Under-enrolment and Low Quality in African Primary Schooling: Towards a Gender-sensitive Solution

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Introduction

Over the past 30 years, school and college enrolments in Africa have increased more rapidly than in other regions. Nevertheless, Africa remains the most under-educated continent in the world. Almost half of the children of primary school age in Africa are out of school, the majority of whom are girls. Most of them are illiterate and are likely to remain so. Much of the available schooling is of a very poor quality. These facts represent a lost opportunity for Africa of immense proportions. Finding a solution is one of the most important development challenges which African countries face.

This paper investigates the causes of under-enrolment and low school quality in Africa, distinguishing between those related to the provision of schooling by the State, and those related to the demand for the service by households. The paper argues that, whilst strong imbalances between male and female enrolments are best understood as demand-side phenomena, policies on the supply-side to improve the quality and quantity of schooling available, and to reduce its costs to households, will be critical to increasing the enrolment of girls in schools. The paper takes as its main focus the countries of Sub-Saharan Africa (SSA), where the greatest part of the enrolment challenge is located. The simulated costs and financing of achieving schooling for all in SSA are presented. Conclusions are drawn for aid policy and for domestic policy reform in the region.

Educational Expansion in Africa, 1960-1990, in Comparison With Other Regions

By 1960, independence had been achieved in a good number of the African countries, and for most of the rest it was shortly to come. Thus, the early 1960s, for many countries in Africa, marked a watershed between the colonial educational inheritance - which was often meagre - and the results of nationally determined development policies, which typically placed fairly central importance upon the early expansion of schooling.

Such emphasis was encouraged by the UNESCO regional conferences on education convened for Africa in 1961 in Addis Ababa (and for the other developing regions in Karachi, Santiago and Tripoli, between 1960 and 1966).[2] Their resolutions set a time-table for the expansion of education which was ambitious by any standards. In Africa, secondary enrolments were planned to increase six-fold, and tertiary enrolments by more than ten-fold over the two decades to 1980. Given that less than 5 per cent of the relevant age-group attended secondary school in Africa in 1960, and that only about half of one per cent had any post-secondary education, these rates of expansion would, it was hoped, lead to a transformation of the educational attainments of Africans over a fairly short period of time. Nevertheless, the major effort - in terms of the absolute increase in enrolments - was to occur at primary level, such that all eligible children were to be enrolled in primary schools by 1980.

In the event, subsequent educational expansion occurred extremely rapidly. The record is summarized in Table 1, which compares African experience with that of other developing country regions. Rates of growth were fastest at secondary and tertiary levels, owing to the small bases from which they began. But, even at primary level, enrolments doubled in Asia and Latin America over the two decades to 1980, whilst in Africa they more than tripled over the period. However, it can be seen from Table 1 that rates of expansion were sharply reduced between 1980 and 1989. This was particularly so in Africa and Latin America, where the growth rates of secondary and tertiary enrolments were halved, and those of primary enrolments fell to between one quarter and one third of their earlier levels. What, then, accounts for this change in the rate of expansion of school systems in the developing world, and, particularly, in Africa?

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[2]   See Unesco 1961, 1960, 1962 and 1966, respectively, for the final reports of these conferences and for the resolutions passed by each of them.

(millions)

Region	Year	First level	Second level	Third level	Total
Africa[b]	1960	19.5	1.7	0.2	21.4
	1975	40.2	7.8	0.8	48.8
	1980	59.2	13.7	1.4	74.3
	1989	70.5	21.3	2.3	94.1
	Annual Growth(%)				
	1960-75	5.0	10.5	10.6	5.7
	1975-80	8.0	11.9	11.3	8.7
	1980-89	2.0	5.3	5.9	2.7
Asia[c]	1960	89.7	26.6	2.7	119.0
	1975	160.1	60.5	9.8	230.4
	1980	184.5	77.0	12.7	274.3
	1989	228.4	118.8	17.6	364.9
	Annual Growth(%)				
	1960-75	3.9	5.6	9.0	4.5
	1975-80	2.9	4.9	5.4	3.5
	1980-89	2.4	4.9	3.7	3.2
Latin America & Caribbean	1960	26.6	4.1	0.6	31.3
	1975	56.3	12.6	3.6	72.5
	1980	64.8	17.6	4.9	87.3
	1989	73.6	23.4	7.3	104.2
	Annual Growth(%)				
	1960-75	5.1	7.8	13.1	5.8
	1975-80	2.9	6.9	6.0	3.8
	1980-89	1.4	3.2	4.5	2.0

Notes: [a] Not including pre-primary, special and adult education.
[b] Excludes South Africa.
[c] Excludes China, since data are not available for 1960.

Sources: Calculated from data in UNESCO 1977 and 1991.

It might be thought that, at least at primary level, such a result was inescapable: if, as reported above, the achieved rates of growth of primary enrolments were somewhat faster than those envisaged in the UNESCO conferences, and if the latter had been premised upon the attainment of universal enrolment by 1980, continued expansion at rates faster than that of the growth of population could not be expected to continue after 1980. Unfortunately, this deduction is flawed, because the population of developing

countries increased much faster than the planners in 1960 had predicted. Thus, although the rates of school expansion recommended by the UNESCO conferences were achieved, they were nowhere near enough to provide primary schooling for all of the eligible age-group by 1980.

In the case of SSA it had been thought that 33 million places would be sufficient to provide for universal primary enrolment by 1980. In fact, actual enrolments in the same year had risen to 44.8 million,[3] but about 56 million places would by then have been required if all the children within the eligible age-range for primary schooling were to have been enrolled. As in so many other areas of economic and social policy, rapid population growth has continually undermined the ability of countries to meet their educational targets.

Furthermore, the targets themselves were badly specified: many of the 45-50 million African children who are not enrolled in school live in countries where universal primary education (UPE), defined as 'the circumstance of having a primary gross enrolment ratio (GER) of 100 or more', has already been, or is close to being achieved.[4] Lesotho represents an extreme, where the primary GER is around 115, yet where only about 70 per cent of children in the official school-age group actually attend school. But there are many other countries in SSA having school systems which are only slightly more efficient, and where a 20 point difference between gross and net enrolment ratios - the result (mainly) of high rates of repetition - remains common. A better, and more comprehensive target is 'schooling for all' (SFA) which we define as 'the circumstance of having a school system in which all eligible children are enrolled in schools of at least minimally acceptable quality'. On these definitions, UPE becomes a necessary, but not a sufficient condition for the achievement of SFA. The latter is more difficult, and more expensive to achieve, than the former. But only when SFA is attained can one truly say that primary schooling has been universalized.

The results of the historical interaction between population growth and the expansion of school places are summarised in Tables 2 and 3. The first of these tables shows changes in GERs, for each level of schooling in the southern continents over the three

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[3]   This statistic is calculated from UNESCO 1989, and comprises all Sub-Saharan African primary enrolments in 1980 less those in Mozambique, Angola, Namibia and South Africa. Those countries were not included in the Addis Ababa conference. The North African Arab states of Egypt, Morocco, Tunisia, Algeria and Libya were invited to send observers, but they were more formally covered by the meeting in Tripoli five years later.

[4]   The gross enrolment ratio is defined as the number of children who are enrolled in primary school expressed as a proportion of the number of children in the age-group who are eligible to attend.

decades beginning in 1960. It can be seen that, in Africa, the children attending primary school were, in 1990, equivalent to less than three-quarters of the eligible age-group - a proportion which has fallen since 1980, and which is significantly lower than the proportions enrolled in other parts of the developing world.

Table 2: Gross Enrolment Ratios in the Developing World

	Primary			Secondary			Tertiary		
	1960	1980	1990	1960	1980	1990	1960	1980	1990
Africa⁽ᵃ⁾	42	80	72	5	23	28	0.7	3.5	4.7
Asia	85	97	104	21	38	48	2.6	5.6	8.2
Latin America	73	105	109	15	45	58	3.0	13.5	18.7

Note: ⁽ᵃ⁾ Excludes South Africa

Source: UNESCO 1991: Table 2.10

Table 3:   Primary enrolments amongst 6-11 year olds as % of
            age group 6-11

	1960	1980	1990
Africa(^)	32	60	56
Asia	52	71	81
Latin America and Caribbean	58	82	88
All Developing	48	70	77
All Developed	91	92	92

Note: (^) Excludes South Africa

Source: UNESCO 1991: Table 2.11.

However, as indicated above, the situation is worse than these statistics suggest, because many school places are occupied by children who are outside the official age-range. In Africa, where rates of repetition in each grade are often around 20 per cent, a similar rate of over-age enrolment can be expected - concentrated mainly in the highest grade. Table 3, which shows age-adjusted net enrolment ratios (NER), indicates that primary enrolments in Africa lag far behind those of other developing country regions, with little more than one half of the children actually attending school. It is clear, then, that the sharp decline in the rate of growth of primary enrolments after 1980 was not imposed by universal attendance already having been achieved.

Table 4 provides some clues as to where the cause may lie. Perhaps contrary to expectations, it shows that developing countries in general maintained and even slightly increased public expenditures on education, expressed as a proportion of their national incomes, during the 1980s. But these were years during which national incomes were increasing very slowly - often less quickly than national populations. Thus, mere maintenance of expenditure shares was often insufficient to avoid a reduction in absolute terms, when expenditures are measured on a per capita basis. The table shows that there were, in fact, some startling changes in the dollar value of these expenditures. It can be seen that public expenditures on education per inhabitant in SSA fell by more than one-half between 1980 and 1987-9. In Latin America they fell by 11 per cent to 1987 and only regained their 1980 nominal values by 1989. By contrast, expenditures in Arab countries increased by one fifth, and in the rest of Asia and in industrialised countries by more than two-thirds. The latter is roughly what would have been necessary in order to maintain the real value of per capita expenditures over these years. These circumstances imply, then, that real public spending on education per inhabitant in Latin America fell by about 50 per cent, and in Africa by more than two-thirds over the years 1980-87.

