

Education and Poverty: A Gender Analysis

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Acronyms

GER	Gross Enrolment Rate
GNP	Gross National Product
CPM	Capability Poverty Measure
CAMFED	Cambridge Female Education Trust

1 Executive summary¹

The linkages between education and poverty can be understood in two ways:

- investment in education as a poverty reduction strategy which can enhance the skills and productivity among poor households;
- poverty as a constraint to educational achievement both at the macro-level (poor countries generally have lower levels of enrolment) and the micro-level (children of poor households receive less education).

Females in developing countries typically receive less education than do males. Although it is generally true that countries with high GNP have greater educational equality for males and females, amongst poor countries there is considerable variation, both in overall levels of enrolment and in female/male enrolment ratios. Female disadvantage in enrolment is thus not simply a matter of overall development. Factors such as social and cultural attitudes, and policy priorities are clearly also significant.

Research into the constraints to girls' schooling explains the persistence of gender gaps and indicates how the combined effects of household poverty and gender reduce educational opportunity for girls. The opportunity costs of girls' schooling are most significant for poor households. Girls' labour is used to substitute for their mothers', e.g. by caring for siblings. The loss of girls' labour during school hours thus has an impact on women's ability to raise household income either through food production or wage labour.

Not only are the costs of schooling girls greater but the private returns (to the household) are often perceived to be less, because of wage differentials between educated women and men, because daughters are expected to leave the household upon marriage, or because tradition favours female seclusion, or women remaining within the home. Other constraints to girls' schooling include concerns about girls' safety both in school and journeying between home and school, especially at puberty, and worries about girls becoming sexually active outside of social sanction. For poorer households, these safety concerns may be increased because children from the poorest households are often furthest from schools, particularly at secondary level.

A gender perspective on poverty and education highlights several possible strategies to tackle female disadvantage. These include:

- reducing opportunity costs to girls' schooling, e.g. through childcare provision or investment in labour saving infrastructure, or flexible or non-formal educational provision;
- incentives and scholarships for girls' enrolment to reduce the direct costs of girls' schooling;
- educational initiatives outside of the schooling system, such as adult education and literacy programmes, for those who 'missed out';
- improving the quality of education and tackling gender bias in the curriculum;

¹This briefing was drafted by Zoë Oxaal, BRIDGE Researcher under the guidance of Sally Baden, BRIDGE Manager, and with the valued advice and support of Christopher Colclough, IDS Fellow.

- and non-education sector policies to tackle discrimination, e.g. in labour and financial markets, which prevent women from realising the returns to educational investment.

2 Debates on education and poverty

2.1 Education and development

Much of the theoretical debate about the role of education in development and economic growth has focused upon whether education is productive in an economic sense. There is much evidence that levels of schooling amongst the population are highly correlated with levels of economic development. But whether the former has helped cause the latter, or whether causality runs from income growth to educational expansion, remains open to debate.

Human Capital Theory (associated with the work of Gary Becker, Mark Blaug and many others), asserts that education creates skills which facilitate higher levels of productivity amongst those who possess them in comparison with those who do not. Education, then, is costly but it brings associated benefits which can be compared with its costs in much the same way as happens with any investment project.

Human capital theorists use proxy evidence of various kinds to support the above assertions. First, there is a strong, and empirically verifiable, positive relationship across all societies between the wages and salaries people receive at work and the level of education which they have received. Using the 'normal' assumptions of competitive labour and goods markets, it follows that those with higher levels of education seem to have, on average, higher levels of productivity. Employers use educational characteristics as a proxy for the suitability, and potential productivity, of their employees.

Second, the earnings by age of the more educated not only start at a higher level, but increase more rapidly to a peak - which happens later in life - than is the case with the earnings profiles of the less educated. Indeed, those with no education tend to have earnings profiles which remain pretty flat throughout their lives. These patterns are said to indicate not just that education makes people more productive but also that it enhances the ability to learn-by-doing, causing productivity, and thus earnings, to increase at a faster rate than for those with less education. The fact, however, that the profiles peak and then decline beyond a certain age suggests that the skills created by education are prone to obsolescence and that their productive value declines when technology has outpaced them.

Although few people contest the strength and near universality of the above relationships, whether or not they necessarily imply that education is itself a source of enhanced individual productivity remains contested. Early criticisms of Human Capital Theory came from a group of radical economists (Bowles, Gintis and others, sometimes referred to 'Correspondence Theorists') who argued that education was valued by employers not because of the cognitive skills which it engendered, but because of the non-cognitive qualities and attributes inculcated at different levels of the education system. These theorists argue that the non-cognitive traits encouraged by each level of the school system correspond strongly to the attributes required of employees at unskilled, middle and higher levels of the occupational hierarchy. Education was thus judged to be responsible for reproducing the social hierarchies in society in a stable and predictable way, rather more than enhancing the productive capacities of labour.

A further set of theories associated with the 'screening' theorists (Wiles, Whitehead and others), asserts that education is merely an attenuated selection process, whereby the most talented people

are distinguished from the less talented. In other words, schooling identifies the most able people but does nothing, itself, to create or enhance those abilities, or by implication, individual productivity. In this view if ranking procedures were efficient, the benefits of ten years schooling could be short-circuited by aptitude tests which might last a matter of days rather than years. This group of theorists argue that the associations between education and earnings adduced by human capital theorists to imply that education has productive value, can be shown to be entirely consistent with its negation.

2.2 Education and poverty

Much of the above debate is set against the backdrop of the formal economy - a world in which people are hired into an occupational hierarchy and progress within it according to their skills and abilities. An extremely important context, however, for a discussion of poverty is that part of production which takes place outside the formal sector, much of which is characterised by self-employment in rural and peri-urban areas. There has therefore been much interest in examining the extent to which education affects production patterns in those activities. It has been shown that primary schooling, for example, helps to increase the productivity of peasant farmers, particularly when they have access to the other inputs needed to enhance their production. It has been shown also that the earnings of the self-employed, including those in urban and informal sector activities, are higher for the educated than for the uneducated. Furthermore, it has been demonstrated that increasing the schooling of women brings beneficial effects for their own control of fertility, for their own health, and that of their families.

