a conditionality for support. This is consistent with the MDG and Dakar commitments. The question is partly whether the budgetary allocation patterns this has produced best serve over arching developmental goals. It may be that in some cases the development of secondary school systems has been inhibited to the point that there degradation will affect the achievement of the MDGs and the chances for economic growth based on sufficient numbers in the labour force with completed secondary schooling.

**The Way Forward**

The case made for revisiting policy on secondary, and the insights that emerge from analysis of recent patterns of development, lead to the identification of several specific challenges.

**On Policy, Planning and Finance**

The place of investment in secondary in poverty reduction strategies needs to be securely established. It has a role to play through its interactive contributions to the MDGs that relate directly to education, and through the relationships with wealth generation and income distribution. This suggests that:
Sector reviews should seek to include consideration of secondary investment strategies as an integral part of their discussions. This assumes appropriate domestic prioritisation and both sympathetic and realistic dialogues with development partners. It also assumes that PRSPs and will recognise the linkages between secondary investment and more general development objectives.

Strategies for secondary expansion need to be developed which are pro-poor and make more equitable and more efficient use of public resources. There is no general prescription for this since starting conditions in different countries vary widely. However, a combination of new policies are needed where participation rates are low, access is highly skewed to the relatively wealthy, transition rates are likely to fall as the number of primary leavers increases, and where there are indications that existing patterns of provision have high costs related to internal inefficiencies.

Financing the development of secondary is a key issue. Without attention to the resource implications of expanded access MDG targets will be missed and desired outcomes remain elusive. This invites the development of integrated and costed plans for the development of secondary education linked to investment at other levels. Unless these shape Medium Term Expenditure frameworks, and feature in Sector Wide approaches where these are in place, they will not be implemented.

The planning the implementation of such strategies needs to recognise both the quantitative and the qualitative implications of expansion. The former revolve around realistic projections of growth and its consequences for both recurrent and capital investment at levels that can be sustained. Questions for planners include:

- What should be the sub-sectoral allocation patterns that are most likely to result in achievement of the MDGs? How should the competing demands for investment at different levels be resolved?

- How should efficiency gains be achieved that will allow expansion at affordable levels of cost without unacceptable diminution of quality? Which aspects of school funding systems, teacher deployment, and non salary expenditure might be most open to reforms that increase internal efficiency and learning effectiveness?

- How can cost recovery systems be profiled to allow expansion with more equitable participation that is pro-poor? What are the limits of affordability which will limit effective demand for secondary

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19 In some systems lower secondary is already regarded as part of basic education. In others it is seen as beyond this level. Clarity is needed in whether the case made is integral to basic education policy, or stands on its own merits as a necessary complement to investment in basic education.

20 Many budgetary systems have had a strong element of historic and incremental approaches to this question, rather than a strategic approach based on medium term goals.
schooling as those who participate are drawn from lower income households? What options might lessen the limits on access this imposes?

- To what extent are non government providers are willing and able to complement publicly subsidised secondary schooling in ways that are pro-poor, based on appraisals of current provision and likely future developments? What mechanisms can or should be used to subsidise non government providers bearing in mind the opportunity costs for public systems?

- How much development expenditure needs to be budgeted to service planned expansion and to replenish stock and infrastructure where these have been under funded in the recent past?

Qualitative improvements concern reforms in the structure, content and process of secondary schooling designed to meet the needs and capabilities of students drawn from a wider range of backgrounds than has historically been the case. These need to recognise that school leavers will enter changing labour markets where new knowledge and skills will be needed, and that majorities will neither find livelihoods and jobs in public sector employment or proceed to degree level courses.

The range of possible responses to qualitative concerns is wide. It includes consideration of structures – length, location, specialisation. Secondary schooling can and probably should be differentiated after a core cycle has been completed. At some point selection into different curricula tracks may be both necessary and desirable. How this is achieved carries cost and efficiency implications.

It also embraces curriculum issues, pedagogy, learning materials, and assessment and selection systems. These run beyond the scope of this paper. Where ways forward can be defined they need to costed and planned. Without clear understanding of the resource implications reforms may be still borne.

On Targets

Some target setting for the secondary school cycle is desirable. This should refocus attention on planned development at this level, remind stakeholders of the interdependence of targets at one level on activity at the next, and provoke policy dialogue that balanced ambitions with realistic judgements of what was needed to support growth. Manifestly any targets identified would complement those for primary education systems. Some possibilities are:

- Generate a consensus amongst key stakeholders of useful and measurable indicators for the development of secondary schooling
• Identify plausible targets, different for different systems, which reflect starting points, priorities, political possibilities and resource constraints and which are feasible to achieve over defined time periods taking into account stated priorities across the education sector

• Encourage commitment to the achievement of agreed targets through expression in forms that can be understood the key stakeholders who have some accountability for outcomes at different levels

• Establish (or include in existing monitoring systems) methods of periodic review of progress linked to the planning cycle

On Data and Evidenced-Based Policy

78 Many aspects of secondary schooling remain informed by inadequate data and lack a robust knowledge base. Improving this situation is a precursor to more evidence based policy. Important analytic needs are for:

• Basic data on patterns of participation in public and non-government institutions disaggregated by household income, gender, residence, and other disadvantaged groups. This should include age and grade specific enrolment rates and given insight into differential drop out, repetition and transition rates at different levels and their causes

• Gender analysis of enrolments, achievement, and social development of learners designed to locate systemic reforms, as well as special programmes, that might improve equity.