Thus, the reduction in the flow of public resources to education has been sharp in Latin America over the last decade, but in Sub-Saharan Africa it has been enormous. These reductions are, of course, a combined result of falls in the **quantity** of educational services provided per inhabitant, and of declines in the **cost** per unit of service provision. Wherever enrolments have grown less quickly than the school-age

Table 4:   Public Expenditure on Education, by Major World Region, 1980 – 1989.

	Public Expenditure on Education as % GNP			Public Expenditure[m] on Education per Inhabitant ($US)		
	1980	1987	1989	1980	1987	1989
Africa excluding Arab States[a]	4.7	4.8	4.8	32	15	15
Asia excluding Arab States	4.6	4.4	4.1	37	58	67
Arab States	4.4	6.6	6.3	112	134	131
Latin America and Caribbean	3.8	4.1	3.9	88	78	87
All Developed Countries	6.0	5.9	5.2	469	704	787

Note: [a] Equivalent to Sub-Saharan Africa, excluding Somalia, Sudan and South Africa.
         [m] These are current prices. A constant price series is not available.

Source: UNESCO 1991: Table 2.12

population - as in much of Africa at primary level - a decline in the quantitative availability of schooling has resulted. The process which has brought widespread cost reductions in education, however, is more complex, and has been delivered mainly by broad changes in macroeconomic, rather than merely in educational, policies. In Africa, the large currency devaluations which have been introduced as part of economic adjustment programmes have often been associated with sharp, and often extreme, falls in the real value of salaries in the public sector, including, of course, those of school teachers. Salary decline - an intended consequence of most adjustment programmes - has typically been engineered by holding the rates of nominal salary increases below the accelerating, devaluation-induced, rates of inflation. As a result, in much of Sub-Saharan Africa wage and salary earners were, by the late 1980s receiving far lower real earnings than they would have had a decade earlier.[5] These circumstances have been a major factor in reducing the costs of education provision. However, in many countries they have also brought strongly negative consequences for the morale of the teaching service. Cost reduction is often necessary, but the ways in which this has actually been achieved in recent years, have often been counterproductive: they have massively undermined the quality of service provision, and have sometimes threatened the very viability of the whole schooling process.

The above trends have, of course, affected all levels of education. There is some evidence, however, that secondary and tertiary systems have been more protected, throughout these years of recession and adjustment, than primary schooling. Table 1 indicates that, in a quantitative sense, the growth rates of secondary and tertiary levels proceeded at twice that of primary schooling throughout the 1980s, in all the developing country regions. Indeed, Sub-Saharan Africa managed to maintain faster rates of growth at these levels than Asia and Latin America, even during the recent years of economic decline. More crucially, in each of the developing regions shown in Table 1, the post-1980 fall in the rate of growth of primary enrolments has been larger, relative to earlier growth rates, than the reductions at secondary and tertiary levels. There is also evidence that the poorest countries of Africa reduced their public expenditures per pupil more sharply at primary level than at higher levels of schooling - at least until the mid-1980s (Colclough with Lewin: 22)

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[5]   Estimates of the extent of recent real wage decline in these regions are given in Colclough 1991:206.

The major influence upon the changing pattern of enrolment growth was, then, neither the completion of the task in hand, nor even a shift of priorities away from education towards other recipients of state spending. Rather, it appears to have been the result of recession and generalised economic decline. This was the 'force majeur' which led to a compression of public budgets and a reduction in the per capita availability of public services in a large number of developing countries, but particularly in those of SSA. It is difficult to generalise about the incidence and effects of these expenditure reductions. Outcomes were critically influenced by the political process which has differed between states. In some countries, expenditures were constrained across all sectors. In others, the ways in which the cuts were implemented appears to have seriously damaged the effectiveness of social services. It is clear, however, that both the quality and availability of primary schooling has been a casualty of recession throughout most of Africa, and that it has sometimes been more affected than other parts of the education system.

Important Correlates of Low GERs: Some Empirical Results

It is obvious that the detailed reasons why many children remain out of school in the developing world are complex, and that they will differ from country to country - probably with as much variety as is found amongst the individual historical, political, social and economic circumstances of different nations. However, it is useful to ask whether there are any common characteristics which are shared by countries with low or high levels of primary enrolments. If so, their identification may point to the existence of particular constraints which would need to be overcome if SFA were rapidly to be achieved. Accordingly, an extensive multivariate regression analysis was conducted, using data for eighty-two countries, with the aim of identifying the cross-national correlates of low primary GERs. The results of this analysis, where they have particular relevance for Africa, are summarised below.

Low Per Capita Incomes The analysis confirmed that, in general, countries with low primary enrolment ratios tend to have low per capita incomes.[6] On the supply side, this is partly because poorer countries have higher rates of population growth, and thus proportionately larger school-age populations. Thus, the size of the educational task facing them is greater than for richer countries. Nevertheless, even after allowing for these different population burdens, poorer countries still have a smaller proportion of children at school. It seems, then, that countries which are very poor find the provision

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[6]   The detailed results can be found in Colclough with Lewin 1993: 60-82.

of schooling opportunities for a given proportion of the population more difficult than those which are not: low per capita income affects the capacity of governments to finance and deliver schooling, which causes its supply to be more restricted in low-income States.

Low Public Expenditures on Schooling The relative poverty of African countries thus provides one reason why African primary enrolments are particularly low. However, by no means all low income countries can be said to be facing a budget constraint which is preventing further school provision. In the cases of Nigeria, Uganda, Tanzania, Ghana, Burundi, Burkina Faso, Mali and Liberia a considerably smaller proportion of government expenditure, relative to GNP, was allocated to primary schooling, than the average of 1.6 per cent spent by all low and middle income countries in 1986. Yet all of the countries mentioned above had far to go in order to reach UPE, with GERs varying between 23 and 77 in that year. They can thus be characterised as exhibiting a low commitment to the achievement of UPE

High Unit Costs of Schooling On the other hand, merely increasing the amount of resources devoted to primary schooling by the government would often not be a sufficient condition for reaching UPE. In some countries, the present high levels of unit costs would prevent this. For example, in Burkina Faso and Mali (from the above list), and in Rwanda, Ivory Coast, Mauritania, CAR, Ethiopia, Yemen Arab Republic, and Sudan, the attainment of UPE would require public expenditures on primary schooling equivalent to between 3 and 7 per cent of GNP. This is too high a proportionate allocation for most countries to countenance. The size of the effort required partly explains why enrolments in these countries are currently very low: in each of these cases the publicly incurred primary unit costs, relative to GNP per capita, are considerably higher than the average for all low and middle income countries. Here, then, the national commitment to the achievement of schooling for all may be low, but even if it were otherwise, high unit costs would presently severely constrain the room to manoevre.

The unit cost problem is particularly acute in Africa. It explains why African GERs are only 85 per cent of their levels in other developing countries, after allowing for differences in income and school-age population size: the difference between African and non-African GERs disappears if the unit costs of primary schooling are also controlled. A corollary is that a given proportionate fall in publicly financed unit costs has twice the positive impact upon mean GER values within Africa that it has outside

that continent. For all these reasons, cost-reduction strategies will be particularly important for many African countries if UPE and SFA are to be achieved.

Low Demand for Schooling A further reason why increases in public expenditure on primary schooling are likely to be only part of any successful strategy to achieve universal enrolment, is that the latter is critically influenced, not only by the supply of school places, but also by the demand for them by private households. It is obvious that GERs will not rise if parents decide not to enrol more of their children. In such circumstances, expenditure expansion strategies by governments would either be frustrated by a lack of enrolment response, or would result in a rise in per capita expenditures per pupil enrolled.

Of course, demand and supply conditions and policies mutually interact. Thus, measures to improve the availability of schools in isolated areas will increase demand for them, since the opportunity costs of excessive journey times to schools are much reduced. Equally, measures to improve their quality enhance the returns to schooling, and, thus, demand. Nevertheless, both direct and indirect costs of schooling are often significant, and the ability to meet these is much reduced as household incomes fall. In Africa, declining household incomes partly explain the reductions in enrolments (and in GERs) which have occurred.

Evidence for the importance of demand effects is given by the fact that there is a particularly strong relationship (stronger, too, in African countries than elsewhere) between low GERs and an underenrolment of girls in primary schools. This, indeed, is one of the three most important characteristics associated with countries having low primary GERs. It strongly suggests that the net benefits of educating girls - as perceived by their parents - tend to be lower in poorer countries, which partly accounts for the failure of such countries to attain UPE.

Yet, even after controlling for differences in per capita income, variations in the proportion of girls enrolled explain a significant part of the variance of GERs. It seems, then, that it is not just the market-place, but also custom and culture which are important determinants. In some societies there are dominant customary attitudes which affect the role of women, and their education, separately from the economic benefits which schooling brings. In Africa, for example, the proportion of Muslims in the population is significantly associated with low GERs, after allowing for differences in per capita incomes. The main manifestation of this is the lower proportion of female enrolments amongst such communities. This, then, provides evidence for the fact that

customary and cultural influences in Islamic (and, doubtless, other) societies, help to determine the level of female enrolments - in addition to economic ones - and that these, in turn, are an important further cause of low GERs.

Our empirical work shows that, although low primary enrolments are more usually found amongst the poorer countries, there are important exceptions. Even in Africa there are some extremely poor countries (Lesotho, Madagascar, Togo) with GERs in excess of 100. Equally, although low public spending may indicate a weak 'commitment' to primary schooling, high expenditures (relative to GNP) do not seem to be a sufficient condition for SFA to be achieved: in at least nine African countries, universalizing primary schooling would require the allocation of an insupportably large proportion of public expenditure at current cost levels. The reality is more complex. It is the interaction between these and a range of other variables, including the public and private costs of schooling, and the ideologies which inform both state and private behaviour, which determine SFA outcomes.