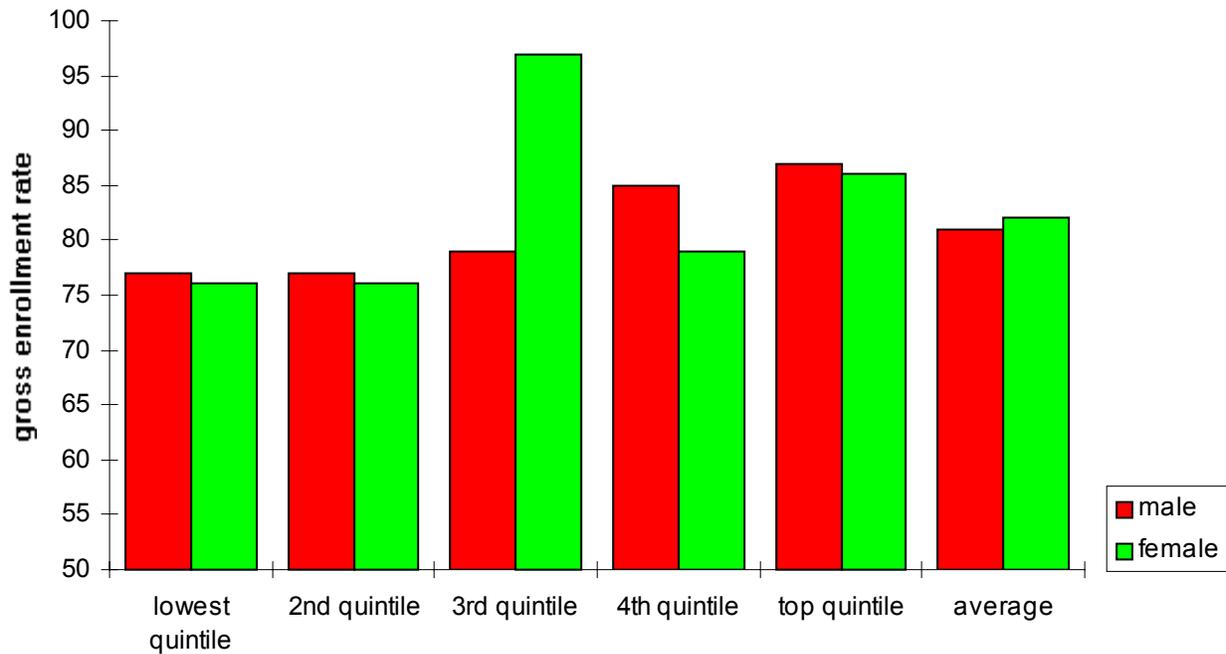
Thus Human Capital Theory and in a different sense Correspondence Theory both provide a set of implications for policies to alleviate poverty. Broadly speaking, the former implies that an effective anti-poverty strategy should incorporate the enhancement of education and skills amongst poor households. This will enhance their productivity in the informal urban and rural economy, and it will also increase their eligibility for paid employment in the formal sector and for advancement once they are employed. Correspondence Theory similarly implies that increasing levels of schooling in the labour force are likely to be functional to the process of employment growth. However it does not necessarily imply a benign impact for those school leavers who fail to secure access to the formal sector².

Human Capital Theory draws links between education and poverty in terms of education as a means of poverty reduction; another significant linkage runs the other way - i.e. the effect of macro- and micro-level poverty on levels of education. At the macro-level, it is generally the case that levels of enrolment correlate with GNP. Countries with low per capita incomes tend to have low enrolment ratios. However there are a number of exceptions to this rule. In Africa, for example, extremely poor countries such as Lesotho, Madagascar and Togo have primary gross enrolment ratios in excess of 100 (Colclough 1994). Among poor countries there is considerable variation, showing that low GNP does not necessarily translate into low levels of educational enrolment.

²If, on the other hand, screening theorists were right, schooling could be expected to have no impact whatsoever upon the incidence of aggregate poverty. It would merely affect the determination of who in society is poor, and thus the distribution of poverty rather than its extent and intensity.

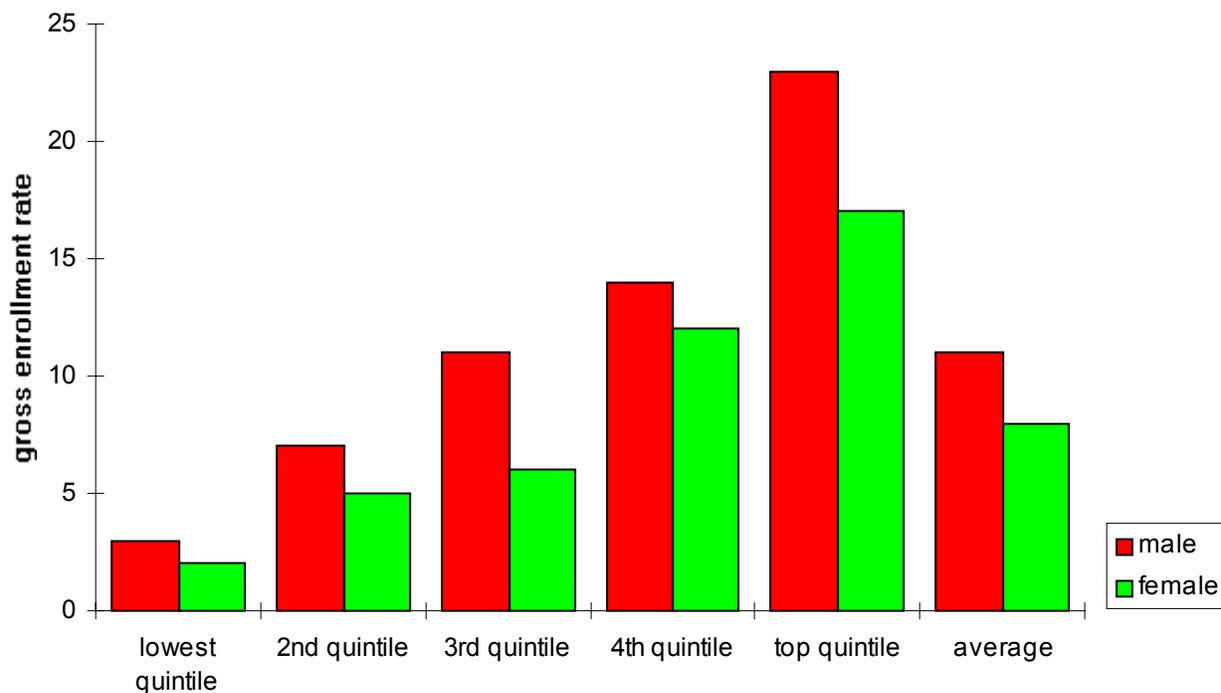
At the household level evidence suggests that children of poorer households are generally likely to receive less education. Data from Tanzania shows that at primary level enrolments rise with income group, with the primary Gross Enrolment Rate (GER) 77 percent among households in the lowest expenditure quintile, which is 6 percent lower than average and nearly 12 percent below enrolment rates among the wealthiest quintile (see Chart 1). More pronounced disparities between enrolment rates exist at secondary level. Secondary GERs among boys in the lowest quintile are only 27 percent of the boys' average rates and just 13 percent of the rates among boys in the wealthiest quintile (see Chart 2). For girls, GERs among girls in the poorest quintile are only 25 percent of average rates for girls, and 12 percent of those girls in the wealthiest quintile.

