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**User Fees, Expenditure Restructuring  
and Voucher Systems in Education**

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This study has been prepared within the UNU/WIDER project on New Models of Provision and Financing of Public Goods in Developing Countries, which is co-directed by Germano Mwabu, Senior Research Fellow, and Reino Hjerpe, Director General of the Finnish Government Institute for Economic Research.

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# CONTENTS

LIST OF TABLES AND FIGURES	iv
FOREWORD	v
ABSTRACT	vii
I INTRODUCTION	1
II USER FEES	2
2.1 Arguments for state subsidies	4
2.2 Arguments for user fees	11
III RESTRUCTURING EDUCATIONAL EXPENDITURES	17
3.1 Distributional arguments	20
3.2 Externalities	23
3.3 The 'excess demand' argument	25
3.4 Information: merit goods and screening	26
IV VOUCHERS	27
4.1 Limited vouchers	27
4.2 Unlimited vouchers	30
V THE ROLE OF COMMUNITY PARTICIPATION	33
5.1 Community finance for education	33
5.2 Community provision of education	36
VI CONCLUSION	38
REFERENCES	41

## LIST OF TABLES AND FIGURES

Table 1	A rough comparison of primary, secondary and tertiary education in developing countries	18
Table 2	Estimates of Mincerian returns to schooling in Africa, post-1979	21
Box 1	Failures in the market for education	5
Figure 1	The excess demand argument with a residual private sector	12

## FOREWORD

This paper provides a general assessment of three key economic aspects in the financing and provision of education, with special reference to the needs of developing countries. The first issue tackled in the paper is the fundamental question of who should pay for education: the state, users or local communities? The second question concerns the restructuring of state expenditure across the sub-sectors (primary, secondary and tertiary). Essentially this is an elaboration of the first issue: is the case for state stronger for some sub-sectors than others? The third and final problem is the desirability of educational vouchers. This question has implications for both financing and provision. In the analysis, care is taken to consider the role of the local community, whether as a possible 'third way' or as a facilitator of more orthodox state or market-led solutions.

The paper tries to avoid making sweeping global policy recommendations, being more concerned with providing a conceptual framework: suggesting 'the grammar of the arguments'. One general theme of the paper is the need for an assessment of the above issues to be grounded both in sound economic theory and a thorough understanding of the realities of countries. For example, the debate surrounding user fees and the restructuring of government education expenditures must begin from the various market and government failures which characterize education. It is not adequate to centre the debate around estimates of the conventional private returns to education. This point is brought home by the summary of the recent African literature on these estimates, which contradicts the received wisdom of higher returns to primary education. Such results need not overturn the consensus around restructuring government education expenditures towards the primary sub-sector because the optimal level of government subsidy depends on the prevalence of market failures rather than the private returns.

The paper concludes that the state is likely to have a major role in education. Market-based reforms, whether in terms of user fees or voucher systems, will often have equity costs and may in some cases worsen efficiency. Given the difficult fiscal positions of many developing countries, the debate should perhaps shift towards reforming the public sector so as to maximize the effectiveness with which available finance is used. Such reforms may well involve bringing in elements often thought to characterize market or community solutions – concepts such as competition and participation. However, they are also likely to centre around careful tracking of

government expenditure and a rigorous emphasis on identifying and introducing 'best practice' in educational instruction.

Simon Appleton, who is with the University of Oxford, is a participant in the UNU/WIDER project on New Models of Public Goods Provision and Financing in Developing Countries. His paper is a pioneering and timely contribution to the debate on education provision and financing in low-income countries.

Giovanni Andrea Cornia  
Director, UNU/WIDER  
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## ABSTRACT

The analysis of the optimal funding of education is complicated by the numerous and serious market failures which are likely to characterize a free market for education. Prominent amongst these are the likely external benefits of education, stressed by some new economic growth models. However, no model of education provision would be considered realistic if it did not also allow for: the central role of education in determining the distribution of income; the failures of secondary markets such as credit and insurance; the potential principal-agent problems and inequalities within the household; the merit good and limited consumer information, especially amongst uneducated parents; and the possible role of education as a signal of ability. All these market failures apart from the last tend to imply that a free market with no government intervention would underprovide education. Against these market failures, proponents of user fees for education have tended to stress failures apparent in existing government education systems. Fees are often advocated as a way of providing new funds for education in situations where financing from fiscally constrained governments is inadequate. The paper critically assesses these arguments, in the light of both the theory of segmented markets and the recent experience of developing governments in introducing or removing fees.

There has been a long-standing and wide-spread international consensus in favour of re-structuring government expenditures from the tertiary to primary level. In part this is based on a misunderstanding: that the conventional (Mincerian) returns to schooling are higher for primary schooling than for post-primary schooling. Recent research (at least for Africa) has shown that this is not true of the 1980s and 1990s, and may not have been true prior to that. This does not fatally undermine the case for educational restructuring. However, at the very least it implies that the case must be centred more properly on arguments that the various market failures are more likely to occur at the primary than post-primary level. Such a case can be plausibly made, but as yet has not been fully substantiated empirically.

Concern with government failure has extended to the provision, as well as financing, of education. Depending on whether the vouchers are limited to the state sector or not, such schemes could either create an "internal" market with the state sector or potentially be a form of indirect privatization. It is argued that whether vouchers have such dramatic effects will in part depend

on how they are administered and in part on the relative cost-effectiveness of the state sector. In the short term, full blown unlimited voucher schemes may not appeal to many developing countries because their most direct effect will be a substantial increase in funding to users of private education (who are sometimes atypically affluent).

# I INTRODUCTION

In all countries, the education industry is one of the largest. The great cost of maintaining these industries is indicative of perceived benefits at least as large. Unlike most other industries, education is one where governments of all ideologies intervene pervasively. In industrialized countries, it is promoted partly for its perceived benefits in creating and utilizing new technology, the engine of economic growth. In developing countries, education is seen as both economically productive and also one dimension of development in itself. If anything, the importance attached to education appears to be growing. In developing countries, there seems to be a growing consensus between advocates and critics of 'structural adjustment' around the need to design programmes so as to strengthen basic social sector services. This is typically referred to as minimizing the 'social costs' of adjustment. However, the economic benefits of education may also be rising due to two global trends. One is the tendency of recent technological advances – for example, in information technology – to be 'skills-biased': that is to say, raise the return to skilled labour relative to unskilled labour. The other is the growing role of East Asian countries in the world economy. For other developing countries, this has had a 'demonstration effect': opening the possibility of them also enjoying rapid manufacturing growth for which an educated labour force will be required (Page 1994). For industrialized countries, the increased competition from labour intensive economies – notably China – implies a need to 'up-skill' their workforce or face worsening inequalities.

This paper focuses on four key aspects of education policy. Section II addresses the fundamental issue of who should pay for education (narrowly defined as formal schooling and higher education). Although there has long been a presumption that the state should finance education – at least at the basic level – this consensus has been placed under increasing strain in the 1980s and 1990s. In some countries such as the UK, the pressure has arisen from a decision to expand educational provision. In other countries such as many in sub-Saharan Africa, the impetus comes from a tightening of the fiscal constraints caused by economic stagnation in the face of an increasing population. In both situations, governments have considered introducing or increasing user fees to recover at least some of the costs of education. There is a common presumption that the case for user fees is strongest with higher education and weakest for primary education. This view lies behind a long-standing argument in

favour of restructuring government educational expenditures from tertiary to primary education. This argument is addressed in Section III. Section IV turns to issues in the provision of education, focusing on the role of 'quasi-markets' or vouchers. Two variants of the voucher scheme are analysed: one limited to within the state sector; and one extending to the private sector as well. Finally, Section V considers the role of the community in the finance and provision of education.

To analyse these issues, this paper adopts the perspective of normative public economics. Underlying value judgements rest on the effect of policies on individuals' economic welfare, aggregated using some trade-off between total welfare and how equally it is distributed. This approach can be contrasted with alternative value systems, such as a libertarian concern with negative freedom (eg Friedman 1962) or with a concern with positive freedoms, variously expressed in doctrines stressing rights, basic needs and capabilities (eg Sen 1990). However, much of the positive analysis presented here may still be of relevance under alternative value systems. One limitation with conventional normative public economics is that it is informationally demanding. Identifying the optimal government policy typically requires that we know much far more about economic and social relationships than we in fact do. This paper reviews some of country experience and evidence, with something of an Africa focus. However, its approach is tentative and does not advocate sweeping global solutions to questions of education policy. Instead it sketches some considerations which may help to create a framework for analysing those questions. In the phrasing of Atkinson and Stiglitz (1980), it suggests the 'grammar of arguments'.

## II USER FEES

User fees are taken here to mean compulsory contributions (in cash or kind) by users of services towards the cost of their provision. Debate about user fees mainly centres on those levied in the state sector. Although many developing countries are committed in principle to free primary education, in practice, the pecuniary costs are typically around 10-20 per cent of per capita incomes in developing countries (Mehrotra, Nigam and Thet 1996). User fees are typically even more important at the secondary level (see Jimenez 1987, for statistics on Africa). With higher education, the situation

varies.<sup>1</sup> In sub-Saharan Africa, in particular, user fees for higher education are often negligible and generous living allowances provided for students (World Bank 1995).

International opinion on user fees for social services can be classified into at least three phases since the Second World War. For a long period, there was a consensus on the undesirability of fees, at least for basic services. This was set out in Article 26 of the United Nations Declaration of Human Rights in 1948:

Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory...

However, during the 1980s, this consensus broke down. Some World Bank staff began to argue a limited case for user fees and the imposition of fees was sometimes included in the conditionality attached to structural adjustment loans.<sup>2</sup> Conversely, critics of adjustment – some associated with UNICEF – often highlighted the negative consequences of user fees and cuts in social sector provision (Cornia, Jolly and Stewart 1987). In the mid-1990s, however, there are signs of a move towards a new consensus. Recent discussion papers published by the World Bank, UNICEF and other development bodies reach very similar conclusions (Adams and Hartnett 1996; World Bank 1995; Reddy and Vandemoortele 1996; Foster 1997).<sup>3</sup> User fees for 'basic education' are not advocated and likely problems with them are noted. In particular, it is noted that their revenue raising potential may be less than sometimes thought, their impact on take-up may often be greater and that it is often difficult in practice to exempt the poor. However, it is recognized that user fees may be unavoidable in certain situations and attention is given to the implementing them in order to minimize their disadvantages. Several forces have moved the two sides of

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<sup>1</sup> The World Bank (1986) estimated the following levels of cost recovery:

	E. Africa	W. Africa	Asia	Latin America
Primary education	6%	11%	2%	1%
Higher education	3%	3%	12%	7%

<sup>2</sup> The World Bank (1980) Education Sector Policy Paper opened by quoting Article 26 and never subsequently contradicted it. Birdsall (1983) was perhaps the first Bank paper to mark a more favourable stance towards user fees and Malawi the first example of a country raising fees on Bank advice.

