



INSTITUTE OF
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An Evaluation of the Impact of School-Based Resource Management and Formula Funding of Schools on the Efficiency and Equity of Resource Allocation in Sri Lanka

B.M. Jayantha Balasooriya

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**School of Educational Foundations and Policy Studies
and
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2004

Dedication

To

the present and future

younger generations in Sri Lanka.

Abstract

Issues of school financing and school-based resource management (SBRM) in Sri Lanka were discussed during the past two decades, and actions were taken to minimize resource allocation disparities; nonetheless the unequal distribution of resources to schools was still evident. Since 2000, the government of Sri Lanka, with the financial assistance of the World Bank, has employed a norm-based unit cost resource allocation mechanism (NBUCRAM) as a new policy for the formula funding of schools (FFS), notably for ensuring equity in the provision of learning resources. The government implemented two types of SBRM programme: 'strengthened basic' SBRM, and the 'extension' of SBRM, to improve efficiency. Strengthened basic SBRM was for all public schools to receive cash allocated by formula for spending on learning materials, consisting of consumables and perishables (excluding chemicals). The extension of SBRM was piloted to enable schools to also decide on the purchase of inexpensive equipment (capital expenditure) to support teaching and learning. This thesis attempts to evaluate the impact of SBRM and FFS on the efficiency and equity of resource allocation in Sri Lanka. The required data were gathered using questionnaires, semi-structured interviews and documentary analysis.

Longitudinal and cross-sectional data reveal that before the introduction of the new mechanism, there were vast disparities in school funding for learning resources. At present, schools have adopted a rational and transparent mechanism of allocation, to ensure procedural and distributional equity. Qualitative interpretative data show that since 2000 this has contributed to minimizing the gaps among and within the schools. Evidence shows a substantial improvement in real per-pupil expenditure on learning resources, compared to the previous three years. Legal support for resourcing disadvantaged schools is another principal impact of NBUCRAM. The evidence of school revenues highlights socio-economic factors as challenges to equity. Constitutionally, education is free for all children, although it is still expensive for low-income families. The system has established a national policy for funding schools, although more consideration of adequacy criteria is needed. The present formula funding system does not fully address some essential issues (i.e. pupils with special educational needs, lack of identification of disadvantaged children and schools, and of adequacy criteria) in relation to resourcing schools. It is impossible to achieve a

perfect solution, since equity is a subjective issue; but it is essential to reduce the disparities in resourcing schools. Moreover, it is crucial to apply procedural and distributional (including horizontal and vertical) equity principles, as well as adequacy criteria.

Longitudinal and cross-sectional data further suggest that strengthened basic SBRM is a preliminary step in the delegation of power and decision-making authority to schools to purchase consumable learning materials (recurrent expenditure) compared to basic SBRM and non-SBRM regimes. The extension of SBRM is the way to delegate extensive power and decision-making authority to schools, beyond strengthened basic SBRM to purchase inexpensive capital learning resources (capital expenditure). Longitudinal, quasi-experimental and cross-sectional data suggest that both programmes have led to increasing participation in decision-making and to improvement in the process of acquisition of learning resources. Expenditure per pupil for learning resources, both materials and equipment, considerably improved under these two programmes, a result of efficiency incentives. In the extension of SBRM, pilot schools get more expenditure per pupil for inexpensive capital learning equipment than non-pilot schools. Non-pilot schools still depend upon centralized provisions. While these two programmes show some successes, some weaknesses are also evident. Both SBRM policies do not identify the relationships between educational inputs and outputs, access to local market, institutional capacities, and regional imbalances.

NBUCRAM and the two SBRM practices are intervention policies meant to improve equity and efficiency significantly, although at present the improvement seems to be insufficient.

Key words: *school-based resource management (SBRM), basic SBRM, non-SBRM, strengthened basic SBRM, the extension of SBRM, formula funding of schools (FFS), norm-based unit cost resource allocation mechanism (NBUCRAM), efficiency, equity, adequacy, Sri Lanka.*

