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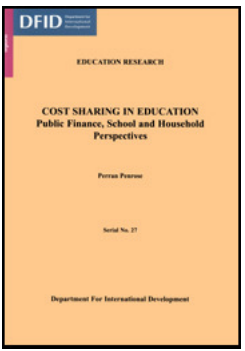

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Perran Penrose
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Abbreviations

AER	Apparent Enrolment Ratio
BEST	Basic Education Statistics
BWI	Bretton Woods Institutions
CCM	Chama Cha Mapinduzi
CFS	Consolidated Fund Services

CPI	Consumer Price Index
CSEE	Certificate of Secondary Education
CSR	Civil Service Reform
DSM	Dar es Salaam
ERB	Economic Research Bureau
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GLSS	Ghana Living Standards Survey
GSS	Ghana Statistics Service
HRDS	Human Resources Development Survey
IMF	International Monetary Fund
IRR	Internal rate of return
JSS	Junior Secondary School
LSMS	Living Standards Measurement Survey
MOE	Ministry of Education
MSTHE	Ministry of Science Technology and Higher Education
NER	Net Enrolment Ratio

NETF	National Education Trust Fund
PBME	Planning Budgeting Monitoring and Evaluation Division
PTA	Parent Teachers Association
PTR	Pupil Teacher Ratio
SIDA	Swedish International Development Agency
SRC	Student Representative Council
SSNIT	Social Security and National Insurance Trust
SSS	Senior Secondary School
TADREG	Tanzania Development Research Group
UDSM	University of Dar es Salaam
UPE	Universal Primary Education
WMS	Welfare Monitoring Survey

I Introduction and Background

A. Introduction

This monograph is concerned with how children in poor countries can gain access to good quality education.[1] The basic thesis of the paper is that financial barriers are the main reason for the failure of many countries to provide education to their children. Financial barriers are of two sorts. First, the cost to parents and

children is often too high, particularly when economies are in trouble. Second, public finances are in most cases inadequate: however, the financial management of education systems is frequently neither efficient nor effective, so that the state's resources derived from taxes in many cases cannot finance basic learning inputs which they would otherwise be able to do if those resources were managed better.

[1 I am grateful to a number of people for comments and discussion. They include John Mace and an anonymous reviewer, and the numerous officials and others in various countries with whom I have worked in this area. Christopher Colclough kindly permitted me to attend his seminar on cost recovery, and I use the excellent papers extensively in this study.]

That the paper is oriented towards public finance should not be a reason for non economists to be uncomfortable with reading it. Although some of the concepts may be unfamiliar, educators should be able to judge the arguments against their own

experience and decide whether they provide a sufficient explanation for the poor quality and falling enrolment ratios which they may be witnessing in their own countries or elsewhere. The paper is critical of the role that economists have played in the formulation of education policy, critical of sectoral management, and critical of the foreign aid agencies' activities, but educators may find that the criticisms come from other directions from those they have customarily employed. 'The purpose and outcome of a great deal of what is said and written about education, however 'scientific' its form, is to persuade and convince. It seeks to establish a basis for agreement on what is, and what should be done.'[2] At the heart of the matter is the question of resources and how they are managed, and this paper is intended to further our knowledge of those issues, which affect daily the lives of every teacher in every classroom, and to persuade and convince that some current orthodoxies should be re-examined.

[2 Taylor W., Metaphors of Educational Discourse, in Taylor W (ed.) *Metaphors of Education*, Heinemann

Educational Books & University of London Institute of Education, 1984, p 20.]

B. Background & Definitions

The subject of this paper is cost sharing, a term which combines the concepts of direct cost recovery, and thus education pricing policies, and indirect contributions from pupils, their parents and sponsors, which may be voluntary, quasi-compulsory or even compulsory. The costs include opportunity costs: that is, alternatives to being at school (how far opportunity cost is properly a subset of cost sharing is a matter for interpretation, and is discussed further in Chapter 2). The term 'cost sharing' encompasses privately as well as publicly provided services. In this study the term is used when the subject under discussion is not restricted to user fee issues, which are classified under 'cost recovery'. However, the terms are frequently used interchangeably, and, although there is a euphemistic element in 'cost-sharing', its sense is clear enough. Even where families face apparent discretionary costs, closer examination may reveal that

those costs are perceived by them to be non-discretionary.

While to some cost sharing is a term which has most significance in specific contexts. such as textbook procurement or school building, and is in various ways linked to concepts of 'community participation', this study, while incorporating and acknowledging those contexts, is in the first place concerned with the complex relation between citizens and the state in the area of financing education and to some extent public services in general. This is the only way the subject can be properly treated because of the linkages between different components of household spending - no one component can be analysed without reference to other components and because cost sharing is frequently treated as a way of earmarking funds for specific purposes, such as textbooks. In some respects this type of hypothecation represents a failure of public finance management systems, although many economists would propose that public bureaucracies are inherently incapable of being 'efficient', a dubious though attractive proposition. In view of that aspect of cost sharing, issues of public finance management are central to the analysis.

The approach of the study is quantitative, but not scientific in the sense that the data can be used to predict future outcomes. There are many different possible approaches to the study of cost sharing. Large scale surveys and associated correlation and probability analysis reveal much that cannot be derived from small scale, qualitative studies, and casual observation techniques can be as illuminating as rigorous statistical techniques. The subject spans government, household and school finance, as each of these requires specialised analysis.

This study tries to cover most aspects of the subject, and such an attempt is bound to be imperfect. While there has been a good deal of qualitative, small scale work, most of it in the form of unpublished reports to be found only in the countries themselves, and a good deal of large scale survey work, unfortunately not all easily available in spite of the fact that they are financed by public money, the focus of this study is on an area which is not commonly analysed, but which for policy purposes is central.

There are also important cultural and sociological aspects to be

considered. The economic rationalism which dominates current policy analysis of cost sharing is too simple in its conception. The critical issue overarching cost sharing is its explicit role in a larger project to reduce public expenditures and the role of the state, and that project is driven forward against, in many cases, the weight of evidence that people do not react to the provision of modern education services in the ways they are believed to react. Furthermore, there are many questions to ask about the educationist's, as contrasted with the economist's, assumptions about the functions of education which impinge on consideration of cost sharing, and many of those questions are discussed in this paper. This study is therefore primarily concerned with putting together a modest body of evidence on education expenditures by governments and households and exploring the implications the evidence has for the central questions which need to be asked in order to develop and sustain government expenditure policies.

The structure of the paper is as follows. Chapter 2 considers the principles which underpin cost sharing policies. The following two chapters consist of case studies of specific countries. The case

studies are not intended to be merely comparative studies only. They consider various aspects of cost sharing according to the availability of information and data and the nature of the issues facing the country. They are not self contained, and each complements the other: the surveys had different designs and their content has different emphases. The final chapter summarises the issues and draws policy conclusions.

C. Principle Questions

This study approaches cost sharing through six questions:

a) Does cost sharing increase total resources available for education?

b) Does cost sharing enhance efficiency of resource use?

c) Does cost sharing affect enrolments and attendance?

d) Does cost sharing improve quality of education?

e) What other effects result from cost sharing in education?

f) Is a policy of cost sharing justified?

The questions are not always easy to answer, and they subsume more detailed questions. The assumption that all of them have positive answers underlies the arguments of those who advocate increased cost recovery and cost sharing.[3]

[3 These questions may be compared to those asked by Christopher Colclough in Who Should Learn to Pay? An Assessment of Neo-liberal Approaches to Education Policy in Colclough C. & J. Manor, *States or Markets? Neo-liberalism and the Development Policy Debate*, Clarendon Press, 1991, pp 197-213. He considers the 'neo-liberal' agenda against four elements: (1) user charges at tertiary and secondary levels combined with scholarships to promote both efficiency and equity; (2)

loans for tertiary students; (3) encouragement of private schooling; (4) reallocation of 'sayings' to more 'socially profitable' parts of the system. He addresses the 'neo-liberals' on their own ground and on certain technical arguments, particularly those relating to rates of return. Rates of return are so suspect anyway that little is gained by arguing about their levels, though to state that view does not diminish the force of the arguments.

For recent overviews which are excellent within their objectives but do not take a public finance orientation, see Bray, M., *Counting the Full Cost: Parental and Community Financing of Education in East Asia*, World Bank, 1996, and *Decentralisation of Education: Community Financing*, World Bank, 1996. Those two pamphlets cover an impressive bibliography which confirm the narrowness of the analysis of cost sharing in education.]

The questions are hard to answer because the data are generally

not available to determine the effects of cost sharing over time: while there is evidence of falling enrolments and falling utilisation of health facilities over the short term, such evidence would not be sufficient to reject cost sharing policies, partly because of other factors which may affect service utilisation, such as an economic downturn. Another reason for the difficulty in arriving at more than tentative conclusions relates to the counterfactual: what might have happened under different circumstances? Counterfactual analysis can only be indicative, but is an important component of analysis of the effects of stabilisation and adjustment, and of changing policies on public expenditure. Thus, for example, the answer to question (a) above might be negative in relation to a given base year, but nevertheless resources allocated to education from all sources might have been even less without cost sharing.

History matters, and developed countries have arrived at near total support of school education over a century, largely as a result of social and rights pressures as opposed to economic

pressures.[4] As Table 1 implies, in most countries tax finance accounts for most education spending.[5] Many developing countries started their education systems under colonial governments as private systems partly run by missionaries, and their education development has been characterised by the transfer of responsibility for mass education to that state, as occurred in the now developed countries. The variations between countries and the explanations for each country's systems are complex, and simplified versions of history should be avoided. One of the purposes of this study is to suggest that simple explanations have very little use, and can be damaging to policy development because of their origin in the powerful foreign aid agencies on which, unfortunately, many countries have come to depend in the last 15 years. Simplified history combined with orthodox economics is a perilous mixture.

[4 Economics has not always been the dominant discipline in social welfare policy. For example, British social policy was lime influenced by economists in the

1950s and 60s and its designers were unrepentantly collectivist in outlook. See Bulmer M., J. Lewis & D. Piachaud (eds), *The Goals of Social Policy*, Unwin Hyman, 1990; also the review of the book in the Times Literary Supplement, p 251, March 9-15 1990, by Frances Cairncross. Indeed, an understanding of the development of education in Europe is important to counterbalance a certain ahistorical tendency in much of the literature. See, for example, the excellent account of the rise of public education in England in Gardner P. Schooling, Markets and Public Agency 1833-1944, in Bridges, D. and T. H. McLaughlin (eds), *Education and the Market Place*, The Falmer Press, 1994.

[5] The data in the table, although presented confidently in *Priorities and Strategies* (not including those countries added separately), must be considered with caution, but, because of different sources and measurement criteria, are likely to be indicative.]

Table 1: Total Education Expenditures by Source

Group and country	Public sources	Private sources
OECD countries		
Australia	85	15
Canada	90	10
Denmark	99	1
Finland	92	8
France	90	10
Germany	73	27
Ireland	93	7
Japan	74	26
Netherlands	98	2
Spain	50	20
United States	79	21
Low and middle-income countries		
Uganda (1992-1993) (1)(2)(3)	17	50

Uganda (1992-1993) (1)(2)(3)	47	53
Haiti	20	80
Hungary	93	7
India	89	11
Indonesia	63	37
Kenya (2) (1992/93)	62	38
Tanzania(1993)(1)	69	31
Venezuela (1987)	73	27

Notes and Sources: From "Priorities and Strategies for Education", World Bank 1995, Table 3.1, p 54.
(1) For Uganda, see World Bank, *Access to Education and Health Care in Uganda*, June 1996, p 21. For Tanzania see World Bank, *Social Sector Review*, Draft, April 1995, Table S5, p xxiv. The original table shows data for Uganda for 1989/90 (43%+57%)
(2) Public institutions only. Private sources refer to households only.
(3) Primary and secondary levels only. Private sources refer to

households only.

The cost sharing/recovery policies which have been advocated over the last few years for developing (and in many cases developed) countries have a medley of motives behind the arguments. The obvious reason for interest in cost sharing is fiscal stress - the inability of domestic revenues to support education systems - so raising contributions from non-government sources (i.e. outside the tax system) through compulsory charges (cost recovery) and through discretionary charges (cost sharing) increases the total level of expenditures. Less explicitly stated reasons are more ideological, based on assumptions about desirable (often termed 'optimal') levels of public expenditures and taxation and other policies within the macroeconomic frame. That cost sharing enhances equity and efficiency is counter intuitive, yet its proponents regard those attributes as a strong part of their case: many believe that cost sharing will result in increased enrolments, particularly of the poor, and force government to manage resources more efficiently. This is the somewhat narrow approach to the question of equity which is followed in this study:

equity is, in fact, a more complex concept concerning compensation, fiscal equalisation and other measures, but for the purpose of this discussion it is hard, I believe, to disassociate equity issues from efficiency issues and to treat them separately.

Furthermore, it is argued that additional resources are made available as a result of cost sharing to increase expenditures on direct learning inputs such as books and to stimulate qualitative improvements. A cycle is created. Enrolment is sensitive to the quality of school experience, which in turn relies on non-government finance. Enrolment is also sensitive to cost. If people don't pay, quality does not improve. If quality does not improve, people don't enrol.

This mixture of necessity and ideology, unsupported by evidence, is confused, all the more so when public expenditure as a whole is taken into account, particularly in countries with a high non-discretionary component in recurrent expenditure.[6]

[6 'Discretionary' expenditures are those over which the spender has some choice. Governments have no choice (generally) whether they should pay debt, or pensions, for example, and such expenditures are 'non-discretionary'.]

Does cost sharing increase total resources to education?

Total resources for education can be increased through (a) increasing overall public expenditures; (b) reallocating to education within a given level of public expenditure; and (c) increasing non-government contributions with no reduction (or a less than proportionate reduction) in enrolments. Only in the first case is there a net additional claim on public expenditures.

The second and third cases are the most interesting, in that most analysis assumes explicitly or implicitly that the fiscal constraint on government is binding (except for off-budget foreign aid), and that public expenditures should be reduced. Such a generalised response ignores two crucial factors, namely the details of the

composition of public expenditures and the fungibility of money.[7]

[7] Fungibility is the substitutability of money between different uses and is a concept which is central in economics (derived from Latin *fungor* meaning 'to perform a duty or fulfil an office' which gave rise to a Latin legal term 'such that any unit is substitutable for another'). If somebody gives me a dollar, I can use the dollar I already have for something else, but which dollar do I use, as they were not marked and are indistinguishable from each other? In the same way, if the Ghanaian football team beats Tanzania 3-2, which is the winning goal? Is it the first, second or third? because none could exist without the other. Fungibility is also why foreign aid lending or donation to a project with the highest social return is not what it appears: the loan will always be for the marginal project, irrespective of the ostensible 'purpose' of the money. The whole issue of fungibility in foreign aid has been woefully ignored, or

argued not to exist or be malign (e.g. Cassen R. and Associates, *Does Aid Work*?, Clarendon Press, 1987, p 21). There are relatively few studies of fungibility of aid: see Pack H. and J. R. Pack, Foreign Aid and the Question of Fungibility, *The Review of Economics and Statistics*, 1993, pp 258 - 265, for one example.]

Most of the countries we are discussing are heavily indebted to foreign creditors, to domestic creditors and to their central banks, and interest costs are shown 'above the line': they are part of the same budget out of which education expenditures are made. The higher the interest costs, other things being equal, the less the finance available for education and other uses, because interest payments are non-discretionary: they have first call on the budget. Although interest costs are temporary, they cannot be ignored, and a counterfactual analysis of a budget without 'excessive' interest costs shows that increasing education (and other) spending is a strong option: more to the point, it shows that reducing spending because of temporary budget problems is counterproductive, because it is easy to cut and very hard to

reinstate cuts. As the case study of Ghana illustrates, while expenditures on education do not account for a particularly remarkable proportion of national income, they account for a high (relative to most countries) proportion of the discretionary (after debt cost) budget, implying among other things that debt costs are crowding social expenditures. Consequent public expenditure management thus becomes geared to freeing resources to cope with debt costs. This aspect of the debt problem is rarely brought up in the debates on debt.

There is also the issue of fungibility, considered further in the next chapter. Fungibility - the substitutability of money - is a fundamentally important concept in all analysis of public finance and foreign aid. Its presence turns many (if not most) foreign aid interventions into illusion and gives limited meaning to many (if not most) donor and lender conditionalities relating to budgetary allocations. It is difficult to analyse and its effects are hard to prove, relying heavily on counterfactual speculation The impact of the fungibility of money on cost sharing policies is quite simply that cost sharing is just as likely to achieve the opposite of what is

intended as to achieve what is intended, and to reduce expenditures.

Thus, whether cost sharing can increase total resources, as it is often assumed it should do, will depend very much on the underlying reasons. It is more likely to mitigate the effects of reductions in government expenditures rather than to increase total expenditures, or to result in increased expenditures in other parts of the budget.

Does cost sharing enhance efficiency of resource use?

The relation of cost sharing to efficiency is explored theoretically and empirically in this study. Much of the rationale for user charges derives from a belief that they stimulate efficiency and accountability. However, it is equally likely that the reverse may be true, particularly in countries with weak fiscal management, and cost recovery can maintain inefficiency and create problems of lack of accountability. Overcoming resource constraints by charging users can permit inefficient management of resources

within the sector and throughout the government budget as a whole, because pressure to find resources through other means is reduced. The fungibility of money can mean that consumers are required to pay for inefficient government sectoral management, which can outweigh any advantages which competition and consumer awareness might bring. Similarly, where fees are raised outside the tax system it has proved hard in many countries to control them.

Another argument which is explicit in the case for cost sharing is that the imposition of charges as well as higher indirect costs at the secondary and tertiary levels of education can permit greater allocative efficiency, creating room for allocations from post-primary budgets to primary education. While the argument has theoretical attractions, it is of little practical validity in the short term because in general governments do not allocate fixed shares of the budget or national income to one sub-sector, and because the sums of money actually raised are small in comparison with what is required. Over the longer term there may be more room to manoeuvre, depending on the overall fiscal position and the

political sensitivity of higher education.

Does cost sharing affect enrolments and attendance?

Although enrolment effects from cost sharing are important, attendance effects can be equally important, because reduced attendance ratios affect repetition rates and achievement measures. There is considerable evidence to suggest that attendance ratios are negatively affected by cost sharing as children are sent home for non payment of fees.

Whether total expenditures on education rise as a result of cost sharing measures or not will depend among other things on the relation between enrolments and increased costs. A justification for cost recovery is that it stimulates *increases* in enrolments largely through the effect of increasing resources and permitting budgetary reallocation. However, cost sharing is more often a response to fiscal stress. Fiscal stress is caused *inter alia* by general economic difficulties. It is logical to suppose that most people will share in general economic difficulties. Cost sharing is

imposed on an already stressed population, and the ratios of food expenditures to total expenditures in a household tend to rise in such times, squeezing capacity to finance items which are not necessities, of which education is one. For example, survey evidence often shows an apparent substitution of health expenditures for education expenditures, and indeed, that primary education is one of the most discretionary of family expenditures: people place priority on expenditures essential for physical survival. Where economies are in trouble, cost sharing policies will affect enrolments, and that is indeed what most evidence suggests. However, it is not easy to distinguish the effect of costs from other effects: for example, most people regard schooling as a route to employment, and in economic bad times employment opportunities are fewer. The economic situation of the people affects their cost-benefit calculus, both from the point of view of opportunity costs (children's labour on farms, for example) and in terms of risk (their perception of the increased probability of unemployment). Similarly, a large number of school children consider public sector employment as the most desirable, and civil service reform may affect that perception.

Thus, while it may appear that the increased cost burdens imposed on households may be responsible for declines in enrolments, the underlying factors are more complex.

Does cost sharing improve the quality of education?

Improved quality of teaching and learning may result from managerial improvements and from better resource allocation. They may also result from improvements in the provision of specific inputs such as textbooks or construction labour: it is reasonable to suppose that availability of inputs enhances quality given that the circumstances are favourable (for example, that there are competent teachers). The history of specific cost recovery schemes for textbooks, for example, has not so far been encouraging, though it is often difficult to see why. Even though specific cost sharing strategies like textbook funds might seem to exert a positive influence on quality, they still have to be considered within the overall menu of alternatives which might be pursued to improve quality.

It is not easy to measure changes in the quality of learning, and less easy to ascribe reasons for quality improvements. Attempts to measure factors which influence learning can result in counter intuitive conclusions, such as that class size or teacher training have no effects: the problem is controlling for all other variables while holding the variable under review constant, and this is extremely difficult in the type of analysis generally employed to measure qualitative changes. At the very least, though, we can reasonably assume that increasing the supply learning inputs such as textbooks has a positive effect.[8]

[[8] Much of the literature is ambiguous on the effects of increased learning inputs, reflecting perhaps the diminishing returns to expenditures on them. However, where the supply of such inputs is very low it is reasonable to suppose increasing returns. See, Hanushek E. A, The Economics of Schooling: Production and Efficiency in Public Schools, *Journal of Economic Literature*, Vol. XXIV, Sept 1986, pp 1141-1177; and

Fuller B, What School Factors Raise Achievement in the Third World?, *Review of Educational Research*, Vol. 57 nr 3, 1987, pp 255-292. See also Lockheed M. E., Verspoor A. M. and associates, *Improving Primary Education in Developing Countries*, OUP/World Bank, 1991, chapter 3.]

A textbook fund may also permit governments to avoid structural changes to the budget, which, if undertaken, might result in greater quality gains. In the country case studies in this paper, non-government finance supports a large proportion of, if not nearly all, learning inputs, and that without that finance there would be no inputs. The dependence on non-government finance affects enrolments, which fall because of the costs of schooling. Looked at from that point of view, it might appear that quality enhancement, if it does indeed result from cost sharing, also has a cost in reduced enrolments.

What other effects result from cost sharing in education?

The responses of households to user charges include (a) reallocating from other expenditures to finance the charges; (b) finding additional money; (c) withdrawing from the service; (d) withdrawing from other services; (e) continuing to use the service but refusing to pay.

The first of those choices can have wider effects. Cost sharing is not an exclusive preoccupation of education sector agencies. Costs of health, irrigation and public transport are also significant in many household budgets. Perhaps the most substantial is health charges. Policies in general are sectoral, rather than cross sectoral or programmatic, and the impact of health charges on household ability to pay for education and *vice versa* is rarely considered. Indeed, it is likely that when faced with competition from other charges, households consider education charges to be the lowest priority.

Finding additional money may mean borrowing, or selling assets. There is evidence in some countries which suggests that people disinvest in physical assets at a more than 'normal' rate in order to

pay fees. What is the aggregate effect of more than 'normal' cattle sales in rural areas to raise money to pay user charges? Does it affect the distribution of wealth and poverty? Does it affect economic growth? Where the 'rich' are required to pay for post primary fees, do they forgo alternative investments which might raise economic growth? These and similar questions have not been investigated as fully as they should be.