<sup>3</sup> The views expressed in these documents are not necessarily endorsed by the organizations publishing them.

the user fee debate closer together. The World Bank appears more cautious as a result of the experience of imposing fees in the 1980s.<sup>4</sup> The critics of user fees have been led to rethink their position following the Bamako Initiative, whereby African health ministers agreed on the need for user fees as a way of countering government under-funding of health care.

In what ensues, we first discuss the arguments in favour of subsidizing education. These arguments imply that user fees for state education should be less than full cost and – if the required subsidies are sufficiently large – zero.<sup>5</sup> We then discuss the arguments in favour of fees. Although the individual arguments are appraised, this section does not attempt to discern the overall balance between the arguments. The relative merits on each side vary markedly with the sub-sector (primary, secondary and tertiary) considered. Consequently, we reserve judgement – and discussion of the specifics of each sub-sector – for the next section on re-structuring.

## 2.1 Arguments for state subsidies

In most countries of the world, the state plays a major role in the provision and financing of education. This is in contrast to many other goods, such as food and clothing, which are arguably even more essential. What is special about education? The main function of education is to impart knowledge and skills. The knowledge and skills provided are ultimately supposed to be economically productive; in economists' terms, education is partly an investment in 'human capital'. Additional functions include inculcating particular values and attitudes; providing child care; and screening ability. Many of these benefits are private: in the first instance, they accrue to the recipients of education.<sup>6</sup> Nonetheless, a private market is likely to be subject to a variety of failures. Box 1 enumerates seven possible market failures: all but the last (screening) tend to imply some government intervention to promote education. We start by considering this last market failure and then turn to the arguments for positive intervention.

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<sup>4</sup> There may also be an important 'public relations' aspect. Imposing fees for basic social sector services is likely to be very unpopular with the Bank's critics and public opinion in general.

<sup>5</sup> They are also *prima facie* arguments for subsidies for private education - an issue we consider below in the section on unrestricted vouchers.

<sup>6</sup> Although often publicly provided and financed, education is not a pure public good. In particular, it is possible to exclude people from many of its benefits and it is rivalrous (provision to additional users is not costless).

BOX 1  
FAILURES IN THE MARKET FOR EDUCATION

1. Externalities: if one individual receives education, it may directly benefit others. (For there to be a market failure the external effects must not come via the price mechanism.) Social returns will exceed private returns and hence education will be under-provided in a market economy.

2. Unequal distribution: a pure market for education will lead to individuals receiving unequal amounts of education. This may be particularly important in developing countries which lack the tax and benefit systems often used to redistribute incomes in industrialized countries.

3. Capital market failure: capital markets are highly imperfect in developing countries and lending for investments in education face additional problems. In particular, in the event of default it is not possible for creditors to seize human capital in the way that physical capital can be claimed. Asymmetric information is also more likely to be more of a problem. Consequently, individuals will tend receive too little education due to lack of access to funds.

4. Insurance market failure: since many of the benefits of education accrue in the future, they are subject to uncertainty. There has been a recent growth of theoretical interest in the role of risk in inhibiting irreversible investment (see Dixit and Pindyck 1992). Investments in education are more irreversible than most physical investments. If individuals are risk-averse, imperfect insurance markets will cause individuals to demand too little education.

5. Intra-household principal-agent problems: education is commonly acquired during childhood. In these situations, parents typically make the decisions about the education of their children. With perfect parental altruism, this would not give rise to problems. However, there are cases of parental neglect and more generally, parents may be particularly influenced by any returns to education which accrue to them personally. Imperfect parental altruism may lead to insufficient demand for education and some inequities, for example, pro-son bias.

6. Merit good arguments: by this it is meant that the private demand for education may be too low because of informational problems. Education is rather a complex service and may be under-valued, especially by those who have never experienced it. For example, correlations suggest that the offspring of educated people are at less risk of death. However, it is not obvious that parents – particularly the uneducated – will realize that educating their children will improve the life expectancy of their grandchildren. Indeed, the link between maternal education and child health remains something of a 'black box' to researchers.

7. Asymmetric information and screening: it has been argued that individuals know their ability but prospective employers do not. Consequently, some economists have argued that even if education does not improve individuals' productivity, it may be used to signal high pre-existing ability. Hence, education may be privately demanded even if it has no value to society (Arrow 1973). This might imply the government should ban, restrict or tax education.

As noted by one of its early proponents (Arrow 1973), the screening hypothesis is difficult to test because it relies on something – pre-existing ability – which is essentially unmeasurable. Nonetheless, recent empirical work has tended to cast doubt on the theory. One strong variant of the hypothesis – credentialism – disputes any link between education and productivity. The educated are paid more despite not being more productive than the uneducated. This seems *a priori* unlikely in a competitive labour market. It has also been challenged empirically by a recent study of manufacturing enterprises in Ghana which found worker education to have similar positive associations with wages and firm productivity (Jones 1994). A weaker version of the theory is that educated workers are more productive because they have higher pre-existing ability. Some doubt has been thrown on this by an influential study of manufacturing workers in Kenya and Tanzania (Boissiere, Knight and Sabot 1985). This found that wages were more strongly related to performance on tests of cognitive skills acquired at school (literacy and numeracy) than to a test of reasoning ability designed to be independent of schooling (Raven's progressive matrices). The screening argument can also be challenged on theoretical grounds: it is hard to see why people should spend so much time in unproductive education when employers could screen them during periods of perhaps unpaid employment (apprenticeships?). More generally, the proposition that the cognitive skills provided at school do not raise productivity seems manifestly untrue for many occupations. For all these reasons, the screening argument does not provide a strong challenge to state subsidy for education. Indeed, the main contribution of the screening hypothesis is not the theory itself but for the problem it highlights in the interpretation of empirical work. In particular, it draws attention to the fact that empirical correlations between education and desirable outcomes – such as productivity – may partly reflect associations with omitted third factors, such as pre-existing ability (see Ashenfelter 1991).

The most direct case for financing primary schooling by taxation rather than user fees is a Pigouvian one: that education brings external benefits. Education may:

- lower transactions costs between individuals by spreading literacy, numeracy and – in multi-lingual societies – the adoption of a national language

- create spill-over benefits from the adoption and diffusion of new techniques<sup>7</sup>
- improve child health and reduce child mortality
- lower fertility and hence raise living standards
- improve good governance by creating an informed public and a skilled political/technocratic class (Dewey 1916).<sup>8</sup>

All these possible externalities appear plausible and important.<sup>9</sup> However, they are hard to quantify empirically. As with the education-productivity relation, there is the problem of inferring causality from correlation (see Behrman 1991). Establishing relations between outcomes for one individual and the education of others is informationally more demanding.<sup>10</sup> Even if a link is accepted – for example, between maternal education and child mortality – it can sometimes be hard to know the extent to which such links have been 'internalized'. Finally, there is the problem of expressing some of these estimated externalities in monetary terms. Although more research should be done on these problems, it is probably naive to expect it to provide clear guidance in the near future on

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<sup>7</sup> Uneducated farmers may follow the innovations adopted by their educated neighbours. For evidence of copying in agriculture, see Foster and Rosenzweig (1995); Burger, Collier and Gunning (1993). Appleton and Balihuta (1996) find a correlation between farm productivity and the education of neighbouring farmers. On the basis of this correlation, they estimate the external return from primary education to be higher than the internal return. However, this estimate is only suggestive, since they did not control for many other community-level factors.

<sup>8</sup> For example, in the UK it was no coincidence that substantial state involvement in education began with a major extension of the franchise.

<sup>9</sup> They were given added prominence by some of the early 'New Economic Growth' theories - notably Lucas (1988) - which predicted that internalizing these benefits would increase growth, as well as the level of economic welfare. Subsequent theoretical work in this field has, however, tended to down play the role of education *per se* in driving economic growth, stressing instead endogenous innovation (Crafts 1994; Lucas 1993; Solow 1994). Nonetheless, education does in practice play a role in affecting innovation and adoption of new techniques (see Feder, Just and Zilberman 1985).

<sup>10</sup> Some externalities are at the level of the country as a whole. Conventional cross-section estimates of the determinants micro outcomes will not be able to identify such effects (the country's education will not vary across the sample).

the size of the Pigouvian subsidy to education.<sup>11</sup> One is likely to be left making strong judgements which have little supporting evidence and thus are hard to convincingly justify. For what it is worth, it is the author's opinion that the various externalities cited above do seem to provide a strong case for substantial government funding of education (although this conclusion may vary by educational sub-sector). Externality considerations should also influence discussions about curriculum reform. For example, emphasis on health and fertility externalities would imply a concern for health and sex education.

The distributional issues surrounding education are rather more tangible, although arguably more subsidiary. In what follows, we discuss distribution measured in terms of poverty and affluence; other dimensions may also be important.<sup>12</sup> The direct or first round distributional effect of educational subsidies depends on the progressivity of education services and of the tax system.<sup>13</sup> State education services are often progressively distributed because the poor tend to have more children or more affluent parents often send their children to private schools (see Besley and Coate 1991). Jimenez (Table 1 1989) summarizes some developing country studies of the distribution of educational subsidies: overall, they are mildly progressive except for higher education. However, he claims that the net impact may be regressive because taxation is often regressive. In fact, there is little hard evidence on this; early studies found mildly progressive tax systems (De Wulf 1975). Whatever the overall – or average – distributional impact, it is important to note that this may not be a good guide to the marginal impact. For example, a government may choose to

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<sup>11</sup> Weale (1992) provides one interesting approach to estimating externalities. He compares microeconomic and macroeconomic estimates of the returns to schooling. Only the latter should include external benefits, so these externalities could be estimated as the macro estimates minus the micro ones. However, a survey of the literature suggests that this difference is negative. Weale argues that this suggests that the micro estimates are upwardly biased (eg due to failure to control for 'ability').