• Assessment of the redistributional effects of bursary schemes, quotas and other mechanisms to increase equitable access to secondary schooling

• Achievement data, based wherever possible on criterion referenced assessments of what is learned, by which learners, at which level, with which consequences for selection

• Analysis of secondary curricula to assess relevance, teachability, antecedent assumptions about learners, timetable demand, level of specialisation, prioritisation of core and elective subjects, and desired learning outcomes to assess development needs

• Exploration of the feasibility of more modularised curricula that can mitigate the effects of irregular attendance and seasonality, explore multi-grade approaches to secondary level learning and teaching that recognise wide age ranges and capabilities with the same grade group, and which might offer more effective curriculum implementation in small schools
• Reviews of learning material (e.g. textbooks) availability in quantity and quality related to main subject areas

• Reviews of teacher training supply and demand and methods to establish whether these represent value for money and are capable of meeting expanded demand at affordable costs

• Assessment of secondary teachers’ career trajectories to establish how many teach for how long, and provide insight into attrition rates arising from different causes with a view to increasing the efficiency and effectiveness of training

• Investigation of constructive and destructive interactions between public and non government providers where these co-exist

• Analysis of secondary teachers’ workloads and working practices designed to identify areas where internal efficiency gains may be possible

• Tracer studies of secondary graduates to determine absorption rates into different types of employment and livelihoods and identify signals of over and under supply, and curricula areas which need reform

• Evaluation of the learning gains and costs associated with uses of information and communications technology in replicable learning environments

Concluding Remark

This paper has reviewed the case for revisiting investment strategies for secondary education in Sub Saharan Africa and identified some of the core challenges. It provides an agenda of items for discussion to shape new approaches to an area of policy that will become more and more important over the next decade. The case made is that the MDG and Dakar goals will only be met through a balanced approach to investment that recognises that investment above the primary school level interacts with the development of universal primary policies, that gender equity is more likely with higher rates of participation at secondary level, and that finance and cost structures for secondary invite reform if there is to be much prospect of mass participation.

Much could be achieved in many systems through improved internal efficiency. There appear to be limits to the extent to which higher levels of cost recovery, and greater contributions by non state providers, can complement public efforts to expand access. Affordability will set boundaries on the rate of growth in enrolments in different systems. Expansion will bring with it needs to reform pedagogy and content to recognise the needs and capabilities of a wider range of students.

Participation at secondary level will grow. The central issue is how to finance and manage this in ways that are more equitable and efficient, and that offer the prospect
of improved quality and relevance to those entering increasingly competitive national and international labour markets.

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Annex 1 The Six Dakar Goals

The Dakar Framework for Action for Education for All identifies six goals. All of these imply the need for systematic policy on access and participation at secondary level, and for sustainable ways of financing development. So also do the Millennium Development Goals.

<table>
<thead>
<tr>
<th>Goals</th>
<th>Comment</th>
<th>Importance of Secondary Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children</td>
<td>Post primary education and training is desirable for early childhood carers and educators; increasing the proportion of ECCE staff who are from marginalized groups would benefit from increasing access and participation at secondary level</td>
<td>Medium</td>
</tr>
<tr>
<td>2. Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete free and compulsory primary education of good quality</td>
<td>Teacher supply is a major constraint on the achievement of UPE. Primary teachers need secondary level certification. In many low enrolment countries primary teachers are predominantly male. More female role models may be needed. Transition rates to secondary are one determinant of persistence and completion; if they fall this goal will not be achieved</td>
<td>High</td>
</tr>
<tr>
<td>3. Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes</td>
<td>Expanded secondary level access to diverse programmes a the major mechanism through which this might be achieved with complementary programmes for those out of school</td>
<td>High</td>
</tr>
<tr>
<td>4. Achieving a 50% improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults</td>
<td>If basic education includes lower secondary the access to secondary level provision is implied Secondary level institutions can contribute to access for adults</td>
<td>Medium</td>
</tr>
<tr>
<td>5. Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring that girls full and equal access to and achievement in basic education of good quality</td>
<td>Requires expanded access to secondary and gender balanced enrolment. Requires more gender balanced teacher recruitment from secondary level institutions Requires increased transition ratios into secondary</td>
<td>High</td>
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<tr>
<td>6. Improving all aspects of the quality of education and ensuring excellence of all so that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.</td>
<td>Requires effective secondary level curriculum development and learning and teaching and examination reforms Needs focus at lower secondary on consolidating basic skills which may not be achieved through primary education</td>
<td>High</td>
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Dakar Framework for Action: Education for All; Meeting our Collective Commitments. UNESCO; Paris; 2000
### Annex 2. The Millennium Development Goals