Ability to pay is a complex concept, and should not be confused with willingness to pay. It is possible for people to pay more than they can afford in certain circumstances, with adverse long run effects, yet simplified analysis can conclude that because they paid, they were both willing and able to pay, which of course in a sense they were: economics has no model for reluctance to pay in the face of absence of real choice whether to pay or not, though many economists would argue that the choice was 'rational'.

While the question of what other effects may result from cost sharing policies is important, this study does no more than acknowledge the issue, as evidence is slight. The question is

posed to highlight the need to examine the effect of sectoral policies outside the sector concerned.

Is a policy of cost sharing justified?

The final question, which is the theme of this paper, is whether policies of cost sharing are really justified. The principle intention in considering this question is to highlight the relationship between public sector management and the costs to citizens which result from decisions of governments. Those costs include costs of inefficiency, costs of decisions which make the service more expensive than it needs to be, and costs arising from perverse expenditure priorities. If through better management and more responsive policies the state can reduce the cost of schooling without loss of effectiveness, the case for cost sharing is weak. Yet in most countries increased cost sharing occurs without any significant progress in reducing the cost of learning to pupils and their parents, or in improving services. In other words, parents are forced to pick up the costs of state inefficiency, or of costly state education policies. The argument applies troth to public and

private schools.

For example, a cumulative process of curriculum development in response to changing education theories and policies has resulted in overloaded and expensive curricula in many countries. The scope of the curricula influences strongly the level of cost of the system. An alternative to making people pay to support the system is to change the system to fit more with the ability of the state to pay. Similarly, in some countries assessment and examinations push up costs with no visible benefit, with the added effect of perverting education and disrupting local societies. At a more technical level, the failure in most countries to control the allocation of teachers means that salary bills are higher than they need be for any given level of salary. In these instances, the availability to the state of additional indirect and direct finance outside the tax system relaxes a constraint which in other circumstances could force down costs. In this respect, it may also be noted that foreign aid constitutes a form of cost sharing, and also permits states to avoid difficult decisions. Orthodox economic models assume costs as given, and therefore are able to

demonstrate axiomatic benefits from cost recovery.

The first step in justifying the introduction of cost sharing policies is to evaluate how far existing provision is compatible with the ability of the *state* to pay, and how far state provision is efficient. If the education system is too expensive for what it delivers, and if indications are that sector management could be improved, a proper sequencing of reform demands that state provision be rationalised and made more efficient before costs are pushed on to citizens outside the tax system. Similarly, where overall economic management is poor, the state's ability to pay is reduced, but would be greater if economic management were improved.

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II Principles of Cost sharing and Key Issues

A. Introduction

This chapter sets out a framework within which the principles underlying cost sharing need to be considered. The principles may be divided into four related and interdependent categories:

a) rights of citizens;
b) economics and finance;
c) cultural aspects;
d) in the case of developing countries, foreign aid and national autonomy.

B. Rights

The framework in which children's rights are normally considered is that provided by the UN Convention on the Rights of the Child. Most governments are signatories to the convention, which lays certain obligations on them. As far as education is concerned, states are obliged to 'make primary education compulsory and available free to all' (Article 28). Article 4 of the Convention recognises the possibility of resource constraints: 'with regard to economic, social and cultural rights, States Parties shall undertake such measures to the maximum extent of their available resources and, where needed, within the framework of international cooperation'.

The Convention begs many questions, some of which will emerge in this paper. Nevertheless, its intentions are clear. The child has rights to services, to protection, and to participation and self-determination. The child must be recognised as an individual with volition, which may be contrasted to some extent with instrumentalist views of children virtually as the property of parents as a resource worth investing in, exemplified in the human capital literature.[9] The significance of rights based approaches and their related legal obligations is that they may imply policies which are not consistent with economic efficiency (however defined), and that they have costs attached to them which should not be discretionary costs because of legal enforceability.

[[9] See de Vylder S. *Children's Rights, Development Strategies and Macroeconomic Policies*, Radda Barnen, January 1995, pp 2 ff]

Opportunity Cost

One interesting aspect of rights approaches and their effect on economic analysis is that of opportunity cost, which in some sense serves also as a metaphor for the adult view of the world embodied in most policy concerned with children. The concept of opportunity (or alternative) cost expresses the basic relationship between and choice. Opportunity cost is therefore the evaluation placed on the *most highly valued* of the rejected alternatives in the presence of scarcity. It is critical to understand that the alternative *is that which might be* and not *that which might have been* without the qualifying reference to choice. If no choice was present, although it is possible to value what might have been, it would not be correct to refer to these values as opportunity costs, since they did not represent a lost opportunity. If education is compulsory (as basic education is in the countries used in this study as case studies), no choice (legally) exists, and therefore there is no opportunity cost: although in the absence of choice it may sometimes be useful to consider alternative values, those values cannot be considered as opportunity costs.

Where education is voluntary opportunity costs, to be present,

require someone to do the choosing, and only the chooser can know what the best alternative is: the value of the alternative exists in the mind of the chooser, and nowhere else. The cost must be borne by the chooser and cannot be shifted to anyone else.

As opportunity cost exists within the mind of the chooser, and cannot be objectified or measured by anyone else, it cannot be readily translated into money, although this is common practice in education economics. The cost only exists at the moment of decision. If a child decides between his/her alternative employment and going to school in favour of the latter, once the choice is made, the cost vanishes, for that which is rejected can never be enjoyed, nor can it be recovered. They become sunk costs, which are irrelevant, except in so far as we are interested in quantifying sunk costs. Opportunity cost is forward-looking. It is 'choice-influencing' rather than 'choice influenced'.[10] Economists tend to value a child's or a household's opportunity cost of schooling in terms of earnings foregone, for example, related to an

imputed market agricultural wage, and the opportunity cost of not attending school in terms of the returns foregone. Both these sets of calculations, while of interest, can only be speculative.

> [10 See Buchanan J, *Cost and Choice*, University of Chicago Press, 1977, and Professor Buchanan's entry on opportunity cost in the *Palgrave Dictionary of Economics*.]

It is likely that many, if not most, children want to go to school, and it is equally likely that many are not able to attend because of family pressures to work. Family income foregone is a cost to the family of a child attending school, but if both the family and the child *choose* to attend school, the relevance of the cost becomes less clear. If the child chooses to attend but the family does not wish it, the cost is ascribed to the family and not to the child, who, it is generally agreed, has a *right* to go to school. This is an example of the importance of defining a position on children's rights, and compulsory education is partly a response to the

danger of parents not wishing children to attend school. It might be argued therefore that family income foregone is irrelevant, though nonetheless real. In terms of economic theory, the concept of opportunity cost is relatively straightforward in market settings (where opportunity cost at the margin equates to cost), but once it is extended beyond market settings its interpretation becomes complex.

C. Economics and Finance

Mark Blaug in his classic monograph published in 1973 reflected a change in thought on how education policy should be made. 'Suffice it to say', he wrote, 'that the concept of education planning for economic objectives is an untidy mess, but it is a paragon of order compared to educational planning for social, political and educational objectives. Is it perhaps that sociologists, political scientists, psychologists and educationists have lacked a framework of decision making in which their positive findings may be fitted? If so, cost-effectiveness analysis is such a framework, which would permit social scientists other than economists to

make their contribution to the subject'.[11]

[11 Blaug M, *Education and the Employment Problem in Developing Countries*, ILO, 1973, p 25.]

Since Professor Blaug wrote those words economists have come to dominate education policy making (as opposed to education practice), and neo-classical[12] economics with its emphasis on market solutions and maximisation principles has developed the analytical tools with which are most familiar. This section reviews some attributes of those tools, with particular reference to partial equilibrium analysis; to the propositions that people ('economic agents') are 'rational' (often loosely used as short hand for economic rationality); and to the economics of public pricing. What are the theoretical and practical criteria on which we can draw to determine public policy for the finance of education and therefore the scope and level of cost sharing? How far are the widely accepted approaches which dominate theoretical discussions of user charges useful as a foundation for policy formulation?

[12 In this discussion the terms 'orthodox' and 'neo-classical' are used interchangeably. This is perhaps too loose, but this is not the place for an extended definition and justification of terms. An important theoretical work which sets out the definitional issues is Hodgson G. *Economics and institutions*, Polity Press, 1988. There is a powerful body of literature which sets out to question *both* equilibrium theoretical systems *and* that part of orthodox economics which has been critical of equilibrium (e.g. the Austrian School).]

Economic Justification for State Provision of Education: 'Market Failure'

The role of government and tax finance the provision of education is generally justified by the presence of conditions for 'market failure'. In other words, the market alone would not supply sufficient education services to be economically 'optimal', and the state must intervene in order to compensate for the shortcomings

of the market. For example, in the cases where people do not fully appreciate the social benefits of education (i.e. the benefits to others rather than themselves, as in the apparent case of girls' education and fertility) or cannot afford basic education, society, represented by the state, will 'demand' more education than the aggregation of individuals will demand - the social demand will exceed the private demand. Individual consumers will not take into account the benefits to society which would accrue should they 'demand' more education, and because they do not take those benefits into account, their demand (when added together) for education is less than the 'optimum', meaning the level of demand which benefits society most. In such cases the state should finance education so that price does not act as a barrier to participation. Similarly, where education and training are considered to be necessary conditions for economic growth, society and therefore the state (in principle at least) have a common interest in increasing the educational level of the population.

The presence of conditions for 'market failure' implies a

recognition that some 'subsidy' to education services is required, but the presence of fiscal constraints suggests that 'market clearing' solutions will depend on the extent to which users of the service are able and willing to pay for them. This is a difficult judgement, as is the judgement of what the socially 'optimal' desired level of provision might be.[13] In orthodox economics, willingness to pay is the maximum price that can be charged without reducing an individual's welfare or utilisation of services. The policy issue is therefore one of determining the appropriate mix of tax and non-tax financing.

[13] One curious result of 'market' policies based on orthodox economic analysis is the power given to policy makers, who have assumed some of the functions of the central planners who are now so vilified. Thus, Jimenez (Jimenez E, *Pricing Policy in the Social Sectors Cost Recovery in for Education and Health in Developing Countries*, Johns Hopkins University Press, 1987) suggests that 'policy makers must agree on the level of

consumption at which the marginal social benefit of another unit of education service is equal to its marginal social cost' (p 68, fn 3) and that 'the basic needs level of consumption can be interpreted as a minimum amount that society or the policy maker considers desirable' (p 133). Similarly, another influential writer equates 'society' with 'government' in considering social returns (Psacharapoulos G. and M. Woodhall, *Education for Development: An Analysis of investment Choices*, OUP, 1985, pp 35 - 37). There are many reasons why such 'decisions' should not be left to 'policy makers' acting on behalf of society: planners and 'policy-makers' have their own preference functions. Geoffrey Hodgson (*Economics and Institutions*, Polity Press, 1988, p 246) writes that there is 'an internal contradiction in much New Right analysis. If it were as absolutely rationalistic or subjectivist as claimed then it would have to abandon any rational argument to persuade others of the policy proposals to which it is attached. This inner contradiction

caused by combining extreme subjectivism with rational argument was identified by Michael Oakeshott ... when he wittily described Hayek's work as 'a plan to resist all planning'.]

Financing of Education: Tax or Fees?

Tax finance is the most stable source of finance for services. Most, but not all, people would accept that tax systems should be progressive, that is, the better off should contribute a larger proportion of their income at the margin than the less well off. User fees, on the other hand, are a comparatively fragile base for social service finance. Moreover, fee finance relates to the individual consumption of services and can interfere with efficient and equitable service provision because of the effect on distribution: one function of the state and tax systems is to redistribute resources. A broad based tax system should not be hijacked by the better off in their pursuit of benefit from services, but to a greater or lesser degree there will always tend to be a distribution in favour of the better off Indeed, it may even be

desirable. [14]

[14 'Higher supply strongly biased towards more privileged groups may be worse than lower supply'. Stern N, Comment on Social Sector Pricing Policy Revisited, *Proceedings of the World Bank Annual Conference on Development Economics*, 1989, pp 139 - 142, quoted in Tilak J. B. F. *Cost Recovery in Education, op cit*. p 15.]

Government expenditures derive from taxes which include income and transaction related taxes, borrowing and in the cases of the countries we are discussing, foreign aid. A distinction between direct compulsory or quasi-compulsory payments made by students and parents for schooling and payments made by governments is to some extent artificial. Bird defines a tax as 'a compulsory contribution from an individual to the government without reference to any special benefits conferred on him as an individual...', and a fee as 'a compulsory payment intended to defray the cost of a service undertaken by the government

primarily in the public interest but conferring a measurable advantage on the fee payer'.[15] He acknowledges the difficulties posed by education. He does not take into account the fungibility of money: defraying the cost of a service is the same as supporting the cost of an alternative object of expenditure for any given level of total expenditure. Fees permit governments to have large armies or large debt just as much as they 'pay for' education. In other words, fee income can allow governments to maintain an overall pattern of expenditure which may be inefficient, inequitable or indeed repressive.[16]

[15] Bird R. M, *Charging for Public Services: A New Look at an Old idea*, Canadian Tax Foundation, 1976, pp 16-22.

[16] This proposition might be rejected on the grounds that the finance involved is small relative to total spending. However, that is the significance of the margin: in cases where most of the education budget is salaries the

smallest reduction in expenditure has an effect on employment and therefore political consequences. The straw that broke the camel's back is an example of impact at the margin.]

The attraction of fee based systems is that fees can be earmarked (allocated to specific purposes) more easily than general taxation.[17] Graduate taxes or payroll taxes can be earmarked taxes, and strong arguments have been made in their favour.[18] However, earmarked taxation, if acceptable to Treasuries, which it rarely is because it constrains financial policy, requires relatively sophisticated systems to administer, systems which are lacking in most developing countries. Fees which do not pass through consolidated revenues are not threatened by Treasury policy. User charges, fees and other types of cost recovery, when not centrally administered, bypass the normal budgetary and accountability processes, and therefore offer none of the constraints that tax finance offers. They often bypass the political process, as well as government accounting processes:

several countries are beginning to experience problems from the unaccountability of the user charge process.

[17 For a review of the arguments for and against earmarking, see Teja R. S. and B. Bracewell-Milnes, *The Case for Earmarked Taxes*, IEA Research Monograph Nr 46, 1991.

18 Colclough C, Raising Additional Resources for Education in Developing Countries: Are Graduate Payroll Taxes Preferable to Student Loans?, *International Journal of Educational Development*, Vol. 10 Nr 2, pp 169 - 180.]

Education Pricing: Efficiency and Distribution

Pricing theory is principally concerned with efficiency. In its purest form, the price of the service should be set at its marginal cost of production, as that is the only 'correct' price. However, the

marginal cost of providing education is not easy to determine: it may be the additional pupil, which may be low, or the additional school, which may be high. In the absence of any pricing rule for education, the principle of 'excess demand' is adduced.

An early formulation of the rules for the mix between tax finance and fees was by Thobani in 1983 in the case of Malawi, and is sometimes known as the 'Thobani Rule'.[19] The Thobani Rule requires a market clearing price of education services, and subsidies are only made in cases where socially desired service provision solutions exceed market solutions, where less education is provided by the market than is socially desirable. If the constraint on resources is such that the supply of services is insufficient meet the demand, some of those who demand the service in vain will, it is argued, be willing to pay for it. There would be a lower aggregate supply of services in the case of full 'subsidy' than in the case where people paid, because the available resources cannot meet the costs of the full subsidy. If fees are charged, the total level of resources available increases,

all other things being equal. Therefore, the argument runs, charging fees *augments* the total level of resources for education, so that all demand can be satisfied, even though the subsidy does not cover the full costs. In this case, the rule is to raise the user charge so long as there is excess demand for the service.

> [19 Thobani M, *Charging User Fees for Social Services. The Case of Education in Malawi*, World Bank Staff Working Paper Nr 572, 1983. More specific analysis was undertaken in Tan, J-P, K. H. Lee and A. Mingat in *User Charges for Education: The Ability and Willingness to Pay in Malawi*, World Bank Staff Working Paper Nr 661, 1984.]

The converse of the rule can also apply. Where there is a constraint on fee payment, it would follow that fees should be reduced and/or subsidies increased in order to attain the socially desired level of service supply.[20] In reality there are always constraints on both public finance and on household finance.

[20 For an extended discussion of these theoretical issues see Bertrand T. and R. Griffin, *The Economics of Financing Education: A Case Study of Kenya*, World sank Staff Working Paper Nr 402, 1983, Annex 1.]

The rules can be formally demonstrated by the construction of demand functions, showing how the demand for education services is influenced by their price. However, the analysis is much more complicated than it appears to be at first sight in the standard texts, simply because of the difficulty of specifying the demand curves. In applying supply-demand principles the product must be defined. Education cannot be easily categorised as one product, yet the notion of private excess demand implies that there is one product with one demand curve.[21] The question must be asked, excess demand for what? For example, if there is excess demand for poor quality schooling, what does this mean? Poor quality schooling is a different product from good quality schooling, and must therefore have a different demand curve.[22] Private excess demand may have little meaning under such

circumstances, though some writers see a virtue in the private provision of low quality education.[23] In many countries education cost benefit analysis appears to suggest 'high' rates of return, while at the same time the low quality of service provision is widely recognised, leading to the logical conclusion that governments do not need to invest in improving quality (particularly as such expenditures may reduce net social benefits). A proper specification of demand curves is by no means an academic point, and can provide a conceptual framework within which to consider some of the paradoxical results which seem to emerge from much education policy analysis.

[21 Throughout this discussion 'education' is synonymous with schooling. Such a synonymy is not always acceptable. we may be talking about a demand for a certificate, or a demand for an unemployment substitute, as well as a demand for learning. These considerations highlight the difficulty of analysing education within a simple demand-supply framework (at least as far as

economic principles are concerned). Furthermore, perceptions of the product change, and a different thing might be demanded at different points in time.

[22] Indeed, the conclusions reached by Armitage and Sabot in Kenya suggest that there is an effective demand for low quality education. see Armitage J. and R. Sabot, 'Efficiency and Equity Implications of Subsidies to Secondary Education in Kenya', in Newberry D. and N. Stern (eds), *The Theory of Taxation for Developing Countries*, OUP, 1987.

[23] Such as James E, *Public Policies Towards Private Education: An International Comparison*, International Journal of Education Research, Vol. 15, 1987, and Armitage and Sabot *op cit*.]

Moreover, the simple models we are discussing assume that the costs of education are given. If costs can be reduced, fees and/or

government expenditures can be reduced. Where costs are in some sense unnecessarily high, households are then required to pick up the bill for government or institutional inefficiency. In this case it would follow that any fee policy would be specifically concerned with minimising fees and reducing costs as a matter of principle.

While Thobani and others argued that income from user charges should yield additional finance for education, an alternative school of thought holds that user charges should be a *substitute* for government expenditure, and that the burden of service financing should shift from centrally or locally collected taxation to direct payment. In other words, reducing excess demand through increased subsidies is itself not socially 'optimal' because the marginal costs incurred through additional taxation exceed the marginal benefits to society.[24] In the real world of public finance management it cannot be assumed that fees will augment total resources.

[24 Ie finance raised through taxation uses up resources in its collection and is itself costly. Resources are used up in administration and in waste. There are also social costs. For example, where tax systems are regressive and disproportionately favour the better off, any services paid for out of tax finance have by definition social costs to the poor. Where taxes have high opportunity costs such as might be found in a country with high marginal rates, the social benefits from government spending on education would have to be adjusted accordingly: this is rarely considered in the social cost-benefit calculus. The additional resources needed to increase subsidies are usually not possible to calculate and are hidden overheads, but nevertheless they would result in an inefficient solution in this context.]

Efficiency

User price theory suggests that charges enhance both efficiency and equity. The attraction of the argument for some is therefore

that they can save money and, at the same time and with one policy instrument, promote a fairer and more efficient use of resources. Cost recovery is seen as a 'multipurpose remedy'.[25]

[25 Hall P. H. Land, R. Parker & A. Webb, *Change, Choice and Conflict in Social Policy*, Heinemann, 1975, quoted in Tilak J. B. G. *Cost Recovery Approaches in Education*, National Institute of Educational Planning and Administration, New Delhi, 1994, p 13, paper prepared for the Workshop on the Social and Economic Effects of Alternative Methods of Financing Education and Health Services in Developing Countries, Institute of Development Studies, Sussex, March 1994. This paper, and others from the same workshop, appear in Colclough C. (ed), 'Marketizing Education and Health in Developing Countries: Miracle or Mirage?', Clarendon Press, Oxford, 1997 (in press at the time of writing).]

User charges can in principle affect efficiency different ways.

Additional resources can permit increased technical efficiency as well as enhanced cost effectiveness. A combination of additional fee finance and reduced tax finance can put pressure for a better and more accountable allocation of public finance.[26] Fees, it is argued, can force consumers to appreciate the value of services and not to use them unnecessarily. Because the costs of higher education to individuals is low in relation to the returns, more people demand it than would do so if they faced the 'true' costs.[27] The argument is analogous to the concept of 'frivolous' demand for health services, and it is a difficult argument to apply to education: there is little evidence to suggest that the argument has substance even in relation to health services.[28]

[26 There are several (related) dimensions of efficiency, including cost-effectiveness, technical, allocative, and incremental output efficiency, and they relate both to the ways in which education policy is formulated and to the way in which public finances are managed. Cost-effective provision of education involves increasing the education

and skill status of the population for a given budget; technical efficiency involves attaining a given level of education provision for minimum cost; and allocative efficiency involves the least cost combination of inputs for a given output. Incremental output efficiency relates the additional outcomes associated with each efficiency measure with each other: do we want major improvements in reading while numeracy declines?

27 'If households faced the true social costs of obtaining more education, they would confront a lower rate of return; instead they are induced to obtain more schooling.' Jimenez E, *Pricing Policy in the Social Sectors Cost Recovery in for Education and Health in Developing Countries*, Johns Hopkins University Press, 1987, p 40. But the intention behind subsidising higher education is precisely to induce more demand. The issue is whether it does or not, and how that demand is distributed across income groups.

[28 See Creese A, User Charges for Health Care: A Review of Recent Experience, in *Health Policy and Planning*, Vol. 6 Nr. 4, 1991, pp 309 - 319.]

The argument for efficiency effects of user charges and private schooling also holds that competition is created by consumer choice, and that this drives down costs. Apart from the fact that most consumers face little choice in what school their children can attend, the role of competition itself as it is defined by orthodox economists is troublesome. It is not axiomatic that competition, which can be 'at once the god and the devil',[29] is always desirable, and that it inevitably enhances welfare.