<sup>12</sup> For example, for many developing countries, regional or ethnic inequalities are important concerns (South Africa being an extreme example). Gender is also often a dimension of disadvantage (Schultz 1989) and there is evidence that user fees will have a particularly adverse impact on the enrolment of girls (Booth *et al.* 1995; Odaga and Heneveld 1995).

<sup>13</sup> There are also likely to be important second round or general equilibrium effects: for example, Lam and Levison (1992) argue that Brazil's expansion of schooling has reduced inequality by lowering both the returns to schooling and the variation in the amount of education received.

fund increased educational expenditure by levying a progressive tax (Colclough 1993, cites two examples of this from Chile and Mexico).

Distributional arguments suggest targeted rather than universal educational subsidies. In practice, however, targeting education is difficult in developing countries. This is for the same kind of reasons which explain why developing countries often lack systems of income tax and benefits.<sup>14</sup> Experience suggests that schemes of exemption from user fees are of limited effectiveness, except perhaps for assisting the 'ultra-poor' (Reddy and Vandemoortele 1996).<sup>15</sup> A more effective approach may be regional targeting of educational subsidies. A second problem with targeting is political: since target groups may have little influence, such transfers may be politically unsustainable (Reddy and Vandemoortele 1996).

One objection to the distributional argument for educational subsidies is the conventional 'first-best' economic argument that transfers are more efficient when made in the form of cash rather than kind. A number of arguments can be made in response to this:

- *distortionary taxation*: cash transfers are not necessarily superior to in-kind transfers in a 'second-best world' (Guesnerie and Roberts 1984). Transfers in the form of education may alleviate the self-selectivity problem in optimal income taxation (Cremer and Gahvari 1997).
- *political constraints*: in practice, cash transfers are inadequate (or, similarly, the poor would not be compensated if user fees rise). Policy-makers (whether elites, electorates or international donors) may have more egalitarian preferences over education than over allocations of cash.
- *merit good arguments*: poor uneducated parents may undervalue schooling.

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<sup>14</sup> These reasons include the difficulty of obtaining the required information and the costs of administration. A fundamental problem is the difficulty of measuring household incomes when a large part of the population depends on profits from informal household enterprises, whether farms or businesses.

<sup>15</sup> The experience of Zimbabwe is illuminating (see ILO 1993). There, an exemption scheme was not applied as widely as expected because of its cumbersome nature. Exempted schools suffered cash flow problems due to delays in reimbursement. Social workers did not have time to visit homes and so automatically granted exemptions, leading to rising proportions of children being exempted.

Capital market failures are important for the distributional and general case for state subsidies for education. In a simple 'human capital' model of investment in education with perfect capital markets, there would be no presumption that the poor would receive less schooling. In reality, capital market imperfections are pervasive and loans are seldom used to finance the pecuniary costs of schooling.<sup>16</sup> The optimal intervention would appear to be in the capital market. However, in practice, student loan schemes are often very costly to administer and suffer from widespread defaults. In such circumstances, funding education by taxation may be a more cost-effective way for the government to ease the private sector's liquidity constraints. Tax liabilities could be linked to educational status ('graduate taxes'), so that users ultimately pay some of the costs of their education. Such graduate taxes (or, alternatively, income-contingent student loans) would have the additional attraction of reducing the risk faced by users in investing in their own education.<sup>17</sup> More generally, in the absence of perfect insurance markets, the government is more able than a household to bear the risks of investing in the education.

The 'Principal-Agent' problems which might arise due to incomplete parental altruism are perhaps more an argument for compulsory schooling than for subsidizing schooling. In practice, state's coercive power is often limited in many developing countries. Principal-Agent problems may provide a case for an additional subsidy for female schooling (Herz *et al.* 1992). In particular, there is a suspicion that gender gaps in school attainment arise because parents often have more claim on the returns to schooling accruing to their sons. The case for female education is strengthened by some studies which suggest it brings greater external benefits (for example, through child health) than male education. The case for promoting female education is particularly strong in parts of South Asia, where gender differences in life expectancy figures suggest serious and pervasive pro-male bias. One appropriate response may that of Bangladesh, which has introduced lower secondary school tuition fees for girls.

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<sup>16</sup> A cross country analysis of the macroeconomic determinants of school enrolment suggests that differences in the development of credit markets may explain a third of the difference in secondary school enrolment between Latin America and more industrialized countries (Flug, Spilimbergo and Wachtenheim 1995).

<sup>17</sup> Since there is typically no security for student loans, Friedman (1962) suggests the appropriate analogy would be with equity issued to finance physical investment.

Merit good arguments for promoting education have some appeal, although in the first instance they warrant the dissemination of information and awareness campaigns about the benefits of education rather than the finance of education per se. Furthermore, in most developing countries today, education is often highly valued. Merit good arguments are perhaps strongest in more isolated traditional communities where most parents are themselves uneducated. This could provide an additional argument for regional targeting of educational subsidies.

## 2.2 Arguments for user fees

The case for user fees could essentially be an empirical argument that the above mentioned market failures did not warrant a large enough subsidy to justify making education free at the point of delivery. Given the relative dearth of evidence, such a debate would be hard to adjudicate. Typically, however, advocates of user fees do not concentrate on denying the importance of market failures. Instead, they highlight counter-balancing government failures.<sup>18</sup> The previous section took the conventional approach of normative public economics: identifying market failures and the optimal government intervention. This approach assumes that the government is perfectly informed and aims to maximize social welfare; an approach satirized by Demsetz as 'nirvana economics'. The lack of information is clearly an important issue: the dearth of empirical evidence on some of the market failures shows that the government can not be well informed.<sup>19</sup> That the government may not have the best intentions has also been a concern of advocates of user fees.

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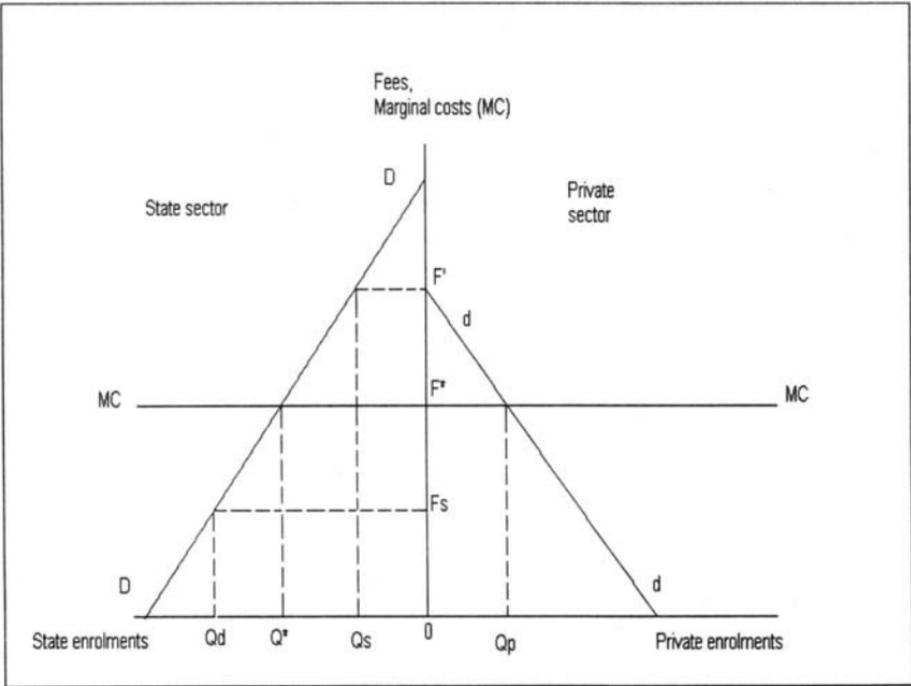
<sup>18</sup> In this section we focus on some of the leading arguments of advocates of user fees. We neglect a number of other, perhaps secondary, arguments for user fees that have also been proposed. In particular, fees may:

- reduce the deadweight costs of distortionary tax finance (see West 1991)
- reduce graduate unemployment
- increase responsibility in users: students may take their education more seriously
- increase accountability in providers: schools may be more responsive to parental requests; they will also have incentives to increase enrolment

<sup>19</sup> Lack of information is often seen as the key problem in the provision of public goods. Theoretical mechanisms have been devised to give individuals the incentives to truthfully reveal their preferences about the benefits of publicly supplied goods. However, since researchers cannot quantify the rather complex and indirect external benefits claimed for education, there is little reason to suppose that the general public can.

Indeed, the pro-fees argument most influential in the emerging international consensus is the second-best argument underlying the Bamako Initiative in health care. This accepts that in a first-best world, basic social sector services may best be financed by general taxation. However, it argues that in practice developing country governments often provide wholly inadequate funding. In such circumstances, it may be better to allow social sector providers to levy user fees in order to raise additional resources.<sup>20</sup> Much of the new international consensus then focuses on the need to ensure such fees

FIGURE 1  
THE EXCESS DEMAND ARGUMENT WITH A RESIDUAL PRIVATE SECTOR



<sup>20</sup> Notice that by accepting the level of finance going to education from the government as fixed, this argument is essentially adopting the perspective of a decision-maker other than the government itself. The relevant decision-maker may be an education minister or head of a individual school.

do indeed increase the funds available for education.<sup>21</sup> The consensus remains distinctly luke warm, since experience suggests that introducing user fees may raise only limited revenue and will often adversely affect usage, particularly by the poor. Nonetheless, the basic argument has a raw force: as Bray and Lillis (1988) note, communities may decide to forgo their right to free education if doing so is the only way to ensure they can exercise their right to education itself. Similarly, as Katz (1987) notes, those not served cannot be made worse off by raising user fees.