Chart 1: Primary gross enrolment rates in Tanzania, by quintile, 1993



Source: Mason and Khandker 1996

Chart 2: Secondary gross enrolment rates in Tanzania, by quintile, 1993



Source: Mason and Khandker 1996

It is at secondary level that a gender gap in enrolments emerges. Girls' and boys' enrolments are nearly equal at the start of lower secondary school, but by the upper secondary level only 25 percent of students are female. Given the low level of secondary enrolment amongst the poorest quintile, and the gender gap at that level, it is clear that gender and poverty combine to produce highly significant educational disadvantage for girls in poor households (this is explored further in section 4).

The direction of causality between poverty and education linkages has been shown to flow both ways. On one hand poverty acts as a factor preventing people from getting access to education. On the other hand those with education are considered to be at less risk of poverty. Appleton (1997) states that each year of primary schooling is associated with a 2.5 percent fall in the risk of poverty, and that lower secondary schooling has roughly twice this effect. Overall, the effects of education on the probability of being poor were found to be very strong (*ibid.*).

2.2.1 Education, capability and poverty

Recent debates on poverty have highlighted the need to expand understanding (and measurement) of poverty beyond household income/consumption figures. This is demonstrated by the introduction in the 1996 Human Development Report of the Capability Poverty Measure (CPM) which includes female education (in the form of female literacy levels) as part of a composite poverty measurement. In this context, education is seen not just as an 'input' to poverty reduction

(in the sense of increasing productivity and incomes) but as an asset which can be realised in terms of 'entitlements' (e.g. to labour, capital, social welfare support).

2.3 Education in policy debates on poverty

The policy conclusions of the Human Capital approach are reflected in the World Bank approach to poverty reduction, which strongly emphasises basic services provision (education and health) to the poor. The World Bank is the largest single source of external funding for education in developing countries. Its agenda on gender, poverty and education is thus influential and the World Bank approach can be characterised as essentially grounded in the orthodox Human Capital Theory outlined above. The Bank states that its projects will pay greater attention to equity, especially for girls, disadvantaged ethnic minorities and the poor. They state:

Education - especially basic (primary and lower-secondary) education - helps reduce poverty by increasing the productivity of the poor, by reducing fertility and improving health, and by equipping people with the skills they need to participate fully in economy and society (World Bank 1995: 1).

Equity is cited as one of the major challenges facing educational development. It is taken to refer to disadvantaged groups including the poor, linguistic and ethnic minority groups, nomads, refugees, street and working children as well as gender. The World Bank argues that public spending on education is often inequitable, when qualified potential students are unable to enrol in institutions because educational institutions are lacking or because of inability to pay (World Bank 1995). Alongside this equity focus are efficiency arguments for World Bank championing investment in education, particularly for girls. It is calculated that there are high rates of return for basic education in most developing countries and this strongly suggests that investments to improve enrolments and retention in basic education should generally have the highest priority in countries that have not achieved universal basic education.

The aim of poverty reduction through investment in education raises issues of financing and the affordability of education for the poor. Analysis of the supply side of educational provision is important to equity considerations because the proportions of government financing of the different levels of education systems have implications for gender equality and poverty-reduction objectives. The World Bank asserts that public spending on primary education generally favours the poor, but public spending on education policy as a whole often favours the affluent because of the heavy subsidisation of the upper-secondary and higher levels of education³. It is pointed out that higher education students come disproportionately from richer families and therefore public sector spending for higher education is particularly inequitable (World Bank 1995). Female students are

³ Benefit incidence analysis of public social spending on education can be used to reveal the extent to which different groups (e.g. the poor, women/girls) benefit from subsidies to public services. Such an analysis of government spending on education in Côte d'Ivoire shows that the poorest groups do not benefit proportionally from public subsidy. The poorest quintile gained under 14 percent of total education subsidy, in contrast with 35 percent going to the richest quintile (Demery 1996).

typically even more under-represented at higher levels of education and thus subsidy of higher education at the expense of lower levels double disadvantages poorer females⁴.

The direct costs of schooling act as a constraint to education in poorer households and financing mechanisms such as user fees have a significant impact on access. Colclough (1996) states that the incidence of absolute declines in enrolments following increases in tuition fees provides compelling evidence for regressive outcomes as is shown in the case of Malawi (see Box 1 below).

Box 1: The impact of user fees in Malawi

In Malawi when primary school fees were introduced in 1982 enrolments declined initially, and then grew at a much slower rate than previously. When, in 1994, the new democratic government of Malawi removed fees for primary schooling there was immediately a huge increase in enrolments with numbers in primary school increasing from 1.9 million to 3 million during the year. Fees are a significant expense for family budgets, and reductions can have a big impact on enrolments, particularly among poorer households.