Underenrolment and Gender

Providing girls with primary (and secondary) education is critical to economic progress, and it probably provides an even greater set of social and economic benefits than that which is provided by the schooling of boys. It is, then, a profound irony that the benefits of primary schooling are especially high for girls, yet that underenrolments are strongly concentrated amongst them: we estimate that, in Africa, about two-thirds of primary school-aged children who are out of school are girls. Gross enrolment ratios at primary and secondary levels for males and females separately are shown in Table 5. It can be seen that there are enormous differences between countries - with Tanzania, Mauritius, Botswana, Lesotho, Swaziland, Namibia and Zimbabwe having negligible differences between male and female primary enrolments, but with most other countries having much fewer girls than boys enrolled. The unweighted average ratio of female to male enrolments, across all African countries, is 0.78, and in more than one-quarter of the countries the number of girls enrolled is less than two-thirds that of boys. The differences are even stronger at secondary level. Correction of these imbalances - which itself would do much to secure SFA - is one of the most important challenges facing educational policy in Africa in the 1990s.

TABLE 5: Gross Enrolment Ratios by Sex in African Countries[1]

Country	PRIMARY GER					SECONDARY GER			
	M	F	TOT*	F/M Ratio	GNP per cap. 1991($)*	M	F	TOT*	F/M Ratio
SOMALIA	20x	10x	15x	0.50	-	12x	7x	10x	0.58
MALI	30	17	24	0.57	280	9	4	6	0.44
NIGER	37	21	29	0.57	300	9	4	7	0.44
BURKINA FASO	45	28	36	0.62	290	9	5	7	0.56
GUINEA	50	24	37	0.48	460	15	5	10	0.33
ETHIOPIA	46	30	38	0.65	120	17	12	15	0.71
LIBERIA	51x	28x	40x	0.55	-	31x	12x	-	0.39
DJIBOUTI	55**	39**	47**	0.71	-	19**	13**	16**	0.68
SIERRA LEONE	56	39	48	0.70	210	21	12	16	0.57
SUDAN	58x	41x	49x	0.71	-	23x	17x	20x	0.74
MAURITANIA	60	42	51	0.70	510	22	10	16	0.46
CHAD	79	35	57	0.44	210	12	3	7	0.25
SENEGAL	67	49	58	0.73	720	21	11	16	0.52
MOZAMBIQUE	68	48	58	0.71	80	9	5	7	0.56
GUINEA-BISSAU	76	42	59	0.55	180	9	4	7	0.44
BENIN	87	44	61	0.51	380	16	6	11	0.38
TANZANIA	64	63	63	0.98	100	5	4	4	0.80
GAMBIA	75**	53**	64**	0.71	-	-	-	-	-
CENT. AF. REPUBLIC	83	51	67	0.61	390	17	6	11	0.35
MOROCCO	81	55	68x	0.68	1030	42	30	36x	0.71
RWANDA	69	68	69	0.99	270	9	6	7	0.67
UGANDA	76	63	70**	0.83	170	16	8	13	0.50
MALAWI	77	64	71	0.83	230	6	3	4	0.50
NIGERIA	82	63	72	0.77	340	22	17	20	0.77
BURUNDI	79	64	72	0.81	210	6	4	5	0.67
COMOROS	82**	67**	75**	0.82	-	20**	15**	17**	0.75
COTE D'IVOIRE	88x	62x	75x	0.70	690	28**	12**	20**	0.43
GHANA	82	67	75	0.82	400	48	31	39	0.65
ZAIRE	89	67	78	0.75	-	32	16	24	0.50
MADAGASCAR	94	90	92	0.96	210	20	18	19	0.90
NAMIBIA	89	99	94	1.11	1460	30	38	34	1.27
KENYA	96	92	94	0.96	340	27	19	23	0.70
ANGOLA	98	91	94**	0.93	-	-	-	11**	-
ALGERIA	103	88	95	0.85	1980	66	53	60	0.80
ZAMBIA	99	91	95	0.92	-	25	14	20	0.56
EGYPT	105	90	98	0.86	610	92	71	82	0.77
CAPE VERDE	118**	110**	114**	0.93	-	17**	16**	16**	0.94
CAMEROON	108	93	101x	0.86	850	31	21	26x	0.68
TOGO	126	80	103	0.63	410	33	10	22	0.30
SWAZILAND	104**	104**	104**	1.00	-	50**	49**	50**	0.98
MAURITIUS	102	104	106	1.02	2410	53	53	52	1.00
LESOTHO	99	115	107	1.16	580	21	31	26	1.48
BOTSWANA	117**	112	115	1.04	2530	44	47	-	1.07
TUNISIA	122	109	116	0.89	-	50	40	45	0.80
ZIMBABWE	118	116	117	0.98	650	54	46	50	0.85
COLUMN MEANS	80.2	65.1	72.7	0.78	593.9	26	18.8	21.6	0.66

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1. Data are for most recent year available after 1985. All African countries are included excepting those for which no data on primary GERs exist. Countries are ranked from lowest to highest total primary GER.

KEY

-	Data not available
x	Indicates data that refer to years prior to 1986, that differ from the standard definition or refer to only part of a country

GER	Gross Enrolment Ratio
NER	Net Enrolment Ratio
M	Male
F	Female

SOURCES:

Main source

UNICEF, 1994, **The State of the World's Children 1994**, J.P.Grant, Director UNICEF, Oxford University Press, Oxford;

Other sources

* World Bank, 1993, **World Development Report 1993**, "Investing in Health", OUP, New York.

** UNESCO, 1991, **Statistical Yearbook 1991**, Paris.

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The extent to which this would happen **pari passu** with the expansion of school places depends upon the reasons for the existence of female under-enrolment in each particular country. In cases where low female enrolments reflect merely a preference to educate boys in the face of a restricted number of school places, one would expect the male/female enrolment ratio to be responsive to the expansion of school facilities. Such cases, however, may be the minority. More often, a strong imbalance in the sex-ratio of enrolments will be indicative of the presence of systematic biases which depress the demand for the schooling of girls relative to that for boys.

Cross-country regression analysis, such as that summarised in the previous section of this paper, can offer only limited insights about the causes - and, thus, about appropriate policies - at the country level. A study of the relevant literature, however, suggests a highly complex picture of cause and effect, the characteristics of which differ from place to place. Table 6 attempts to synthesise some of the main lessons from the African literature on gender and education, distinguishing between factors influencing the demand for and the supply of schooling opportunities separately. The table suggests a set of underlying conditions which influence the supply and demand for schooling, and a set of effects which they generate (or of symptoms which suggest their presence). These are not completely different in kind for boys and girls, but they usually differ in degree. It will be helpful to begin by considering some of the factors which affect the demand for schooling, using a gender dimension. Three sets of biases which tend to discriminate against the schooling of girls suggest themselves.

Table 6: Specification of Typical Contextual Conditions which lead to Underenrolment, particularly of girls, in developing countries.

Underlying Conditions/Constraints	Proximate Effects/Symptoms
Supply Side:	
Low per capita income and/or low public expenditure on education	Low overall enrolment, but particularly of girls Inadequate quantity or distribution of school places Poor school quality - low teacher pay, high absenteeism - inadequate materials support
High Unit Costs of education and low or moderate public expenditure on education	Low overall enrolments, but particularly of girls Inadequate quantity or distribution of school places
Inappropriate priorities within education	Low enrolments in secondary schooling, thereby reducing incentives to enrol in primary Too much spent on tertiary, relative to primary education
Low Commitment to SFA	Inadequate sanitation/safety at school Insufficient female teachers Lack of single sex schools in some societies Inappropriate curricula or language of instruction for minorities, pastoralists, nomads, migrants, refugees or girls
Culture in State and/or Society hostile to girls' education	Economic opprtunities for females very limited Major imbalance in sex-ratio of school enrolments Compulsory schooling legislation absent or not enforced
Demand Side:	
Low Household incomes	Low overall enrolments, but particularly of girls
High fertility and family size	Family and child care responsibilities reduce participation of girls in schooling
High perceived costs of school attendance	Direct and opportunity costs to parents judged higher than returns, particulary for girls
Low demand for educated male and/or female labour in agriculture, industry or services	Low absolute private returns to schooling for all children or for girls
High levels of illiteracy amongst adults	Ignorance of benefits, particularly of girls' education to farms and families
Culture in families hostile to girl's education	Economic opportunities for females very limited High drop-out of girls from school owing to pregancy/marriage Bride price/dowry favouring benefits to parents from male offsprings Major imbalance in sex-ratio of school enrolments

First, the opportunity costs of sending girls to school are often high, and, at primary level, higher than those for boys. There is a considerable amount of evidence that, whether in school or not, girls of primary school-age spend significantly more time on household chores than do boys.[7] For older children, the time spent working appears to become more equal between the sexes, but the girls tend to spend more time in household activities than in the labour force, whereas the reverse is the case for boys.[8] Girls' labour time is typically spent looking after younger children, cleaning, cooking, collecting fuel and water, and other household tasks. This liberates the time of other family members, and particularly of mothers, for work outside the household. For young children the opportunity costs of school attendance are more strongly those associated with work in the household rather than in the labour force. Thus, owing to the specialization of tasks between the sexes, which appears in many societies to start early, the **de facto** opportunity costs of sending girls to primary school tend to be higher than those for boys.

Second, the perceived economic returns to parents of sending their daughters to school tend to be lower than those for their sons. There is little systematic evidence to show that private returns to education for girls are, in general, lower than those for boys. Nevertheless, in some countries, occupational segmentation in the labour market does sharply reduce women's earnings in comparison with those of similarly educated men. Low perceived returns are often found in patrilineal descent systems, where girls are incorporated into their husband's families, while boys stay with that of their parents.[9] But even where this is not so, the differences between male and female participation rates in the market economy mean that, on average, expected returns to schooling will be lower - from the perspective of parents - for girls than is the case for boys.