Much of the discussion within the World Bank in the 1980s was also concerned with introducing fees to generate more finance for education. One particular argument concerned the introduction of fees in the context of a supply-constrained 'free' education system. In such situations, the government might be viewed as 'failing' in that it subsidized education but did not provide enough resources to enable all those who demanded the service to receive it. The argument for raising fees in such circumstances was that, given excess demand, this would not reduce enrolment. On the contrary, it would raise resources which could be used to increase supply, in terms of either quantity or quality (see Tan, Lee and Mingat 1984, on the case of Malawi). Let us first consider the argument in terms of quantity alone and abstract from possible improvements in quality. Figure 1 provides a simple illustration. The excess demand argument is typically presented without reference to the private sector, so let us focus first on the left hand side of the diagram which gives the total demand curve DD for education. For simplicity, we assume that education has a constant marginal cost of  $F^*$ . The state subsidizes education, charging users a fee of  $F_s$ , less than the marginal cost. At this fee, there is demand  $Q_d$ . However, the state does not meet all this demand, but instead rations access to a quantity  $Q_s$ . At its simplest, the 'excess demand' argument is that by charging a higher fee more resources could be raised for education and hence more places supplied. For example, moving to marginal cost pricing would lead to  $Q^*$  being supplied.

There are several points to note about this argument. First, the assumption of excess demand is not obviously true with regard to the quantity of schooling

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<sup>21</sup> Here it may be helpful if the fees are retained at the school level and explicit assurances obtained that the government will not reduce its core funding of education. An agreed division of responsibility for the financing of different types of expenditures may also help prevent budgetary displacement. For example, in the Bamako Initiative, it was common for the state to finance staff and capital investment, whilst users funded other expenses (such as drugs).

in many developing countries. In section 3.3 below, we suggest that primary schooling is often demand determined. Thus, in Figure 1, the state would supply  $Q_d$ , not  $Q_s$ . Second, even if there is excess demand, for the move to marginal cost pricing to lead to an increase in enrolments, the quantity  $Q_s$  supplied by the state must be less than the market clearing supply  $Q^*$ . Whether this is true or not is an empirical matter. Thirdly, the argument so far has been presented assuming there is no market for private education.<sup>22</sup> More commonly, however, private 'second-chance' schools serve some of the students rationed out of the state sector. Here the analysis depends on the nature of the mechanism used to ration state school places. In Figure 1, we assume that the state school places go to those with the highest demand for them: those whose willingness to pay exceeds  $F'$ . This is an extreme assumption, since state school places are often rationed by academic performance and not sold in an auction. However, those with a high demand for schooling may be more motivated to perform well and may also come from more affluent families, a fact that is also likely to enhance performance. Taking the extreme assumption, there will be a residual demand  $dd$  for schooling amongst those rationed out of the state sector. This demand curve  $dd$  is the same as  $DD$ , without the segment of demand with willingness to pay greater than  $F'$  (we assume private and state education are homogeneous, with no switching costs). If private education is priced at the same marginal costs as state education, then the private sector will supply  $Q_p$  to those rationed out of the state sector. By construction, the supply of education in the state sector,  $Q_s$ , plus that in the private sector,  $Q_p$ , is equal to that which would be forthcoming under marginal cost pricing,  $Q^*$ . Consequently, in such a situation, raising fees to reduce the excess demand could indeed fund more state education. However, it would not increase the combined amount of education provided by the state and private sectors. Students previously rationed out of the state sector would merely switch from private to state education. This result of no change in total enrolments depends on the assumption that the rationed places go only to those with the highest demand. More generally, one might expect some of those previously enrolled at state schools to be unwilling to pay marginal costs. In such a case, marginal cost user fees would lead to a fall in the amount of total education provided.<sup>23</sup>

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<sup>22</sup> Private education has been prohibited for periods in some developing countries, such as Tanzania and Pakistan, but experience suggests that these experiences have been harmful (see Knight and Sabot 1990; Jimenez and Tan 1987).

<sup>23</sup> See Roemer (1986) for analogous arguments about why price liberalization need not lead to a supply response.

The above analysis assumes a homogeneous product, supplied by public and private sectors. However, variations in the quality of education are important in understanding public-private interactions. Barr (1993) suggests that governments committed to free education either ration access or, if everyone is given an entitlement, ration quality. In many developing countries, there is an entitlement to at least primary education and hence the 'excess demand' argument tends to manifest itself in terms of inadequate quality. Given subsidies for state education only, many parents will not switch to private education but may nonetheless be willing to pay for higher quality state education. User fees are an obvious way to remedy this situation, but may do this by excluding some children. Early advocates of user fees denied this, arguing that improvements in school quality may lead to an increase in the demand for school quantity.

Much of the debate surrounding user fees has focused on the extent to which they do in fact reduce enrolment. This question is often equated with estimating the price elasticity of demand for education, but this may be misleading if there is in fact excess demand for education or there are variations in the quality of education.<sup>24</sup> The effect of fees upon enrolment is important in determining the amount of revenue raised and the extent to which cost-recovery will lead to the market failures discussed in the previous section. In particular, if there is little effect then the potential inefficiencies caused by externalities or credit market failure will be less pronounced. However, it should be noted that elasticities are not central to the distributional argument. Indeed, if the poor have an inelastic demand for education then *ceteris paribus*, their welfare will fall more if fees are raised.

The effect of fees upon enrolments is typically estimated using two alternative approaches: cross-sectional econometric studies and 'before and after' studies. Amongst the former category are the ten studies of the elasticity of demand for education cited by Jimenez (1987), which suggest an elasticity of less than unity. Reddy and Vandemoortele (1996) criticize 'before and after' studies as commonly failing to provide a 'rigorous' analysis such as that provided by the econometric approach. However, the apparent rigour of the conventional

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<sup>24</sup> According to the conventional excess demand argument (with no residual private supplier), one would expect the introduction of user fees to increase enrolment. Nonetheless, if this was observed, one would not conclude that the elasticity of demand had the wrong sign. Similarly, one might find greater demand when schools charge higher fees, but this may reflect quality improvements associated with higher fees rather than a perverse price elasticity of demand.

econometric studies masks a number of very serious weaknesses which may make them a poor guide for policy. They typically do not consider the possibility of excess demand; they usually fail to control for the endogeneity of policy and supply; and they commonly do not measure many important variables such as school quality. Indeed, the data available often provides only limited information on fees – household surveys typically do not record the fees faced by those who do not consume the relevant service and so this essential information is often imputed by the researcher. Furthermore, if a government sets uniform fees, then cross-sectional studies provide no variation from which to estimate the demand response. To the extent that fees differ, this may reflect unobserved variations in quality of education or other aspects of local supply or demand conditions, rather than a pure price difference.

Looking at actual variations in fees over time is probably a better guide to policy than most cross-section econometric studies. It is true that 'before and after' studies are subject to weakness. They sometimes fail to observe 'displaced demand' (for example, switches to private schools) and often cannot control for other contemporaneous changes, for example, in school quality or the general economic environment (Shaw and Griffin 1995). Nonetheless, observing the experience of many countries in introducing or abolishing user fees for education, it is hard to deny that this often has very large effects on enrolments. For example, after more than doubling in the previous decade, primary school enrolments in Nigeria fell from 14.7m to 12.5m with the introduction of fees in 1984. In Bendel state, the gross enrolment ratio fell from 90 per cent to 60 per cent in 18 months (Hinchliffe 1989). In Malawi, the pilot case for the introduction of fees by the World Bank, the introduction of fees in 1982 was associated with a marked slow down in primary school enrolments (Fuller 1989). Their removal in 1994 led to a 50 per cent surge in enrolment (see Reddy and Vandemoortele 1996, for this and other instances).

The previous arguments for user fees are based on the premise that governments often provide insufficient funds for education. Another influential argument was that available funding was often regressively allocated. This was partly due to higher take-up of (tertiary) education by the more affluent and partly because it was claimed that tax systems in developing countries were often regressive. Far from governments sharing the idealized social planners concern with the poor, in practice, they may often favour the

children of the elite or exhibit 'urban bias'.<sup>25</sup> In addition, there is an argument based on horizontal equity that the users of education – as opposed to non-users – should pay its cost. These equity arguments are important but not necessarily sufficient to justify user fees. Other considerations apart from equity – such as externalities – must also be borne in mind. To the extent that there are arguments for full cost-recovery, such a policy may nonetheless be politically hard to implement. A radical solution in such circumstances may be to privatize the relevant educational facilities (Haddad et al. 1990). Indeed, if the state is not prepared to subsidize a service, it is hard to see why it should provide it.

### III RESTRUCTURING EDUCATIONAL EXPENDITURES

The arguments surrounding the restructuring of educational expenditures are essentially the same as those about user fees for primary, secondary and tertiary education.<sup>26</sup> Consequently, we use this section to consider the extent to which the arguments for and against subsidies as opposed to user fees apply to each of educational sub-sectors. There is fairly general and long standing international agreement that the case for user fees is strongest at the tertiary level and weakest at the primary level. This underlies calls for restructuring of government expenditure in developing countries from tertiary to primary education. However, there has been relatively little discussion of secondary education.<sup>27</sup> This is despite the fact that, for most developing countries, future

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<sup>25</sup> This argument is often made about higher education. Curiously, the impetus for raising school fees in Malawi appears to have been strengthened by the fact that school enrolment was nearly universal in the poorer North, whereas in the more developed Central and Southern Provinces is was much lower (51.5 per cent and 56.2 per cent respectively in 1977; see Thobani 1984).

<sup>26</sup> Restructuring of educational expenditures could also be taken to infer decisions about the appropriate mix of educational inputs - staff, equipment, buildings. These issues are important, but are not addressed here.

<sup>27</sup> Most of the controversy has been around fees for 'basic' education. This term is widely used in international debate but is seldom explicitly defined. Instead, it appears something of a 'fudge', enabling different people to interpret it differently. The more parsimonious take it to refer only to primary education; the more liberal may also include secondary education. This may facilitate surface international agreement, but is unhelpful to clear analysis.