Source: Colclough 1996

For poorer households, the payment of user charges has a negative income effect which may adversely affect household ability to meet their other basic needs. Evidence of the importance of this income effect is seen in the steep fall in enrolment ratios during recession and adjustment. In Tanzania 1980-86, during a period of steep economic decline during which fees remained the same, the gross enrolment ratio fell from 93 to 69 percent (Colclough 1996).

⁴However this emphasis on basic educational investment, and away from funding for higher education is controversial because of its implications for undermining intellectual development in the South.

3 Gender in the mainstream debate on education and poverty

3.1 Investment in female education

The World Bank has stressed investment in female education as an important development strategy for developing countries and this strategy is broadly agreed across a range of agencies and, increasingly, governments. In particular the World Bank has stressed the high social rates of return to female education. It is widely claimed that educated women marry later, want fewer children and are more likely to use effective methods of contraception. Large differences in fertility rates are found between those who have completed at least seven years of education and women who have not completed primary education (UN 1995)⁵. The more educated the mother, the lower is maternal mortality and the healthier is the child (World Bank 1995). It is calculated that child mortality falls by about eight percent for each additional year of parental schooling for at least the first eight to ten years of schooling. This is explained through the use of medical services and improved household health behaviour, resulting from attitudinal changes and ability to afford better nutrition and health services. The benefit-cost ratio of health and fertility externalities are estimated for Pakistan, for example, as 3:1 (World Bank 1995). Furthermore it is stated that education increases economic productivity.

Although the World Bank and others have accepted the argument that investment in female education pays off through higher social benefits, this calculation has been contested. Berhman (1991) states that the externalities to female education are not as great as is often claimed and are actually realised as private benefits. Furthermore, he argues that child health and welfare and fertility reduction might be gained in a more cost-effective way by spending directly on child health and family planning rather than on female education (Baden and Green 1994).

The literature on capabilities and entitlements also suggests that women experience greater barriers than men in translating capabilities into entitlements, not just in the labour market (as rates of return are conventionally measured) but also in other markets and public institutions.

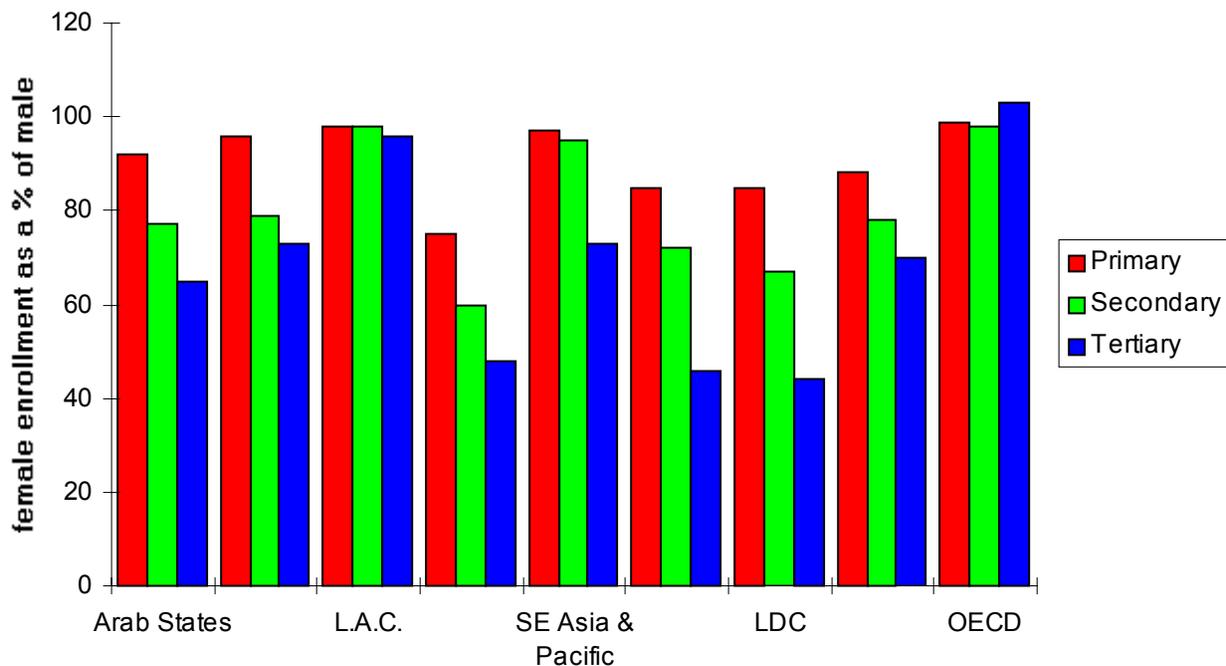
⁵The effects of men's education on family decision-making and family size have been studied less.

4 Why a gender perspective is important

4.1 Gender gaps in education

Girls' primary, secondary and tertiary school enrolment has been maintained or increased in most countries since 1970. Women's literacy increased from 54 percent of the male rate in 1970 to 74 percent in 1990. However females' educational opportunity remains significantly lower than males and the gap is particularly marked in the poorest countries (see Chart 3).