Third, strong customary or traditional attitudes often assign greater constraints, or restrictions, upon the education of girls in comparison with that of boys. Girls have special needs for physical protection which may not be acknowledged by the disposition of school facilities. Some national cultures require the privacy or seclusion of girls, and place special value on the protection of their reputations. In some societies convention requires that girls be taught by women rather than men, yet the public school system may not reflect this requirement. In many others, there is a

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[7]   See Davison and Kanyuka 1990 for Malawi; MacSweeney and Freedman 1980 and Sajogyo
         et. al. 1980 for Burkina Faso; Barthel 1989 for Senegal; Green with Baden 1994 for Malawi.
[8]   See Akuffo 1987, for Ghana. Also, outside Africa, see Evenson et. al 1980 for Philippines,
         and Pitt and Rozenzweig 1989 for Bangladesh.
[9]   See Eshiwani 1985, for Kenya; and Okeke 1989, for Nigeria.

fundamental cultural bias in favour of males, strengthened by deeply-rooted social and cultural attitudes which fail to perceive the crucial significance of involving females in the process of development.[10] In such cases, these and other customary attitudes lead to female education being assigned lower value than that of males, in turn reflecting the roles which society expects women to fulfil. For example, the strong association, reported earlier, between the proportion of Muslims in the population and female under-enrolment, after allowing for income differences between countries, indicates the importance of such 'demand side' constraints upon the achievement of SFA.[11] In these cases, then, it is the set of attitudes at the level of the household - which may or may not reflect, or be supported by the prevailing ideology of the state - which would need to be changed if moves towards SFA were to succeed.

Turning now to the supply side, although they are conceptually distinct, supply conditions often interact with those of demand to produce outcomes which exacerbate the under-enrolment of girls. For example, although the under-provision of school facilities in Africa is a critically important determinant of low GERs for both sexes, where journey times to the nearest school are high, it will be the girls who tend not to be sent to school rather than the boys. Again, where school quality has been deteriorating, as in much of SSA over recent years, it will tend to be the girls who drop out first: high rates of teacher absenteeism, in response to salary decline in much of SSA, raises doubts not only about quality, but also about discipline and student safety which are of particular concern to the parents of girls.

Inappropriate policy priorities within education are a further cause of low enrolments at primary level, even in countries where the overall level of public expenditures on education are high by international standards. Here too there may be biases which particularly discourage female enrolment. For example, where the enrolment of girls in secondary or tertiary education is low, and where access to good economic opportunities for primary leavers has long been lost, the incentives for girls to enrol at primary level - or to perform well, once enrolled[12] - will be less than those for boys.

There are, however, many cases where supply-side policies have more overtly discriminated against the interests of female pupils. The literature is replete with

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[10] See Brock and Camish 1991, for Sierra Leone and Cameroon, Csapo 1981, for Northern Nigeria and Green with Baden 1994, for Malawi.

[11] The point here is not that Islam itself necessarily underplays the importance of female education: the traditional antagonism of Moslems to Western modes of schooling is often a result of parental misconceptions of Islamic views (see Csapo 1981).

[12] See Mbilinyi et. al. 1991, for Tanzania.

examples where schools without separate, or adequate, facilities for girls, or where there were few, if any, female teachers, consistently failed to enrol sufficient numbers of female pupils.[13] In some countries of Africa single-sex schools have a positive impact upon female enrolment, and upon achievement within them,[14] notwithstanding the danger, reported by some observers, that they may reinforce traditional attitudes toward female roles.[15] There are many examples, too, of gender stereotyping within curricula, textbooks and subject choices which either confirm or further narrow the chances of girls using their schooling to overcome the economic and social constraints which will face them in adulthood.[16]

Policy Choices

All attempts to explain the problem of underenrolment in African primary schools - amongst both boys and girls - in mono-dimensional terms are likely to prove faulty. In some countries many girls, and sometimes the majority of those who are presently out of school, are not enrolled simply because there is no accessible school for them to attend. Equally, there are many boys who remain unenrolled because the direct costs of their attendance are judged too great by their families, or because their labour is needed on the family farm.

There are, then, a wide range of supply-side and demand-side factors which affect enrolment outcomes for both girls and boys. However, the evidence indicates that, in most countries, there are sets of economic, social or political factors which tend, for

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13   The case of Botswana, where enrolments amongst boys and girls are roughly equal, is interesting here. Some authors (eg Duncan 1989) point to the importance of having secured a high proportion of female teachers, and of the success of government policies more generally, in achieving this gender parity in enrolments. Others, however, point to the widespread occurrence of female-headed households in Botswana, which has led to daughters being educated equally with sons (see Hyde 1993). Although there are negative demand pressures arising from some girls being needed for household tasks, there is an equally strong tradition of boys' labour being needed at the cattle posts, which are situated away from the main settlements and are thus not served by schools. That these latter factors have dominant importance in explaining enrolment outcomes seems likely in view of the fact that similar social and economic structures are found in Lesotho and Namibia, and, to a lesser extent, in Swaziland, where, in each case, the F/M enrolment ratio is high (See Table 5).

14   See Tadreg 1990, for Tanzania.

15   See Hyde 1993; also Pittin 1990 for Northern Nigeria.

16   See Eshiwani 1985 and 1989, for Kenya, Duncan 1989 for Botswana, Brock and Camish 1991 for Sierra Leone and Cameroon, Haddad 1991 for Malawi, and Makoni 1991 for Zimbabwe.

any particular level of overall enrolments, to depress those of girls relative to boys. The importance of each of these factors varies sharply between countries, and even between regions within countries. Accordingly, country-level analyses are needed in order to determine the balance of causes - and, thus, the selection of appropriate policies to tackle them - in each case.

In countries where significant under-enrolment of both sexes still exists - ie in about two-thirds of African countries in 1990 - policies to secure increased access will help both girls and boys. In all cases, the particular instruments selected to promote enrolment expansion will need to be gender-sensitive if larger numbers of girls are to be enrolled. However, the general question as to how African school systems can best be expanded and enhanced over the medium term, given the economic problems presently faced by most countries, remains critical. Are these goals beyond the reach of much of Africa? If not, how can they best be achieved? These questions are explored below.

The Impact of Policy Reforms on Costs and Resources: **Examples from SSA**

Case-studies from Africa and elsewhere indicate that there is much that can be done by States in order rapidly to increase the overall level of enrolments. Zimbabwe's experience, for example, in managing to double primary enrolments in the early 1980s, was remarkable. After only two years of independence the primary GER had risen from 60 to around 100. Over the same years, the number of girls enrolled increased from around 80 per cent of that of boys to approximate equality. Thus, within a very short period of time, the system was transformed from one in which resources for education were profoundly maldistributed, and heavily oriented towards the white community, to one where there is open access to education for all, where primary schooling is compulsory, and where all who so wish may proceed to secondary school after completing Standard 7. The main reforms which facilitated these achievements were the introduction of double-session teaching in urban and some rural schools, the extensive use of untrained teachers, the use of low-cost teacher-training methods which minimized the time spent by trainees in college and maximized that spent in the schools, increases in class size, rationalization of the curriculum, and a devolution of financial responsibility to communities - for the construction of schools, and to contribute to school expenses. The main difficulty with these reforms is that they have resulted in a highly differentiated quality of schooling which, because of the devolved means of

financing, is strongly related to the household incomes and general prosperity of the communities served by particular schools. Nevertheless, there are many positive aspects to the experience, which pose a sharp challenge to those who believe that administrative and fiscal constraints must inevitably frustrate rapid moves towards SFA in the developing world.

The cases of Ghana and Senegal are also instructive. These are examples of African countries which have been exceptionally hard hit by recession. Both have faced a chronic lack of public resources and their governments have introduced educational and fiscal reforms, in the face of low, and declining, primary enrolments. In Ghana, where the primary GER fell from 80 to around 70 by the mid-1980s, efficiency savings were obtained by reducing the length of the pre-university school cycle, by cuts in administrative staff in schools, and by introducing double-shifts at primary level. Some costs, as in Zimbabwe, were passed from the state to parents and communities. As a result primary enrolments increased by one-fifth over the first two years of the reforms, for little additional budgetary cost.

Senegal is one of those West African countries where the major constraint on educational expansion has been the high level of recurrent costs: teachers' salaries were, on average, 12 times as high as percapita incomes in the early 1980s - more than twice the average for the rest of Sub-Saharan Africa at that time. Senegal's reforms sought to reduce unit costs in a number of different ways: the proportion of low-cost assistant teachers employed was increased by one-fifth; large numbers of educational administrators (equivalent to about 10 per cent of the teaching force) were redeployed as teachers (as in Ghana) at no net additional costs; double-shift teaching was widely introduced in urban schools, and multi-grade methods (whereby each teacher is responsible for more than one class) were introduced in rural schools. These and other measures led to a sharp increase in primary enrolments with, according to recent evaluations of progress, no noticeable decline in school quality.

These, and other case-studies from outside Africa (China, Sri Lanka, Colombia) show that in some countries which are poor, and where initial enrolment levels are very low, UPE - and, perhaps, SFA - can be attained over comparatively short periods of time if a determined and imaginative approach to policy change is adopted. There is, of course, a potential trade-off between the achievement of budgetary savings and the maintenance of school quality. It is necessary to identify policies which hold promise of increasing the capacity to expand enrolments, whilst at the same time giving greatest benefit (or doing least harm) to the quality of schooling. However, if additional

capacity to enhance enrolments is to be gained, one or more of four policy objectives will need to be adopted: these are, respectively, to reduce the unit costs of schooling by affecting teacher costs-per-student; to reduce the total costs per school leaver via changes to the organization and length of the school cycle; to redistribute expenditures towards primary schooling from other items, both within education and from other sectors; and, finally, to raise additional financial resources for education in general, and for primary schooling in particular, through taxation, various forms of cost-recovery or other fiscal policies. Each of the measures which have been introduced by reforming governments, in Africa and elsewhere, in order to create additional resources for primary schooling fall under one or other of these headings. This international experience shows that a very large range of possibilities exists, and that much can be done to expand, or to improve the quality of primary schooling opportunities, even where resources are severely limited.