TABLE 1

## A ROUGH COMPARISON OF PRIMARY, SECONDARY AND TERTIARY EDUCATION IN DEVELOPING COUNTRIES

	Primary	Secondary	Tertiary
Typical enrolment	Usually most children; often universal	Variable; often minority	Typically a small minority
Allocation	Often demand determined	State sector supply constrained, but with large private sector	Supply constrained, often weak or non-existent private sector
Distribution	Progressive if universal; regressive if low enrolment	May be regressive, but including many children of poor	Regressive, sometimes catering mainly to the elite
Unit cost	Modest	Intermediate	Very high
Skills acquired	Basic literacy and numeracy; some general knowledge	General knowledge and skills, often problem-solving focus	Typically specialized knowledge and higher skills
Other distinctive features	First contact with education system: important for screening and socialization	State sector often rationed by ability with some elite and 'second chance' private schools	Caters for the future 'leaders' in the public and private sectors; recipients are adults
Private returns	Probably positive in agriculture; low in wage employment	Usually good returns in wage employment; not in agriculture	Usually good, although may involve search unemployment
Associations with child health	Positive	Positive	Low enrolment makes relatively unimportant
Associations with lower fertility	Sometimes weak (eg in Africa)	Almost always strong	Low enrolment makes relatively unimportant
Other possible externalities	Literacy lowers transactions costs; may help inform electorate	May be important for manufacturing?	May be important for public sector decision-making and private sector technology

educational expansions are likely to be at this level.<sup>28</sup>

Although there is a fairly strong international consensus prioritizing primary schooling above secondary or tertiary, this position is often justified by rather weak grounds. In particular, reference is often made to the higher returns to primary schooling claimed by Psacharopoulos (1994) in an influential series of surveys of the developing country literature. These claims have recently been subject to a devastating critique by Bennell (1995 and 1996), based on a persuasive re-reading of the original sources. Furthermore, more recent studies – at least for Africa – indicate that the conventional rates of return are in fact lowest for primary education (Table 1 refers). However, it is important to note that the returns in question are based on estimates of the association between wage earnings and education. These 'private returns' are then adjusted to take into account taxes and government subsidies to education, to produce 'social returns' (which are below the private returns). Neither the private nor the social returns tell us anything about the possible external benefits from education listed in Section II, which are arguably the most important consideration in determining the optimal government subsidy.<sup>29</sup> Moreover, returns in formal sector wage employment may be irrelevant to many people in developing countries – especially the poorest – who are often farmers or self-employed. Although studies almost invariably find a positive correlation between education and wages, comparable estimates for agriculture and non-farm self-employment are more mixed. For example, nearly half the studies of agricultural productivity and education surveyed by Lockheed, Jamison and Lau (1980) found no significant relation. The proportion is even higher in the African studies surveyed by Appleton and Balihuta (1996). Nonetheless, the pattern of estimates suggests that, on average, education has positive returns in agriculture, although these may be smaller than the returns in wage employment.<sup>30</sup>

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<sup>28</sup> In particular, for many developing countries, primary education becomes less of a concern as they reach universal coverage. Tertiary education may not be given priority, due to its high cost and limited coverage.

<sup>29</sup> Perhaps the main reason that discussion often centres around conventional rates of return to schooling rather than externalities is because only the former can be readily quantified.

<sup>30</sup> There is some indication, at least amongst the evidence from Africa, that insignificant results are due to high standard errors rather than low estimated returns per se. Observing a pattern of such results makes it likely that the true relation is positive.

We have argued that decisions about educational restructuring do not depend closely on conventional estimates of the 'returns to education'. More relevant is the extent to which the various arguments for and against user fees apply to the various educational sub-sectors. We discuss the applicability of the various arguments in turn.

### 3.1 Distributional arguments

Table 2 provides a rough outline of some of the different features of primary, secondary and tertiary education.<sup>31</sup> Although enrolment falls with the level of education, rising unit costs mean that all three sub-sectors typically account for substantial shares of the government education budget.<sup>32</sup> The size of enrolments is the key determinant of the progressivity or regressivity of enrolment. When nearly universal, state education may be progressive if the poor have more children. With low enrolments, the children of the less affluent tend not to be included, either because they cannot afford the costs of education or because they do not perform well enough in school to secure access to places rationed by examinations. In the case of tertiary education, enrolment is often so low that it is not a useful vehicle for redistribution. For example, in sub-Saharan Africa, only 2.5 per cent of the relevant age group receive tertiary education. The high costs of serving this minority imply a large opportunity cost in terms of funding for broader based schooling. For example, the World Bank (1986) calculated that eliminating living allowances for students in tertiary education in Sub-Saharan Africa would increase primary education budgets by 18 per cent (full cost recovery would increase them by 40 per cent). An additional factor determining progressivity is the role of the private sector. If private schools cater for those demanding high quality education, this will make the state sector more progressive. Conversely, private schools may sometimes – particularly at the secondary level – provide for those rationed out of higher quality state schools, often making state education more regressive.

The distributional impact of educational subsidies constitute a strong equity-based argument for restructuring spending from tertiary to primary education (see Table 1 of Jimenez 1989). This argument is strengthened when considering the feasibility of loan systems. These are feasible at the

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<sup>31</sup> Here we focus on the teaching function of tertiary education. Other arguments exist for subsidizing research.

<sup>32</sup> Mook and Jamison (1988) claim that the unit costs of secondary education are four times those of primary; for tertiary education the ratio is sixty.

TABLE 2

## ESTIMATES OF MINCERIAN RETURNS TO SCHOOLING IN AFRICA, POST-1979

Area and study	Data	Mincerian returns (per cent)						Other comments
		Primary	Secondary		University			
			Lower	Upper				
Côte d'Ivoire (Appleton, Hoddinott and Knight 1996)	1145 employees from urban households in the Living Standard Surveys, 1985-87	5	m 14 f 18	m 19 f 13	m 9 f 38		University returns derived from dummy variable, assuming three-year course.	
Côte d'Ivoire (Vijverberg 1993)	1620 employees from urban households in LSS, 1985-87	m 9 f 6	m 12 f 24	m 20 f 26	m 20 f 26		Weighted averages of Abidjan and other estimates.	
Ethiopia (Appleton et al. 1997)	547 employees from urban household survey, 1990	m 8 f -1	m 2 f 27	m 13 f 18	na		Weighted averages of private and public; from dummy variables.	
Ghana (Glewwe 1991)	389 employees from households in LSS, 1988-89	1-3	9-11	5-7	1-2		Indirectly estimated via cognitive skills. May under-estimate returns post-middle school.	
Ghana (Beaudry - Sowa 1994)	1801 employees from households in LSS, 1987-88	4	7	18	12		May include self- employed (Glewwe 1991).	
Ghana (Teal, personal communication)	2649 employees in manufac- turing enterprise survey, 1993-5	3	0	8	14			

Table 2 cont.

(Table 2 cont.)

Area and study	Data	Mincerian returns (per cent)				Other comments
		Primary	Secondary		University	
			Lower	Upper		
Kenya (Knight - Sabot 1990)	Approximately 2000 urban wage employees	6	14	na	As cited in Moll (1996).	
South Africa (Moll 1995)	16200 households in 13 urban areas in 1990 CSS/HSCR survey	Afr. 2	Afr. 11	na	Similar estimates provided from other surveys.	
South Africa (Mwabu - Schultz 1995)	6016 employees from households in 1993 survey	4	16	25		
Tanzania (Knight - Sabot 1990)	Approximately 2000 urban wage employees	5	10	na	As cited in Moll (1996).	
Tanzania (Mason - Khandker 1995)	4217 employees from 1990/1 labour force survey	m 9 f 21	m 14 f 18	m 2 f 14	m 14 f 2	Source: direct calculations from Table 2.
Uganda (Bigsten and Kayizzi-Mugerwa 1992)	403 employees from households in Kampala 1990	m 8 f 10	m 3 f 1	m 15 f 4	'University' refers to post-secondary institution.	
Uganda (Appleton et al. 1996)	2174 employees in urban households of 1992 IHS	m 4 f 5	8 f 20	m 0 f 20	m 30 f 24	University returns derived from dummy variable.
Zambia (Andersson 1993)	1413 workers in 1985 labour force survey of urban Lusaka	m 7 f 16	m 12 f 30	m 29 f 20	Returns inferred from dummy variables.	

Source: Appleton, Hoddinott and Mackinnon (1996).

Note: m = male

f = female

tertiary level, although even there the administrative costs are high (Jimenez 1987, estimates a cost of 12-23 per cent in Latin America). Introducing loan systems for schooling would be more costly and difficult to implement. Moreover, a graduate income tax or an income contingent loan seems preferable to a conventional 'mortgage-type' loan system, from the point of view of reducing the risk faced by students.<sup>33</sup> To the extent that primary schooling is universal, there will be no difference between such a system and finance from general taxation. By contrast, there are real equity issues involved in using general taxation to fund the tertiary education of the elite. An additional consideration is the maturity of the students. By the time they reach tertiary education, students are typically adult and able to make informed choices about their own futures. The potential principal-agent problems between parent and child are greatly reduced by this stage.

### **3.2 Externalities**

Although the above arguments for restructuring are strong and can be established empirically, they are arguably secondary to the crucial issue of the external benefits of education. Even if tertiary education goes to the elite, it may still be worth funding if it brings direct benefits to the rest of society. Some such externalities do seem likely. Those with tertiary education are likely to become leading figures in the public and private sectors; they may also tend to be political leaders. High quality tertiary education will help create a more efficient public service, more informed policy-making and greater use of new technology in the private sector. Such gains are hard to quantify, but could be tremendously important if achieved. Economic theory stresses new technology as the determinant of long-run growth. For developing countries, growth may not necessarily require invention of new technology but can benefit greatly from the ability to access existing technology already used in more industrialized countries. The external benefits from informed policy-making could also be great. An able and reform-minded Permanent Secretary at a Ministry of Finance may bring more benefits to the country than could ever be reflected in their pay. These arguments do suggest some government finance for tertiary education, but probably with a rigorous focus on quality and supporting the most able children of the poor. Needless to say, such a policy would be very difficult

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<sup>33</sup> Australia and Sweden have recently implemented graduate income taxes (see Morris 1989 and Chapman 1992, for favourable assessments).

to sustain politically. In many countries, it would probably imply a reduction in the number of students funded by the government.

It is often argued that primary schooling brings the highest external benefits. As with many claims about educational externalities, this is difficult to substantiate empirically but has some plausibility. If effective, primary schooling is the stage of education at which basic literacy and numeracy are learnt. These basic skills may be most important in lowering transactions costs and giving people access to written ideas and information. There may be further external economic benefits via the adoption of new techniques in agriculture. Of the social benefits, parental primary schooling is associated with lower child mortality.<sup>34</sup> In some societies (particularly outside Africa), primary schooling is also associated with lower fertility.