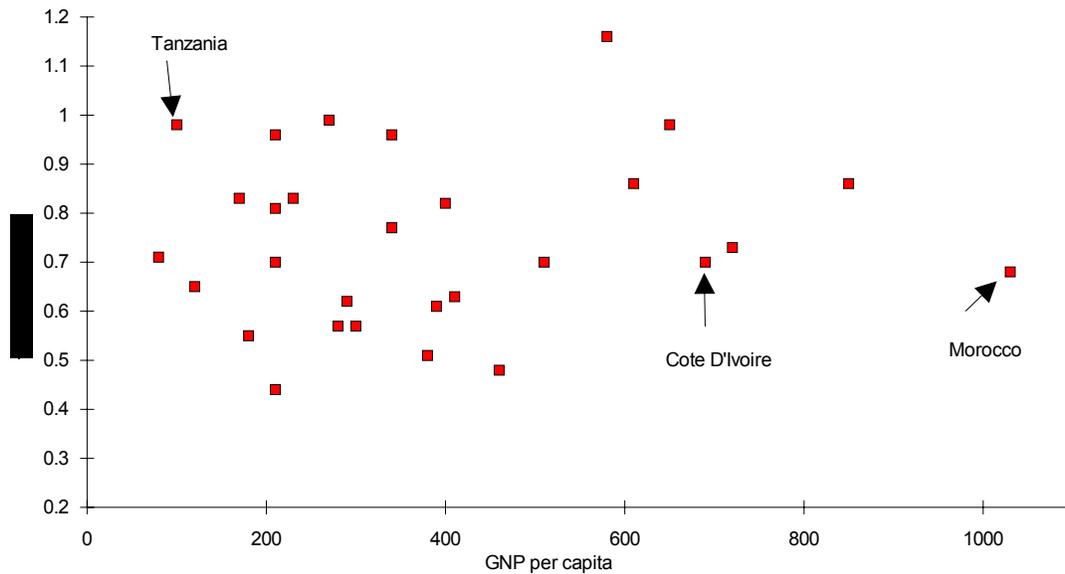
Chart 3: Female enrolments as a percentage of male, by region, 1990



Source: Human Development Report 1995

Although it is generally true that countries with high GNP have greater educational equality for males and females (as shown in Chart 3), amongst poor countries there is considerable variation in female/male ratios. Graph 1 shows that among African countries there is no clear relationship between GNP and gender equality in enrolment. For example, Tanzania with a GNP per capita of US \$100 has a female/male ratio of 0.98, whilst Morocco with a much higher GNP per capita of US \$1030 has a female/male ratio of only 0.68. The figures for Côte D'Ivoire are US \$690 and 0.7 respectively. Female disadvantage in enrolment is thus not simply a function of low levels of development. Factors such as social and cultural attitudes, and policy priorities are clearly also significant.

Graph 1: GNP per capita 1991 (\$) (*x-axis*) and female/male primary gross enrolment ratio (*y-axis*) in African countries⁶



Source: Colclough 1994

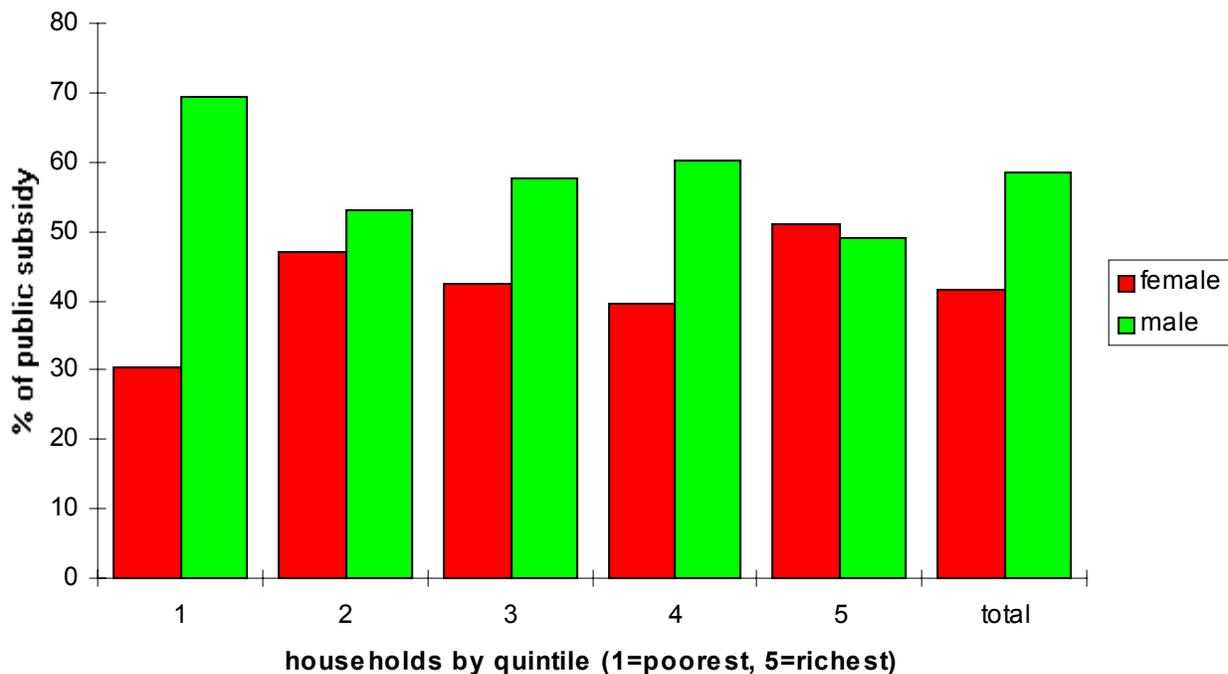
Analysis is required to explain these persistent gender gaps and to formulate solutions for more equitable education. Macro-level analysis of the effects of national investment in education on poverty, and of the social returns to female education, needs to be accompanied by an analysis (at micro- and meso-levels) of how household poverty and other institutional biases lead to gender inequity in educational outcomes.

In many regions in the developing world, gender gaps have narrowed, but the extent and explanation of this narrowing varies between and within countries and regions. In Africa, over the past decade, gender gaps are calculated to have narrowed in the context of an overall decline in enrolment. Gaps have reduced because girls' enrolments have held up more strongly than boys', so that boy's enrolment is decreasing to produce an effective levelling down. In Latin America and Asia (excluding South Asia) gaps have narrowed, because enrolments were already high and further increases necessarily required an increase in girls' enrolment as most boys were already in school. (In some countries this success has come from increasing enrolments for all but not necessarily through policies specific to girls.)

Gender-disaggregated benefit incidence analysis reveals that in each quintile by income, the benefits of public spending are disproportionately distributed between males and females. Chart 4 shows that in all but the richest quintile, males benefited from a greater percentage of public subsidy for primary education. Notably, this unequal distribution was most marked among the poorest quintile, with females receiving just 30.5 percent of subsidy going to that quintile (see Chart 5). Furthermore, at secondary school level the female share of the poorest quintile's subsidy drops to 25.1 percent.

⁶Data for most recent year available since 1985.