Can Domestic Policy Reforms Achieve SFA in Africa?

In order to examine the prospects and potential for enrolling all children in primary schools in developing countries, Educating All the Children developed a simulation approach which was applied to each country separately. Using this approach, the enrolment and cost implications of achieving UPE and SFA were estimated. National data for enrolments, population growth and a wide variety of parameters which determine educational costs were utilized. An enrolment transition model was developed for these analyses, which permits investigation of the cost implications of the expansion of school systems under present, or changed, policies. In what follows, the results for SSA are abstracted, and briefly discussed.

Based upon case study evidence from six countries, and upon results from the wider research literature, a number of efficiency reforms were selected which appear to offer the most cost-effective means of financing further school expansion. These reforms are summarized in Figure 1. They include a group of reforms to save costs, via increasing the extent of double-shift teaching, increasing the size of classes in cases where there is scope for this, and increasing the proportion of teacher-helpers and assistants. A second group of reforms shifts more of the costs of education to households, by encouraging some increase in private schooling, and by passing on more of the costs of tertiary education to users. In addition, a number of quality-enhancing reforms are introduced, in order to simulate the difference between the mere expansion of existing

primary systems to UPE levels, and the substantial qualitative improvement necessary, in most countries, for SFA to be achieved. These include a substantial reduction in present rates of repetition and drop-out, the allocation of a minimum amount of resources per child for learning materials, and increased real expenditures on teachers' salaries. This set of measures is sensitive to the initial circumstances in each country, and it identifies a minimum set of conditions necessary to satisfy the qualitative criteria of SFA.

Enrolments. The results of the national simulations for the required expansion of primary enrolments are summarized in Table 7, which compares Africa with the other major developing regions. It can be seen that Africa, and particularly SSA, faces a much greater challenge in achieving UPE and SFA than other parts of the world. Primary enrolments in SSA would have to double over the decade to 2000, and to increase by 150 per cent by the year 2005 if SFA were to be achieved. This translates into an annual required rate of growth of enrolments of around 7 per cent over the whole period - a rate which is 3 or 4 times greater than that needed in the non-African developing country regions. This is the result of SSA having, at present, much lower

Cost Saving

1. Reduce teacher-pupil ratio by 15% over 10 years as a result of the introduction of double-shifting at primary and secondary levels.

2. Increase class-size by 5 pupils/class for all cases where the current value is 40 or less in primary and secondary schools, and 30 or less in teacher training and vocational schools, over a 10 year period.

3. Reduce primary teachers' unit costs by 10% over a 10 year period through increased use of self-study, teaching assistants, and community helpers.

Cost Shifting

4a. Decrease unit recurrent costs of primary and secondary schools by 10% over a 10 year period by increasing private contributions.

4b. Decrease the capital costs of classroom construction at primary level by 50% over 5 years through increased community support.

5. Freeze higher education subsidies at current levels.

Quality Enhancing

6. Increase annual expenditures on learning resources to $5 per child over 5 years at all educational levels in those case where they are less than $5.

7. Increase teachers' salaries by 15% in real terms over a ten year period.

8. Reduce repetition rates to 25% of existing values at all levels over 10 years whilst keeping drop-out unchanged and allowing promotion rates to increase concomitantly.

9. Reduce drop-out rates to 50% of existing values at all levels over 10 years and allow promotion rates to increase concomitantly.

TABLE 7 Primary Enrolments and Enrolment Ratios in Developing Countries, and the Enrolment Implications of UPE and SFA.

	Gross Enrolment Ratios (1986) population weighted (a)			Estimated Primary Enrolments (thousands)	Additional Enrolment for UPE and SFA (thousands)				Average Annual Growth of Enrolment Required from 1990			
	Males	Females	Total	1990 (b)	UPE 2000	SFA 2000	UPE 2005	SFA 2005	UPE 2000	SFA 2000	UPE 2005	SFA 2005
SSA	81	65	69	58,527	58,399	62,124	82,143	85,877	7.17	7.50	6.02	6.21
North Africa	99	78	89	14,432	5,326	5,276	7,399	7,257	3.19	3.16	2.80	2.75
Asia	117	96	107	345,790	41,043	68,102	56,566	90,580	1.13	1.81	1.02	1.56
Latin America	110	106	108	72,844	4,897	15,219	7,907	22,094	0.65	1.72	0.69	1.78
Other	101	99	100	30,627	4,241	5,041	5,650	6,484	1.31	1.54	1.14	1.29
All LDCs	111	93	101	522,219	113,906	155,763	159,666	212,293	1.99	2.64	1.79	2.30

NOTES: (a) GER weighted by the number of children aged 6-11 in 1986.

SOURCE: National Simulations of UPE and SFA.

primary GERs and considerably higher rates of population growth than other regions. By consequence, about half of all new primary places required for UPE will be in SSA (even though, in 1990, that region had only about 11 per cent of total developing country primary enrolments), and the SSA proportion of all the additional enrolments needed for SFA is about 40 per cent.[17] Thus, a very large part of the world-wide problem of achieving schooling for all lies in SSA.

The distribution of the quantitative challenge as between different countries in SSA is shown in Table 8. Just as at the world level, the burden is very unequally shared. There is only a small handful of countries where SFA appears to be within relatively easy reach, requiring enrolment growth of no more than 3 or 4 per cent per year. In two-thirds of the 35 SSA countries shown, on the other hand, annual enrolment growth in excess of 6 per cent would be required to reach SFA by the turn of the century, and, in fully one-third of the cases, growth rates in excess of ten per cent, annually, would be required. In principle, even these latter rates would not be impossible to attain: we reported earlier that Zimbabwe doubled its primary enrolments over a two-year period in the early 1980s. A number of other countries - Botswana, Malawi - have achieved sharp increases in enrolments of up to 20 per cent in particular years, often in response to reductions in school fees. Furthermore, as shown by Table 1, SSA as a whole achieved an annual compound rate of growth of primary enrolments in excess of 8 per cent per year over 1975-80 (which now must be repeated in the region as a whole if SFA is to be achieved by the end of the century).

Nevertheless, the scale of the task is daunting for some of those farthest from SFA. The countries facing the greatest proportionate challenge, where annual enrolment growth rates of between 11 and 28 per cent are needed - Sudan, Central African Republic, Guinea, Ethiopia, Chad, Burkina Faso, Niger, Liberia, Mali, and Somalia - are often shackled by the combined effects of poverty, drought and war. Given the scale of enrolment increases required it is, as we shall show, extremely unlikely that the task can be achieved in those countries in the absence of substantial external support.

Costs. The criterion which we have proposed for the achievement of 'schooling for all' is 'the provision of a school system in which all eligible children are enrolled in

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[17]   This difference is mainly because repetition rates in Africa are about twice as high as in other developing country regions; thus the reductions in rates of repetition arising from the quality-enhancing reforms used in our simulations, are able to absorb a greater proportion of the additions to the school-age population than is possible elsewhere.

SSA	Required Annual Growth in Enrolments for SFA		Required Annual Growth in Enrolments for UPE	
	1990-2000	1990-2005	1990-2000	1990-2005
Mauritius	-2.28	-1.75	-1.27	-1.07
Zimbabwe	0.15	1.18	0.27	1.17
Botswana	1.53	1.96	1.84	2.18
Gabon	1.58	2.39	2.16	2.73
Cameroon	1.91	2.41	2.81	3.04
Lesotho	2.07	2.42	1.77	2.15
Togo	2.97	3.12	3.40	3.45
Madagascar	3.06	3.29	1.45	2.06
Zambia	3.56	3.50	3.82	3.72
Kenya	4.11	4.05	4.12	4.05
Ghana	5.87	4.92	6.54	5.51
Mozambique	5.93	5.02	4.91	4.32
Zaire	6.02	5.03	5.87	4.99
Nigeria	6.21	5.33	6.24	5.41
Cote d'Ivoire	6.25	5.28	7.05	6.03
Angola	6.40	5.32	3.55	3.30
Uganda	6.84	5.70	6.95	5.87
Tanzania	7.63	6.49	7.93	6.85
Senegal	8.10	6.36	8.77	7.01
Burundi	8.57	6.95	9.42	7.73
Malawi	9.24	7.68	7.74	6.52
Benin	9.39	7.55	8.12	6.69
Mauritania	9.55	7.42	10.50	8.31
Rwanda	10.02	8.47	9.00	7.67
Sierra Leone	10.61	8.50	9.44	7.66
Sudan	10.69	8.11	10.51	8.13
Cen.African Rep.	10.94	8.71	7.58	6.17
Guinea	15.56	11.12	15.89	11.85
Ethiopia	15.59	11.38	13.97	10.23
Chad	15.71	11.79	12.18	9.18
Burkina Faso	16.15	11.86	16.36	12.27
Niger	17.13	12.52	17.25	12.82
Liberia	17.45	12.91	16.71	12.57
Mali	20.76	14.83	19.31	14.13
Somalia	27.24	19.43	25.12	18.02

SOURCE: Calculated from national simulations of UPE and SFA.

schools of at least minimally acceptable quality'. The mere achievement of UPE does not satisfy this criterion. This is both because the quality of schooling currently available is often extremely weak, and because the frequent incidence of high levels of repetition and drop-out imply, in the former case, that many school places are occupied by over-age children, and, in the latter case, that many school-age children leave before completing their primary schooling. Thus 'schooling for all' will be more costly than UPE to the extent that the provision of school inputs, such as teaching materials or salaries, needs to be increased, and to the extent that enrolments, as drop-out rates are reduced, have to be higher than would be implied by GERs of 100, in

TABLE 9   Achieving UPE and SFA by the year 2000: Costs and Enrolments in years 2000 and 2005 compared with those of 1990. All SSA countries combined.