Many of these claims about externalities to primary schooling could also apply to secondary schooling. Although basic skills are first taught in primary school, there is evidence from some developing countries that retention of these basic skills is low for primary leavers (Eisemon 1988). The first best response to this may be to improve the quality of primary schooling, but there may also be an argument for secondary schooling as a way of consolidating basic skills. Although microeconomic studies often find no relationship between secondary schooling and agricultural productivity, there is some macroeconomic evidence that it improves agricultural technology (Thirtle, Hadley and Townsend 1995). Having a workforce with secondary schooling may also assist with the introduction of more modern technology in manufacturing and the services. Finally, secondary schooling is also associated with lower child mortality and indeed has a stronger negative effect on fertility than primary schooling (see Subbarao and Raney 1995; Ainsworth, Beegle, and Nyamete 1995). Overall, more research is required to see whether primary schooling has greater external benefits than secondary schooling. Both would seem to warrant some government support.

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<sup>34</sup> Behrman (1991) cautions against relying on associations between education and child mortality as evidence of externalities. His warnings are well taken, but the link does nonetheless appear to be one of the most compelling arguments for state funding of primary schooling. A causal interpretation of the link does seem plausible and is the safest one to take if the government places a strong weight on saving lives. Even though the lives saved are internal to the household, the government may again wish to 'play safe' for fear that the links are not understood by parents making schooling decisions (or, in some cases, neglected because of imperfect parental altruism).

### 3.3 The 'excess demand' argument

In many developing countries it is questionable whether there is excess demand for places in state primary schools. Even in countries with very low primary enrolments, such as Ethiopia, the greatest problem appears to be a low demand for services rather than a lack of schools (Weir 1997).<sup>35</sup> Consequently, primary enrolment may often be demand determined. The other variant of the 'excess demand' argument may more often be true: that the quality of primary education is low and that parents are willing to pay for it to be improved. This provides a case for allowing parent-teacher organizations to raise modest fees to fund additional school expenditure. Since this argument depends on the strength of demand, it may vary across countries and across communities within particular countries. Where demand is high and enrolment nearly universal, PTA fees may have little effect on take-up. In other areas, the effect may be too severe to justify introducing user fees. One striking current example of the effect of user fees on primary enrolment is provided by Uganda's move to free primary education. The announcement that fees were to be abolished has led to 2.8m children previously out of school being enrolled for primary education. This compares with the 2.4m other children already enrolled in primary school prior to the announcement (*The New Vision* 1997).

Enrolment in state secondary schools and universities is often subject to excess demand, with access explicitly rationed by exam performance. At the secondary level, this typically generates a market for 'second-chance' private schools. Consequently, for the reasons given in Section 2.2, it may be naive to expect raising fees for state school to increase the total amount of secondary education provided in a country and typically the reverse will be true. Raising fees for secondary and tertiary education may nonetheless serve a distributional purposes, if – as is often the case – the beneficiaries of the state subsidies are the more affluent.<sup>36</sup> Tertiary education may be one area where the 'excess demand' argument does apply, since many developing

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<sup>35</sup> The absence of local schools will usually correlate with low enrolments, but this need not imply a supply constraint. There may be further away schools which could be attended were households willing to face the transport costs. Furthermore, the absence of schools will often be endogenous: governments will be reluctant to build facilities that will be under-utilized, whilst the private sector (including communities) will tend to supply services that are in demand.

<sup>36</sup> For example, where access to subsidized state education is rationed by examination performance and children from more affluent households perform better in examinations.

countries lack private universities. In part, private universities may be absent because those rationed out of the state sector are unwilling to pay the full cost of university tuition. However, it may also reflect over-restrictive accreditation by governments.<sup>37</sup> Removing such entry barriers would seem to be desirable. Encouraging private supply may be a politically easier way of financing increased tertiary education than raising user fees in state universities. In the same vein, privatizing universities may be one way to reduce political pressure to over-subsidize tertiary education. In Africa – where restructuring is arguably most necessary – universities are overwhelmingly within the public sector (Eisemon 1992). Elsewhere, private universities often thrive (see Levy 1989; Tilak 1991).

### 3.4 Information: merit goods and screening

The screening hypothesis implies that acquiring more education signals ability. This may be more of a concern for post-primary education, especially where primary schooling is near universal. Indeed, contrary to the theory, it is not clear that parents (particularly the uneducated) have a good knowledge of the academic potential of their pre-school children. Instead, primary school may provide a socially useful screening function. Without subsidized primary schooling, talented children of the poor may never have their potential recognized. The risk of educating children may also fall with the level of education, as the ability of the child becomes realized. On a related point, the merit good arguments also seem most important at the primary level. Uneducated parents may not realize the value of education, but such arguments would appear less plausible if all parents had themselves reached primary education. These informational arguments suggest state funding of special initiatives to promote primary schooling in less educated region.<sup>38</sup>

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<sup>37</sup> The willingness of many students to go for tertiary education overseas may be a reflection of an excess demand at home. This seems likely in some cases: for example, Kenyans studying in Indian universities whose degrees are often not even recognized back home. In other cases, overseas tuition may partly reflect a demand for higher quality tuition, the presence of scholarships from overseas and an aspiration to emigrate.

<sup>38</sup> *Inter alia*, such initiatives might include: building local schools; providing extra equipment; abolishing fees and possibly even providing grants; providing incentives to head teachers and other officials to increase enrolments.

## IV VOUCHERS

Most recent debate over education in developing countries has centred on user fees: on the financing of education. In most industrialized countries, it is assumed that the state wishes to finance schooling (if not higher education) but there have been periodic debates over whether it should directly provide the service. Thinkers from a range of different perspectives have proposed that the state could finance education by providing vouchers which may be redeemed in return for educational services (see Friedman 1962; Jencks 1973; Chubb and Moe 1990).<sup>39</sup> Although this is the basic principle, whether it amounts to a minor change or a radical upheaval to the educational system depends on the details of the particular scheme (see Blaug 1985). Perhaps the key distinction is whether the vouchers are limited to the state sector or not. Coupled with local management of schools, limited vouchers aim to create an 'internal' or 'quasi' market for state education. We consider the case for these reforms, before turning to consider the further issues which arise when vouchers can be used to buy private education.

### 4.1 Limited vouchers

Here we consider vouchers which are redeemable only in the state sector and where schools charge the same fee (equal to the voucher).<sup>40</sup> There are two salient features to such scheme: allowing free choice of school and having funding follow pupils. Indeed, the scheme is equivalent to introducing an open enrolment policy within the state sector and channelling funding to institutions on a capitation basis. As such, the voucher scheme is quite similar to how the state manages tertiary education in some countries. The voucher variant may nonetheless have an added advantage in that it is more transparent to parents.

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<sup>39</sup> These debates are often academic: voucher schemes have seldom been implemented by policy-makers. However, the UK government is currently introducing a voucher scheme for nursery education.

<sup>40</sup> This is similar to that proposed by Jencks (1973), although in addition he advocated a supplement for children from low income households and payment of transport costs. The effects of such a scheme were explored in the Alum Rock experiment. Although not specifically excluded from the scheme, private schools would have to had to charge pupils the same fee as the voucher and consequently none participated. We do not consider some more radical forms of internal market - for example, allowing state schools to charge different fees. Blaug (1985) suggests that this could greatly improve cost efficiency.

It is sometimes argued that school choice is valuable because it encourages diversity: parents are able to choose the kind of school that suits them. However, Brown (1992) provides an interesting argument that schools are likely to be fairly uniform even with school choice. Parents and students may be uncertain of their abilities and interests, so they will typically demand a broad based curriculum for most of their schooling. This tendency towards uniformity will be reinforced if – as commonly occurs – the state attempts to set national standards, both through examination systems and through a national curriculum. There may be some variations in the relative emphasis of schools and their secondary characteristics (for example, special emphasis on music, sports, formal discipline, etc), but these may turn out to be slight.

Instead, the most important potential gains from school choice lie in encouraging competition in quality. Parents will be able to exit from poor performing local schools and enter more distant higher performing schools.<sup>41</sup> This may bring benefits when faced with a given menu of providers. Hoxby (1994a) provides evidence from the US of beneficial effects of competition when parents are able to choose amongst state schools provided by neighbouring school districts. However, for competition to have full effect, it will be necessary to allow popular schools to expand and unpopular ones to contract. Governments would need to give schools both the freedom to build and the 'freedom' to be bankrupted. In one experiment with this kind of voucher in Alum Rock, California, this process was ultimately prevented – in part, due to the costs of adjustment and the security of tenure of teachers at unpopular schools (Blaug 1985). Similarly, many attempts at school choice – for example, in the UK – have often become a facade, as over-subscribed schools ration access by geographic proximity instead of expanding. Even if these constraints can be removed, the process of expansion and contraction across schools will involve capital costs – eg new building – and may give rise to diseconomies of scale, as small class sizes occur.<sup>42</sup> Students in schools forced to close will also face disruption.

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<sup>41</sup> This may be inhibited by transport costs; these may be particularly high in sparsely populated rural areas. At the primary level, most rural parents may prefer the local school. However, distance appears much less of a constraint at the secondary level and is largely irrelevant for tertiary education.

<sup>42</sup> Vouchers should be combined with a system of professional monitoring to identify failing schools and despatch of trouble-shooting teams of inspectors and advisors to remedy such situations. Such systems often exist within the state sector, but vouchers

Whether these costs are worth incurring depends partly on one's belief about the variability of the distribution of school quality. Statistical analysis of differences in school performance typically find large residual school effects which cannot be explained by observed characteristics of the schools or the pupils. In part these may in fact reflect the unobserved effects of the local environment, not necessarily the school. However, to the extent that schools do have large unobservable effects, their causes can not be easily identified, let alone duplicated. This creates potential gains from allowing parents to choose schools. It is not guaranteed that parents will be able to identify good schools, but it may be worth experimenting in order to test this.<sup>43</sup> The government could play a facilitating role, requiring schools to disclose relevant information and publishing school examination results, perhaps attempting to adjust for the pre-existing ability of the intake to obtain figures for 'value-added'. Third parties selling independent information on schools may also develop in response to school choice.