[29 Penrose E. T. *The Theory of the Growth of the Firm*, John Wiley and Sons, New York, 1959, p 265. The most advanced area of economics in the sense of its rejection of simple neo-classicism is the economics of the firm, where much interesting theoretical and empirical work is now taking place. For the role of competition and

economic theory of competition, see Best M, *The New Competition*, Polity Press, 1990, and Hodgson G. *Economies and Evolution*, Polity Press, 1993. There are many reasons why (neo) liberal dogma about competition should be considered sceptically, including reasons relating to efficiency and reasons relating to equity and ethics (e.g., see Hirsch F. *Social Limits to Growth*, Routledge and Kegan Paul, 1977).]

Equity

To many, the main argument in favour of cost sharing policies, particularly at post basic education levels, is that they induce a more equitable distribution of opportunities and resources. To others, such a concept is counter intuitive. Equity, it is argued, is achieved by increasing resources through fees charged to those who can afford them through present or future resources, and thereby more children are enabled to receive education. Greater allocative efficiency allows resources to be redirected from higher education to primary education, and this permits poorer people to

send their children to school, or, alternatively, the funds can be used to give scholarships to poorer students.

Equity arguments are deceptively simple. There are few if any examples of obvious reductions in public spending at higher levels in favour of lower levels of education, especially where costs per pupil are concerned, partly because in most countries the management of resources for education is weak and the systems are inefficient. The effect of reallocations is just as likely to be to redirect finances towards inefficient uses, which is hardly fair on those who pay, whether they be 'rich' or not. Moreover, in a broader context, the fungibility of money implies that fee income can perpetuate rather than obviate inequitable resource allocation.

Nevertheless, equity of provision of education opportunities across income groups should be an important social goal. The question is how it is to be achieved, and the history of earmarked and targeted expenditures in countries with weak fiscal management suggests that the answer is not straightforward. For example, measurement of how far government expenditures are

redistributive, neutral or regressive (in the sense that the better off benefit from them more than proportionately to their share of income), can to some extent be made on the basis of household data and information on government expenditures.

Household finance combines with public finance to make up the total package of expenditures on education. More affluent households have a higher level of discretionary resources to allocate to education. Relative affluence is often concentrated in particular geographic locations, but in most communities there is a spread of incomes. One function of public finance is to compensate for income diversity through the tax system and through the distribution of benefits financed by taxes. Analysis of the geographical distribution of resource allocations can show how far public budgets are equitably shared between the population, and at the household level it is possible to determine to some degree how equitably public resources are distributed between income/expenditure groups, irrespective of location.

The incidence of the benefits from public spending can be derived

from data on the number of people in a population in given income (expenditure) brackets and the average expenditure per enrolled pupil. Enrolments of different consumption groups can be identified, and on the assumption of a single national average expenditure per pupil the amount of public expenditure 'captured' by each income group can be plotted on a Lorenz curve to show the progressiveness or regressiveness of public spending. The case studies of Ghana and Tanzania show the results of benefit incidence calculations, and are intuitively acceptable, in that they show progressive distribution of resources at the primary levels, regressing at higher levels.[30]

[[30] The technique is a useful one but not without flaws, and tells us nothing about the quality of expenditures on the different income groups. As with much poverty oriented analysis, it is also not always clear that the information adds a good deal to what is already apparent, and when the costs of data collection and processing are taken into account there must be some

question about the use of scarce resources on expensive surveys: Living Standards Measurement Surveys cost up to $1 million, not including staff costs.]

In Tanzania and Ghana (and in many other countries), the incidence of the benefits of public expenditure on primary education is broadly progressive. The issue is how to increase and sustain enrolments at the basic level at the same time as making the incidence of benefits from post basic education expenditure more progressive. Simply charging fees for post basic education will not achieve that objective without strong complementary actions: it merely increases the marginal rate of tax on 'rich' families with few redistributive benefits.

The Assumption of Rationality: Government and Household Reaction Functions

Analysis of policy requires assessment of how agents react to interventions. How do governments and households react to cost sharing and cost recovery? What are the effects of the fungibility

of money? These are the central questions, from which the questions we ask in this paper are derived.

The Government Reaction Function

A paradox in the theoretical system we have been discussing is that on the one hand governments are frequently assumed to be inefficient, so the less that government manages the better; while on the other hand the success of market prescriptions depends on an efficient bureaucracy, as well as a set of complementary interventions which would ensure success. There is a set of 'implementation conditions' upon which the success of any reform depends, and it is the failure of economic reform packages to reflect that concept at the sectoral level which is the cause of much of the decline in enrolments in many countries.[31]

[[31] Creese A. and J. Kutzin, *Lessons from Cost Recovery in Health*, World Health Organisation, 1994, paper prepared for the Workshop on the Social and

Economic Effects of Alternative Methods of Financing Education and Health Services in Developing Countries, Institute of Development Studies, Sussex, March 1994. See Chapter 5 for an outline of a possible package.]

The network of assumptions we have been considering extends beyond individual behaviour and equilibrium, which we discuss below, to assumptions about perfect flexibility in public finance mechanisms: it is almost as though the abstract conception of the rational individual is mirrored by the abstract conception of the rational bureaucracy. The capacity of administrative systems to respond to calls for the reallocation of finance, targeted scholarship systems, fee exemption mechanisms, and so on, is notoriously weak: all of these require resources which are usually not available. Welfare economic analysis of user charges involves assumptions about public finance management, in particular that reallocation of finance to those areas yielding the highest social returns is in fact possible, and that government expenditure can be efficient and 'optimal'.

The reaction of government to fee income and cost sharing is the central fiscal question we are addressing, and the functional relationship between a government and an additional resource injection may be expressed via a reaction function.[32] Whether explicitly or implicitly, the effect of fiscal squeeze has been to regard cost recovery as a way of reducing the burden of public expenditure. Were other things to be equal, total ('private' + public) expenditures on education would rise as a result of increased cost recovery, but in reality cost recovery policies are usually intended to mitigate the effect of falling public expenditures. This can be looked at in one of two ways:

a) without cost recovery expenditures on education would fall by more than they would with it; and

b) without cost recovery measures government would have been forced to reallocate in favour of education away from, say, defence, or to improve revenue collection. Fungibility in the budget permits government to charge parents fees which effectively finance less

socially desirable outcomes: without the option of cost recovery expenditures on education might be maintained *and* a better composition and balance of public expenditure be achieved at the same time.

[32 See Heller P. 'A Model of Fiscal Behaviour in Developing Countries: Aid, Investment and Taxation', *American Economic Review*, Vol. LXV Nr 3, June 1975, pp 429-445.]

(a) and (b) above represent two possible counterfactuals, and, as with all counterfactuals, it is not possible to say whether or not they are 'true' for any given case. The questions raised are central to cost sharing policy, because recovery of the costs incurred (out of tax finance) by the state for education and health permits the state to maintain levels of inefficiency and misallocation. Even where there is an explicit policy of substitution of non tax compulsory financing for tax financing, the gains which the proponents of such policies might expect will not be forthcoming if the overall level of public expenditure is not reduced or if there is

no progressive reallocation.

The Household Reaction Function

The reaction of families and individuals to cost sharing policies and patterns of government expenditure is equally complex. How do people respond to better services? How much is the demand for education or certification affected by the quality of provision of service? Do sectoral interventions have a greater effect on household responses to education policies than do the employment effects of economic policies? There are two broad sets of views of the how and why decisions are made in households. On the one hand many models are based on the assumption that households are homogenous groups with one set of preferences, while others, more in keeping with anthropological studies, are based on more complex assumptions about how individuals within households negotiate their interests.[33] There is increasing interest in the specific role of children in decisions affecting their future. In many cultures children do not get a substantial share in decisions about schooling, although in some,

such as Ghana, with more complex family patterns, children may not only decide but have responsibility for raising money. In some societies women prefer to spend money on their children's education, whereas men have other preferences.

> [33 For a review see Alderman H. *et al*, 'Unitary Versus Collective Models of the Household: Is it time to shift the burden of proof ?', *The World Bank Research Observer*, Vol. 10, nr 1, Feb 1995, pp 1 - 19.]

There is a wide range of economic and cultural influences on household reactions to education policy. For example, Tilak has shown how, in the case of India, there was a positive relationship between government and household absolute expenditures on education. Families appeared from his data to spend more on education as government spent more.[34] If there is a causal relationship, one explanation might that the level of public expenditure has a strong enough effect on quality, perhaps in the form of school inputs, for people to want to spend more. This

would be consistent with survey experience and with experience in the health sector.[35]

[[34] Tilak J. B. G. Family and Government Investments in Education, *International Journal of Educational Development*, Vol. 11, Nr 2, pp 91-106, 1991.

[35] Bennett S, *The Relationship Between Public and Private Systems in Health Care*, Health Policy unit, London School of Hygiene and Tropical Medicine, 1994, p 16, paper prepared for the Workshop on the Social and Economic Effects of Alternative Methods of Financing Education and Health services in Developing countries, Institute of Development Studies, Sussex, March 1994.]

Few countries have time series of data for household education expenditures which would allow the hypothesis of complementarily between government and family expenditures on education to be

explored further.[36] Intuitively, it makes a good deal of sense. For example, survey results indicate that parents will pay more if they feel it is worth it: if there is indeed a link between total expenditures and quality of output, then increased government expenditures could trigger increased family expenditures. In order for cost recovery to become a successful policy, the consumers of the service must see benefits. One of the underlying reasons for resistance to cost recovery in higher education is that there is little apparent benefit to students, who have little incentive to accept it. Were their conditions to be improved, it is possible that they would show more willingness to pay.

[36 For example, using regional cross-sectional data, there was no systematic relation between household and government spending in Viet Nam (Penrose P. *Review of Public Expenditures on Education in Viet Nam*, UNDP/Ministry of Finance, Hanoi, 1995). But cross sectional data would not be strong evidence either way.]

The contrary hypothesis is that government expenditures crowd out private expenditures (West's 'public/private displacement mechanism'[37]), particularly those on private schools. High levels of government expenditure on education in developed countries are, it is argued, a principal reason for relatively low private expenditures when compared with less developed countries, where 'excess demand' prompts parents to seek their own solutions.[38] The absence of time series data makes it difficult to take these conjectures further, though West's study of education finance in Britain through the 1 9th and early 20th centuries is food for thought. An interesting aspect of the same issue is found in Chile. One study shows that after the privatisation of education in Chile total household expenditures on education increased, but profit-taking by school owners resulted in lower average expenditures on direct and indirect inputs than previously.[39]

[37 West E. G. *Education and the Industrial Revolution*, Batsford, 1975. He argues that there was a significant 'public/private displacement mechanism' in Britain

between 1833 and 1945 as public (state) schools took over from private schools and total average expenditures on education expenditure declined (Chap 15).

[38] See for example Johnes G. *The Economics of Education*, MacMillan, 1993, pp 81 ff, and James E, Public Policies towards Private Education, *op cit*.

[39] Schiefelbein E, Restructuring Education through Economic competition: The case of Chile, *Journal of Educational Administration*, Vol. 29, Nr 4, 1991, pp 17-29.]

One way in which we find out how people react to cost sharing policies is through household surveys.[40] Household income is made up of cash income through work, sales, borrowing and transfers, and non-cash income, such as the imputed value of food and own production. Household surveys have different ways of measuring income, and they are not always clearly specified in

analysis based on them. It is notoriously difficult to determine income in questionnaires, and a little less difficult to determine expenditures: often therefore household expenditures and cash savings are used as a proxy for (cash) income and other non-cash values are added. There is a strong relation between income and expenditure, but there is a less strong relation between cash expenditure and total income (cash plus imputed income) among poorer people.

[40 see Behrman J. R. 'Human Capital Formation, Returns and Policies: Analytical Approaches and Research Questions', *Journal of International Development*, Vol. 8, Nr 3, 1996, pp 341-373 for an overview of issues of technical analysis of household data in a neo-classical empirical economic framework. The use of the term 'household' is in many ways unsatisfactory, but there is no easy shorthand alternative. 'Household' has come to mean the opposite of government, so that total expenditures = government +

household. The pervasiveness of the technology of planning now far surpasses what was available to the central planners of the command economies, and as market economies are increasingly susceptive to the preferences of planners as survey techniques become more sophisticated.]

Fees and other schooling costs affect household savings and investment, and by extension there must also be an effect on national economies. One reaction to fees which is not well documented is that the poor may sell significant proportions of their assets (i.e. more than that which is normally set aside for financing their children) in order to pay fees and other charges: they switch investments from physical investments to human capital. Fee obligations may be one cause of declining household abilities to sustain their basic needs as well as reduce their capacity to generate wealth. Part of the problem is that although the returns to schooling appear to be 'high', those who do not earn are not included in the calculations, and families take increasing risks in deciding to 'invest' in schooling, even assuming that their

expenditures are voluntary.

Wealthier families can afford more risk[41] and are likely to spend more on education. Their opportunity costs include investment in business: the alternative 'investments' to education are not restricted to capital or equipment investments with which returns may be compared, but also in recurrent costs of entrepreneurship and other wealth creating activities. User charges will necessarily have a macroeconomic cost, the issue being that of the size of the effect and how the costs and benefits balance against each other.

[41 Levhari D. and Y. Weiss, 'The Effect of Risk on the Investment in Human Capital', *American Economic Review*, Vol. 64, Nr 6, December 1974, pp 950-963.]

Risks are greater and less affordable for poorer families. Poor households have more children, and the ratio of total education costs to total household cash income will be higher in the case of large households than in the case of smaller households on the

same cash income. One consequence of this is the additional burden placed on families by extending basic education without compensation measures. It is also likely that in poor areas the number of households represented in a school will be less than in better off areas, because of larger families. The average expenditure per child would thus be lower, and the poverty of the school would be worsened by reduced income from parents.

Economic Rationality

Over the last few years the economic concept of 'human capital' has gained ascendancy in the social sector literature and dominated foreign aid discussions on education.[42] 'Rational' human beings are assumed to make investments in themselves and their children on economic grounds, and society also makes investments in individuals on economic grounds. Investments by definition yield streams of financial and economic returns. In the case of human beings these are expressed in the form of lifetime earnings and other financial and non-financial returns, which benefit both society and individuals. These streams of returns can

be estimated, and internal rates of return both to individuals and to society as whole derived as guides to policy.

> [42 Compare Mark Blaug's assessment in 1976: 'In all likelihood, the human capital research programme will never die, but it will gradually fade away to be swallowed up by the new theory of signalling, the theory of how teachers and students, employers and employees, and indeed all buyers and sellers select each other when their attributes matter but when information about these attributes is subject to uncertainty'. (Blaug M, 'The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey', in *Journal of Economic Literature*, Vol. 14, Nr 3, Sept 1976, pp 827-855.]

One assumption which is hard to accept as a basis for serious policy formulation is the view that economic coordination is *simply* a matter of price signalling in markets to which individuals react predictably (a crude definition of 'rationality'). We need to take account of a wide variety of factors relating to culture, institutions

and other components of individuals' environments. The problem with simplified propositions is that while they are useful tools of analysis, they can discourage deeper understanding of the connecting principles relating to relevant phenomena.[43]

[[43] In his important book, *Equilibrium and Evolution: An Exploration of the Connecting Principles in Economics*, Manchester university Press, 1991, Brian Loasby suggests, following Adam Smith, that 'we try to make sense of the world by imposing patterns on it, and then sticking to them as long as they are tolerably successful in allowing us to feel that we understand what we observe and what we experience.' He continues: 'Smith argued that people like to feel comfortable, and that they do not feel comfortable unless they can link together in their own minds the phenomena to which they are exposed. People prefer not to have to think; but what they like even less is the feeling that they do not understand, and in such a situation they are driven to

seek an explanation.... The motivation of science, therefore, according to Smith, is the psychological need to invent a set of connecting principles which will make sense of experience, and thereafter leave the brain in peace.' (pp 6 -7). The drive to define connecting principles has resulted in the rational choice equilibrium method of economics, a method which gives tranquillity to the economist's imagination. The world of the economist's imagination is not the world of policy: Herbert Simon wrote 'the decision maker's ... perceived world is fantastically different from the real world' (Simon H. A, *Models of Bounded Rationality*, MIT Press, Cambridge MA, 1982, Vol. 2 p 306), and the consensus of economists in the subject matter we are discussing is very much responsible for many of the problems faced by education systems in poor countries now.]

The importance of the price mechanism for education policy making is illustrated by the current hegemony (at least within the Bretton Woods Institutions) of the analysis of internal rates of

return to education. Rates of return are seen by many as an indicator of how individuals perceive the financial benefits to themselves derived from additional education, and as an indicator of the economic benefits to 'society'. Where there is a high 'private' benefit relative to the estimated 'social' benefit, it is implied that there is excess demand and that therefore fees must be charged. Because the 'social' internal rates of return to primary education are generally estimated to be higher than those to secondary or tertiary education, and because the divergence between 'private' and 'social' benefits is usually calculated to be less at the lower levels, policy advice based on rate of return analysis is invariably that public expenditures should be directed at those lower levels of education while cost recovery must be pursued at higher levels, principally at the university levels.[44]

[[44] Social rates of return are computed simply by adjusting estimated private rates to include costs to the state, with little corresponding adjustment on the benefit side of the cost-bereft calculus, particularly those which

might be caused by externalities.]

There are two kinds of question which can be posed about the value of education cost-benefit analysis. The first relates to the rational choice basis of the assumptions derived from it, and the second relates to reasons of a more technical and methodological nature which cast doubt on the reliability of the solutions offered. In many respects the robustness of rate of return analysis is surprising, and tells us more about the absence of tools which enable us to make education policy than the usefulness of the technique itself.[45] Although there have been a number of criticisms of the foreign aid agencies' reliance on rates of return in its policy 'dialogues' with governments, criticisms do not appear to have affected the widespread acceptance of the results offered, principally the policy focus on expanding basic services and rationing access to post-basic services through price.[46] The range of objections to the technique as a main basis for policy decisions is too wide to discuss fully in this paper, but I return to the subject where it is relevant, particularly in regard to post

primary policy: there are in any case very strong reasons for not placing too much credence on education rates of return. Moreover, even for those who do have faith in such analysis, the problem should lie more in how the findings are used in relation to public expenditure allocations as a whole (especially when they are driven by foreign aid conditionalities), and whether the correct response is to charge fees and raise costs for post-primary education rather than to eliminate expenditures elsewhere in the budget with even lower 'social' rates of return, as theory would suggest.

[45 But the need for such a tool derives not from 'market' approaches but rather from central planning requirements. A point which was often missed from the rate of return versus manpower planning debate is that both techniques are used by central planners, but one appears to be more sensitive to market signals than the other.

[46] The criticisms of the reliance on internal rates of return for education policy purposes are strong enough to require the results to be used with circumspection, if at all. Where they are used well, such as by Knight and Sabot in Knight J. B. and R. H. Sabot, *Education, Productivity and Equality: The East African Natural Experiment*, OUP, 1990, the authors caution readers that they did not 'wish to perpetuate the illusion of precision created by oversimplification' (p 51). Knight and Sabot, rightly, do not dismiss either the methods or the results, but suggest that the reliance on survey data for cross section averages does not take into account the changing conditions facing new entrants to employment, and that rates of return may be weak guides to policy. A strong (and sometimes intemperate) attack with many well argued points which I have not seen answered is by Curtin in Curtin T, *The Economics of Public Investment in Education in Papua New Guinea*, University of Papua New Guinea Press, 1991. See also Bennell P. *Using and*

Abusing Rates of Return: A Critique of the World Bank's 1995 Education Sector Review, IDS Working Paper Nr 22, Sept 1995, and two other Working Papers (Nrs 23 & 24).

One interesting development is how more recent calculations (most of the cited IRRs are a decade or more old) show high private relative to social IRRs to primary education, and more or less equalised rates for secondary education (as in the recent calculations for Ghana). This may well be a trend, and it will be interesting to see how aid policy is affected. See Psacharopoulos G. 'Returns to Investment in Education: A Global Update', *World Development* Vol. 22, Nr 9, pp 1325-1343.

It is often suggested that nobody pays much attention in practice to rate of return findings, but experience suggests otherwise. Not only is lip service paid to them, but Treasury officials, often frustrated by the absence of

reasoned justifications for expenditures in education sectors, latch on to them as at least one way of making sense of education spending.]

D. Culture

Although any discussion of cost sharing will have an economic bias in that the justifications for cost sharing policies relate to the financing of education, the cultural and social environment in which cost sharing activities take place will to a great extent determine how they work. There is considerable cultural diversity between countries which directly affects people's reactions to cost sharing, and the insights from anthropological and sociological research are important in balancing the cruder assumptions of economic rationality.[47]

[[47] There have been a number of important studies over the years which bring cultural issues to the fore. Perhaps One of the finest is Philip Foster's *Education and Social*

Change in Ghana, Kegan Paul, 1965. Another very important study is Serpell R. *The Significance of Schooling. Life journeys in an African society*, Cambridge University Press, 1996. Also Musgrove F. *Education and Anthropology: Other Cultures and the Teacher*, John Wiley, 1982.]

In 1932 T. S. Eliot wrote 'Questions of education are frequently discussed as if they bore no relation to the social system in which and for which the education is carried on... Education cannot be carried on in a void: our questions raise other questions, social, economic, financial, political. And the bearings are on more ultimate problems even than these: to know what we want in education we must know what we want in general, we must derive our theory of education from our philosophy of life'.[48] Western education can have a different significance in many traditional societies, and the influence of foreign aid can be, in Denis Goulet's phrase, 'shockingly ambiguous'.[49] One reason for the ambiguity is that modern education systems in non-Western cultures have not

arisen in the same way out of a 'philosophy of life' in a natural fashion. Sociological and anthropological literature is replete with accounts of the reactions of 'traditional' peoples to modern education, and dissenting economic literature has also emphasised the consequent problems of transporting foreign models via the medium of foreign aid.[50]

[[48] Eliot T. S. Modern Education and the Classics, in *Selected Essays*, Faber & Faber, 1966, pp 507-516.

[49] Goulet D, *The Cruel Choice: A New Concept in the Theory of Development*, New York: Athenaeum, 1971.

[50] 'External doles ... tend to bias the development process in directions based on external prototypes which are often inappropriate and therefore damaging. Such a sequence retards development rather than promotes it... Adverse results are all the more likely when the expenditure within the country is undertaken by people

who do not themselves bear the cost.' Bauer P T. *Dissent on Development*, Wiedenfield and Nicolson, 1971, p 103.]

In a sociological echo of the language of economics, the concept of capital investment may be extended to that of investment in 'cultural capital'. The range of meanings of the concept of cultural capital is wide, but modern education systems may stimulate capital growth where it may be less desirable and destroy cultural investment without creating new capital.