		Projected position in 1999/2000 at each reform level												Projected position in 2004/2005 at each reform level			
	BASE 1989/90	UPE No reforms	1	2	3	4a	4b	5	6	7	8	9 SFA		UPE No reforms	Cost-Shifting 1-3	Cost-Saving 1-5	SFA 1-9
1 PRIMARY ENROLMENTS (Grade 1-6)																	
1987/90 = 100 CURSOR >>	100	200	200	200	200	200	200	200	200	200	185	206		240	240	240	247
	58528979	11910272	11910272	11910272	11910272	11910272	11910272	11910272	11910272	11910272	10848475	12063368		14065094	14065094	14065094	144372759
2 GROSS ENROLMENT RATIO (6-11 year olds) (%)	69	100	100	100	100	100	100	100	100	100	93	104		102	102	102	106
3 UNIT COSTS (US$)																	
3.1 Primary	41	40	35	33	30	28	28	28	31	34	34	35		39	30	28	34
3.2 General Secondary	145	134	121	115	115	103	103	103	105	114	113	112		134	115	104	112
3.3 Teacher Training	228	211	190	173	173	173	173	173	174	190	188	185		211	174	174	185
3.4 Vocational	145	134	121	108	108	108	108	108	109	119	118	116		134	108	108	116
4 EXPENDITURE (US$ mn)																	
4.1 Primary (investment)	179	467	407	373	373	373	373	190	190	190	143	199		429	345	179	179
4.2 Secondary (investment)	76	260	226	201	201	201	201	201	201	201	206	364		337	254	254	328
4.3 Higher Educ.(investment)	57	80	80	80	80	80	80	58	58	58	58	58		95	95	58	58
4.4 Total (investment)	311	807	713	654	654	654	471	449	449	449	407	621		861	694	491	565
4.5 Primary (recurrent)	2394	4630	4071	3828	3556	3246	3246	3246	3615	4029	3721	4162		5544	4254	3882	4959
4.6 Secondary (recurrent)	1839	2713	2459	2333	2333	2155	2155	2155	2176	2373	2142	2624		3838	3280	3019	4030
4.7 Higher Educ.(recurrent)	938	1312	1312	1312	1312	1312	1312	971	971	971	972	971		1552	1552	993	993
4.8 Total (recurrent)	5171	8655	7841	7473	7201	6713	6713	6373	6762	7374	6834	7757		10934	9086	7894	9982
5 RESOURCES (US$ mn)																	
5.1 Total Recurrent Education	5171	7222	7222	7222	7222	7222	7222	7222	7222	7222	7222	7222		8542	8542	8542	8542
5.2 Recurrent Ed. Deficit	0	-1598	-951	-734	-594	-438	-438	-370	-497	-710	-594	-1021		-2653	-1174	-596	-1999
5.3 % of Total Rec. Resources Req'd	12%	14%	13%	12%	12%	11%	11%	10%	11%	12%	11%	12%		15%	12%	11%	13%
6 CUMULATED ANNUAL EXPENDITURES/RESOURCES (US$ mn)																	
6.1 Total Recurrent Educ. Expenditure	19161	19161	14687	12660	11166	8484	8484	8610	8749	12116	9149	14223		46107	31321	21787	38492
6.2 Total Recurrent Educ. Resources	11281	11281	11281	11281	11281	11281	11281	11281	11281	11281	11281	11281		26970	26970	26970	26970
6.3 Recurrent Ed. Deficit	-8780	-8780	-5232	-4036	-3266	-2410	-2410	-2035	-2735	-3907	-3269	-5618		-21223	-9392	-4768	-15994

Notes:

1. This table is derived by aggregating each of the national simulations for individual countries in SSA. South Africa and Namibia are not included, owing to a lack of data.

2. GERs and Unit Costs (lines 2 to 3.4) are averages for SSA, calculated from national values weighted by the size of the 6-11 years age-group in each country.

3. Total capital and recurrent expenditures are as derived by simulations.

4. Recurrent resources available for education (line 5.1) are assumed to increase at the same rate of growth as that of the population.

5. Expected deficits shown (lines 5.2 and 6.3) exclude countries with surpluses. Thus, for example, line 5.2 is not the simple difference between lines 4.8 and 5.1. It cannot be calculated from information shown in the Table. Similarly so for line 6.3.

6. Each reform affects costs and enrolments in ways which depend upon the characteristics of the reform concerned (see text).

SOURCE: Calculated from national simulations of UPE and SFA.

order to allow for however many places continue to be occupied by those who are over-age.

The qualitative improvements to school systems which are required can be at least partly financed in most countries by 'efficiency' reforms to the school system, which either reduce costs, or shift them to other parties. The first five of the reforms shown in Figure 1, the impact of which has been simulated for each African country, reduce publicly incurred costs, either by achieving efficiency savings or by shifting more of the costs of education to private households. The last four reforms, on the other hand, are designed to improve the quality of primary schooling, and provide a proxy for the differences between UPE and SFA.

The impact upon costs of the move to UPE in SSA, and the effects of introducing each of the nine reforms leading to SFA are summarized in Table 9. The Table can be understood first by reading down the columns. The first column shows the position in the base year, 1989/90. Primary enrolments of 58 million give a weighted GER for all SSA countries of 69, as indicated in earlier tables. The total capital and recurrent expenditures are derived for each country from the relevant cost and enrolment parameters in each case. These are then summed from each of the national simulations to give the total investment and recurrent expenditures shown in rows 4.1 to 4.8 in Table 9. Unit costs (rows 3.1 to 3.4) are population weighted for all SSA, and calculated, again, from each of the national simulations. Recurrent resources are assumed equal to expenditures for each country in the base year.

The second column (UPE, no reforms) shows the situation in 1999/2000 if GERs in SSA were all to be increased to 100 by that date, with no changes in any of the cost parameters affecting education systems in the region. Weighted unit costs do change, however, owing to enrolments in each country growing at different rates - in turn a consequence of differences in base-year enrolment ratios and in the rates of growth of the school-going age-group over intervening years. The next ten columns show the effects of the progressive implementation of each of the policy reforms shown in Figure 1 on costs and expenditures by the year 1999/2000. These outcomes are cumulative, in the sense that each reform includes the effects of the previous ones. The final column in this part of the table (reform 9) includes the effects of the previous ones, and thus represents SFA at the turn of the century. In a similar fashion, the last four columns of the table show the position in the year 2004/5 for UPE, and after implementing reforms 1-3, 1-5 and 1-9, respectively.

SSA: Public Sector Rec.Costs of UPE and SFA in comparison with 1990
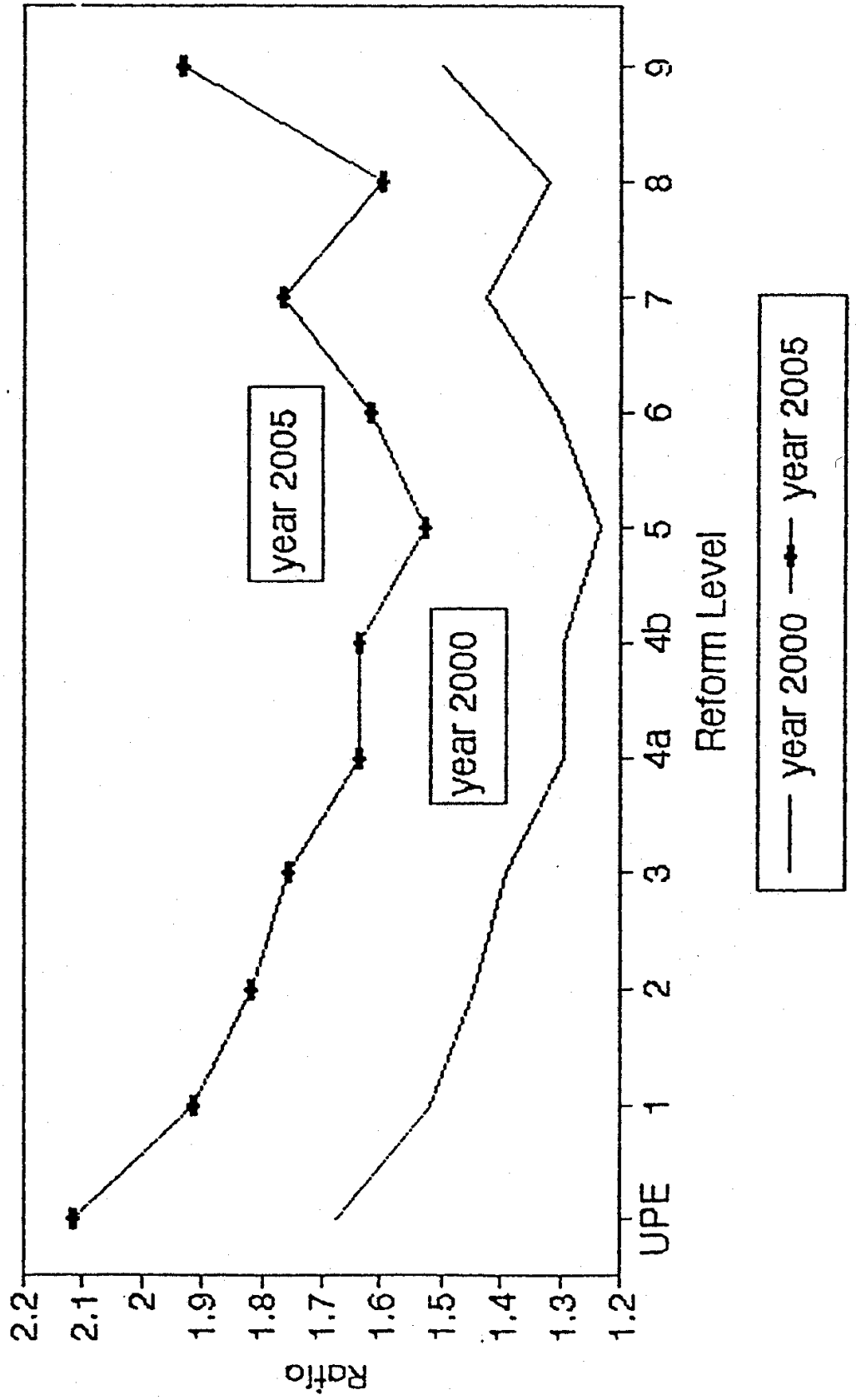
The results show that the recurrent costs of education would be sharply increased as a result of a move to UPE in SSA over the present decade. Figure 2 (based upon row 4.8 of Table 9) shows that UPE would require recurrent expenditures which, by the year 2000, would be 70 per cent greater than those incurred in 1990, and that they would have more than doubled in real terms by the year 2005. The introduction of the efficiency reforms, however, changes this picture substantially. The group of cost-saving reforms (1-3) reduce the cost increase by the end of the century to around 40 per cent, and the cost-shifting reforms (4 and 5) reduce it further, to around 23 per cent. This implies that it would be possible to achieve UPE in all countries of Sub-Saharan Africa for scarcely more than 20 per cent greater expenditures, in real terms, than were spent on education in 1990 - provided each country implemented the efficiency reforms as and where necessary.