Perhaps more important than re-allocating students across a given menu of schools are the possibilities that vouchers cause individual producers to improve the quality of the service they provide. Here much depends on

- *the school managers' objectives*: it is likely that most school managers would be uncomfortable to see their intake dwindle, particularly given the effect this will have on the school's revenues. Some managers are likely to be entrepreneurial: actively seeking to attract new admissions by trying to improve quality and increase cost-effectiveness. Such qualities may be encouraged by providing school managers incentive payments and using appointment committees to select candidates with such objectives.
- *the degree of local management of schools*: the more discretion school managers have over their expenditures and teaching methods, the more potential there will be for improvements in quality in response to the internal market.

There are, however, problems with school choice and local management of schools. Local management of schools is likely to lead to higher administrative costs. It could also lead to a greater likelihood of 'capture' by

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may enhance them in so far as the exit of parents provides a useful - and hard to ignore - early warning signal.

<sup>43</sup> Notice that any experiment - unlike Alum Rock - will have to be fairly large-scale and fundamental (Manski 1992).

producers. School choice be adversely affected by asymmetric information about school quality. Parents may judge school quality by their average examination marks, providing incentives to schools to exclude the less able.<sup>44</sup> Even if this is prevented, selection may occur if the parents of the more able also make more use of their powers of choice. Selectivity raises equity issues, but may also affect average performance.<sup>45</sup> More generally, school choice may increase social stratification and segregation if the more affluent and educated parents are also the most likely to exercise their choice. Hirschman (1970) argued that such 'exit' of the more articulate parents may reduce the effectiveness of parental 'voice' in lobbying for improvements of the failing schools.<sup>46</sup>

## 4.2 Unlimited vouchers

A more radical form of voucher scheme – proposed by Friedman (1962) – would allow parents to redeem their vouchers at private schools, 'topping them up' to meet any excess of the fees over the voucher. Again such a scheme could be duplicated by other means (at a loss of some transparency). In particular, it would be equivalent to augmenting an internal market in the state sector with a private school subsidy equal to the cost of state education.<sup>47</sup> This illustrates the point that debates about unlimited vouchers are partly about the finance of education, as well as its provision. Most of the arguments for state finance of education are *prima facie* not limited to subsidies for state as opposed to private education. However, in practice, the arguments may be stronger for support of state education. This is clearest in the case of the distributional and credit rationing arguments, if private schools cater to the more affluent. Similarly, the externality and merit good arguments may apply less to private education, if those using private

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<sup>44</sup> Glennerster (1993) terms this S-competition - selectivity competition - in comparison to the E-competition - efficiency competition - typically attributed to the market.

<sup>45</sup> It is often argued that grouping children by ability raises the effectiveness of teaching. This is plausible and implies that selection by ability may increase average performance. However, some studies claim the opposite: that more able children perform well in many settings, but that the less able perform better if taught together with the more able (see Rutter *et al.* 1979).

<sup>46</sup> Hirschman's argument was concerned with articulate parents exiting the public sector to enter the private sector, but applies also to more limited school choice.

<sup>47</sup> Unlimited vouchers may have a political advantage over their tax credit equivalent in that users of private education will be given a reason to support state educational expenditures (in the form of vouchers). Using tax credits rather than vouchers might lead to pressures to increase tax credits but oppose higher spending on state education.

institutions have a high demand for education. For example, if a child from an affluent household attends an unsubsidized private primary schooling there may well be external benefits but these are realized without the need for government intervention. However, it should be noted that the above assumptions about the incomes and demand for education of those in private schools may not be applicable where these schools cater for those rationed out of the state sector.

An essential feature of unlimited voucher schemes is that they remove a discontinuity on the parental budget constraint. In particular, one could view the choice between state and private education as one concerning the quality of schooling. Parents may choose state schooling of a standard quality paid for by taxation. Alternatively, they may want slightly higher quality schooling – as might be privately provided. Under an unlimited voucher scheme, they would just have to pay the extra cost of the improvement in quality provided by the private school. The voucher would cover costs up to those of the state schooling. By contrast, without an unlimited voucher, parents switching from state to private education would have to pay the entire cost of the private schooling.

Introducing unlimited vouchers would thus have several effects:

- *facilitate exit from state schools*: students could leave the state sector in order to obtain slightly higher quality private schooling. This could be a Pareto improvement, since public money would not have to be spent on educating these children in the state sector. However, for such Pareto improvement to exist, the value of the voucher must be less than the cost of the state education (see Ireland 1990).
- *transfer tax revenue to private school users*: the required outlays may be very substantial and regressive. In principle, these effects could be reduced by making vouchers income-related, but in practice this may be difficult for developing countries.
- *increase competition between the state and private sectors*: This may lead to efficiency gains for the same reasons that competition within the state sector might (see Hoxby 1994b, for evidence of this in the US). Indeed, competition with private providers may bring greater efficiency gains than competition with state schools. There may be gains in diversity and experimentation, if state schools provide a more uniform service than private schools. There may be greater pressures for cost-effectiveness, particularly if the private sector includes some 'for-profit' institutions.

Clearly, the possibility of a Pareto improvement (sometimes termed 'dollars on the sidewalk') is worth investigating. However, most governments have been deterred from introducing unlimited full vouchers by their distributional and fiscal implications. For example, Mrs Thatcher's UK administration shied away from school vouchers when it was estimated that they could cost £0.5bn, predominantly in subsidies to the less than 10 per cent of children who receive private education. Opposition from state providers has also been important. In a feasibility study in Kent (UK) in the 1970s, three-quarters of state school teachers surveyed were opposed to a voucher scheme and half said they would not serve in voucher-eligible schools. Support from parents was lukewarm: most said their children were in their first choice schools. Only 10 per cent said they would switch to another state school under a voucher scheme; 9 per cent (mostly those in management and the professions) said they would switch to the private sector (see Blaug 1985).

Whether the fiscal and political cost of voucher is worth bearing depends in part on how one views the efficiency of the private sector compared to the state sector. If state education is particularly inefficient, then large gains might be expected from switching funding to private education via parental choice. In such a situation, unlimited vouchers may lead to a gradual privatization of education or provide an impetus for reform within the state sector.<sup>48</sup> Much interest has focused on a comparison of state and Catholic high schools in the US which concluded that the latter were more cost-effective (Coleman, Hoffer and Kigore 1982). Similar claims are made for private schools in a number of developing countries (Jimenez, Lockheed and Paqueo 1991). These conclusions have been the subject of some dispute (see Witte 1992, on the US; Colclough 1993, on developing countries). One reading of the debate is that private schools often are of higher quality and but that differences in cost-effectiveness are frequently small.

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<sup>48</sup> Indeed, privatization of education was explicit in Friedman's (1962) argument for unrestricted vouchers: he believed that state provision of education was incompatible with political freedom.

## V THE ROLE OF COMMUNITY PARTICIPATION

The discussion so far has contrasted state and market based approaches to education policy. What is the role of local communities and 'civil society' in the financing and provision of education? Here it is argued that these do not constitute a possible 'third way' to the state and the market, but rather are important in determining the effectiveness of both state and private approaches. This former claim is partly semantic: 'community schools' do not constitute a third category distinct from state or private schools. To the extent that community schools are controlled by the state, they are state schools. If they are not controlled, then the fact that they are 'not-for-profit' does not exclude them from being counted part of the private sector. Indeed, for-profit private educational institutions are surprisingly rare in most societies. We discuss the role of the community first in the financing of education and then in the provision.

### 5.1 Community finance for education

Interest in community finance for education arose at the same time as interest in user fees and in response to the same fiscal pressures.<sup>49</sup> Indeed, community finance often takes the form of user fees. Specifically, community finance for education can take one of three types:

- *user fees*: these are common in 'community schools'; Parent-Teacher Association charges in state schools could also be viewed as user fees set by the local community. In difficult times, some countries – such as Uganda – have relied on the community to fund all non-salary school recurrent expenses.
- *compulsory contributions*: households in the community must contribute regardless of their usage of services; for example, in pre-reform China, the People's Communes levied charges on their production teams to pay for additional *minban* teachers to augment those paid for by the state (Bray and Lillis 1988). Community schools in Tanzania are also described as levying such charges (Rothchild and Lawson 1994: 270).

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<sup>49</sup> For example, the issue was raised at the 9th Conference of Commonwealth Education Ministers in Cyprus in 1984 and work arising from this was published in Bray and Lillis (1988).

- *voluntary contributions*: households in the community voluntarily contribute regardless of their usage of services; for example, in Kenya, *Harambee* (self-help) projects financed the building of community schools.

The first two types of community finance are equivalent to user fees and taxation respectively. As such, they raise no new fundamental issues of principle from those discussed in section II. The third form of community finance – voluntary contributions – resembles tax finance in that it does not deter enrolment, but differs in being non-coercive. In practice, there may be a fine line between compulsory and voluntary contributions. For example, in rural China, the demise of the commune system led to community contributions for education becoming voluntary. However, social sanctions – feelings of shame and likely ostracization – remain sufficient to overcome any temptations to free-ride. In such situations, even if contributions are nominally voluntary, the pressures to conform and not free-ride would seem to have the same effects as the penalties underlying tax compliance.

The community may have a number of advantages over the state in raising contributions or setting user fees. It may increase the likelihood that the funds raised be retained at the local level and spent on education. It may facilitate exemptions for the poorest: communities may be better able to identify these households. It may create a sense of ownership, fostering local participation. Moreover, local decision-making over finance may be better informed than higher level budgeting. Communities may be better able to identify and react to immediate shortages and constraints. They may even also be better able to judge the benefits of education, perhaps including some of its local external benefits. Cornia (1989) suggests that community finance may promote cost-effectiveness: communities will have incentives to minimize costs that state bureaucracies may lack. Moreover, there may be important differences in the objectives of some communities and some states. Bray and Lillis (1988) make the interesting observation that for many states, the primary focus is on control (for example, through taxation and conscription) rather than on serving communities (as opposed to a favoured elite).

One dramatic example of the potential of community finance is the *Harambee* movement in Kenya, which was responsible for a massive expansion of secondary schooling in the 1970s. A careful comparison of this experience with that of neighbouring Tanzania, where both private and state

secondary education was tightly restricted, suggests that this educational expansion improved equity and raised the productivity of labour (Knight and Sabot 1990).