In an example of the first phenomenon, as governments seek means of targeting public finance to overcome inequalities and inequities in the system they come up against the self-replicating nature of social status and provision where parents with education are able to use the publicly financed system to perpetuate and consolidate their advantages.[51] At the same time, the pressure from the foreign aid agencies to 'liberalise' education provision and encourage the development of private schools will tend to create a 'cycle of privilege' if accompanied by a reduction in public finances

for state schools.[52] Cost sharing will always tend to create inequalities simply because schools in better off areas or with better off pupils are better financed than others.[53] If schools rely on cost recovery for non-salary items, and cost recovery is unevenly distributed between schools, underfunding is built into the system, even where the incidence of public expenditure may be progressive. Such a tendency would work to offset the supposed equity effects of cost recovery.

[[51] See, for example, the discussion and analysis in Halsey A. H, A. F. Heath and J. M. Ridge, *Origins and Destinations: Family, Class and Education in Modern Britain*, Clarendon Press, 1980, pp 75 ff and pp 198 ff.

[52] State education is often viewed from the World Bank as an 'inferior good', meaning something that people cease to purchase as their incomes rise.

[53 See, for example, Bray M, *Community Financing of Schools in Less Developed Countries: Rationales, Mechanisms and Policy Implications*, paper prepared for the Workshop on the Social and Economic Effects of Alternative Methods of Financing Education and Health Services in Developing Countries, Institute of Development Studies, Sussex, March 1994. There are other local phenomena. For example, in some places in the north of Ghana, parents do not wish to contribute anything to schools because of the competition from teachers in farming. Teachers, who earn salaries, are able to finance farming inputs (as well as use children as free labour), and this gives them an advantage over poor farmers with little cash working capital. Throughout every system local effects such as these strongly influence attitudes to cost sharing.]

An example of the second phenomenon is the relation between 'traditional' wisdom and skills and those promoted in modern

schools.

A good deal of anthropological debate centres on the assumption and definition of (economic) rationality.[54] Anthropologists have much to say about the impact of markets and economics on societies to which these phenomena have been relatively recently introduced, particularly by foreign aid. Indeed, anyone who has worked in countries which are the subject of the attentions of foreign aid project designers should have been able to see the various patterns of resistance which are mounted against them.

[54 In some instances economists can be treated as a homogenous group, but this should not be the rule: one example of this treatment is in R. L. Stirrat's interesting paper *Economics and Culture: Notes Towards an Anthropology of Economics*, School of African and Asian Studies, University of Sussex, 1994. This paper was one of many delivered at a conference with the theme of 'tensions between economics and culture' in the

University of London Institute of Education.]

People possess economic rationality in the sense that they will respond in some way to economic stimuli. This is not the same as saying that those responses will outweigh all other responses, or that economic rationality is not tempered by other types of rationality. Self-interest is not confined to economic betterment, but includes it. The Mandevillian baker bakes bread for a living and not for altruistic reasons, but he may also consider it important to make good bread (quite apart from the market implications of baking bad bread), and may also take seriously his place in society as a contributor to general welfare. Economic rational man is stimulated exclusively by prices, an assumption as absurd as it is wrong. As surveys illustrate, people desire education for other reasons than economic reasons, but of course for economic reasons as well.[55]

[[55] Though the Becker position would be that all behaviour is by definition rational to the behaver (Becker

G. *The Economic Approach to Human Behaviour*, Chicago, 1976), a position not universally shared.]

For example, one interesting paper records that in Mozambique 'peasant families were generally unable to ascribe any meaning to what was taught in schools in terms of content... Instead, schooling was basically ascribed a purely functional value, that of opening up the door leading to modern society and its well-being. But even in this respect, the relationship was ambiguous'.[56] One reason for the ambiguity was that education offered an escape route from the peasant condition, but that at the same time the route was 'long, costly and insecure'. Another reason was that education took a member of the group away from the group, transforming him or her into something different. While this might be acceptable for boys, it represented a great risk for girls in a matrilineal society. Research such as this goes some way towards the explanation of why there is underenrolment in the presence of 'high' private rates of return.[57]

[56 Palme M, *Being Respected but Teaching Hieroglyphs: addressing the question of the primary school teacher, culture and local community in rural Mozambique*, paper presented to conference on 'tensions between economics and culture' in the University of London Institute of Education.

57 Although, of course, the returns are only to those in employment.]

Survey literature in other countries shows similar phenomena. In Sierra Leone, for example, parents in some parts of the country see western education as *haram* (sinful), as breeding ingratitude, and as alienating children from their families and homes.[58] The general reaction by the agents of the modern education sector - teachers, administrators, foreign aid workers is that parents are 'ignorant', they 'do not appreciate education', and that community attitudes to education are in some sense irrational. This applies also to girls' education, where refusal to send girls to school is

seen as an oppressive measure. In reality, parents' attitudes may be very rational, even in the economic sense, as in, for example, Pakistan, where parents who have traditionally been opposed to the education of their daughters may change their views if they see economic benefits deriving from it.[59] It is also important to note in the consideration of cost sharing that the benefits accruing from education can be more important in people's perceptions than the costs of attaining it, for the benefits are measured in other ways than the material, and are frequently seen as 'social' rather than 'private'.

[[58] Kroma S. *Factors Influencing School Enrolment and Attendance in Rural Communities in Sierra Leone*, (mimeo) Njala University College, Sierra Leone, December 1993.

[59] Bacchus K. & I. Farah, *Tensions Between Economics and Culture in the Provision of Education for Girls*, Institute for Educational Development, Aga Khan

University, Karachi, 1995. The paper was delivered to the London Institute of Education conference.]

'All societies seem to have a somewhat ambivalent attitude towards children. They are accorded the status of humans as far as our basic orientation is concerned. We do not treat them like animals: we talk to them, greet them, expect them to eat, to toilet and to dress like humans; but we do not expect them to take responsibility for their actions or their words. They are thus incomplete humans, in a state of transition, creatures about to be persons. Their actions are promissory, provisional, subject to correction and to being forgotten. It is this ambivalence which motivates the activities we call rearing, socialisation or education through which we attempt to prepare children for adult personhood.'[60] Parents and communities are fairly clear about what they expect from their children, and there is always a tension between economic betterment and the attributes and behaviour of a person in any given society. In African countries, as in many Asian countries, communities are rural and small, and education

must provide skills and attributes for survival both in those communities and in the bigger world of the towns and cities. Yet a key function of school is 'getting children out of their families'[61]: schools become the 'third cultural reality' of Malinowski, and they transcend the cultures in which they are situated in order for societies to progress.

[[60] Serpell, *op cit*. p 70.

[61] Musgrove, op cit. p 174]

The importance of understanding what constitutes education in any society in relation to policies which require citizens to pay for it lies in the need to understand the product. The economic justification for making citizens pay for the education of their children is partly founded on calculations of economic returns, and therefore in some sense involves repayment of a debt to society (although economic justifications often conceal a simpler truth which is that the state has insufficient resources, for whatever reason). The

implication might be that people pay for the perceived entitlement to employment. The product is deemed as one which enables those who purchase it to be employed, and secondary benefits may or may not be learning how to be better people, and so on. Evidence suggests that when employment opportunities do not flow from success in schooling, school is seen as only mildly relevant, which is a sad indictment of any education system.

The intermediation between schooling and the economic benefits which accrue from it is the examination. In some countries the examination has complete dominance over all aspects of the system. Educational considerations are of little relevance. It is widely accepted among teachers and pupils that if an item is not examined there is little point in teaching it. As Ron Dore wrote in 1980,

> Schools belonged unmistakably to the modern sector. Timetables were adjusted to the city week, not to the rhythms of the agrarian calendar. Teachers were hired and paid in accordance with the canons of modern

> bureaucracy, not indigenous custom. Furniture, layout, and curriculum design explicitly mimicked imported models. Schooling was socialisation into modern sector life - in anticipation of a future which only a small minority could enjoy. Hence, an overwhelming importance was attached to examinations, which determined who should belong to that minority.[62]
>
> [[62] Dore R, The Future of Formal Education in Developing countries, in Simmons J. (ed) *The Education Dilemma: Policy Issues for Developing Countries in the 1980s*, Pergamon, 1980, pp 72-73.]

Dore reiterates the difference between the emergence of education systems in industrialised countries and those in developing countries: 'where they lack certain pre-industrial traditions it is harder to sustain the guise that education is aimed at personal development and spiritual enrichment rather than money-earning opportunities, a fiction which in older societies

derives some strength from traditional ideals and mitigates the effect of the qualifications disease'.

The extent to which parents and children perceive the relative advantages of schooling in economic or non-economic terms depends on tradition and culture as well as the robustness of employment opportunities, and will vary between and within countries. There is frequently a belief that school can build moral responsibility and discipline, partly in reaction to the breakdown of traditional relationships in communities. In that cost sharing policies rest on assumptions of economic benefits, their success or failure will be sensitive to the attitudes of communities to the benefits of school, which, one would suppose, is related to success of children in examination systems. However, lack of information or the ability to interpret information, or indeed the lack of any choice, parents may be unaware of the poor quality of schooling their children receive as measured by examination results.

Although there are many aspects of the cultural environment which

impinge on education policy, perhaps most critically language issues, another aspect which is relevant to cost sharing is the culture of management in the public sectors. The general model of cost recovery supposes among other things a perfect flexibility in public finance allocation. Such a flexibility cannot easily be achieved by any large organisation, public or private, and not at all in hierarchical and unaccountable public sector bureaucracies staffed by underpaid staff who live often in fear of their superiors and where there is no reward for innovation and much reward for caution and inactivity. Many of the reforms proposed for the management of education systems which emanate from foreign aid agencies seem to derive from idealised rationalist perspectives, assuming an underlying willingness of the recipients of these attentions to change. Yet in many countries the simplest of analyses reveals the irrationality of change, and preference for the 'inefficient' *status quo*, when viewed from the local perspective. Efficiency brings unemployment, and there is in most developing countries a shared goal of employment with widespread unwillingness to be responsible for or collude in other people's unemployment. Also, larger work loads may interfere

with the necessary business of making a living from second or third jobs.

Much of the rhetoric about communities and 'ownership' is based on an assumption that measures can be taken to thrust on teachers accountability to the communities in which they serve. Apart from the fact that teachers will be accountable to those who pay their salaries (if they are accountable at all), the foregoing paragraphs suggest that the widest perception of the product which teachers deliver is employment (or movement up the education system) through certification. As Serpell argues well in the case of Zambia, the impediments to teachers perceiving their responsibilities to their communities as opposed to the wider educational bureaucracy are centred on the nature of the product, rather than on what should be the process, for teaching to examinations may not involve much which can be construed as 'learning'.[63]

[63 Serpell, op Cit. pp 132 - 135]

All this is to emphasise the scope of the 'implementation package' in which cost sharing policies should be included. To implement reallocation and efficiency in public expenditures requires action along an extended chain ranging through different government agencies, including schools. It requires individuals to make arguments and claim more accountability than is strictly necessary, as well as requiring them to relocate accountability in ways which the system in which they operate cannot easily support.

E. Foreign Aid

It is worth also considering the culture of foreign aid agencies, which can be generally characterised as bureaucratic and hierarchical, with inward looking accountability, as evidenced in the Wappenhans report for the World Bank.[64] The role of foreign aid agencies in the context of the present discussion can hardly be exaggerated: cost recovery was a central part of economic adjustment strategies on which aid was conditional, and there were few dissenters within the agencies. Moreover, most aid

policy was directed towards expansion and increasing costs, and it disrupted the natural evolution of education systems within fiscal feasibility.[65] It had a direct impact through this mechanism on cost recovery imperatives.

[64] The 'Wappenhans Report' was prepared by a former Vice-President of the World Bank in 1992 but never published. It attributed much of the high failure rate of World Bank projects to a 'culture of commitment' in which staff were appraised more on the basis of the projects for which they gained approval and committed funds rather than by any success of the projects themselves. This seems to be common to most agencies.

[65] cf '... aid represents the import of resources not generated within the receiving economy. This may mean that the skills which would have been generating those resources were never in fact called for or learned, and are not available to use the resource when it is provided.

> In a more complex case, the educational system of a country has to be paid for from its productive resources ..., but if education is rapidly expanded by the use of unearned aid resources (without corresponding growth in the economy) there may not be employment for its graduates....' Bauer *op cit,* pp 105-106, quoting Guy Hunter.]

Another way foreign aid affected cost was via the high level of debt incurred by countries.[66] In many countries, up to one third of recurrent budgets is allocated to paying debt costs (domestic and foreign).[67] Priority is given to paying debt, and the large spenders in the budget such as education are constrained. The point to note is that debt is (or should be) a temporary phenomenon. Yet foreign aid agencies in their drive to impose fiscal rectitude on countries take debt costs as given and ask for substantial and in some cases irreversible changes in education policy in order to reduce expenditures. Were debt not to be such a burden these changes would not be necessary. Foreign aid has therefore

promoted contradictory aims of expansion and contraction, which is hardly a sound base for policy.

[66 How far should countries borrow to finance their social sectors? The argument is that without education economies will not grow, and that growth provides the fiscal space to repay loans. That has not transpired in many countries with have borrowed heavily for education. Moreover, the benefits of education loans may be doubted: in Tanzania and Ghana it is hard to see the returns to past loans for education.

67 For example, external debt costs account for over a third of the Ghanaian development budget for education. Nearly all this debt is to the World Bank. Internal debt cannot be allocated to sectors, though of course it finances them. There is a connection between aid to education and internal debt through the cost push effects of aid (e.g. through the expansion of systems beyond

fiscal feasibility) which forces governments to borrow for deficit finance. World Bank officials commonly urge that IDA aid is almost grant aid, a disingenuous argument as the chickens of the 1970s and 80s come home to roost in the 90s.]

To a large extent foreign aid upsets a natural process of evolution in education policy, as countries are subject to swings of education fashion from outside: from the emphasis on university education; to vocational education and 'diversified' secondary curricula; to the current emphasis on 'basic' education. Depending on the capacity of the recipient country, staff from aid agencies have great influence over domestic policy, and in many cases even draft it.[68]

[[68] As in the case of Tanzania where social sector policy was written and published by World Bank staff.]

Foreign aid projects have played a significant role in expanding

education systems beyond a size which can be supported by domestic tax finance. Perhaps one of the most destructive initiatives has been Universal Primary Education (UPE) and the huge costs associated with it. Many countries expanded their systems too rapidly to maintain any quality, creating a large pool of untrained teachers, a stock of poorly built schools and large equipment and materials deficits. They also created raised expectations of employment which, not materialising, have prompted withdrawals from schools rather than increased enrolments, the opposite of what was intended. A current example is the education reform and consequent free compulsory universal basic education policy in Ghana which extended the cycle from six to nine years in a fiscally stressed country.

Paradoxically, in many countries foreign aid agencies, while pressing for basic education policies, allocate the greater part of their donations to post-basic uses: this is certainly the case in Tanzania. However, this should not matter simply because of the fungibility of money. Indeed, there is a reasonable case for foreign aid to be directed at higher levels of education on the grounds that

such interventions are much more likely to assist the poor than sub-sectoral interventions at the basic level.

There are two reasons which support such a view. First, post basic education has heavy infrastructural costs which, if they come from the same budget as primary education, will effect primary education spending: this is arguably one reason for the aid fashion of requiring communities to build their own primary schools, while post basic institutions receive capital budgets from government. Secondly, the ratio of private to public expenditures at the primary level are higher than the ratios at post-primary levels simply because costs are higher. The marginal dollar has a greater impact at the primary level than at higher levels. It would follow from this that policies should aim to create conditions and incentives to maximise parental contributions to primary schools rather than to reduce them. This would necessarily involve reducing the private costs of secondary education. Indeed, the argument can be extended: foreign aid should finance heavy infrastructure (roads, water and sewerage) within recurrent maintenance and operational cost constraints, and work through

fungibility to push more resources from domestic revenues to social expenditures. The foreign aid fallacy is the assumption that foreign aid finances only achieve what they are directed targeted to achieve, which ignores fungibility.[69]

[69 Contrary to the belief of many commentators, governments' natural priorities tend towards higher education rather than basic education: hence the multiplicity of foreign aid conditionalities. If this were not so, why would conditionalities be required? Kenya provides an interesting example. Most aid to education was stopped for several years for political reasons. During the period of no aid government allocations to education investment showed entirely different priorities. Details are given for one section of the education system in the 1994 Kenya *Public Expenditure Review*, Chap 8.

Similarly, if priorities in the Ghanaian education development budget are ranked with and without foreign

aid, higher education receives the highest ranking when only domestically financed investment is included, whereas basic education takes first rank when aid is included. Similarly, over the whole government development budget education expenditures rank fourth at 3.5 per cent of the total when only domestic finances are considered, but rises to the second highest priority over all expenditures at 11 per cent when foreign aid is added. The situation is complicated by 'matching funds', which are domestic revenues required to match foreign aid allocations: see Penrose P. *Budgeting and Expenditures in the Education Sector in Ghana*, Ministry of Education, April 1996, Chap 5. (There is a deplorable tendency for agencies to demand fixed coefficients for budgetary allocations to education (e.g. the absurd '20/20' formula), something which, apart from all the measurement ambiguities involved, would never be countenanced by public finance managers in any country). In Ghana there has been intense pressure over

recent years on the higher education budget with corresponding pressure to raise its share of the total. One argument commonly used by those pushing for reallocation is that basic education benefits from foreign aid.]

The implementation of cost recovery policies is frequently a part of wider conditionalities relating to fiscal balance and a part of institutional development programmes the design of which contains serious flaws of pacing and sequencing.[70] Throughout the adjustment period the combined reduction of expenditures in real terms[71] and increased costs to families invariably featured highly in Bretton Woods Institution (BWI) conditionality lists. These conditionalities were more attached to ideology than evidence.[72] The history of foreign aid over the decade 1985-1995 (and perhaps beyond) will be shown to have had an immensely destructive effect on education systems in many countries with hasty 'reforms' imposed without regard to practicality or educational effect.[73]

[70 One such example was cost recovery in Zambia. Bretton Woods conditionalities, supported by donors, imposed cost recovery policies for health and education during a period of drought, and before significant public finance reforms were implemented.

71 David Sahn's study was more concerned with social sector expenditures as a percentage of national income, rather than in absolute real terms. As a percentage of national income education expenditure was quite robust in many countries, while at the same time falling in real terms. Both measurements are valid as partial measurements of real movements in fiscal effort, but it is a little disingenuous to argue, as is often the case, that real expenditures are maintained on the basis of constant or rising GNP/GDP shares. See Sahn D. E, Public Expenditures in Sub-Saharan Africa During a Period of Economic Reform, *World Development*, Vol. 20, nr 5, pp 673 - 693.

[72] See Colclough C. & J. Manor, *States or Markets? Neo-liberalism and the Development Policy Debate*, Clarendon Press, 1991, pp 197-213

[73] This perhaps somewhat strong statement will be countered by 'what choice was there?', and while in relation to certain structural reforms it is probably the case that little choice existed, in the case of education there were many choices, some related to wider reform programmes and some simply to paying more attention to evidence and less to dogma. In both cases reforms paid little heed to initiating medium term measures to tackle the underlying cost structures of education, instead preferring to concentrate on superficial measures to reduce budgets. The failure to understand the essential requirements of civil service reform was another example. One documented example is in Carnoy M. and C. Torres, *Educational Change and Structural Adjustment: A Case Study of Costa Rica*, UNESCO,

September 1992. The authors argue that Costa Rican secondary education never recovered from the effect of 'reform' policies initiated in the 1980s. It is easy to destroy and hard to rebuild.]

F. Conclusions

This chapter has set out issues for inclusion in the analytical framework for the case-studies of cost sharing. The common economic justifications for cost sharing are contradictory and inconsistent, and their rationalist assumptions do not reflect reality, either of how people behave or how public finance systems react. The politics and economics of cost sharing in developing countries are rather founded in fiscal crisis[74] and in the ideology of 'low' public spending and budget deficits. They are also heavily influenced by foreign aid policies, which are themselves unstable over time and frequently inconsistent between donors and lenders, and which impose additional fiscal burdens on countries. As a result, there has been a general failure to understand the content, pacing and sequencing of financial reforms which improve the

resource flows to education.

> [74 A point generally accepted in Bray M. and K. Lillis (eds), *Community Financing of Education: Issues and Policy Implications in Less Developed Countries*, Pergamon Press, 1988. The book provides interesting case studies and is written, as the title suggests, with minimal analysis of public finance aspects of community financing. Keith Hinchliffe, in a cogent review article Neo-liberal Prescriptions for Education Finance: Unfortunately Necessary or Inherently Desirable? in *International Journal of Educational Development*, 1993, Vol. 13, Nr 2, pp 183-187 asks the same question in the title, although he is cautious in his approach to the answer.]

The subsequent chapters consider the evidence from selected countries and attempt to answer the questions posed at the beginning of this paper.

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III Case Studies in Cost Sharing - Ghana

A. Introduction

This chapter and the next are case studies of cost sharing in education. The first case study is of Ghana, and the next chapter covers Tanzania. My Ghana survey was undertaken between 1994 and 1996, and the large scale survey data are from the Ghana Living Standards Survey of which the latest round collected data for 1992.[75] As I have already emphasised, my small scale surveys are intended to yield qualitative insights and are not statistically representative in that they can be used for prediction or statistical probability analysis.

[75] The research for this chapter was carried out by staff of the Ministry of Education. They were Steven Agyarkwa, Eunice Dappah, Nana Dwomoh, Gottfried Gome, Daniel Konadu, and Daniel Zogblah, supported by Yaw Dwomoh and R. J. Mettle-Nunoo. Florence Hianno and Herbert Gorman checked and entered the data on

computer. I am also grateful to H. N. Pandit for his assistance.]

B. Overview of the Ghanaian Education System

Structure and Curriculum

The school system is divided into four levels. Pre-school education lasts for two years, and is mainly enjoyed by urban children. Primary education, from the age of 6 to the age of 12, lasts for 6 years, followed by Junior Secondary School (JSS) which lasts for three years. Primary and JSS are considered together as Basic Education, and the government is embarking on a programme of compulsory basic education for all children. For most children Basic Education is terminal.

The curricula are, by general consent, too large. There appears to be a consensus that there are 'too many subjects' in basic school, and that they should be reduced from the present nine subjects at primary level to five or six subjects, and from the present JSS total

of 13, of which 12 are examined in national examinations, to 12, with 10 nationally examined. At the SSS level the problem is equally acute.

The importance of this issue from a financial viewpoint is simply that it is the number of subjects which determines the number of teachers required at the post primary levels, and which therefore is a significant determinant of educational costs. The legacy of years of curriculum development and reform in many countries is large curricula which impose both substantial burdens of learning on children and high costs on parents and the state.

Enrolments and Staffing

Table 2 shows trends in enrolments. Up to 1991 there had been decline in the apparent enrolment ratio (AER)[76], which reached about 69 per cent in 1989. The basic education enrolment has been fairly constant since, though there appears to be a drop in the primary AER, which, if true, will cause a decline in the overall basic AER over the next few years if not offset by large increases

in Primary 1 intake.[77] The data need to be treated with some reservation because population data are extrapolations from the 1984 census. In absolute terms total primary enrolments increased by 148,500 over the period, an increase of a little under 2 per cent a year. The age 6 population growth rate is probably higher than that. Senior secondary enrolments have declined in the same period. The enrolment data are for public schools only, and the AERs include private school enrolments, which have made a modest contribution to enrolment growth.