Nevertheless, that would leave African countries with school systems of very low quality. In many schools, the teaching process would not be viable in the absence of qualitative and quantitative improvements in resources, to levels well beyond their current availability. Accordingly, qualitative reforms are necessary which will push up the costs of schooling in most countries. These are simulated by reforms 6-9, which increase the materials support to a minimum of $5 per child, and which improve the real level of teachers' salaries by 15 per cent over the period to the year 2000. The introduction of automatic promotion and the reduction of drop-out (in turn facilitated by the qualitative improvements mentioned, by curriculum reform, and by measures to stimulate demand) on balance increase enrolments beyond UPE levels (Table 9), which further add to total educational costs. As shown in Figure 2, the attainment of SFA by the year 2000, as proxied by the implementation of all the reforms 1-9, would cost about 50 per cent more than 1990 actual educational expenditures. It is important to note that this cost, though large, is about 10 per cent **less** than that of UPE in the absence of policy reforms. Thus, the introduction of the

set of reforms proposed here would be capable of financing the improvements to both the quantity and quality of primary schooling which separate UPE from SFA.

The total additional recurrent costs of achieving UPE in SSA by the end of the century would, in the absence of policy reforms, amount to some $46 billions, in 1986 prices, over the years 1990-2005. These costs (shown in row 6.1, Table 9) are additional to 1990 expenditures (running at about $5 billions), cumulated over the whole fifteen year period, and they include the minimum cost of enrolment increases at secondary level which the move to UPE is likely to bring. Capital costs are excluded from these estimates: our work shows that these would be small, compared to the recurrent cost burden. SFA could be achieved for the somewhat lower additional cost of $38 billions provided that countries were prepared to introduce the full package of cost-saving and cost-shifting reforms which we have simulated.

Means of Financing. Given a willingness to implement the policy reforms, eleven countries in SSA would be able to meet these costs of SFA,[18] provided that real spending on education increased at least as fast as their populations, over the period 1990-2005. This, of course, is a demanding requirement, particularly for the poorer countries of Africa. And even so, 24 countries would still incur combined deficits (in the sense of unfinanced expenditures on education) of around $16 billions over the period to 2005, unless education spending increased more rapidly than this (row 6.3 of Table 9).

Table 10 shows the distribution of these expected deficits amongst the different countries of Sub-Saharan Africa. It also explores the implications of reallocating some recurrent resources from defence, or other sectors, to education, as an additional means of financing SFA. The analysis suggests that the combined deficit in 2005 could be further reduced to around $10 billions, in 22 countries of SSA, if the proportion of the recurrent budget allocated by each country to education in the late 1980s were increased by 2 percentage points, and kept constant over 1990-2005.

The table shows that the largest financing gaps over the period to 2005 will be in Ethiopia, Sudan and Mali - each of which are likely to face deficits in excess of $1 billion over the fifteen years, even if all policy reforms and budgetary reallocations were implemented. However, the countries facing the greatest **relative** financing gaps are a different group. As shown by the final column of Table 10, which ranks countries by the size of the financing gap **per child** aged 6-11 years, the countries with the

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[18]   These countries are listed in the notes to Table 10.

greatest burdens are Liberia, Central African Republic, Chad, Somalia, and Burkina Faso, in addition to the three countries mentioned above. In each of these countries, the size of the financial gap, over the whole fifteen years 1990-2005, would vary between $280 per child in Sudan and $850 per child in Liberia.

It will come as no surprise to learn that the countries with the greatest relative financing gaps, as shown in Table 10, are also those where the greatest proportions of girls relative to boys remain out of school. A comparison of the data shown in Table 5 with those in Table 10 reveal that the (unweighted) average ratio of girls to boys enrolled for the first eight countries in Table 10 (Liberia to Sudan) is 58 per cent; for the middle eight countries (Malawi to Senegal) it is 72 per cent; and for the bottom eight countries (Mauritania to Tanzania) it is 82 per cent. By contrast, in those countries which should be able to finance SFA domestically (the eleven countries mentioned in the footnote to Table 10), the ratio is 91 per cent. Thus, those countries which will have most difficulty in financing SFA domestically, are also those where the relative challenge of enrolling girls in primary schooling is greatest.

Implications for aid flows

It is obviously not possible to forecast the precise magnitude of aid transfers required to finance SFA throughout Africa. Aid requirements will depend upon what African countries actually do themselves, in order to increase expenditures on education , and to reform both their systems of schooling and the methods whereby they are financed. However, our analysis suggests that the $10 billions (in 1986 prices) mentioned above represents an absolute minimum estimate for foreign resources required over the years to 2005. Aid would need to be greater than that to the extent that countries were unable to introduce all the efficiency reforms, that the rates of economic growth were lower than expected, or that the required budgetary reallocations towards education, and away from defence or other sectors, were not achieved. Even if these (and other) conditions were satisfied, additional aid would still be needed to help countries other than the 24 deficit cases to introduce the reforms necessary for them to achieve SFA.

For these, and other reasons, our work suggests that the likely additional aid needed by the countries of Sub-Saharan Africa over 1990-2005 would amount to around $15 billions. Most of this would need to be recurrent support, directed towards the countries which had not achieved UPE by 1990, and allocated on a country basis in proportions as roughly suggested by Table 10. Target flows of an additional $1 billion

(1986 prices) per year are thus implied, which, in 1990 price terms amounts to some $1.25 billions, annually, over 15 years (Table 11 provides a summary).

Additional resources of this magnitude would increase annual aid to education in SSA

TABLE 10   Current Recurrent Budgetary Implications of Financing SFA: All Deficit Countries settling separately

Region	Country	GER 1986	Cumulated Deficit 2000 (All Reforms 1-9 Implemented)				Cumulated Deficit 2005 (All Reforms 1-9 Implemented)			
			Unchanged Budgetary Allocat. (US$ mn)	Budgetary Allocation Increased by 2%			Unchanged Budgetary Allocat. (US$ mn)	Budgetary Allocation Increased by 2%		
				Total (US$ mn)	Per Child (b) (US$)			Total (US$ mn)	Per Child (b) (US$)	
SSA	LIBERIA	35	181	164	376		405	373	856	
	CENTRAL AFR. RE:	66	151	119	252		383	327	691	
	MALI	23	457	403	257		1138	1045	667	
	CHAD	43	323	289	319		623	568	628	
	SOMALIA	15	185	181	148		468	461	377	
	BURKINA FASO	31	180	149	100		567	504	337	
	ETHIOPIA	36	1723	1507	172		3177	2814	321	
	SUDAN	49	838	525	125		1710	1181	281	
	MALAWI	65	95	11	8		518	382	278	
	RWANDA	65	176	127	94		449	361	268	
	NIGER	29	108	91	74		303	277	225	
	ANGOLA	93	185	0	0		748	346	209	
	SIERRA LEONE	54	57	42	62		156	136	202	
	GUINEA	29	83	53	44		245	206	170	
	BENIN	64	47	30	37		141	104	128	
	SENEGAL	58	74	20	16		224	131	107	
	MAURITANIA	51	2	0	0		.122	32	95	
	MOZAMBIQUE	84	107	84	33		266	224	88	
	UGANDA	70	97	57	18		267	204	64	
	MADAGASCAR	121	11	0	0		182	57	29	
	ZAIRE	76	157	29	5		359	147	24	
	NIGERIA	77	379	0	0		2641	194	10	
	BURUNDI	59	0	0	0		175	0	0	
	TANZANIA	69	0	0	0		723	0	0	
	TOTAL		5618	3881	2140		15994	10074	6057	

NOTES: (a) Only those countries expected to show deficits after implementation of all reforms 1-9 are shown in this table. Eleven countries in SSA (excluding South Africa and Namibia) are expected not to show such deficits, and thus to be able fully to finance SFA domestically, without increasing budgetary allocations to education, providing all cost-saving and cost-shifting reforms were introduced. These countries comprise Botswana, Cameroon, Cote d'Ivoire, Gabon, Ghana, Kenya, Lesotho, Mauritius, Togo, Zambia, and Zimbabwe.
(b) Total Deficit divided by the number of children aged 6-11 in 1990.

SOURCE: National simulations of UPE and SFA.

by about two-thirds, in real terms, above recent levels. That is a very substantial increase, but it would no more than compensate for the downward trend in such aid which has occurred since the mid-1970s (OECD 1990). Pledges made during 1990/91 have been significant, and up to half the additional resources needed for education, world-wide, have already been allocated by the World Bank. However, some change in the composition of Bank lending, towards a greater utilization of IDA financing, and in particular towards greater support for education in Africa, is needed if these funds are genuinely to support SFA.