Against these potential benefits, there are a number of important limitations with community finance. The effectiveness of community finance for education varies by culture. The strength of the community's collectivistic tradition and its valuation of education are both likely to be crucial to success. Where households are highly individualistic, it may be hard to avoid the free-rider problem. Where households cannot afford or do not value education, contributions are also likely to be small. Mbithi and Rasmusen (1977) note that Harambee was most successful in Central and Nyanza Provinces, where it had fairly long indigenous roots. It was least successful in North Eastern Province, where the demand for schooling was low and Harambee largely a 'top-down' process instigated by politicians.

More generally, community finance will do nothing to reduce regional inequalities. Prosperous areas will be able to fund their schools more generously; community finance may be inadequate in more backward areas. There will remain a role for central government transfers between regions to compensate for inequalities in revenue base; this is observed in both Kenya and China. In educationally backward and poor regions, financing education from such transfers is likely to be preferable to relying on local funding.

In many countries, there is a strategic relation between state and community finance. Often, community finance arises as a 'stop-gap' response to cope with inadequate state finance. In Kenya, the government has gradually taken over responsibility for Harambee schools. This was probably anticipated – and certainly lobbied for – by the communities. In this situation, the establishment of community schools should perhaps not be seen as a permanent sustainable system of educational funding. Instead, it may be a pump-priming initiative, directed towards securing future state funding.

Indeed, for all their possible benefits, community financed schools generally tend to be under-resourced and deemed of lower quality than their fully funded state school counterparts (as, for example, in China and Kenya). Free-riding problems and a lack of coercive power imply that community contributions will be less effective at mobilizing resources than 'first-best' conventional taxes. This is one reason why community initiatives to finance education often fail. Bray and Lillis (1988) report figures on the fate of

projects to build schools during the Harambee movement in Kenya. In some years, more of these projects were terminated in failure than were completed. For example, in 1971, 3,325 schools were abandoned and only 1,841 completed. More generally, even where community financed schools can be sustained, they are probably more likely to rely on user fees than tax funded state schools. As a result, they may provide a lower quality service to fewer children. In many developing countries, community finance provides a useful supplementary role to taxes and fees set by the state. However, it is doubtful whether community finance could or should replace state funding.

## 5.2 Community provision of education

Local communities and 'civil society' often play an active role in the provision of education within both the private and state sector. We have already noted the predominance of not-for-profit institutions in private education in most countries. As well as secular community schools, religious schools play an important role – for example, Catholic schools in the US and mission schools in Africa. Even elite private educational institutions – such as 'public schools' in the UK or some 'Ivy League' universities in the US – are often educational trusts rather than profit-maximizing enterprises (this may reflect favourable tax treatment). In the state sector, communities also often have an important role in managing schools. In many developing countries, this is intimately linked to their financing role (for example, through Parent-Teacher Associations). Elsewhere, communities have control without directly raising finance. For example, in the UK, control over many aspects of school decision-making has been transferred from local authorities (which provide the funding) to boards of elected parent governors. Here a delicate balance must be struck between the influence of three parties: the community; the state; and the school management.

Communities may be valuable in asserting the interests of parents and students over those of teachers and managers. They may be less vulnerable to 'capture' by providers than education authorities staffed by education professionals. Educational production functions are consistent with teachers exerting too much influence compared to parents over schooling decisions (Pritchett and Filmer 1997). In particular, expenditures on staffing appear to be far less effective at the margin in raising student achievement than expenditures on educational materials. However, there are likely to be severe limitations to how well communities can control the influence of teachers. Parents are disadvantaged in terms of information and subject to the free-riding problem inherent in collective monitoring. For example, Booth *et al.*

(1995) cites examples in Zambia where PTA meetings did not inquire about the use of funds from school income-generating projects. Nonetheless, community participation is an important example of Hirschman's concept of the use of 'voice' in influencing the provision of services. It contrasts with the emphasis of market or quasi-market approaches which stress the use of 'exit'. To some extent there is likely to be a choice between the two methods of control. Community participation is likely to play a limited role in a market or voucher system, since parents in a given area will not all use the local school.<sup>50</sup>

Whether it is better to rely on exit or voice will vary according to circumstances. One consideration is the travel cost of exit to a neighbouring school. This may make the exit option infeasible in the case of primary schools in sparsely populated rural areas, but powerful in the case of secondary schools in major urban areas. A lot will also depend on the how unified and cohesive local communities are (see Reddy and Vandemoortele 1996: 641). Again, cohesion may be greater in some rural communities than in urban areas. However, it is important not to idealize the role of the community. In general, procedures for collective decision-making and implementation at the community level are likely to be subject to similar flaws as those of the state. Certain groups are likely to be under-represented; for example, women played a subsidiary role in the Harambee movement in Kenya. Reddy and Vandemoortele (1996) suggest that the administrative and technical capacities of the providers are crucial in determining school quality, rather than the level of control or method of financing. Teachers and school managers are likely to be better informed about most aspects of education and providing them with a degree of autonomy may be desirable. Furthermore, the state is unlikely to relinquish much of its control over the provision of education. It may be suspicious or hostile to the motives of some 'civil society' institutions in providing education; as, for example, with some state responses to religious schools. In Kenya, Harambee committees often became centres of political opposition to the government.<sup>51</sup> More disinterestedly, the state may have a role in setting national standards (for

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<sup>50</sup> Indeed, it is often argued by opponents of vouchers that such schemes will lessen community ties and increase social divisions.

<sup>51</sup> Politicians out of favour with central government often sponsored Harambee schools in order to obtain local political support. Keller (1980) quotes a Kenyan Minister of Labour as saying of Harambee schools:

They are a political thing and even though I am not very happy with what they are doing, I myself am building these schools.

example, through the examinations system) and in making sure schools transmit a common core of skills and knowledge (for example, through a national curriculum).

## VI CONCLUSION

Perhaps the central issue in the economics of education is who should pay for education. Leaving education entirely to the market will lead to an unequal and inefficiently low level of service. For this reason, most countries rely heavily on government tax finance for funding. Unfortunately, there is little reliable evidence on the size of the likely market failures. Consequently whether the optimal subsidy is large enough to imply free education is largely a matter of judgement. Advocacy of free basic education becomes largely a matter of faith, albeit one with a wide appeal.

There is a strong case for the common view that primary education is more deserving of public funding than tertiary education. This implies a restructuring of public expenditures which may be politically difficult. Indeed, this difficulty explains why calls for restructuring have gone unanswered for decades. The relative merits of funding primary and secondary education are less well-established. However, since secondary schooling is often considerably more costly than primary education, there may be a rationale for the *status quo* of greater private finance at the secondary level.

Much of the debate over user fees has centred on second-best arguments. In practice, it is argued, relying solely on tax funding has led to a shortage of places or poor quality service. These arguments have some power. Governments should be wary of introducing prohibitions on fees without ensuring compensatory funding. However, the view that introducing fees would have little impact on enrolment – or would even increase it – was probably over-optimistic. Similarly, experience from initiatives to introduce free education often show a large increase in enrolments. International agencies might be best focused on supporting these efforts. It may be more appropriate for them to try to increase the priority placed on education rather than to promote 'second-best' accommodations to stagnant educational expenditures. Although the case for government support for education is partly a matter of faith, the arguments are more persuasive than those for many other forms of government expenditures. Where developing countries

are reluctant or unable to provide sufficient funds, donor support should be considered. Education is one of the most deserving areas for the use of international aid, just as it is for government expenditure. In this respect, the conventions that restrict aid for capital projects and macro programmes seem anachronistic. Investment in education is just as much a capital expenditure as investment in physical infrastructure.

Voucher schemes have not been on the agenda for most developing countries. Given limited political capital and administrative capacity for reform, this may be appropriate. Unlimited schemes including private schools will require possibly regressive increases in fiscal expenditures. They may well lead to some improvements in quality but the size of the gains is unclear. Limited schemes to create internal markets within the state sector may bring some benefits, but may be irrelevant to many rural primary schools. In urban areas and at the post-primary level, such schemes are more relevant. However, the gains may already have been realized in many current educational systems which allow school choice and rely on capitation funding.

Local communities play a large role in education, particularly at the primary level. Often they can provide substantial funding, perhaps particularly in the construction of new schools and in meeting any additional school requirements not provided for by the state. However, it is not clear that community finance can or should replace taxation as the primary source of revenue for education. Likewise, community participation in the provision of education may provide benefits but is unlikely to substitute for professional management and the national setting of standards.

These conclusions could be taken as implying that Education Ministers in developing countries are boxed in. Subject to tight limits on tax financing, they cannot turn to user fees as an easy option. Restructuring of expenditures is likely to be highly desirable, but may be politically infeasible. Vouchers represent a leap into the unknown. Community involvement does not provide a way out of existing trade-offs. In reality, however, state education systems are seldom operating at full efficiency and there is usually scope for substantial improvements even within a given budget.

Many developing countries can improve their education systems by focusing on mundane but important issues in the general monitoring and control of

expenditures.<sup>52</sup> However, the complex nature of the process of education may make it particularly prone to avoidable inefficiencies. The evidence previously discussed from educational production functions suggests the possibility of large efficiency gains. If – as it appears – educational inputs are commonly combined in a grossly inefficient manner, then educational achievement could be improved without increased expenditures.<sup>53</sup> The important differences in school quality which are often discovered but which cannot be related to observables also suggest opportunities. Gains may be forthcoming by allowing the management of successful schools 'takeover' the running of failing schools. More generally, there is scope for experimentation and further research to try to identify what makes a good school. One advantage of the centralized nature of most education systems is that it is easy to experiment with different reforms, running pilot schemes in different areas. Consequently, even with a limited budget, there are likely to be a range of initiatives which Education Ministers can take to try to improve the quality of education provided. In short, perhaps the policy debate should shift from the broad generalities of the economics of education to a detailed examination of the mechanics of education *per se*.

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<sup>52</sup> For example, a recent tracking study of public expenditure on primary education in Uganda found that only a third of recurrent non-salary allocations reached schools: the rest stayed at the district level (Opio 1996). This was not due to corruption, but more innocent failures in administration.

<sup>53</sup> Some recent experimental evidence from Northeast Brazil is consistent with this (Harbeson and Hanushek 1992).

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