[[76] Also known as the Gross Enrolment Ratio.

[77] Which is unlikely as there have been declining grade 1 enrolments throughout the country.]

Table 2: Enrolments in Ghana, 1991/2 -1995/6

Level	1991/92	1992/93	1993/94	1994/95	1995/96
Primary	1,807,226	1,848,300	1,910,408	1,920,803	1,955,713

(public)					
Apparent Enrolment Ratio (public + private)	79%	77%	77%	75%	
Pupil-Teacher Ratio (state schools)	27	30	31	30	32
Junior Secondary (public)	592,867	629,258	655,642	659,85	1677,641
Apparent Enrolment Ratio (public +	56%	58%	59%	58%	

private)					
Pupil-Teacher Ratio (state schools)	17	19	18	19	20
Basic Education AER (public & private)	67	77	77	76	
Senior Secondary (public)	225,277	247,496	236,530	201,813	194,460
Pupil-Teacher Ratio (state schools)	22	22	23	20	17

Tertiary		21,947	22,754	23,493	30,331

Notes & Sources: School data from MOE PBME school statistics. Tertiary education comprises Universities and Polytechnics only, data from Dept of Tertiary Education.

The apparent enrolment ratio is the ratio of the total number of children in school to the school age group. It can thus exceed 100 per cent, and is only a general indicator of enrolment performance, depending on the number of 'over-age' children in school. It also provides no indication of what percentage of any given age group actually attend and complete school. Its general use as an indicator of universal primary education is therefore misplaced. Time series for the two other measurements, net enrolment ratios and age-specific enrolment ratios, are not available in Ghana (apart from the two year GLSS comparison shown below). Age data have only recently begun to be collected and analysed in the school census.

Table 3: Primary School Net and Apparent Enrolment Ratios,

Ghana 1991/92

		Consumption Quintiles									
		I		II		III		IV		V	
		NER	AER	NER	AER	NER	AER	NER	AER	NER	AER
Accra	Male	ns	ns	ns	ns	ns	ns	96.7	146.7	ns	ns
	Female	100.0	ns	ns	111.1	92.6	115.6	90.6	88.2	88.6	80.9
Other	Male	78.0	111.9	86.2	119.8	88.7	126.8	85.9	126.3	97.3	154.8
Urban	Female	63.3	92.9	81.4	116.7	82.8	110.1	85.7	121.4	88.2	121.1
Rural	Male	61.3	91.9	81.4	122.0	87.8	123.0	86.0	128.0	86.1	144.4
Coastal	Female	55.0	80.0	67.2	93.4	72.2	95.8	80.0	126.7	85.7	128.6
Rural	Male	78.7	126.0	89.4	127.8	80.3	109.8	85.6	124.0	93.5	129.9
Forest	Female	75.2	99.3	80.6	113.7	85.7	114.3	89.1	118.8	78.8	126.9
Rural	Male	45.6	70.5	51.7	82.8	45.1	70.3	60.9	88.0	60.4	98.1
Savannah	Female	31.4	46.3	65.6	76.7	43.5	67.1	38.0	52.2	58.9	101.8
	Male	66.6	101.2	77.8	113.3	76.3	110.9	80.5	118.1	87.5	130.7

All	Female	58.3	81.4	76.1	104.7	74.3	100.0	74.0	102.8	79.5	120.9
	All	62.6	91.7	77.0	109.4	75.3	105.5	77.4	110.7	83.6	125.9

Notes & Sources: GSS, *The Pattern of Poverty in Ghana, 1981-1992*, May 1995, Tables 7.4 & 7.5. ns=not significant (small sample). The first quintile is the lowest consumption quintile.

The GLSS provides information on net enrolment ratios (NER) - albeit in some cases on the basis of a small sample - by Accra, other urban and the key ecological zones, not by administrative locality. The NER is the ratio of the number of children of school age in school to the total population of school age: where the denominator of the AER includes all children in school, the NER excludes children outside the 'official' age range. Table 3 summarises the data.

There is a discrepancy between the national apparent enrolment ratio of 79 per cent in 1992 in Table 2 and the 1991/92 AER in Table 3 of 108 per cent. The different data collection methods

illustrate the difficulty of the measure. Households report the enrolment of children in school at a given time, whereas the MOE data are derived from school reports and enrolment registers. It appears that the number of children who actually attend school for some time may be greater than the number officially measured.[78] It may also be that the discrepancy is a measure of a larger rate of early leaving than is generally accepted: at any given time enrolments are higher than those reported in the school census. The ratio of national aggregate NERs to AERs across consumption groups is stable in the area of 65 to 75 per cent, indicating that repetition and enrolment of over school age children is proportionately similar.

[78 There are some reports of children attending school without officially enrolling, with the agreement of teachers, largely as a result of inability to pay charges. While this is consistently denied at the school level, it would provide some partial explanation for the discrepancy. At any rate, it has long been well known

that Enrolment Ratio data underestimate attendance at school. Other factors contribute. For example, the textbook fee, which until last year was compulsory at all levels but is now abolished for primary pupils, is backed up by severe sanctions on head teachers if not collected. Where pupils did not pay, often for reasons of inability to pay, headmasters did not declare the full enrolment figures in order to avoid comparisons between enrolments and fee collections. This is reported to be a problem still in JSS.]

The GLSS data provide some inter-temporal comparison (Table 4). Net enrolment ratios of the very poor and poor were fairly static between 1987 and 1991. The rate of increase of enrolment ratios was greatest at the higher consumption levels. In 1987/88 the percentage point spread between the lowest and highest consumption quintiles' AERs and NERs was less than 10 per cent: the gap widened by 1991-92 to 20 per cent for NERs and 30 per cent for AERs at primary level. Such a conclusion provides an additional dimension to the interpretation of the Lorenz curves

(Figure 4) for the incidence of public expenditure on education, which show overall progressiveness. There was a similar percentage increase in spread at the secondary level, though the percentage point spreads were lower.

Table 4: Apparent and Net Primary School Enrolment Ratios, Ghana 1987-1992

	1987/88			1988/89			1991/92		
	Very Poor	Poor	Non-Poor	Very Poor	Poor	Non-Poor	Very Poor	Poor	Non-Poor
Primary Education									
Apparent Enrolment Ratios									
Male	86.1	94.5	90.1	89.0	100.0	110.0	98.4	110.4	118.1
Female	62.4	75.8	79.1	73.6	87.0	92.5	80.6	92.7	107.5
All	74.9	84.9	84.6	81.6	93.4	101.1	89.9	101.9	113,0
Net Enrolment Ratios									
Male	63.9	67.7	66.3	64.2	66.8	78.0	65.8	73.4	80.7

Female	47.4	58.4	60.8	56.0	65.4	67.5	55.8	70.7	76.1
All	56.0	63.0	63.6	60.2	66.1	72.7	61.1	72.1	78.5
Secondary Education									
Apparent Enrolment Ratios									
Male	40.1	37.5	46.9	37.1	38,0	48.3	39.4	43.4	52.7
Female	23.1	30.5	30.9	22.3	25.4	32.3	25.4	36.2	40.0
All	32.5	34.1	39.2	30.6	32.3	40.4	33.2	40.3	46.5
Net Enrolment Ratios									
Male	34.5	33.6	39.6	33.7	34.5	41.5	34.5	37.2	43.5
Female	21.4	29.1	27.7	22.0	24.6	29.5	23.4	33.1	35.9
All	28.7	31.4	33.9	28.6	30.0	35.6	29,5	35.5	39.8

Notes and Sources: Compiled from GSS, *The Pattern of Poverty in Ghana, 1981-1992*, May 1995, Tables 7.3, 7.4, 7.5 & 7.6.

The geographical variation in enrolment ratios creates inequality in the distribution of education facilities around the country, but the

inequality of distribution of facilities measured in this way has been substantially reduced in recent years: the northern regions remain the most disfavoured.

While the primary PTR rose slowly, it varied significantly between and within provinces, as is shown in Table 5, and the variance between the PTR and the average number of pupils per class is also wide. The distribution of enrolments is uneven throughout the country, and the north is particularly disadvantaged. One effect of unequal distribution is that even though the distribution of public expenditure on education may be mildly progressive when measured against shares of aggregate consumption spending, the geographical distribution of expenditures may not be.

Table 5: Enrolments and Teachers by Region, Ghana 1992/3

Region	Total Enrolment	Population Aged 6 - 11	Nr. of Classes	Teachers	Pupils per Teacher	Pupils per Class
ASHANTI	333,940	442,475	11,276	10,999	30	30

BRONG AHAFO	198,825	272,579	8,001	7,653	26	25
CENTRAL	190,751	228,667	6,780	5,863	33	28
EASTERN	272,422	353,662	10,809	10,389	26	25
GREATER ACCRA	180,642	324,493	4,209	4,562	40	43
NORTHERN	136,328	265,686	6,770	5,123	27	20
UPPER EAST	75,758	164,472	2,363	2,012	38	32
UPPER WEST	48,909	91,111	1,888	1,461	33	26
VOLTA	215,496	242,149	8,528	7,545	29	25
WESTERN	195,229	254,536	7,856	7,237	27	25
Totals	1,848,300	2,639,830	68,480	62,844	29	27

Notes & Sources: Enrolment, population & classes from MOE

data; teachers from GES. Data sources account for the difference in PTR between Tables 2 and 5.

Thus, enrolment growth has been slow and the proportion of the school age population in school has been declining (other data not shown here indicate that the entry class enrolments in primary school have in many places been declining or stagnant since 1992). These facts are important background to the analysis of cost sharing.

C. The Economy, Public Finance and the Education Sector

The importance of a better understanding of the effect of economic management on the education sector is vital to sectoral policy making in view of the apparent acceptance of resource constraints at the sectoral level and the apparent need to adapt to them. There are features of Ghana's macroeconomic management which seriously affect the level of resources available for sectoral spending. In addition, limited capacity in the general public finance management area means that assumptions

about reallocation in the system must be treated with caution. Ghana accepted Bretton Woods stabilisation and adjustment programmes at an early stage. Cost recovery was part of the package with well documented consequences.[79]

[79 For an excellent (and critical) account see Kraus J. The Political Economy of Stabilisation and Structural Adjustment in Ghana, in Rothchild D, *Ghana: The Political Economy of Recovery*, Lynne Rienner Publishers, 1991, pp 119-156.]

National Income and Public Expenditures

The Ghanaian GDP figures are generally accepted to be in need of revision, and there is a programme under way to do so. Similarly, there are questions surrounding the reliability of total government expenditure data. Table 6 is constructed from various sources and the usual data cautions apply.[80] It appears that the growth of education recurrent expenditures has exceeded that of

GDP growth, but that it was lower than the growth of total government expenditure. However, it exceeded the growth of discretionary recurrent expenditures by a little under twice as much. While maintaining a fairly steady proportion of total discretionary recurrent expenditures of just under 40 per cent, these relative growth rates exerted pressure on the budget and depended for their sustainability on the ability to reallocate from other budget items. Internal debt growth was also significant, as interest payments compete for recurrent finance.

[80 Nominal expenditures are converted to 1994 prices with the GDP deflator. Another way of looking at a salary based budget is to use a consumer price index. If this is used growth rates are slightly higher. This does not affect the comparative data. Opinions vary about the level of misestimation of GDP, but it may not be as significant as in other countries (including Tanzania).]

Table 6: Shares of Government Expenditure on Education in GDP and Total Budget, Ghana 1990-1997

	1990	1991	1992	1993	1994	1995	1996	1997
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Provisional
(Actual and estimated expenditures in billion cedis at current prices)								
GDP (1)	1,921	2,428	2,803	3,675	4,950	7,418	10,385	13,681
Total Government Expenditure	264	352	509	791	1,010	1,715	2,543	2,830
Share of GDP	13.7%	14.5%	18.1%	21.5%	20.4%	23.1%	24.5%	20.7%
Pensions &c (2)		21	31	65	80	134	187	202
External Debt	10	13	26	44	61	96	145	198
Internal Debt	18	30	25	92	114	233	434	645
Share non discretionary	1.4%	2.6%	2.9%	5.5%	5.2%	6.2%	7.4%	7.6%

Development Expenditure	58	60	105	121	174	323	495	429
Other(3)	5	33	41	67	97	185	187	111
Discretionary Recurrent Expenditure (4)	174	194	281	402	484	743	1,095	1,245
Recurrent Education (5)	59	75	112	156	189	272	446	535
as % GDP	3.0%	3.1%	4.0%	4.2%	3.8%	3.7%	4.3%	3.9%
as % recurrent	33.7%	38.7%	39.8%	38.7%	39.0%	36.6%	40.7%	42.9%
Primary & Pre-school Education (6)	16.7	28.6	42.4	56.5	65.8	102.7	154.7	192.9
as % GDP	0.9%	1.2%	1.5%	1.5%	1.3%	1.4%	1.5%	1.4%

as % recurrent education	28.5%	38.1%	37.9%	36.3%	34.9%	37.8%	34.7%	36.1%
JSS (6)	8.5	16.6	27.3	38.5	43.9	56.6	94.4	109.2
as % GDP	0.4%	0.7%	1.0%	1.0%	0.9%	0.8%	0.9%	0.8%
as % recurrent education	14.6%	22.0%	24.4%	24.8%	23.3%	20.8%	21.2%	20.4%
Secondary	6.2	7.5	12.3	16.9	24.1	31.8	66.7	72.7
as % GDP	0.3%	0.3%	0.4%	0.5%	0.5%	0.4%	0.6%	0.5%
as % recurrent education	10.6%	10.0%	11.0%	10.9%	12.8%	11.7%	15.0%	13.6%
Tertiary	6.4	8.0	12.8	17.7	24.9	25.7	49.2	63.5
as % GDP	0.3%	0.3%	0.5%	0.5%	0.5%	0.3%	0.5%	0.5%
as % recurrent	11.0%	10.7%	11.5%	11.4%	13.2%	9.4%	11.0%	11.9%

education								
Education Development		4.0	3.4	4.2	4.7	15.6	15.7	18.6
GDP Deflator (1980=100) (5)	565	680	765	956	1210	1735	2309	2896
		20%	12%	25%	27%	43%	33%	25%
(Actual and estimated expenditures in billion cedis at constant prices								
GDP	4,113	4,319	4,433	4,649	4,950	5,173	5,441	5,716
Total Government Expenditure	565	625	804	1,001	1,010	1,196	1,332	1,182
Government Exp/GDP	13.7%	14.5%	18.1%	21.5%	20.4%	23.1%	24.5%	20.7%
Pensions &c	na	38	48	82	80	94	98	84
External Debt	21	23	42	56	61	67	76	83

Internal Debt	37	53	39	116	114	162	228	269
Other	11	58	65	85	97	129	98	46
Discretionary Recurrent Expenditure	372.3	345.6	444.3	508.8	484.1	518.4	573.5	520.3
% GDP	9.1%	8.0%	10.0%	10.9%	9.8%	10.0%	10.5%	9.1%
% Total	65.9%	55.3%	55.2%	50.8%	47.9%	43.4%	43.0%	44.0%
Total Education		140.9	182.0	202.2	193.3	200.5	241.8	231.1
Education Recurrent	125.3	133.8	176.7	196.9	188.6	189.6	233.6	223.3
Primary & Pre-school Education	35.7	51.0	67.0	71.5	65.8	71.6	81.1	80.6
JSS	18.3	29.5	43.2	48.8	43.9	39.5	49.4	45.6
Secondary	13.2	13.4	19.4	21.4	24.1	22.2	35.0	30.4
Tertiary	13.7	14.3	20.3	22.4	24.9	17.9	25.8	26.5

Tertiary	15.7	14.0	20.0	22.4	24.0	17.0	25.0	20.0
Development Expenditure	124	108	166	154	174	225	259	179
Education Development		7.1	5.3	5.3	4.7	10.9	8.2	7.8
% Total Development		6.6%	3.2%	3.5%	2.7%	4.8%	3.2%	4.3%
as % total education exp		5.0%	2.9%	2.6%	2.4%	5.4%	3.4%	3.4%

Notes & Sources: From *Ghana Country Economic Memorandum*, World Bank, May 1995, Tables Al, A2 & A7; *Quarterly Digest of Statistics*, Ghana Statistical Service, March 1993, Tables 40 & 42, & *Broad Based Budget*, 1994, Government of Ghana, n.d., Section A p 6. 1993 budget data provisional actuals, 1994 estimates. Education development expenditures from *1994 Public Expenditure Review* Table A1.3 (1993&94) and

Broad Based Budget Section D.1(c). The development expenditure estimates are inconsistent between sources and very unreliable, and are assumed to be 'narrow coverage' (i.e. domestically financed expenditures only). The mixture of sources also means that some of the trend data should be interpreted with circumspection.

(1) GDP to 1996 from IMF, Staff Country Report, 1997; 1997-98 from 1998 Budget Statement

(2) Includes pensions, gratuities, social security

(3) Includes Common Fund, Environmental Fund, arrears clearance & emergency fund, redeployment & ESB, arrears clearance

(4) Total recurrent less pensions, debt & others

(5) Does not include Common Fund; interest subsidies on student loans; student loans arrears; scholarships;

National Service volunteers.

(6) Primary and pre-school normally budgeted and accounted together. Primary budget includes GES admin, not apportioned to JSS.

By international developing countries' standards the proportion of discretionary expenditure allocated to education in Ghana has been high, while the ratio of education expenditure to GDP is comparable to the sub-Saharan average.[81] Total government expenditure as a percentage of GDP has been rising to a level which places it within a comparable range for other African countries. It appears, though, that discretionary recurrent expenditure as a proportion of total government expenditures declined, and this was and continues to be the source of pressure on the overall education budget. The lower growth rate of domestic development expenditures indicates that finance is not being reallocated to investment. While it may be unlikely that education expenditures as a percentage of total *discretionary* expenditures will rise, the apparent steady decline in education

spending as a proportion of total government expenditures shows that an overall reallocation of spending is taking place out of the sector, perhaps to service internal debt costs among others. If such a trend were to continue, it is difficult to see how the proportion of discretionary expenditures could be maintained in the face of competing claims on the diminishing total. The picture is made clearer in Figure 1.

[81 International comparisons should be treated cautiously because of the well documented problems in computing developing country national incomes; because of the ambiguities created by including capital/development expenditures in total education expenditures; and because of the combination of discretionary and non-discretionary expenditures in the numerator. Nevertheless, the average range of the education/GDP ratio in sub-Saharan Africa is likely to be in the region of 4 per cent; and the share in total government expenditure of education spending to be

about 1 5 per cent (World Bank, *Priorities and Strategies for Education: A World Bank Review*, August 1995, p 66).]

The left hand axis of the Figure 1 measures public expenditures and the right hand axis measures national income. The four lines plot trends in GDP, total government expenditure, government expenditure after items such as pensions and debt payment are subtracted, and education sectoral expenditure. The area between total government expenditure and total government discretionary expenditures indicates the level of non discretionary expenditures. As the table shows, the gap is mainly accounted for by the growing level of internal debt interest payments which are above the line and which therefore compete with the sectors for recurrent finance.

Figure 1: Shares of Government Expenditure on Education in GDP and Total Budget, Ghana 1990-1997

The rate of inflation, reported to have exceeded 70 per cent in

1996 was accompanied by a growing deficit[82] and level of government borrowing from the central bank. While this is not the place for an analysis of government economic policies, a resurgence of inflation and the failure to take action on its causes has created great difficulties in maintaining a stable sectoral policy framework. Salaries rose by about 30 per cent. Nevertheless, the level of national income implies a greater capacity to finance sectoral budgets than is currently experienced

[82 'Deficit' here refers to the budget balance net of foreign grants but including internal debt interest.]

D. Trends in Recurrent Education Expenditures in Ghana

Total Expenditure Trends

Most government recurrent education expenditure is in the government budget, the main exception apparently being expenditures from compulsory fees such as the textbook fee, which has not been on budget. However, not all education sectoral

expenditure is recorded in the Ministry of Education's budget, including secondary schools and university scholarships; the interest subsidy of the student loans scheme; and a few other items. There are also considerable difficulties in disaggregating past kindergarden, primary and junior secondary expenditures.

***Figure 2: Trends in Government Real Education Expenditure, Ghana 1990-1997* (Actual expenditures in '000,000 cedis at constant 1994 prices)**

Notes & Sources: From MOE tables (PBME).

Figure 2 plots the trends in real actual expenditures (expressed in 1994 prices) from 1990-1995. Expenditures by sub-sector seem to follow the track of total expenditures, with a slight reallocation towards post-basic education. Over the period the average annual growth of secondary education has exceeded that of basic education. Of the major expenditures, only tertiary education is experiencing real growth.

Basic education (including kindergarden[83]) grew in real terms over the period, though the growth rate was interrupted in 1994, and now appears to be declining again. Secondary education also grew but is also now declining, while post-secondary education showed little growth.[84] It is worth noting that although there are problems using the GDP deflator to derive real growth rates, it is similar in its order to magnitude to the CPI, and most of the budget is salaries. Growth in the education budget (as much of the Ghanaian civil service budget) is effectively financed largely through inflation taxation on teachers and civil servants.

[[83] Note that all Ghanaian data combine pre-school and primary expenditures. It is a serious distortion of primary figures: pre-school expenditures account for about 18 per cent of the figure normally quoted as 'primary'.

[84] Without including overhead allocations, the growth rates of direct expenditure are higher, indicating that overheads have declined. The data are not given here.]

Average Expenditure Trends

***Figure 3: Average Actual Government Expenditures for School Education, Ghana 1990-1996* (Cedis at constant 1994 prices)**

Source: Derived from MOE PBME data. Primary costs have been estimated by reducing the figures in Table 6 by 15 per cent to allow for KG costs.

Average Expenditures per Pupil

To make sense of total expenditure movements it is necessary to compare them to average expenditures, where the denominator is both expressed in terms of students and of teachers, and of non-salary expenditures. The calculation of such figures is fraught with difficulty, and they can only be taken as indications of orders of magnitude and trends, and even this may be misleading.

With these *caveats* in mind, Figure 3 shows the trends in average

expenditures, expressed in 1994 prices. Average expenditures per primary pupil appear to have been constant. Over the latter part of the period JSS per pupil expenditures have declined but may be rising again, although they may be underestimated because of reporting difficulties. There has been a fairly sharp rise in secondary student average expenditures since 1993, largely because the fall in enrolments was not matched by a reduction in the number of teachers.

Average Non-Salary Expenditures: Textbooks

Non salary recurrent expenditures on non administration are largely limited to learning materials and school maintenance at post primary levels.