Chart 4: Côte D'Ivoire: gender distribution of public spending on primary education, by quintile, 1995



Source: Demery 1996

4.2 Demand for education: poverty and gender

Research into the constraints to girls’ schooling explains the persistence of gender gaps. Girls in poor households are particularly likely to miss out on schooling because of the perceived and actual costs to households of girls’ schooling. These costs are both direct (e.g. fees, books, pencils, paper, required clothing, transport) and opportunity costs. For example, data from Morocco reveals that reasons for non-attendance differ by gender, and that poverty was more likely to be a constraint for girls. Poverty was found to be a reason for non-attendance for 15.8 percent of girls, but only 8.9 percent of boys. In the poorest expenditure group, girls were much less likely to attend school with 48.5 percent non-attendance for girls versus 22 percent of boys (World Bank 1994, cited in Baden 1995b).

4.2.1 Opportunity costs

The opportunity costs of girls’ schooling are high for poor households in developing countries, and often exceed the opportunity costs of boys’ schooling. Opportunity costs include lost chore time and foregone earnings. Time-use studies (e.g. in Burkina Faso and Nepal) show that girls are generally required to spend more time on household chores than boys. Girls’ labour is used to substitute for mothers’ in work such as caring for siblings, fetching wood and water, caring for animals and pounding grain. The loss of girls’ labour during school hours thus has an impact on

women's ability to raise household income either through food production or wage labour (Herz *et al.* 1991).

Boys may also be required to contribute their labour although with different tasks. In Southern African pastoral societies (e.g. Namibia, Zimbabwe, Lesotho, Swaziland), boy's labour is in heavy demand, and girls outnumber boys at primary level. In Bangladesh, while girls between the ages of 13 and 15 spend ten times as many hours as boys on household activities, boys spend twice as much time on crop production and five times as much time in wage work (Pitt and Rosenzweig 1989, cited in Herz *et al.* 1991). Girls too may contribute wages earned to household survival, especially in households experiencing extreme poverty.

It is also important not to make the assumption that it is parents who make the investment in schooling their children, or that increasing household income will necessarily lead to gender equity in investment in education. Children themselves, older siblings or relatives and friends may finance children's education. For example, a study on child prostitution in Mozambique in 1993-4 found that some girls were earning money through sex work in order to pay for their own schooling, often with the tacit approval of parents (cited in Baden 1997). In many Asian countries, daughters' earnings are used to pay for sons' education.

The costs of education to households affects both the enrolment and the drop out rates. Even when girls are attending school they are still required to help with household chores, which can hamper their achievement in school and thus their possibility of continuing in education. Unforeseen incidents such as the illness of a household member can mean that daughters are required to drop out of school.

4.2.2 *Private rates of return*

Rates of return to education are also a factor in household decisions about schooling. Girls' schooling is constrained when the real or perceived rates of returns to female education are limited or less than for males. Not only are the costs of schooling girls greater but the private returns (to the household) are often less, or perceived to be less⁷. Poor households sometimes see investing in girls education as not worthwhile as they expect daughters to leave the household upon marriage. Where tradition favours female seclusion, or women remaining within the home, the future economic returns to girls' schooling are less.

The current earning capacity of women also influences expectations of how much a girl in education can expect to earn in later life. Parents see the benefits of educating boys as more tangible (Rose *et al.* 1997). Wage differentials between educated women and men mean that the private economic rates of return to female education are generally less than for men. Major obstacles arise when women strive to education into social and economic advancement (UN 1995).

⁷ Private rates of return (to the household) for female education are considered less for a number of reasons, e.g. labour market discrimination which limits the wages even educated women can earn compared to men. However it is argued that social rates of return (to society) which measure the externalities such as effects on fertility and child health, are higher for female education than male.

Role models are important for developing girls' desire for education and understanding of its benefits. Girls' ambitions are often more circumscribed than boys' by socio-economic background and rural locations (Brock and Cammish 1991). A case study in Vanuatu showed that girls in a typical rural school expressed a wish to work in a subsistence 'garden' or to be a teacher, based on the fact that the only available female role models were their mothers and their teacher. Boys however expressed a wider range of options such as mechanic, doctor, policeman, pilot etc. (*ibid.*). Schooling may reinforce female disadvantage and poverty if it fails to raise female aspirations or to encourage women/girls to enter areas of labour market demand.

4.2.3 Concerns for girls' safety and issues relating to puberty/sexuality

Other constraints to girls' schooling include concerns about girls' safety both in school and journeying between home and school, and concerns about privacy (Herz *et al.* 1991). These physical safety concerns are further exacerbated when girls have to travel a long distance to school and/or when schools lack separate private toilet facilities for girls. In Ghana, girls' enrolment (but not boys) at primary level is deterred by a long distance to school. In Bangladesh, parents are unlikely to send daughters to school if they lack private toilet facilities. Issues concerning puberty and sexuality also relate to safety concerns. Parents fear that contact with boys and male teachers at school may lead to inappropriate sexual activity or to physical abuse.

For poorer households, these safety concerns may be increased due to the fact that children from the poorest households are often furthest from schools, particularly at secondary level. Data from Indonesia, for example, shows a direct correlation between distance and income groups, with the poorest furthest away from secondary schools, and the richest situated conveniently closer (see Table 1 below). Greater distances to school for poorer households are likely to be a greater constraint to girls' schooling than boys' given the concerns for girls' safety, particularly at puberty, as outlined above.

Table 1: Average distances to lower secondary schools in rural Java by expenditure quintile, 1989 (lowest quintile = poorest households)

	Average Distance to Schools (in km.)
all rural Java	3.9
lowest quintile	4.7
second quintile	4.2
third quintile	4.0
fourth quintile	3.4
top quintile	3.2

Source: Mason 1994

Early marriage or pregnancy is another factor reducing female education. In many countries the legal minimum age at marriage, and the actual age, are lower for females than for males. Early marriage therefore probably acts as a deterrent to female education more than male. Pregnancy also disrupts girls' schooling, and in many countries girls are automatically expelled if pregnant. The early marriage of girls links to poverty as poor households may push daughters to marry for economic reasons - to save on their upkeep, or to obtain bridewealth. As illustrated above, girls'

from poor households may also be more likely to engage in sexual survival strategies to secure support for their schooling, risking pregnancy and the curtailment of the education.