Conclusion: The Integration Supply-side and Demand-side Approaches

Even if the necessary resources could be found, that would be the start, rather than the end of the task in hand. There are many reasons to fear that the achievement of SFA in Africa will be delayed, or that its costs will be higher than need be. It will require a more efficient approach to programme management and policy implementation on the parts of both aid agencies and national governments than has been typical in the past. As regards the northern part of the bargain, it will be necessary to review afresh the geographical disposition of educational aid: at present, for example, very few World Bank funds finance programmes in Sub-Saharan Africa (or in the educationally most disadvantaged countries more generally). Most go to middle income states which can afford repayments on close to commercial terms. It will also be necessary to shift away from capital aid towards recurrent support, to substitute southern for northern purchasing wherever possible, and to ensure that aid genuinely supports SFA policy, assisted by a policy dialogue leading to specific agreement on the timing and phasing of national policy reforms.

Equally, in African countries themselves there are a range of constraints that are likely to hinder progress. The process of policy reform often involves offending the interests of some groups - including the parents of children who attend the best schools - in ways which not all governments will find easy. Planners and administrators would need to move rapidly, often devolving more of their authority to the local level. Teachers would be better paid, but would also have more responsibilities than in the pre-reform period, which may not always be easy for them to accept. There are also technical and economic reasons which might prevent the reform process from delivering quite as much as expected in some country circumstances.

Table 11   Summary of Additional Recurrent Costs of Achieving SFA and Financing Requirements, 1990-2005 (US$ billions, 1986 prices)

	SSA	
ADDITIONAL COSTS 1990-2005[a]		
UPE BY 2000	46	
COST SAVING/SHIFTING REFORMS[b]		-24
QUALITY ENHANCING REFORMS[b]		+17
SFA by 2000[b]	39	
TOTAL DEFICITS[c]	-16	
Countries below UPE 1990		-16
Countries at UPE 1990		0
DEFICITS IF ED. BUDGET INCREASED 2%[d]	-10	
Countries below UPE 1990		-10
Countries at UPE 1990		0
ADDITIONAL AID 1990-2005	15	
Countries below UPE 1990		14
Countries at UPE 1990		1
ADDITIONAL ANNUAL AID 1990-2005		
1986 Prices	1	
1990 Prices	1.25	

Notes and Sources:

a) These are the cumulated additional recurrent costs, as compared with those of 1990, for each year of the period. See Table 8, line 6.1.

b) All reforms are here implemented in all countries.

c) These are expenditures on education which remain unfinanced after expected budgetary growth and implementation of all reforms. See Tables 8 and 9.

d) See Table 9.

Finally, supply-side and demand-side policies must go hand in hand. The policies to improve both the quality and the availability of primary schooling will, of course, have effects upon demand. Reductions in the average walking distance to school sharply reduce the private costs (and, for girls, the dangers) of attendance. Automatic promotion reduces the time it takes to graduate from school. Qualitative improvements make schools more enjoyable, and their effects more productive. Each of these changes will help to stimulate demand.

Nevertheless, where demand for schooling, particularly for girls, is very low, more direct policy measures will also be needed in order to attain SFA. Critical, here, will be measures to mitigate the costs of school attendance. Community financing would need to be confined to the wealthier areas and schools, and all direct costs, such as fees or charges for books, materials and other consumables, would need to be reduced and, where possible, removed. Scholarships, or fee-wavers are needed for girls first, in societies where fees are charged. Elsewhere, subsidies for school uniforms, meals and free transport to school need to be focussed particularly upon increasing the incentives for girls to attend. But broader measures will also be required.[19]

Actions by the state to attempt to reduce the resistance towards educating girls could be extremely important, including publicizing, in simple, accessible terms, the impressively wide range of benefits of female education (accruing both to society and to individual households) which are now known to exist. Nevertheless, attitudes will often change only slowly. It will be necessary in some societies to facilitate girls' schooling in ways which recognize this. Single-sex schools, the recruitment of more female teachers, and more flexible timetabling to reduce conflict with household responsibilities each provide some means of increasing the incentives to enrol girls.

The most important ingredient for successful policy design will be careful analysis of the factors which constrain enrolments in each case. Country circumstances differ widely, and there is no single package of supply- or demand-side policies which are relevant in all circumstances. Usually there are a number of factors which act together to influence enrolment outcomes. It must be expected therefore, that a range of different policies will be needed, affecting both demand and supply, in order effectively and rapidly to enhance the enrolment of both girls and boys.

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[19] There is little systematic information available on the relative costs and effects of policy alternatives to improve the incentives to educate girls. However, a useful review of what is known can be found in Herz, Subbarao, Habib and Raney, 1991.

REFERENCES

Akuffo, F.O., 1987, "Teenage Pregnancies and School Drop-outs: the relevance of family life, education and vocational training to girls' employment opportunities", in **Sex Roles, Population and Development in West Africa**, edited by C. Oppong, 154-164, London and Portsmouth, New Hampshire (U.S.), Heinemman Educational Books.

Barthel, D., 1989, "Senegal", in **International Handbook of Women's Education**, edited by G.P. Kelly, (New York, West Port and London: Greenwood Press).

Brock, C., and Cammish, N.K., 1991, **Factors Affecting Female Participation in Six Developing Countries**, The Overseas Development Administration, January.

Csapo, M., 1981, "Religious, Social and Economic Factors Hindering the Education of Girls in Northern Nigeria", **Comparative Education 17(3):311-319**.

Colclough, C. 1991, 'Who Should Learn To Pay? An Assessment of Neo-liberal Approaches to Educational Policy', in Colclough and Manor (1991:197-213).

_____ and Manor, J., 1991 (eds)., **States or Markets? Neo-liberalism and the Development Policy Debate** (Clarendon Press, Oxford).

_____ with Lewin, K., 1993, **Educating All the Children: Strategies for Primary Schooling in the South**, (Clarendon Press, Oxford).

Davison, J., and Kanyuka, M., 1990, 'An Ethnographic Study of Factors that affect the Education of Girls in Southern Malawi', (USAID, Lilongwe, mimeo).

Duncan, W.E., 1989, "Botswana", in **International Handbook of Women's Education**, edited by G.P. Kelly, (New York, West Port and London: Greenwood Press).

Eshiwani, G.S., 1985, "Women's Access to Higher Education in Kenya: A Study of Opportunities and Attainment in Science and Mathematics Education", **Journal of Eastern African Research and Development 15:91-110**.

Eshiwani, G.S., 1989, "Kenya", in **International Handbook of Women's Education**, edited by G.P. Kelly, (New York, West Port and London: Greenwood Press).

Evenson, R., Popkin, B., and Quizon, E., 1980, 'Nutrition, Work and Demographic Behaviour in Rural Philippine Households' in H. Binswanger et. al. (eds), **Rural Households in Asia**, (Singapore University Press, Singapore).

FAO 1985, **Women in Developing Agriculture**, (Food and Agriculture Organization, Rome).

Green, C. with S. Baden, 1994, "Women and Development in Malawi", report prepared for the Commission of the European Communities Directorate-General for Development, (BRIDGE briefings on development and gender).

Haddad, L., 1991, "Gender and Poverty in Ghana: A Descriptive Analysis of Selected Outcomes and Processes", **IDS Bulletin 22(1):5-16.**

Herz, B., Subbarao, K., Habib, M., and Raney, L., 1991, "Letting Girls Learn: Promising Approaches in Primary and Secondary Education", Discussion Paper 133, (World Bank, Washington DC).

Hyde, K.A.L., 1993, "Sub-Saharan Africa", in **Women's Education in Developing Countries: Barriers, Benefits and Policies**, edited by M.A. Hill and E.M. King, 100-135, (Baltimore and London: The Johns Hopkins University Press).

Makoni, B., 1991, "Crisis in Education and Culture and Its Reflection on Women: A Case Study of Zimbabwe", Zimbabwe Institute of Development Studies, Working Papers No.6.

Mbilinyi, M., P. Mbughuni, R. Meena and P. Olekambaine, 1991, "Education in Tanzania with a Gender Perpsective: Summary Report", SIDA, Education Division Documents, No.53, October.

McSweeney, B.G. and Freedman, M., 1980, "Lack of Time as an Obstacle to Women's Education: The Case of Upper Volta", **Comparative Education Review 24(2):S124-S139**.

OECD 1990, **Development Co-operation Review** (OECD, Paris).

Okeke, E.A.C., 1989, "Nigeria", in **International Handbook of Women's Education**, edited by G.P. Kelly, (New York, West Port and London: Greenwood Press).

Pitt, M., and Rosenzweig, M., 1989, "Estimating the Intra-family Incidence of Illness: Child Health and Gender Inequality in the Allocation of Time in Indonesia" (Yale University, New Haven, Conn., mimeo).

Pittin, R., 1990, "Selective Education: Issues of Gender, Class and Ideology in Northern Nigeria", **Review of African Political Economy (48):7-25**.

Sajogjo, P., et.al., 1980, "Different Perspectives: West Java Project on Rural Household Economics and the Role of Women", in FAO 1985.

Tadreg, G., 1990, "Girl's Educational Opportunities and Performance in Tanzania", Development Research Group, Research Report, No.2, July.

UNESCO 1960, **Conference of Ministers of Education in Asia, Final Report**, Karachi (Unesco, Paris; updated Tokyo, 1962).

_____, 1961, **Conference of African States on the Development of Education in Africa**, Final Report, Addis Ababa (Unesco, Paris).

_____, 1962, **Conference on Education and Economic and Social Development**, Santiago Chile (Unesco, Paris).

_____, 1966, **Conference of Ministers of Education and Ministers Responsible for Economic Planning in the Arab states**, Tripoli (Unesco, Paris).

_____, 1977, **Statistical Yearbook, 1977** (Unesco, Paris).

_____, 1989, **Statistical Yearbook, 1989** (Unesco, Paris).

_____, 1991, **Statistical Yearbook, 1991** (Unesco, Paris).

World Bank, 1988, **Education in Sub-Saharan Africa: Policies for Adjustment, Revitalization and Expansion**, (World Bank, Washington D.C.).

predaf.doc- June, 1994