In 1993 an average of cedis 1,276 was spent on textbooks for each child in basic education, in 1994 the figure was cedis 1,011, and in 1995 it was 1,854. Expenditures on senior secondary books were low in 1993, at about cedis 1,292 per student, and in 1994, when 1,022 cedis was spent per student: in 1995

expenditure per student on textbooks was nearly 6,000 cedis. The average cost of a primary education textbook was about 600 cedis and at senior secondary level 3,000-5,000 cedis. The budget would have purchased less than two books for every primary child: JSS children require at present 12 books, while in primary grades 1 - 3 children require books for two subjects and in the following grades for four subjects.

These data do not include expenditures made from the textbook revolving fund. Each senior secondary student contributes 6,000 cedis per year and each JSS student 500 cedis. Primary children no longer have to contribute. Expenditures from the revolving fund amounted to about 1 billion cedis in 1995. At January 1995 the account had a balance of 2.3 billion cedis, and the balance at January 1996 was 2.6 billion. If the revolving fund expenditures are added to the recurrent expenditures, average expenditures on post primary books are higher.

E. Distribution of the Benefits of Public Expenditure

One indication of how far government expenditures are equitably distributed across income groups is how far the share of government expenditure captured by income groups equates to their share of the population. If shares are equally distributed, the poorest 20 per cent of the population would expect to 'capture' 20 per cent of government expenditures, the next 20 per cent the same, and so on. A progressive distribution of government expenditures would have as a minimum condition that each quintile[85] captures a greater percentage of public expenditure than the quintile below it. If shares are not progressively distributed, the poorest 20 per cent would be expected to capture less than 20 per cent of public expenditures. These relationships can be plotted on Lorenz curves, which are shown in Figure 4.

[[85] Quintiles - population divided into five equal shares - are commonly measured in terms of aggregate consumption, which is taken to be a proxy for income, as income is difficult to measure because of income in kind. The GLSS categorises consumption groups in terms of

'expenditure'.]

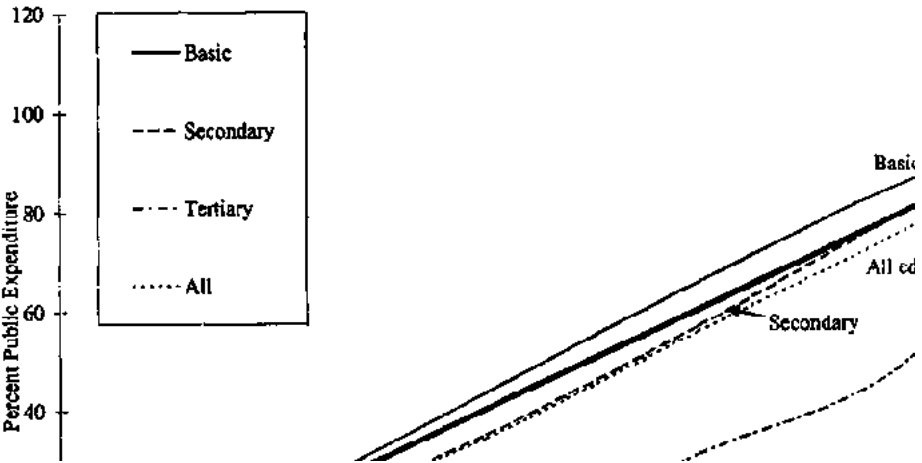
It can be seen from comparing the two charts that there was some flattening of the curves over the period, meaning that expenditure, even for tertiary education, became more progressive. Expenditure on primary education is progressive, with lower quintiles receiving a proportionately larger share of primary expenditure, and it is notable that the incidence of secondary education spending is also very close to the 45 degree diagonal, which indicates equal shares to all quintiles. Indeed, when all education expenditure is aggregated it is only mildly regressive when measured in this way, and education spending is more progressively distributed than is aggregate consumption.[86]

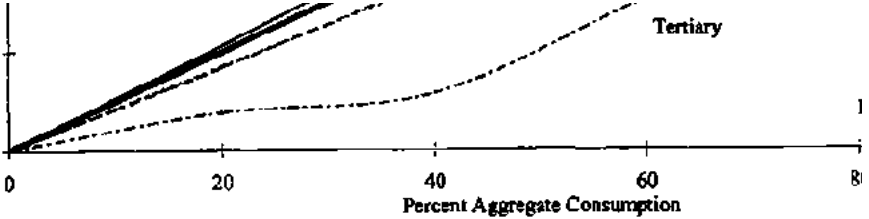
[[86] The way these data are calculated is described in Chapter 2. There are several reasons why they should be regarded as indicative, and it is not easy to determine whether they over or underestimate progressiveness of the incidence of public expenditures, at least for school

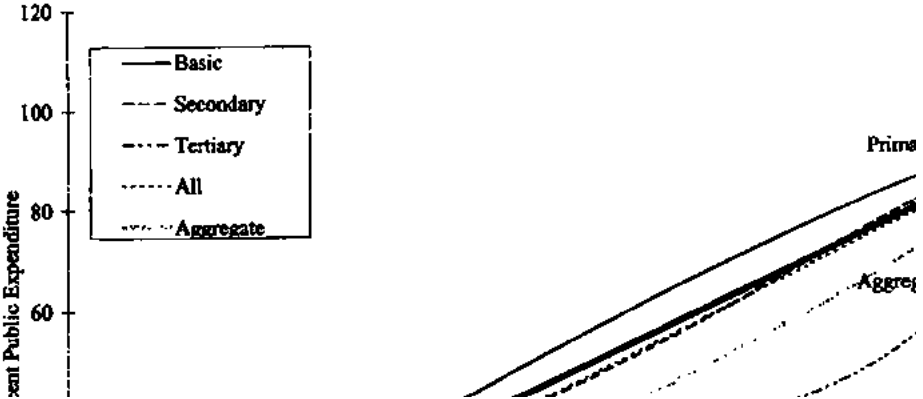
education. As most school education expenditure is made up from salaries, the incidence of aggregated public expenditures on education tells us very little about the quality of expenditure. Where there is a greater level of private expenditure to complement the public expenditures, it is fair to assume that quality will be higher than where private expenditures are lowest, at least where the data imply geographic distributions of benefits (because, for example, poorer people would be concentrated in specific locations). Also, there are variations in average expenditures on pupils between regions, and presumably these differences are reflected at the district and finally the school levels. Further insights into variations between schools are given later. There are other problems, such as the choice of unit, which will affect the distribution pattern: whether per adult equivalent measures are used or *per capita* total household expenditures matters. This is discussed in Demery *et al*, where alternative measures are given. The

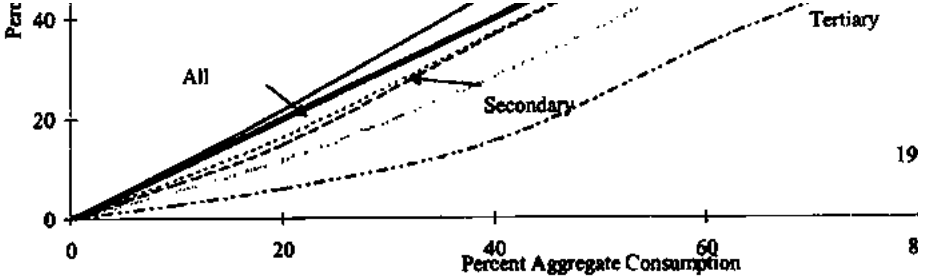
charts above are based on actual expenditures and are not adjusted.]

Figure 4: Benefit Incidence of Public Expenditures OH Education in Ghana, 1989 & 1992




Tertiary
20
0
0
20
40
60
Percent Aggregate Consumption


120
100
80
60
Basic
Secondary
Tertiary
All
Aggregate
Prima
Aggre



Notes & Sources: Computed from data in Demery *et al, The Incidence of Social Spending in Ghana*, World Bank mimeo, Sept 1995. Tables Al & A2; GLSS3 Table 7.1 for 1992 aggregate consumption

In concluding the general overview of government education expenditures, there are a number of points to note which impinge upon cost sharing. First, it does appear that government has been

reallocating away from education over the period, which would imply that any cost sharing measures were a response to a growing fiscal gap in education, and possibly a deliberate government policy (although the state of the macro-economy would be a better explanation). Second, enrolment growth is low, as are enrolment ratios, and additional costs to parents are unlikely to stimulate more enrolment. Third, a reduction in the government's debt obligations would release discretionary resources for education, and a longer term strategy would involve increasing expenditure on education, with less emphasis on short term gap filling.[87] Fourth, there is little space for reallocation: higher education takes about 12 per cent of the budget, and while there has been a fall in the efficiency the secondary sector, its share of about 16 per cent of the budget is not excessive and it is likely that demand for places will eventually pick up.

[87 Although public expenditures are to be reduced as a percentage of GDP.]

F. Household Expenditures and Cost Sharing in Education

Survey Data

There have been three rounds of the Ghana Living Standards Survey (GLSS 1, 2 and 3), capturing data in 1987/88, 1988/89 and 1992. There are reported to be a number of problems with the data, particularly in the first two rounds, which have severely circumscribed their usefulness, and there are difficulties with inter-temporal comparisons of the data. Nevertheless, the GLSS provides valuable insights into the education system and its accessibility to the population, as well as to popular perceptions of

the system.

My survey was on a very small scale and concerned more with exploring parental finance at the level of the school rather than the household. The survey covered 27 primary, junior secondary and senior secondary schools of different types from around the country, and 96 parents, 158 children and 122 teachers were interviewed. Data were collected for an additional 419 students.

The Ghanaian Household and Cultural Issues Related to Cost-Sharing

Ghana is unusual in that children take responsibility for the payment of fees. This derives from the structure of the Ghanaian family. Child fostering in Ghana is widespread. Sibling data from GLSS 3 have not been published, but evidence is available from earlier rounds. GLSS 1 (1987/88) data indicate that school aged children averaged 4.1 'same-mother' siblings and 5.9 'same-father' siblings, a difference of 1.8, which is an indication of the level of fostering. Children living away from their mother or father have

more siblings on average than those living with them.[88]

[88 See Lloyd, C. B. & A. J. Gage-Brandon, Does Sibsize Matter? The Implications of Family Size for Children's Education in Ghana, in Ardayfio-Schandorf, E. *Family and Development in Ghana*, Ghana Universities Press, Accra, 1994, pp 123-159.]

In my survey of the children, a large proportion of the sample were not sure of the parentage of their siblings, and although the data indicate that a little over half the siblings were of the same father and mother, this finding is not reliable. Because the parent's questionnaire was not conducted for the most part in the households with both parents present, most children were 'biological children' of the parent interviewed.

Children thus collect money from both parents as well as relatives to pay fees, and there appears to be less direct financial relationships between parents and schools as in other countries.

Indeed, one reason cited for sending children home for non-payment of fees is the belief by head teachers that although the children have collected the money they have 'misused' it: by sending them home parents (real or foster) may become aware of the leakage.

Ghanaians have a great respect for education. Philip Foster, in his classic work *Education and Social Change in Ghana*, remarked on the 'shrewdness and economic sagacity of the citizens in Ghana', and although his thesis was that choice of education was linked to perceptions of future employment in the public service, it would be a mistake to assume that economic rationality is the only force in people's calculations. My parents' survey asked parents to rank the three main benefits from education, and the responses were interesting in that great stress was laid on education as a means of instilling moral responsibility, 'discipline' (a favourite word), and good behaviour. Jobs were seen as a means towards self-reliance and independence. Indeed, in spite of low salaries and retrenchment, 43 per cent of the parents considered government jobs to be the most desirable kind of job, because of

the job security: similarly 63 per cent of the children surveyed aspired to government jobs.

Household and Government Expenditures on Education

GLSS data show that household direct and indirect expenditures on primary education amounted to the equivalent of about 30 per cent of government expenditures, or 23 per cent of total (government plus household) expenditures.[89] Overall, education non-government household expenditures accounted for the equivalent of about 32 per cent of government expenditures. However, rural households on average contributed the equivalent of about 20 per cent of government expenditures on their primary education provision.

[89 These figures may be subject to considerable error. It is extremely difficult to derive household education expenditure data disaggregated by level from the GLSS, for a number of reasons (including the fact that in most

tables education is lumped with recreation, which includes significant levels of 'gambling' expenditures). The percentages given in the text are derived from Demery *& al, op cit* Table 11, in which government and household expenditures have been averaged using total population as the denominator.]

Education Expenditures within Households

Across all households, average household expenditures on education accounted for about 2.8 per cent of total average household expenditures.[90] Equivalent figures for household expenditures in Kenya and Uganda[91] were 6.7 per cent and 5.4 per cent respectively. The Ghana data seem very low, and may not provide an accurate picture. Expressed as a percentage of non-food spending, Ghanaian households on average spent about 5.7 per cent on education.[92] The percentage expenditure accounted for by education in total discretionary (non-food) expenditures is comparable to other countries: it is higher than

Tanzania but a bit lower than Zambia. As the Zambian data show[93], there can be a strong relationship between percentage shares of education in household spending and changes in total spending (income) where total income declines while the fixed elements of education costs must still be met. Over all Ghana this amounted to about 15,000 cedis per household, according to GLSS, though the figure may be low. This may be compared to 11,000 cedis per household spent on weddings, dowries and funerals.

[90 *Ghana Living Standards Survey: Report on Third Round*, Ghana Statistical Service, March 1995. Derived by comparing relevant figures from Tables A9.27 & 28 with Table A9.29.

91 *Report on the Uganda National Integrated Household Survey*, 1992-93, Table 1.51.36: Kenya *WMS 1993* Table 36a.

92 Demery *et al, op cit*. Table 14.

93 Zambian non-food expenditures fell from a national average of 42 per cent of total household expenditures in 1991 to 31 per cent in 1993, reflecting the rise in poverty over the period. Education in 1991 accounted for about 7 per cent of non-food expenditures, and rose to a startling 16 per cent as families grappled with poverty, drought and adjustment. See Penrose P. L. Harris and G. Bloom, *Evaluation of the EU Structural Adjustment Support Programme in Zambia*, EU Evaluation Unit, Brussels, August 1996, for an assessment of the relation between economic 'reform' and poverty. Data in table are from Central Statistics Office, *Social Dimensions of Adjustment Priority Survey I*, Lusaka, 1992, table 10.1 p 119 and *Priority Survey II* (1994), table 9.1 p 102, adjusted with the CSO annual rate of inflation. For Tanzania see Chapter 4.]

The introduction of health charges in Ghana introduced an additional item of expenditure to household budgets, and most health expenditures, particularly to the poor, are probably non-discretionary.[94] In 1989 households spent 8.5 per cent of total non-food expenditures on health, rising to 9.4 per cent in 1992, and over the same period education shares in household spending fell (Table 7). Rural households show the strongest relationship between the claims of health and education spending. While their share of health spending in non-food expenditures rose by a little over 18 per cent, the share of education fell by 28 per cent. At the same time, the percentage of non-food spending in total spending rose. Thus a larger proportion of a larger proportion of total household expenditures is being spent on health care, while in total and in rural areas a smaller proportion of a larger proportion of total household expenditures is being spent on education.

[94 When health charges were introduced in Ghana in 1985 outpatient visits declined from 4.4 million to 1.6 million. Waddington C. J. and K. A. Enyimayew, A Price

to Pay: The Impact of User Charges in the Volta Region of Ghana, *Parts I & II, International Journal of Health Planning and Management*, Vol. 4 Nr I, 1 989, pp 17 - 47, and Vol. 5 Nr 4, 1990, pp 287-312. It is unlikely that the reduction was a result of a decline in 'frivolous' usage. Utilisation has since climbed back, but with changes in the way people use health services and how they procure drugs: Ghana has a seriously high rate of antibiotic resistance. See also Kraus J. op cit. p 142.]

Table 7: Household Spending on Education and Health, Ghana 1989 & 1992

Household Spending as a Per Cent of Non-food Expenditure						
Population Grouping	**1989**			**1992**		
	Education	**Health**	**Ed + Health**	**Education**	**Health**	**Ed + Health**
Total	6.2%	8.5%	14.8%	5.7%	9.4%	15.0%
Urban	6.5%	6.5%	13.0%	6.9%	7.7%	14.6%

Rural	6.0%	10.7%	16.6%	4.3%	11.2%	15.5%
% non-food of total	28.8%			33.8%		

***Notes & Sources*: Demery *et al*, Table 14 (from GLSS 2 & 3). Expenditures include spending on private provision. Last row from *The Pattern of Poverty in Ghana*, 1981-1992, GSS, May 1995, Table 6.1, percentage non-food cash spending by the poor.**

Table 8: Distribution of Expenditure on Market Purchased Commodities in Rural Areas, Ghana

	1987/88			1988/89			1991/92		
	Very Poor	Poor	Non-Poor	Very Poor	Poor	Non-Poor	Very Poor	Poor	Non-Poor
Tobacco	8.7	6.5	5.1	7.6	5.1	4.3	5.8	4.1	2.9
Soap	16.5	15.4	12.5	15.0	12.7	11.2	13.3	12.2	11.8

Charcoal	1.5	1.6	2.7	1.0	1.0	2.6	1.3	1.9	2.7
Other Fuel	8.9	8.7	5.8	9.0	7.0	5.0	11.7	10.3	7.8
Gasoline	0.1	0.0	0.5	0.0	0.0	0.8	0.0	0.5	1.3
Shoes and Clothing	22.1	25.0	24.0	24.8	26.9	25.7	22.8	22.5	19.1
Public Transport	5.3	5.1	5.6	4.3	4.6	5.0	6.2	7.2	9.6
Medicine	6.7	7.4	6.8	6.8	7.1	6.3	9.8	10.4	10.8
Education	8.9	8.4	6.4	9.7	10.0	7.0	7.7	7.1	5.3
Utilities	0.1	0.0	0.4	0.1	0.2	0.6	1.2	1.2	0.1
Others	21.2	21.7	30.1	21.6	25.3	31.6	20.2	22.7	27.5
Total	100.0	100.0	100.0	1000	100.0	100.0	100.0	100.0	100.0

Notes and Sources*: GSS, *The Pattern of Poverty in Ghana,

May 1995, Table 6.4b

Table 8 shows more disaggregated data by income group in rural areas, over a period of four years. The percentage of non-food expenditure spent on education declines over the period. Higher proportions of expenditure are allocated to transport, fuel, and medicine. This was during a period of major education reform. Unfortunately the GLSS data stop at 1992, and it may be that the conclusions are of little relevance now, depending on the view taken of the economy of the poor. However, there is little reason to suppose that real cash incomes are improving significantly: people still face problems in paying for education.

There are no published data which indicate household expenditures disaggregated by primary and JSS children. Table 9 from GLSS 3 data shows a breakdown of primary education by consumption quintile: the data are available for primary, secondary and tertiary. The first quintile is the

poorest and the fifth the 'richest'. Clothing is the largest item for the poorest while food and lodging account for the greatest expenditure in the higher quintiles. Average expenditure in urban areas was over 12,000 cedis per pupil, of which just below a third was for food and lodging and a surprisingly low percentage for clothing, possibly the result of reporting error. Private tuition expenses were also significant. The poorer groups spend half of the highest quintile on books and supplies.

Parental and pupil expenditures

Table 9: Per Pupil Household Spending on Primary Education, Ghana 1992

Quintile	Tuition		PTA Fee		Clothing		Books/Supplies		Transport		Food/
	Cedis	%	Cedis	%	Cedis	%	Cedis	%	Cedis	%	Cedis
1	923	17.9	301	5.8	1,460	28.4	482	9.4	1	0.0	1,281
2	1,174	19.5	174	2.9	1,642	27.2	590	9.8	50	0.8	1,500

3	1,378	18.1	290	3.8	1,790	23.5	768	10.1	172	2.3	2,373
4	1,468	16.5	284	3.2	2,068	23.3	805	9.1	270	3.0	2,904
5	1,975	18.6	295	2.8	2,383	22.4	1,050	9.9	344	3.2	3,067
Total	1,331	18 1	264	3.6	1,819	24.7	710	9.6	148	2.0	2,126
Urban	2,574	20.9	587	4.8	2,375	19.3	1,196	9.7	420	3.4	3,626
Rural	800	15.2	127	2.4	1,581	30.1	503	9.6	32	0.6	1,485

***Notes and Sources*: GLSS 3, from Demery *et al, op cit*, Table A3**

The data show that primary school spending by pupils and their families was a little over 7,000 cedis for each pupil, with a spread between 5,000 and 12,000 cedis over rural and urban households. Average public expenditures were about 24,000 cedis[95], yielding an average ratio of private to public spending on primary of education of about 3.5:1.

[[95] From MOE accounts: see Penrose P, *Budgeting and Expenditures in the Education Sector in Ghana*, April 1996]

Table 10 gives average expenditures as collected from a small (and nationally unrepresentative) sample of parents in 1996. The table shows estimates of JSS expenditures from two sources, parents and children. The table also shows average government expenditures for the same year. Government expenditure per pupil was roughly the same as private expenditure per pupil at the primary level, and a little under private expenditures at JSS level.

Table 10: Average Expenditures per Pupil Primary and JSS, Ghana 1995

	Parents' Survey			Average Gov Primary	Parents' Survey			Avera Go JS
	Total	Nr	Average		Total	Total	Average	

	Primary Exp	Children in primary	Primary Expend	Exp	JSS Exp	Children in JSS	JSS	Exp
Mean	123,490	3.3	48,747	35,236	96,231	1.6	62,685	71,9
Nr parents paying	74		74		83,024		57	

***Notes and Sources*: Columns 2-7 as reported by parents; column 8 as reported by children. There were 246 primary and 89 JSS children reported. Government data from MOE calculated in Penrose P. *Budgeting & Expenditures in the Education Sector in Ghana* (Tables 9 and 15). Note that government actual expenditure (not budget) data are not adjusted for the variation between the school and fiscal years, and are therefore probably slight overestimates.**

Comparison of the average primary expenditure in Tables 10

and 9 would only be indicative, because the survey did not collect income and expenditure data, and the sample was not representative and the means are not generally statistically significant. If we take the consumer price index over the period,[96] the overall average expenditure of 7,364 cedis reported in GLSS in 1992 would be something over 17,000 cedis, compared with nearly 49,000 in Table 10, which in turn would equate to about 21,000 1992 cedis, putting the sample well above the highest expenditure groups. This would be unlikely as 36 per cent of the sample of parents were farmers and 30 per cent of the sample of students was from farming families. 38 per cent of the parents in the sample had had no schooling and were illiterate in all languages. Only another large scale survey with comparable data, combined with the construction of a robust deflator, can reveal whether the real costs to parents of education have been rising. It would, however, be a perfectly reasonable hypothesis that they have. Such a conjecture should be considered in conjunction

with the indication above that education spending as a proportion of non-food spending has been falling, while non-food expenditures have risen as a proportion of total spending.