4.3 Education for women's empowerment?

A gender perspective on education suggests attention to the content and value of what schools teach and the kind of environments they provide for girls, not just whether girls attend school or not. Girls' sense of second class citizenship may be reinforced by the school environment, where the curriculum or teacher attitudes perpetuate sexist stereotypes, or where there is a lack of female role models (Womankind 1995).

A number of factors tend to limit the value of formal schooling for girls. For girls in poor households where the opportunity costs of schooling are particularly high, the question of the value of schooling is of pressing importance. Women and girls need the opportunity to learn both basic literacy and numeracy, and a wide range of subjects and skills which challenge stereotypes, e.g. management training, accounting, marketing and machine maintenance. Reform of existing formal education systems can go some way to address these problems. Possible measures include: gender-awareness training for teachers and pupils; sex and health education to prevent teenage pregnancy; and curriculum and textbook changes.

5 Implications for policy of a gender perspective

The preceding analysis suggests a number of strategies for improving access and returns education for poor women. Most strategies concentrate on improving access. Focus is also required on improving educational performance, on the quality and relevance of provision, and on enabling women to realise returns to education in the marketplace.

5.1 Reprioritising educational expenditure

Improving overall educational provision, accessible to poor women, involves reprioritising expenditure patterns in the sector, with increased allocations to basic education, but also non-formal, adult education and literacy programmes, and pre-school education. Spending at higher levels should be earmarked for encouraging greater female enrolment. Public expenditure reviews should include a review of educational spending from a gender perspective and outcomes can be monitored using gender-disaggregated benefit incidence analysis (Demery 1996).

5.2 Increasing access to education for poor women

From a poverty perspective, strategies which reduce the direct and opportunity costs of girls' schooling are most relevant.

The direct costs of girls' schooling to poor households can be addressed through incentive and scholarship programmes (see Box 3 below). Experience suggests that careful formulation is needed in the targeting of such schemes to ensure it is the poor who benefit.

Box 2: Reducing opportunity costs: provision of childcare facilities in Colombia and China

The expansion of day-care facilities sited in schools and workplaces can increase girls' enrolments by reducing the need for them to remain at home caring for siblings to enable parents to work.

In Colombia *Hogares de Bienstar Infantil* is a community day-care programme which has freed girls and women to attend school or enter the labour market. In 1987, the first centres were established in poor neighbourhoods. Within a few years these centres were serving about 400,000 children under the age of seven. 'Community mothers', selected by local women and trained in nutrition, health, hygiene and recreation, are paid a salary to supervise children and receive assistance in obtaining home improvement loans.

In Gansu province, China, some schools allow girls to bring their younger siblings to class. This policy, along with other initiatives such as the establishment of work-site day-care centres for young children of employed mothers, and the expansion of pre-schools, succeeded in achieving a target of three percent growth in female primary enrolment and surpassed a two percent target for growth of secondary enrolments.

Sources: Herz *et al.* 1991; King and Hill 1993

Strategies to increase female education by reducing opportunity costs may particularly benefit girls from poor households. Provision of childcare facilities is one way of increasing girls' enrolments, by reducing their need to care for siblings while their parents work (see Box 2 above). Investment in infrastructure (e.g. water supply) outside the education sector may also be significant in increasing female enrolment (see next section).

Box 3: Incentives for girls' schooling: scholarship programme experience in Bangladesh, Guatemala and Zimbabwe

A number of programmes have attempted to increase girls' schooling by offering various incentives such as free uniforms or scholarships. Schemes with free clothing provided have met with problems of misappropriation. For example, a World Bank assisted project providing uniforms to girls in Bangladesh, found that girls who should have been ineligible were benefiting. Evidence from scholarship schemes looks more successful. It has been suggested that scholarship programmes suffer more from limited coverage than from inappropriate design (Tietjen, cited in Rose *et al.* 1997).

The Bangladesh Female Education Scholarship Programme started in 1982 and including 20,000 girls in secondary school by 1988, provided subsidies for school expenses, exam fees, transportation, uniforms and books. Eligibility was based on family income and in the areas covered by the scheme female enrolments were reported to have increased from 27 percent to 44 percent (more than double the national average). The drop out rate also fell. The scheme also had the effect of increasing primary enrolments because girls enrolled with the hope of later receiving a scholarship to continue their education.

In Guatemala, a scholarship programme for primary school girls has shown promising results. The programme was tested in an area, the Indian *altiplano*, where only 53 percent of school-age girls attended primary school and only 17 percent completed. By 1988 the families of 600 girls between the ages of seven and 15 had received a payment of 15 *quetzales* (US \$4) a month for each daughter who attended at least three-quarters of classes. As parents were not required to pay for tuition or fees ordinarily, the monthly payment was intended as compensation to parents for other school-related expenses and for the loss of their daughters time. The Ministry of Education reported that more than 90 percent of scholarship girls completed the year.

In Zimbabwe, a programme organised by the Cambridge Female Education Trust (CAMFED) in three rural districts provides financial support for secondary schooling for selected girls from poor socio-economic backgrounds. The programme is reported to have achieved success at improving girls' attendance and academic performance with negligible drop out (1992-94).

Sources: Rose *et al.* 1997; King and Hill 1993

Introducing more flexible school hours and non-formal education provision is another way of reducing the opportunity costs of girls' schooling by enabling them to combine work in the household with schooling (see Box 4).

Box 4: Making schooling more flexible: non-formal education provision

More flexible community based forms of education provision, with greater community participation, flexible hours, adapted curricula and other innovations can have considerable success in increasing female enrolment and reducing drop out rates. A scheme in Pune, Maharashtra, India, held classes in the evenings between 7 and 9 p.m. when evening meals and domestic chores were completed, for greater accessibility to girls.

However, it is essential to ensure that non-formal programmes of education have bridges into the formal system and do not become part of a two tier system. For example a project in Nepal, for low caste girls, held early morning classes, and succeeded in reducing drop out. However, the subsequent enrolment of these girls into local public schools was opposed by upper caste families.