<table>
<thead>
<tr>
<th>Goals and Targets</th>
<th>Comment</th>
<th>Importance of Secondary Education</th>
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| **Goal 1. Eradicate extreme poverty and hunger**  
Target 1. Halve, by 2015, the proportion of people whose income is less than one dollar a day.  
Target 2. Halve, by 2015, the proportion of people who suffer from hunger. | Reducing poverty requires economic growth; secondary education contributes to high level human capital. Incomes are associated with educational levels Access to secondary to rural and marginalised groups should raise their incomes Those with secondary education are more likely to have sustainable livelihoods | Medium |
| **Goal 2. Achieve universal primary education**  
Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling. | Teacher supply is a major constraint on the achievement of UPE. Primary teachers need secondary level certification. In many low enrolment countries primary teachers are predominantly male. More female role models may be needed. Transition rates to secondary are one determinant of persistence and completion; if they fall this goal will not be achieved | High |
| **Goal 3. Promote gender equality and empower women**  
Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education | Requires expanded access to secondary and gender balanced enrolment. Requires more gender balanced teacher recruitment from secondary level institutions Requires increased transition ratios into secondary | High |
| **Goal 4. Reduce child mortality**  
Target 5. Reduce by two-thirds, by 2015, the under-five mortality rate. | Child mortality is associated with the educational level of mothers and of other family members Health care workers benefit from secondary level education | Medium |
| **Goal 5. Improve maternal health**  
Target 6. Reduce by three-quarters, by 2015, the maternal mortality ratio. | Maternal mortality is associated with the educational level of mothers and of other family members Health care workers benefit from secondary level education | Medium |
| **Goal 6. Combat HIV/AIDS, malaria and other diseases**  
Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS.  
Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases. | Those with secondary education and above are likely to have lower morbidity rates for common diseases Secondary age students, especially girls, enter a period of becoming at risk of HIV/AIDS | High |
### Goal 7. Ensure environmental sustainability

**Target 9.** Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.

**Target 10.** Halve by 2015 the proportion of people without sustainable access to safe drinking water.

**Target 11.** By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

### Goal 8. Develop a global partnership for development

**Target 12.** Develop further an open, rule-based, predictable, non-discriminatory trading and financial system. (Includes a commitment to good governance, development, and poverty reduction – both nationally and internationally.)

**Target 13.** Address the special needs of the ldc's.

**Target 14.** Address the special needs of landlocked countries and small island developing States.

**Target 15.** Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable.

**Target 16.** In co-operation with developing countries, develop and implement strategies for decent and productive work for youth.

**Target 17.** In co-operation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

**Target 18.** In co-operation with the private sector, make available the benefits of new technologies, especially information and communications.

### Table

<table>
<thead>
<tr>
<th>Goal 7. Ensure environmental sustainability</th>
<th>More educated citizens are more likely to appreciate the issues and trade offs concerned with environmental sustainability</th>
</tr>
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<tbody>
<tr>
<td><strong>Target 9.</strong> Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.</td>
<td>They are also more likely to hold rational views of infectious water bourn diseases and their causes</td>
</tr>
<tr>
<td><strong>Target 10.</strong> Halve by 2015 the proportion of people without sustainable access to safe drinking water.</td>
<td>Secondary level participation should improve quality of life</td>
</tr>
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<table>
<thead>
<tr>
<th>Goal 8. Develop a global partnership for development</th>
<th>Markets work better with information and the abstract ability to interpret data which should be acquired at secondary level. Civil society organisations benefit from more educated members</th>
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</thead>
<tbody>
<tr>
<td><strong>Target 12.</strong> Develop further an open, rule-based, predictable, non-discriminatory trading and financial system. (Includes a commitment to good governance, development, and poverty reduction – both nationally and internationally.)</td>
<td>Markets work better with information and the abstract ability to interpret data which should be acquired at secondary level. Civil society organisations benefit from more educated members</td>
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<td><strong>Target 13.</strong> Address the special needs of the ldc's.</td>
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<td><strong>Target 14.</strong> Address the special needs of landlocked countries and small island developing States</td>
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<td><strong>Target 15.</strong> Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable.</td>
<td>Markets work better with information and the abstract ability to interpret data which should be acquired at secondary level. Civil society organisations benefit from more educated members</td>
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<td><strong>Target 16.</strong> In co-operation with developing countries, develop and implement strategies for decent and productive work for youth.</td>
<td>Markets work better with information and the abstract ability to interpret data which should be acquired at secondary level. Civil society organisations benefit from more educated members</td>
</tr>
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<td><strong>Target 17.</strong> In co-operation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.</td>
<td>Markets work better with information and the abstract ability to interpret data which should be acquired at secondary level. Civil society organisations benefit from more educated members</td>
</tr>
<tr>
<td><strong>Target 18.</strong> In co-operation with the private sector, make available the benefits of new technologies, especially information and communications.</td>
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