[96 5 12/1320 = 0.427 (GSS).]

JSS seems to represent a greater financial burden to parents than does primary. The sample was too small to determine whether there is any relation between the costs of JSS and parental contributions to primary, but it is likely that there is one. As the table shows, there were on average more children in primary than in JSS in the sample, and while this may not be significant, for a poorer household with five children the burden of cost will rise as the children pass through grade 6.

The average expenditure data are heavily influenced by reported expenditures for food. Tables 11 and 12 show the

composition of private expenditure. No fees are officially charged for state primary education. However, both the GLSS and my survey report fees for primary school. The GLSS (question 2A7) lumped registration and fees together - registration is a one-off charge - and this would account for some of the response. In addition, parents pay 'fees' to the PTA, and in many cases pay for private tuition and report this as a fee. It is likely that primary schools are making compulsory charges, or that some parents and pupils are seeing some charges as compulsory.

Table 11: Parental Basic School Expenditures by Main Item, Ghana 1995

	Fees		***Uniforms***		***Food***		***Supplies***		***Textbook***	
	Primary									
Sample Mean*	5,886	12.1%	9,085	18.6%	25,196	51.7%	3,144	6.5%	2,418	5.0
Nr	74		70		74		70		28	

parents paying										
Mean of payments	6,134		9,604		33,900		3,324		6,389	
Total number of primary children = 246										
					JSS					
Sample Mean*	6,863	10.9%	11,159	17.8%	26,175	41.8%	7,513	12.0%	5,118	8.2
Nr paying	56		55		57		55		23	
Mean of payments	6,986		11,565		26,175		7,786		12,685	
Total number of JSS children = 89										

***Notes & Sources*: Minority items (not paid by many pupils in this sample but significant in other schools have been omitted, including transport, pocket money, society contributions and 'other'.**

*** The last row of each section, 'mean of payments', excludes all the 0 values and represents the average payment of all those who paid.**

The overall sample mean includes zero values.

Primary school pupils mainly pay for fees (meaning PTA fees and possibly some other types of fee), uniforms, food, supplies. Food, then uniforms, are the largest items.[97] The size of the fee in the sample is hard to explain, as there are several large entries which cannot be treated as outliers. JSS students pay for more items, of which school clothing and school materials are the most significant. The responses to the questionnaire probably mix the textbook fee and other fees. The food expenditure probably distorts the overall picture: parents were asked for their daily expenditure and this was multiplied by 200 for the annual expenditure. In addition not all food expenditure can be considered incremental. However, if reported daily expenditures on food

are multiplied by 100 days (halved) the effect on the overall average is to reduce it by 25 per cent, while the share of food is still dominant (e.g. 35 per cent for primary). Food costs are important, even with an arbitrary adjustment.

[[97] There is always discussion about how far food costs are legitimately considered part of school expenditures. They are, however, *perceived* by parents and children as additional, school related, expenditures, and cannot therefore be ignored.]

Table 12 analyses JSS students' expenditures as reported by the students. It is only a little more than that reported by parents, implying some robustness of the two questionnaires. Parents cannot always recall the details of small payments they make during the year as children request specific items. Children also receive money from several sources: in this sample 44 per cent reported receiving money from both parents, 28 per cent from father

only, 14 per cent from mother only, and 9 per cent from relatives. It is likely that one parent will not be aware of the full amount collected by the child. It is therefore possible that total private contributions to JSS are more than those reported by parents only.

The level of food payments in Table 11 is supported by Table 12. Nearly all the sample pay textbook fees, food, uniforms and school materials. Minority items are usually clustered by school, as schools differ in their practices. The extreme values are retained as they are not isolated, and it is possible that certain individuals incur considerably higher than average expenditures (note that at the time of the survey $1 US was worth a little under 1,000 cedis, and the extreme values are not extreme in absolute or even purchasing power terms).

Table 12: JSS Student Expenditures by Item, Ghana 1995

	Text	Stationery	PTA	Sport	Ex	Uniforms	Shoes	Other	F

	Text book User Fee	Stationery Fee for Exams	PTA dues	Sport	Ex Books	Uniforms	Shoes & Canvas	Other School Mat's	
Mean	446	2,133	109	117	4,480	8,696	7,273	10,761	23
Maximum	6,000	6,000	750	900	26,000	30,000	39,000	114,000	80
Nr std'ts paid	68	51	33	34	76	75	75	76	
Mean of p'mts	518	3,304	262	272	4,657	9,160	7,661	11,186	29

***Notes and Sources*: Expenditures incurred by a small number of students in the sample have been omitted. These include transport, entertainment fees, and rent. Such expenditures are incurred in other schools. The last row is the mean of those who have actually paid, while the first mean includes zero values.**

Secondary Education

We now turn to the costs of secondary education. This is an area which has tended to be neglected over recent years because of the emphasis on basic education by foreign aid agencies. However, although there still lacks a strong body evidence to support the hypothesis, it may well be that increasing the private costs of secondary education create disincentives to attend primary school and have the effect of reducing household expenditures on primary education.

There is some evidence of this in Ghana.[98] Parents and children perceive that there is relatively little return in terms of access to jobs from just a basic education[99], and therefore recognise the need to stay on at school. Primary school is therefore essentially a route through to secondary education. However, if secondary education costs are perceived to be beyond the ability of parents and children to pay, they may choose to forego the expense of basic education in the anticipation of not being able to continue beyond it.[100]

[[98] Lavy V, *Investment in Human Capital, Schooling Supply Constraints in Rural Ghana*, LSMS Working Paper Nr 93, World Bank, 1992.

[99] See Glewwe P, *Schooling, Skills, and the Returns to Government Investment in Education: An Exploration Using Data from Ghana*, LSMS Working Paper Nr 76, World Bank, 1991. Glewwe argues that returns to primary education in Ghana are (or were at the time of analysis (1989 GLSS)) almost nil.

[100] See World Bank, *Access to Education and Health Care in Uganda*, June 1996, p 22 for speculation that this effect occurs in Uganda.]

Lavy addresses the criticism raised in Chapter 2 that cross-sectional data are used to predict future behaviour, and that costs are fairly constant throughout the education cycle. His model explores the effect of future costs on the present

demand for primary schooling, rejecting the assumption of constant costs. His main result is that the cost of access to post-primary education is the major determinant of parents' decisions to enrol their children in primary school, although the principal component of this conclusion is distance. Direct costs are weak coefficients, while he does not consider indirect costs except for travel costs. Distance is treated in effect as a proxy for cost, with some reason. Furthermore, his conclusions concern rural communities.

As the main cost constraint identified by Lavy was travel to secondary school, he concludes that access to secondary school should be made cheaper through building more schools. Expansion of JSS access is just one such response, and the community secondary school programme was another.[101] My survey data are not adequate for the purpose of exploring the relation between the costs of grades 7-9 (JSS) and decisions to attend primary school, but perhaps future GLSS surveys will be better able to address such

questions through more appropriate questions. It is likely that costs both to government and households rise sharply at grade 7. It is also reasonable to suppose that one effect of a single basic cycle will be to emphasise constraints to senior secondary school.

[[101] This programme, which was part of the Education Sector Adjustment Credit financed by the World Bank, has generally failed and is one cause of the secondary education crisis.]

Costs rise sharply at senior secondary school. Table 13 complements the data for primary education in Table 9, but includes middle, junior secondary and senior secondary, which could not be easily distinguished in GLSS data. The overall average expenditure in 1992 reported by GLSS was a little under 17,500 cedis, 10,000 cedis more than primary expenditure. There is a large 'other' category which is not explained, and the main expenditures are tuition and food

and lodging.

Table 13: Components of Household Expenditure per Pupil in Secondary Schools, Ghana 1992

Quintile	Tuition		PTA Fee		Clothing		Books/Supplies		Transport		Food/
	Cedis	%	Cedis	%	Cedis	%	Cedis	%	Cedis	%	Cedi
1	3,285	24.0	725	5.4	2,303	17.0	1,967	14.5	450	3.3	2,474
2	4,325	24.9	358	2.1	3,220	18.6	2,660	15.3	785	4.5	3,927
3	5,035	22.7	680	3.1	2,830	12.7	2,788	12.5	1,164	5.2	4,551
4	5,920	20.8	627	2.2	4,020	14.1	4,494	15.8	2,329	8.2	6,826
5	7,625	19.6	1,073	2.8	4,785	12.3	4,978	12.8	2,974	7.6	9,400
Total	5,309	21.7	677	2.8	3,481	14.2	3,447	14.1	1,586	6.5	5,544
Urban	7,882	23.1	1,069	3.1	4,430	13.0	4,631	13.6	2,522	7.4	7,922
Rural	3,434	19.7	392	2.3	2,789	16.0	2,584	14.8	904	5.2	3,810

***Notes and Sources*: GLSS 3, from Demery *et al, op cit*, Table**

A3

Table 14 presents data from the survey on senior secondary students. Average expenditures reported by parents per secondary student were nearly 158,000 cedis, compared with average government expenditure per SSS pupil in the same year of nearly 129,000.[102] This would equate to about 67,500 1992 cedis, again implying a rise in the real cost of education, assuming that the data are comparable, and using the CPI. However, the data in Table 14 include JSS, and so are depressed and not altogether comparable.

[[102] Penrose, *Budgeting and Expenditures op cit*, Table 9.]

Table 14: Parental Senior Secondary Expenditures by Item, Ghana 1995

	Fees	Uniforms	Food	Supplies	Textbo

Mean	37,281	25.5%	28,616	18.5%	47,932	45.5%	13,905	10.8%	11,852	1
Nr parents paid	54						44		35	
Mean of payments	40,264		29,156		71,898		17,065		18,287	
Total number of SSS children = 84										

***Notes & Sources*: Minority items (not paid by many pupils in this sample but significant in other schools have been omitted, including transport, pocket money, society contributions and 'other'. The last row excludes zero values.**

The ratios of primary, JSS and SSS private expenditures derived from the parental survey data are similar to those for government expenditures. The ratio of private JSS to primary expenditures is 1.4, compared with 1.9 for government expenditures, while for secondary education it is 3.2,

compared with 3.5. In other words, it might be 40 per cent more expensive for a parent to send a child to JSS after primary, and over twice as expensive to go on to secondary. The differential between primary and JSS is striking.

Table 15 sets out the complete list of charges reported by the sample of SSS pupils. The expenditures reported by students exceed those reported by parents by a considerable amount, but the difference is accounted for by the influence of boarding fees: the parental sample did not report many children in boarding schools. With boarding fees omitted the average expenditure falls to 151,000 cedis, very similar to that reported by parents. Apart from boarding fees, school materials and clothing make up the largest percentage of expenditures. The most notable discrepancy between the composition of the expenditures in the two tables is the difference in food expenditures: students reported half that of parents. Less than half of the sample reported food expenses, and the average expenditures of those who did

report were once again high and close to the parental estimates.

Table 15: SSS Student Expenditures by Item, Ghana 1995

	Mean	Per Cent of Total	Maximum	Number Paying	Mean of payments*
Boarding Fees	63,524	29.5%	288,000	27	181,162
Rent	4,161	1.9%	72,000	21	15,257
Textbook User Fee	6,504	3.0%	9,500	75	6,677
Stationery Fee for Exams	2,445	1.1%	6,000	49	3,843
PTA Dues	8,148	3.8%	18,000	77	8,148
Entertainment Fees	1,000	0.5%	6,000	35	2,200

Development Fund	686	0.3%	5,000	15	3,520
Sports	2,558	1.2%	12,000	77	2,558
Exercise Books	9,481	4.4%	49,000	75	9,734
Uniforms	21,892	10.2%	67,500	76	22,180
Shoes & Canvas	16,256	7.6%	80,000	76	16,470
Other School Materials	34,432	16.0%	227,000	71	37,342
Food/year	22,519	10.5%	100,000	34	51,000
Transport	2,865	1.3%	80,000	4	55,150
Culture	61	0.0%	2,000	10	470
Furniture	6,578	3.1%	20,000	39	12,987
Religious Collection	664	0.3%	8,000	35	1,460
Bag	9,534	4.4%	35,000	59	12,442

SRC	440	0.2%	9,000	10	3,390
Other Expenditure	1,331	0.6%	30,000	9	11,389
Total	215,081	100.0%	451,500	77	215,081

***Notes & Sources*: Survey of Secondary Students (n=77). *The last column shows the average of actual payments and the first column includes zero values.**

The foregoing paragraphs have built up a picture of the considerable level of private costs borne by students. At the basic level students and their parents contribute roughly the same as the government, while at the SSS level students (not including boarding) contribute nearly 20 per cent more than the government. If we apportion the contributions between direct - applied to teaching, learning and school activities - and indirect - clothing, food and transport - the ratio of direct to indirect increases from primary to senior secondary, as Table 16 shows.

Table 16: Ratio of Direct to Indirect Private Costs, Ghana 1995

	Direct	Indirect	Ratio Direct/Indirect
Primary - Parent Survey	12,043	36,653	0.33
JSS - Student Survey	21,242	47,091	0.45
JSS - Parent Survey	20,248	42,129	0.48
SSS - Student Survey (1)	74,329	77,227	0.96
SSS- Parent Survey (1)	69,912	88,075	0.79

***Notes and Sources*: (1) Boarding costs not included in calculation.**

School expenditures

We now turn to the schools themselves, where it will become apparent that private contributions are vital to the running of the school, are usually insufficient, and one possible cause

of declining quality. The following analysis mainly relates to JSS and SSS, as analysis of primary school finances is of limited value because nearly all direct expenditures are by the government (apart from construction). At the secondary level schools charge for a number of items, and the income gained is a significant proportion of total expenditures: the boarding school fee for the period was 74,640 cedis.

Table 17: Sample of Secondary School Charges, Ghana 1994/95

Item	JSS			SSS		
	Mean	Nr Charging	Range	Mean	Nr Charging	Range
Boarding				99,760	7	40,000 - 117,600
Textbook	375	8	250 -	6,300	10	6,000 -

user fee			500			9,000
Stationery fee for examinations	2,825	4	800 - 6,000	6,286	7	2,000 - 12,000
PTA dues	888	8	100 - 2,700	3,375	9	500 - 6,000
Sports	269	8	100 - 600	2,275	9	1,000 - 3,000
Furniture				7,129	7	200 - 20,000
Culture	63	8	50 - 150			

***Notes & Sources*: N = 10 SSS and 8 JSS.**

Table 17 sets out a sample of the reported charges by JSSs and SSSs. There appears to be a good deal of variation in what schools charge and how they ask for the charges.

Some reduce requirements to a few lump sums, while others disaggregate into small items. Schools in poorer communities appear to restrict the range of charges. Apart from boarding charges in boarding schools, the only non-negotiable charges are textbook and examination fees. In the case of textbook fees head teachers, salaries are blocked if the full sum is not collected, and it is the main cause of sending children home for non-payment.[103]

[[103] In general the textbook fee is the only statistically significant mean in the sample, reflecting its compulsory nature through the lack of variation.]

Table 18 sets out income and expenditures for a sample of secondary schools around the country. The survey was undertaken between November 1995 and January 1996 and was thus able to collect the data for the previous school year, 1994-95. The fourth column of the table records the income, including salaries, which the school accounts show

as received out of the national education budget. Some of the schools earn money from 'internal generation', including farms and collections from old students. Multiplying enrolment by the school charges per pupil gives column 6, the income which a school might expect from parents/pupils if everyone paid the full amount, while the next column shows what they actually paid.

Table 18: Selected Secondary School Accounts, Ghana 1994/95

Type of School	Region	Enrolments	Income from Government	Internal Generation	Total Expected Income from Parents	Total Actual Income from Parents
SSS	Ashanti	373	56,047,894	0	18,508,000	12,511,
SSS	Upper West	247	24,787,118	0	3,013,400	2,175,2

SSS d/b	BA	230	35,849,446	492,950	25,355,120	23,227,
SSS d/b	Central	783	135,291,613	1,209,270	98,249,700	109,305
SSS d/b	Eastern	887	122,499,463	0	102,825,400	161,366
SSS d/b	Northern	1,094	174,641,010	0	132,436,240	115,299
SSS d/b	Upper West	956	165,824,130	143,000	15,898,800	8,248,0
JSS only	Ashanti	244	15,315,704	0	1,068,200	1,486,6
JSS only	Central	150	7,436,673	0	420,000	264,800
JSS only	Eastern	221	19,437,770	53,250	1,867,450	1,867,4
JSS	Northern	1,045	29,668,000	160,000	4,545,750	310,400

only						
JSS only	Northern	31	7,893,110	7,400	23,250	10,500
JSS only	Upper West	120	9,338,895	60,000	462,000	0
JSS only	Upper West	140	8,645,292	140,000	147,000	110,850
JSS only	Western	241	11,190,884	165,500	807,350	772, 85

***Notes and Sources*: Penrose survey. pvt = private; b = boarding; d = day. School income includes PTA collections, SRC (Student Council) and Textbook Fees, which are not strictly speaking school income. Comparable data were only available for 15 schools.**

There are wide variations in the ratio of income from parents to total school income, which is made up from income from

government, mainly for salaries, and from parents. Income from parents includes the textbook charge, although the school does not benefit to the full extent of the amount as the funds are sent to Accra. The textbook fee is in fact the single largest payment by parents and in general exceeds all other single categories of payment, including PTA dues, except boarding fees. If the fee is not included as school income, total school revenues from parents not including boarding fees is reduced by nearly 50 per cent. Thus income from students is a very small percentage of school non-boarding income, as can be seen by comparing the last two columns of the table.

Part of the variation in percentages of parental contributions will be explained by data collection and reporting problems: for example, for northern secondary schools the scholarships do not appear to be reported as government income. However, leaving data difficulties aside, it is likely that secondary schools depend almost entirely on parental

contributions for non-salary expenditures. Junior Secondary Schools' subventions are almost entirely salaries. Boarding schools have the highest income and expenditure, and it can be seen that their ratios of school income to government income reflect the fact that students no longer receive boarding subsidies (except for northern students through scholarships). In general internally generated funds are negligible.

Average expenditures are a function of enrolments, and one JSS from the Northern Region in the table with low enrolments but offering the entire cycle has very high expenditures, accounted for almost entirely by teachers' salaries. They are also a function of how many out of the total number of students pay. As the table shows, many schools cannot expect full payment, and the average direct expenditures by students and their parents when calculated by school, particularly for JSS, appear to be lower than those reported by parent and students. Most large scale surveys

can provide estimates of private expenditures, but they do not always mean that in each school all pupils pay the average amount. Surveys do not generally relate school accounts to reported household expenditures. Presumably per pupil non-government revenues per school are skewed, with many schools well below the average. These schools are likely to be in poorer catchment areas. Therefore there are probably very wide differentials in average expenditures ('unit costs') per school.

As schools fail to raise, often by considerable margins, the income from parents that they would raise if all fees were paid as expected, we would assume that they would incur debts. Institutional indebtedness is a serious problem in many, if not most, education systems. It is often ignored, and when it can no longer be ignored once-off budgetary provision is made to clear debts. This of course does not solve the problem which created indebtedness in the first place.

My survey also collected data on bank overdrafts and late payment of bills, and it is apparent that schools, particularly senior secondary schools, manage their cash flow problems through running up considerable bills and overdrafts (Table 19). Again, although the data were gathered from school bookkeepers, and checked as thoroughly as circumstances permitted, they must be taken as more indicative than literal. It was not possible to compare debt over time, but the school managers generally confirmed that it increases each year. However, in Ghana as in other countries it is known that institutions build up debt (contrary to financial regulations) against the security of next year's budget, and that suppliers have little choice but to accept the system, particularly in the case of boarding schools in rural areas. This practice is to be expected in survival budgeting practices at which schools have become adept.

Table 19: Debt in Selected Secondary Schools, Ghana 1994/95

Type	Total Unpaid Bills	Current Bank Overdraft	Cash Balance at End of Year	Net Liabilities	(Debt)/Surplus per Pupil
SSS	2,700,000	14,399,786	6,830	(17,092,956)	(74,317)
SSS	0	0	18,900	18,900	24
SSS	500,000	300,000	1,960	(798,040)	(900)
SSS d/b	0	5,160,177	0	(5,160,177)	(16,539)
SSS d/b	6,000,000	12,529,650	50,790	(18,478,860)	(16,891)
SSS d/b	14,091,417	3,661,999	11,412	(17,742,004)	(128,565)
SSS d/b	0	333,326	333,326	0	0
SSS d/b	0	3,540,000	16,982	(3,523,018)	(9,445)
SSS	4,235,500	145,000	685,500	(3,695,000)	(9,734)

SSS d/b	4,235,500	145,000	685,500	(3,695,000)	(9,724)
SSS d/b	0	4,284,088	885,457	(3,398,631)	(13,760)
JSS only	0	30,000	5,000	(25,000)	(102)
JSS only	0	2,000	0	(2,000)	(13)
JSS only	395,780	100,000	0	(495,780)	(2,243)
JSS only	0	2,692	18,150	15,458	15
JSS only	6,000	0	0	(6,000)	(194)
JSS only	0	0	60,000	60,000	500
JSS only	0	2,500	13,000	10,500	75

JSS only	0	34,000	11,000	(23,000)	(95)

Textbooks

One of the largest components of private expenditures is for the textbook fee. Schools might therefore reasonably expect to have sufficient books, given the level of fee collected. In principle the amount collected, when combined with the budgeted amount, should be sufficient to provide books to all children. Data collected from the sample schools indicate a shortage of the right books. 87 per cent of the teachers said that they did not have enough books for their classes, and over half the teachers reported that up to 75 per cent of their students were without an adequate number of books. Most students said that they had received books from the school, but not for all subjects. The school survey listed the books in the school stock, shown in Table 20, where total stocks are divided by the number of pupils in each grade, as

a crude measure of availability per pupil.