Source: Baden and Green 1994

5.3 Promoting education for poor women's empowerment

There is also a broad range of possibilities for educational initiatives with a gender and poverty focus outside of the schooling system. Adult literacy programmes may be valuable in reaching women who were not schooled as girls. This kind of education can be delivered in a variety of forms, not only literacy classes, but integrated with other programmes such as credit, income-generating, health etc.. A focus on promoting learning for empowerment and social, economic and political involvement suggests the importance of education for legal awareness and leadership training.

Adult literacy programmes have been shown to have positive impact on women's political empowerment in their communities, e.g. in Andhra Pradesh, India (see Box 5). Gaining basic literacy and numeracy increases women's confidence and self-esteem.

However, care is needed to ensure that adult education does not become a form of second best education for the poor, disguising the need to reform educational systems. There are a number of problems associated with previous adult education and literacy programmes, including:

- over-emphasis on welfare-oriented subjects such as family nutrition and child-rearing may limit training to expand women's horizons;
- scarcity of programmes for poor women in rural areas;
- requirements for women to attend classes regularly may hamper women with heavy workloads who lack time and energy;
- inadequate social infrastructure, e.g. lack of childcare or adequate public transport may prevent women from participating;
- perceptions of adult education as inferior to schooling may lead to reduced access to jobs despite suitable qualifications (Womankind 1995).

**Box 5: Literacy programmes leading to women's empowerment:
anti-liquor agitation in Andhra Pradesh**

The Akshara Deepam (Light of Literacy) campaign in Andhra Pradesh, India, in the early 1990s has been identified as the strongest catalysing force behind an anti-liquor (*arrack*) movement initiated and led entirely by poor rural women in a few villages in one district (Nellore) which subsequently spread throughout the state. The campaign was aimed not only at increasing women's literacy but also at raising women's consciousness and ability to act to improve their status. A chapter in the literacy primer described the plight of a poor woman whose husband drank all his wages at the local liquor shop. Women recognised that the story bore striking resemblance to their reality and began to question the abundant supplies of liquor available locally despite the constant shortages of food in government-controlled ration shops and lack of basic services. Liquor sales were boosted by many local employers and landlords paying men in coupons redeemable for liquor and by the state interest in liquor excise revenues. Meanwhile poor households suffered from inadequate food and resources, as well as violent abuse by drunken men. Women used a variety of tactics to reduce liquor sales, including picketing liquor shops, thereby reducing household poverty.

Source: Batliwala 1994

5.4 Improving returns to education

Incentives to invest in girls' education need to be tackled not just by direct subsidies, but also by improving their educational performance, the quality of schooling and the returns to educational investment in the labour market. This requires improvements in the curriculum, improved teacher training, tackling gender biases in attitudes and the curriculum and encouraging women in 'non-traditional' subjects. Complementary policies outside the education sector are also required, particularly to remove legal or other barriers to market access.

5.5 Non-education sector strategies

A gender equality perspective draws attention to the need for non-education sector policies to reduce women's disadvantage. For example, legal reforms and enforcement of existing legal protection are significant, in areas such as justice and compensation for physical attack; laws on the employment of young children, and laws relating to age of marriage (Brock and Cammish 1991).

The significance of sex discrimination in the labour market (and particularly wage discrimination) in limiting the benefits of female education draws attention to the need for non-education sector strategies to increase female education. Macroeconomic policies which protect some sectors and penalise others may have an adverse affect if the non-protected sectors account for more female employment. Legal or regulatory barriers to women's full participation in the labour market or self-employment, or which restrict women's access to resources, perpetuate women's economic disadvantage and thus the lack of investment in their education (Herz *et al.* 1991).

The high opportunity costs of girls' education in loss of household labour, underline the need for non-education sector investment. For example, in Morocco, a survey indicated that not only were non-education sector investments important for increasing enrolments, but that different kinds of

investment were more important for females than for males, reflecting the gendered nature of opportunity costs (see Box 6 below).

Box 6: Complementary investments to increase education in Morocco

A study in Morocco used data from the Living Standards Measurements Survey, and a 1993 literacy study to show that improved supply of school facilities in rural areas was insufficient to increase attendance and attainment, particularly of females. It was concluded that complementary investments in rural infrastructure and productive capacity are also needed. Different investments revealed striking gender-differentiated effects. It was found that investment in paved roads, rural electrification and rural water supply has a more marked impact on female than male enrolment in primary schools, whilst investing in more schools, irrigation and advanced crop technologies increases male but not female schooling.

Source: Khandker *et al.* 1994, cited in Baden 1995b

6 Areas for further research

- Further analysis of benefit incidence of public expenditure on education, across different income groups, and of gender differences in expenditure patterns on education, using data from household surveys. Analysis should suggest, at both macro- and micro-levels, factors which lead to increased investment in female education.
- Specific local research on constraints to girls' schooling. There now exists considerable understanding of what are the general constraints to girls' schooling, many of which are increased by household poverty. However, in order to design appropriate policies and execute effective reform, it is necessary to have information specific to the country or area. Whilst the factors limiting female education are understood, the relative importance of each factor varies in different contexts.
- Poor people's (including women's) perceptions of education and the education system. Participatory action research into low income communities' (and particularly poor women's) perceptions of education may reveal more about constraints to schooling for poor females, and also how education can be made more useful and accessible.
- Issues relating to sexuality, harassment, violence and poor female attendance and performance need further research and policy advocacy.
- Non-education sector strategies, linked to education interventions, need to be explored further, particularly links to labour market conditions and policies.
- Evaluation of cost-effective interventions: there is less existing on the measures for promoting female education than there is on constraints. A range of different interventions have been tried, as outlined in section 4. There is now a need for careful evaluation of the effectiveness of these strategies.
- Explanation of differential educational performance: more research is needed to explain the causes of girls' and boys' different levels of achievements in schools. It can be deduced that girls' educational performance is negatively affected by some of the same factors that limit girls' enrolment. An important area for future research is an assessment of the impact of the curriculum on girls' performance and what effects changing gender stereotypes has on performance outcomes.

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