Table 20: Textbooks per Pupil in Stock, Selected Schools, Ghana

Type of School	Maths			English			Science		
	Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 3
SSS	1.7	1.3	4.7	2.1	1.3	4.5	0.0	0.0	11.3
SSS	1.2	1.8	1.0	1.1	1.4	1.3	0.0	0.0	4.5
SSS	1.2	2.8	2.3	2.0	2.7	2.7	0.0	0.0	2.6
SSS	0.7	1.3	1.2	0.7	1.3	1.2	1.3	0.0	0.0
SSS	1.2	1.3	1.8	1.2	1.3	1.8	2.0	0.0	0.0
SSS	1.4	1.5	2.1	1.9	1.4	1.9	0.0	0.0	3.1
SSS	0.9	1.7	1.2	1.0	2.0	1.0	0.4	1.0	1.0
SSS	1.1	0.7	1.2	1.1	0.7	1.4	1.1	0.7	1.4
SSS	0.9	0.7	0.8	0.9	0.9	0.8	0.0	0.0	2.8

SSS	1.5	2.1	4.3	2.5	2.2	3.0	0.4	1.0	0.5
Average	*1.2*	*1.5*	*2.1*	*1.5*	*1.5*	*2.0*	*0.5*	*0.3*	*2.7*
JSS only	15	2.1	2.5	2.6	1.3	2.6	2.4	2.0	1.0
JSS only	0.7	0.6	1.2	0.5	0.9	1.0	0.4	1.1	1.8
JSS only	0.7	1.0	1.2	0.4	1.1	0.7	0.4	1.1	1.2
JSS only	0.9	1.4	1.4	1.2	1.3	1.3	0.8	1.3	1.4
JSS only	3.7	1.4	1.1	1.3	0.5	0.6	2.8	1.3	1.3
JSS only	0.2	0.7	0.0	0.0	0.2	0.0	1.0	0.0	0.0
JSS only	0.8	1.2	1.4	0.0	1.0	0.9	0.8	1.4	1.2
JSS	0.8	1.1	2.2	1.1	1.3	1.0	1.4	1.8	2.1

only									
Average	*1.2*	*1.2*	*1.6*	*0.9*	*1.0*	*1.2*	*1.3*	*1.3*	*1.4*

While it may seem that there are sufficient books, many of the books are donated or old books and not used for the syllabus. The table shows considerable variation between schools (with the newer schools mostly experiencing the shortages: older schools have accumulated more books). The senior secondary schools appeared to be lacking science books. It appears that while teachers and students (40 per cent of whom bought at least one book) complain of inadequate numbers of books, many schools have stocks of books which they do not use because they are not the right books for the course.

In that cost sharing is supposed to provide benefits to pupils and schools, it would seem to be of the utmost importance that this major component of school charges should be seen to work well. It seems to be reasonably efficient in collection,

but less so in distribution.

Borrowing

Another indication both of ability and willingness to pay is the level of borrowing and/or sale of physical assets to pay for education. The GLSS3 document does not tabulate these questions, but indicates in the text that 28 per cent of all households were in debt.[104] GLSS did not gather data on asset sales. Education is not mentioned as a reason for loans, but 12 per cent of loans were for health reasons. The sample of university students would be too small for GLSS, and consequently student loans would not show up in the survey. In addition, the fungibility of money would suggest that loans for one item release funds for another. Overall, though, it seems that Ghanaian households do not consider borrowing for education to be a priority, though such a conclusion must necessarily be a weak one for lack of evidence. Nevertheless, the question is an important one, as

among other things it is an indication of the perception of the relative returns to education.

[104 *GLSS3* p 106]

Tertiary Education

There is a scarcity of information on how university students finance their education.[105] Of all the education institutions, universities succeed in raising the least fee income, less even than senior secondary schools. Cost recovery at the higher education level is one of the most difficult political challenges facing governments, and there is little history of success in Africa. The costs of higher education are by nature high relative to other parts of the system, and these high costs are compounded by the difficulties experienced in many countries of managing the sub-sector.

[105 My survey did not cover higher education

institutions. One report has been produced by the Technology Centre of the University of Science and Technology, Kumasi (*Socio-Economic Background of Students in Tertiary Institutions*, 1995 draft), but it contains no information on the subject matter of the title.]

Ghana has a student loan scheme for universities. Since 1988 students in higher education have been entitled to take loans for subsistence and other costs from the Social Security and National Insurance Trust (SSNIT). These loans are repayable at fixed interest, deducted at source from the employees' contribution to social security when they are employed. The loan in 1995/96 was 350,000 cedis, as compared to 200,000 cedis in 1994/95, and the student fixed interest rate was 6 per cent. The government compensates SSNIT for interest foregone at the prevailing Treasury Bill rate, which was running at 45 per cent in 1996: the rate of subsidy was therefore 39 per cent. It is not clear if, or where,

the interest rate subsidy is budgeted.

Table 21 shows the mechanism of the subsidy. Government makes an advance to SSNIT to cover the forecast amount of the interest subsidy. The first advance was for the first five years of the scheme to 1994, and it can be seen that the forecast was accurate. SSNIT benefits from the interest earned on the advance which supplements the capital available.

Table 21: Financing the Student Loans Scheme, Ghana, 1989-95

Year	Amount Disbursed (cedis million)	Repayments & Refunds (cedis million)	Outstanding Loans (cedis million)	Treasury Bill Rates	Government Interest Subsidy (cedis million)	Interes Earnec (cedis million
Initial Deposit						

1989	418	30	389	20	42	214
1990	990	97	1,282	23	160	292
1991	965	177	2,070	30	436	415
1992	902	376	2,597	19	379	255
1993	2,539	436	4,700	25	837	310
1994	2,772	931	6,541	28	1,594	197
1995 (Oct)	6,126	49	12,618	41	3,738	
Add interest on 1994 balance @ 40.5 %						
Totals	14,713	2,095	30,197		7,187	1,682

***Notes & Sources*: SSNIT**

Failure to replenish the scheme in 1994 meant that government's arrears to SSNIT stood at the end of 1995 at about 4.7 bn cedis. The projected current cost of the subsidy (i.e. not including arrears) for 1995 was about 3.7 bn,

representing about 14 per cent of the total 1995 tertiary subvention. If arrears are included, total additional liabilities on government for the tertiary sub-sector amounted to an additional 40 per cent of allocation, to which should be added scholarships (about 7 billion)[106]. Total government expenditure on university education for 1995 was therefore about 34 billion cedis, as compared with 25.6 billion shown in the MOE actual expenditure records, and 22.7 billion budgeted.

[[106] The Scholarship Secretariat, which is headed by a Registrar, is responsible for allocating five types of bursary, four types for secondary school students which generally cover boarding fees, and one type for tertiary students; scholarships for all sixth form students (now being phased out), Merit Awards for the top two students in each secondary school form; automatic scholarships for all northern students,

defined as coming from Upper East, Upper West and Northern Province, wherever they attend school; and Hardship Scholarships to students who can demonstrate financial or other needs. Hardship applications are rejected if the student consistently fails academically. At the tertiary level, science students at universities and polytechnics are automatically entitled to reimbursement of their student loans, on condition that they sign their bonds (though this condition appears to have been relaxed), and some other students, including students studying law and journalism, also benefit. Scholarships are not given directly to students, but are reimbursed against invoices from schools and from SSNIT.]

To this picture should be added the observations that real interest rates on T. Bills were negative, and that the opportunity cost of the funds to SSNIT are probably

therefore heavily underestimated. While this does not represent a financial cost, it does represent an economic cost, though the volume is small when compared with the total volume of SSNIT transactions.

SSNIT bears the full risk of non-recovery. At present that risk is not seen as a threat, because each student must provide three guarantors who themselves are in the social security scheme. The SSNIT merely has to deduct outstanding payments from guarantor's contributions.

However, the continuing rise in graduate unemployment could prove to be a problem, not so much because students themselves do not get jobs, and therefore do not become members of the scheme, but because perceptions of future unemployment may act as a disincentive to guarantors.[107]

[[107] It is interesting to note that because of this threat SSNIT takes an active interest in higher

education policy. One response is to encourage greater enrolments in science and technology subjects on the grounds that students with these degrees will have a greater chance of employment, or be better equipped for self-employment. The Ministry also takes this view, which may, however, be questioned in the light of tracer studies and market surveys. One of these shows clearly that employers' demand is for management and business related graduates (Plan Consult, *Manpower Survey, Graduate Tracer Study*, Accra, Sept 1995). Out of the total sample of 339 vacancies, 3 were for science graduates. Employers' predictions of future vacancies were bleak.]

SSNIT's own ceiling on the increase of the loan is the rate of increase in the index of its basket of salaries, which is a mixture of private and public sector salaries. For 1995 the index was 30 per cent, the previous year being 10 per cent.

The government, on the other hand, is constrained by the level of subsidy, which, in view of the fixed level of student interest, is a function of T Bill rates. The current high rates of inflation have a serious impact on the effectiveness and sustainability of the loans scheme. Government has therefore capped future loan increases at 600,000 cedis per student. A more satisfactory student interest rate would reduce government liabilities and enable the loan to be increased.

In addition to loans, which do not provide direct finance to the universities, but are a substitute for student maintenance grants, there are attempts to introduce direct fees for higher education, and some of these are in place, though the amounts are not significant. They include application and registration fees, and 'academic facility fees'. Polytechnics charge fees to part-time students which do represent significant income. In general, secondary education is still more expensive to students than university education.

There are clearly serious questions to be asked about the sustainability of the scheme in spite of the professionalism of its management. The amounts are low and arguably not very significant when compared with the required resources: falling repayment rates must be a real possibility and indeed defaults in due course, and the interest rate burden on government is probably excessive. As the pressure to expand post secondary education increases the loans scheme will face difficult problems.

Willingness to Pay

My survey had questions about willingness to pay in questionnaires for school administrators, school teachers, students and parents. The responses to this type of question are notoriously difficult to interpret, and of course need to be considered carefully. The responses were fairly consistent. School administrators, parents and students gave broadly similar responses to the question on how much more fees

could be raised, as shown in Table 22 (teachers appeared to be unwilling to be specific about a figure).

75 per cent of the form teachers questioned (not shown in table) did not think their pupils would be able or willing to pay more fees. About one third of school administrators felt that pupils could pay more than an additional 3,000 cedis, but at the same time they felt that between 40 and 60 per cent might drop out if fees were raised. About 40 per cent of the parents expressed a willingness to pay higher fees, though less than 20 per cent would exceed 3,000 cedis extra, but they would need to see improvements in facilities, teaching, and their children's performance. However, 22 per cent of parents said that under no circumstances would they be willing to pay more fees. Parents in general might be expected to be more reluctant to express a willingness to pay more, but the overall impact of the table is that raising school charges would meet with hostility in the absence of tangible reasons why they should be raised.

Table 22: Extent to which fees can be raised, Ghana

Extent to which fees can be raised	Students	Parents	School Management
No more	39%	30%	33%
up to 3,000 cedis more	15%	21%	33%
up to 5,000 cedis more	18%	8%	11%
more than 5,000 cedis more	27%	9%	22%
Don't know/no opinion	1%	32%	1%

The parental questionnaire had an open-ended question which asked parents what they would do were they the minister for education. The responses were striking in one respect: there was an evident sympathy for the problems of teachers. The belief that education is important for every child is also evident in the responses to this and other questions (the interviewers were encouraged to record opinion on the questionnaires), and there was a widely

expressed opinion that costs were a problem for other families if not the respondent him or herself. As another indicator of the attitude towards paying for education, 63 per cent of the parents interviewed did not consider more private schools to be desirable.

The teachers were asked for their opinions on why children in the area were not enrolled at their school, and to rank their answers in order of significance. There were four main reasons which accounted for three quarters of the responses. They were

a) financial reasons
b) wrong type of school
c) not good enough marks in exams
d) poor physical facilities.

The second category covered many disparate reasons, of which the most significant were that parents preferred

boarding schools and local children cannot board; religion; ethnic reasons; and a preference for 'old' rather than 'new' schools. The first reason was the dominant response.

When teachers were asked for their explanation for their pupils' absenteeism, the main reason given was a combination of 'lack of interest in schooling' and fees. There did not seem to be a significant relation between absenteeism and the agricultural calendar. 70 per cent of the teachers reported that students from their form had been sent home for non-payment of fees, one quarter of them reporting over 10 students (from classes of about 30). The average length of time before students were allowed back was two weeks. The parents' survey shows 17 per cent of parents stating that their children had been sent home for non-payment, with the students' sample giving a slightly higher figure of 20 per cent. Over half the school administrators said that students were sent home for non-payment, in one case up to 400 students, but in general

between 20 and 70. One third of the students said that it was very difficult to raise the money for fees, with another third saying it was difficult: the rest reported no problem. Half of the students reported paying fees late on occasion, and one fifth were always late. The school administrators reported that about 80 per cent of students regularly did not pay their fees by the end of the first term.

Families in most of Ghana set great store by education, particularly in urban and town areas.[108] When pupils are asked under what circumstances their parents and sponsors would be willing to pay more, they invariably reply 'if I do well'. From this it might be deduced that investments in improving quality would result in a greater volume of private contributions. However, there may also be a mismatch between perceptions of quality and the reality. When asked if and why they liked their child's school, a large number of parents replied 'because he/she is doing well'. The survey collected school examination results, and in many cases the

same school where children were believed by their parents to be 'doing well' reported near total failures in examination results. Indeed, even teachers, who might be expected to know the examination results, appeared to have a positive attitude towards school performance which is belied by the results. In Ghana examination results are not published, and parents therefore have an imperfect source of information on school performance, at least those aspects of performance measured by examination success, though in the survey teachers reported in some cases that parents chose schools for their children which had better academic reputations, and which also provided extra tuition. Only 20 per cent of the sample said they had never visited the school, and a third said they visited teachers often. A little over half of the teachers rated their own schools as average.

[[108] For one account, see Peil M, Ghanaian Education as Seen from an Accra Suburb, *International Journal of Educational Development*,

Vol. 15 Nr 3, 1995, pp 289-305.]

G. Conclusions

How have government and households reacted to cost sharing? The functional relationship between government expenditure and cost sharing is largely a question of the relative levels of expenditure that occur/would have occurred with and without cost sharing; while the relationship between household behaviour and cost sharing is critically a matter of the effect on enrolment trends. We may now consider the six questions with which we started this paper in the context of education financing in Ghana:

a) Has cost sharing increased total resources available for education?

b) Has cost sharing enhanced efficiency of resource use?

c) Has cost sharing affected enrolments?

d) Has cost sharing improved quality of education?

e) What other effects have resulted from cost sharing in education?

f) Is a policy of cost sharing justified?

Has cost sharing increased total resources available for education?

Real education expenditures have been stagnant in recent years, and expenditures per pupil at the basic and tertiary levels appear to have been falling. There is a lack of evidence on how far household expenditures have increased over the period to compensate. Schools depend on non tax revenues for nearly all non salary costs, and at this level there is little doubt that cost sharing is important. Had there been no textbook fund it is possible but not certain that there would

be fewer textbooks in the system: and as far as primary education is concerned the pupil textbook ratios are very low indeed, in most parts of the country less than one.

However, cost sharing may have also enabled government to squeeze education expenditures, which, together with declining efficiency expenditures, could also mean that cost sharing has contributed to a lower level of expenditure than might otherwise have been. The availability of funds from the textbook fund meant that government did not need to budget for JSS and SSS books. There might have been more pressure on the government to allocate teachers better in order to release funds for non-salary learning inputs. Put in another way, the existence of the textbook funds may permit allocative and technical inefficiency of resource allocation to continue. Had government raised the aggregate PTR by 0.5 of a pupil sufficient resources would have been released to dispense with the textbook fund (or to be used for other purposes).

While cost sharing may have resulted in increased resources per pupil, or a slower decline than would otherwise have occurred, it has also involved the establishment of a potentially regressive tax. Cost sharing has been in partial response to the fiscal gap, and in that sense has not resulted in augmented resources except in so far as total expenditures would be lower ceteris paribus without cost sharing.

Has cost sharing enhanced efficiency of resource use?

The efficiency of the education system in Ghana is low, with a high proportion of expenditure on salaries and little on learning inputs. More resources would be available to purchase learning inputs which are at present financed by direct contributions if the system were more efficient, and there is plenty of scope for that to happen. Parents are therefore subsidising inefficiency.

There is no evidence of reallocations from higher levels of education to lower levels - rather the reverse: in terms of average expenditures there has been a trend in favour of secondary schools, but the reasons underlying that trend are connected with attempts to make secondary education more widely available, as well as the effects of the reform of the structure. There is little space to reallocate from higher education, which receives a relatively modest share of the budget and which is politically significant enough to make politicians wary of pushing to hard for more cost sharing, even were that the right thing to do, which is not self evident.

Indeed, there is considerable pressure to increase the share of higher education in the budget, partly on the grounds that basic education receives more foreign aid. There have been no equity effects through allocative adjustments, and, on the basis of the available evidence, cost sharing at post primary levels has not resulted in allocative changes within the budget in favour of primary education, which is one of the

main justifications for the policy. Instead, cost sharing at post basic levels is accompanied by increased shares of the government budget for those levels.

At the tertiary level, there are considerable costs attached to the loan scheme, which increase the government's liabilities substantially. These costs, coupled with the low ceiling required by the insurance system, mean that it is unlikely that the level of loan can be increased to any significant amount, and it is not clear just how much social benefit is derived from the scheme. In any case, the university sector is inefficient (in terms of staffing ratios, for example) and student loans should not be the first choice for increasing discretionary resources. Indeed, it is possible that the whole scheme will slowly disintegrate as it becomes less and less relevant to the overall problem of higher education funding.

Has cost sharing affected enrolments?

The data suggest that enrolment ratios have been stagnant or falling, and that cost is a factor. Furthermore there is evidence to suggest that attendance ratios are affected by the textbook fee, although this has now been abolished for basic education. Although the GLSS data showed a rise in apparent and net enrolment ratios between 1988 and 1992, the growth in secondary school enrolment ratios of the poor was slight, and the gap between the richer and the poorer groups' ratios rose over the period. There are no comparable data after 1992 so it is not possible to judge trends over the last four years, except on the basis of extrapolated population data and census enrolment figures.

The removal of boarding subsidies for secondary schools (except for Northern students) resulted in a sharp decline in the number of boarding students and was a contributor to the decline in secondary enrolment. One reason for the failure of many students to enrol in secondary school is the absence of boarding facilities, as well as cost. How far the

constraints on secondary enrolment affect primary enrolments is difficult to determine, but some respondents to the survey said that the lack of employment and the high cost of secondary education were factors in their decisions not to continue in basic education. There is no doubt that the absence of affordable accommodation is a key factor in low secondary enrolments and inefficiency of resource allocation at the secondary level.

The question is whether enrolments would have been higher had the direct and indirect costs of education been lower. At the basic education level the indirect costs are dominant, and could only be reduced by abolishing school uniforms, providing school meals and other measures. Similar measures would be required at the secondary level, plus direct funding for non-salary items. At both levels a much higher level of infrastructural spending would be required.

In that Ghana has embarked on a policy of free compulsory

and universal basic education (primary + JSS), the definition of 'free' is important, partly because of the morality of compulsion when considerable costs are involved, and partly because nothing is 'free'. In the first instance it means that all direct charges are abolished. Quasi-compulsory charges also need to be reviewed, as well as community responsibility for building.[109] Such policies would only make sense in the context of a fundamental review of the determinants of the costs of education inputs. This would involve simplification of the curriculum, a reform of teacher training, control over the establishment, and other measures.

> **[[109] The situation is further complicated by District Assemblies' revenue raising rights, and in Ghana the perception is that the 'F' of 'FCUBE' (Free Compulsory Universal Basic Education) has got smaller (it is often printed as '*f*CUBE').]**

It is reasonable to hypothesise that were direct and indirect

costs to parents and their children to be reduced, enrolments would rise, and it remains to be seen whether the abolition of fees has an effect on basic enrolments. However, if an increase in the number of students were not accompanied by scale economies in the provision of inputs (particularly rising pupil-teacher ratios) there would be a strain on the budget. There is also more room over the medium term in the Ghanaian budget to expand expenditure on the education sector than is commonly supposed: the high proportion of education expenditure in discretionary expenditure is more a reflection of the size of the non-discretionary budget than an indication that too much is allocated to education.

Cost sharing has not resulted in increased enrolments via increased resources, and there have been no equity effects. It is more likely to have contributed directly to a reduction in enrolments at all levels, except for tertiary institutions where demand is strong.

Has cost sharing improved quality of education?

Cost sharing policies have had little impact on quality. Nevertheless, the text book revolving fund as well as the near total reliance of the JSS and SSS systems on parental contributions for non-salary costs imply that without cost sharing policies the quality of education provision could have been worse, assuming all other things to be equal. The *ceteris paribus* assumption is not, however, entirely appropriate, because by presuming on an apparent willingness and capacity to pay in the short run government has succeeded in delaying efficiency improvements in publicly financed provision. In any case, examination results have not been improving, and other evidence suggests a stagnation in school performance.

What other effects have resulted from cost sharing in education?

This question is not examined in detail. Education cost-benefit calculus proposes that investment in education has relatively high returns compared to other investments.[110] There is no analysis of the alternative investment choices open to the people who pay school costs, so it is not possible to justify the choice of schooling as the best investment. Would the rate of (non-human) capital accumulation in rural areas increase with lower schooling costs? Would parents of secondary school pupils increase their savings rates? Would the health of the population improve if more private resources were moved to health care?

[[110] Curiously, the Ghanaian rates of return show little difference between social and private returns to secondary education, and much higher private than social returns to primary education. This is in spite of loading the cost equation with private costs. At

the very least the data would suggest to those who regard them as useful policy indicators that government should invest more in secondary education. They are presented in Annex 3-3 of the Staff Appraisal Report for the World Bank's Basic Education Improvement Programme (May 1996). The author of the annex does not consider Glewwe's paper on GLSS1 data where, like Knight and Sabot in East Africa, the meaning of the returns to low quality education is questioned.]

Among the poor the alternative use of resources is probably limited. The parents surveyed were asked what they would give up in order to pay more for education. About half could not answer or would/could give up nothing. About a fifth of the sample would give up luxury items, though the main component of such items was alcoholic drink. 10 per cent said they would have to work longer hours. There seems to be little slack in household budgets.

Is a policy of cost sharing justified?

In Ghana households provide significant support for the education system, particularly at the post-primary and pre-tertiary levels. How far their support has enabled the education system to expand more than it would have in the absence of such support is not easy to judge.

However, if the reason for raising private costs is that efficiency and equity are improved by user charges, there is some reason to be sceptical that this has actually transpired in Ghana. Cost sharing is a response to fiscal pressure, and the policy may not be justified, particularly in view of the large non-discretionary part of the budget. Not only would there be room for more public expenditure on education with better macroeconomic management, but also the poor management of the education system has involved costs to government and therefore to households which are higher than they need be. In this sense cost sharing may enhance

and perpetuate inefficiency and excessive costs.

In summary, few of the objectives of cost sharing policies seem to have been achieved in Ghana. Enrolments have declined, school quality has deteriorated, and expenditure reallocations have not been made in favour of primary education. Private schools have made a modest contribution to enrolment growth, and there may be scope for further private school enrolments, although they would not go a long way towards tackling the low enrolment problems or to releasing state resources for public schools: indeed they would take the better pupils out of state schools (the data on private schools in Ghana are not good, and there is more analysis of private schooling in the next chapter in the context of Tanzania). The school textbook fund assists in secondary school book availability, while the university loans scheme is a well run example of its kind, but they both have had relatively little impact.

In many respects Ghana has not laid great emphasis on cost recovery except in the specified areas of student loans and textbooks, but at the same time the dependence of schools on non government funds is great. As a result schools are under provided and in poor physical shape. There would be little justification for further emphasis on cost sharing until some of the major systemic issues are resolved.