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Abbreviations

AAF	-	Alumni Association Funds
AAs	-	Alumni Associations
ADB	-	Asian Development Bank
CBSL	-	Central Bank of Sri Lanka
DDE	-	Deputy Director of Education
DEA	-	Data Envelopment Analysis
FC	-	Finance Commission
FFS	-	Formula Funding of Schools
GCE AL	-	General Certificate of Education Advanced Level
GCE OL	-	General Certificate of Education Ordinary Level
GDP	-	Gross Domestic Products
GEP2	-	General Education Project 2
GOSL	-	Government of Sri Lanka
KRQs	-	Key Research Questions
LEAs	-	Local Education Authorities
LMS	-	Local Management of Schools
ME	-	Ministry of Education
MEHE	-	Ministry of Education and Higher Education
MEHECA	-	Ministry of Education, Higher Education and Cultural Affairs
MFP	-	Ministry of Finance and Planning
MHRDECA	-	Ministry of Human Resources Development, Education and Cultural Affairs
NBUCRAM	-	Norm-Based Unit Cost Resource Allocation Mechanism
NEC	-	National Education Commission
NEPs	-	National Education Planners
NGOs	-	Non-Government Organizations
NIE	-	National Institute of Education
NPD	-	National Planning Department
OECD	-	Organization for Economic Co-operation and Development
OFSTED	-	Office for Standards in Education
PDE	-	Provincial Department of Education
PEAs	-	Provincial Educational Authorities
PEPs	-	Provincial Education Planners
PME	-	Provincial Ministry of Education
PSDG	-	Provincial Specific Development Grant
PTFGE	-	Presidential Task Force on General Education
SBDP	-	School-Based Development Plan
SBM	-	School-Based Management
SBRM	-	School-Based Resource Management
SDS	-	School Development Society
SDSF	-	School Development Society Funds
SECs	-	School Evaluation Committees
SEN	-	Special Educational Needs
SFF	-	School Facilities Fees
SLRs	-	Sri Lankan Rupees
SPCs	-	School Purchasing Committees
SPs	-	School Principals
SRQs	-	Subsidiary Research Questions
ZEO	-	Zonal Education Office
ZEPs	-	Zonal Education Planners

Glossary of terms

Allocation for learning resources:	The government agreed with the World Bank to allocate 4% of the recurrent education budget to learning resources in 1999, and this would be increased to 5% in 2000 and 6% in 2001. In 2000, this was amended to 2% of the total recurrent education budget and 35% of the total capital education budget annually.
Formula funding of schools:	'Formula funding of schools' (FFS) is a term used sporadically in this research. In Sri Lanka the term 'norm-based unit cost resource allocation mechanism' (NBUCRAM) is used with a similar meaning.
Government financial assistance:	The schools are provided with teacher salaries, free textbooks, free school uniforms (each child is entitled to one set of uniforms a year), and subsidy for public transport by the government.
Learning resources:	The term 'learning resources' is used to denote 'learning equipment and materials' throughout the thesis.
Ministry of Education:	Ministry of Education (ME) has been used for the central ministry. Its name has been changed from time to time, to the Ministry of Education and Higher Education (MEHE), the Ministry of Education, Higher Education and Cultural Affairs (MEHECA), as well as the Ministry of Human Resources Development, Education and Cultural Affairs (MHRDECA).
NBUCRAM	NBUCRAM is the tool for per capita distribution of financial allocations among the schools. This mechanism would be considered as a sub-set of FFS. NBUCRAM is the technical term for FFS used in my thesis.
PSDG:	The provincial specific development grant (PSDG) (separate for each budget programme: i.e. education) was introduced in 2000. Before 2000, it was named the medium-term investment programme (MTIP).
Ready Reckoner:	The Ready Reckoner is the tool used for the calculation of teachers required by each school. This calculation includes the pupils by class, by section, by subject and by cycle as its variables.

Chapter One

Introduction

This chapter provides an overview of the research. It includes an overview of research on school financing and the issues, problems and trends within school-based resource management (SBRM). In addition, this section presents the structure of my thesis, the outputs and outcomes, and the constraints and limitations of the research. Secondly, it focuses on the historical context of the current education system in Sri Lanka with especial reference to the patterns of expenditure on education which have been practised.

1.1 Overview of the research

1.1.1 The research problem

Since 1938, the government has had a continuous commitment to a 'free education' policy, following a macro school planning approach for resourcing schools. Until the 1960s, there was one administrative system, and financial and administrative regulations dominated. Little attention was paid by the education authorities to the operational level. The education system was not complicated. Basically the authorities attempted to maintain the existing system, their perceptions did not envisage development.

In 1961 and 1966, administrative powers and decision-making authority were delegated to the district level. Further, financial regulation was decentralized in the 1970s, including school financing (through school facilities fees and school development societies). Significant changes took place in the 1980s. The cluster school system and a divisional education management structure were introduced. In

1984, reforms in education management were introduced. These attempts were significant for school financing as well as for SBRM. As a result of the education management reforms in 1984, the role of principals was changed, adding management functions in addition to their administrative role. In 1987 political power was delegated to provincial authorities, including educational administration. A zonal education management structure was implemented. Within these significant changes, the government invested a large amount of public money annually in the development of education (see Tables 1.3; 1.4), but there remain many issues regarding resourcing schools and the quality of education.

1.1.2 Problems and issues of school financing and SBRM

Since the 1980s, inadequacies in the financing system have been widely debated within the education sector. One of the main issues was that resources did not meet school-level requirements satisfactorily. Mostly, school budgets depended upon external social factors rather than the actual needs of individual schools. Ministry of Education (ME) had set up norms and criteria for the provision of resources, but these were not properly implemented. Further, pupil enrolment decreased due to a fall in the population. However, the mismatch between resourcing and future needs shows a remarkable lack of foresight. Macro and micro politics played a main role in the resourcing of schools. Further, purchased and distributed resources were not received in time or at the correct place. This situation was common for human resources too. Unequal treatment was evident. Large urban schools enjoyed more privileges than small schools situated in remote areas. **For several decades a small number of**

schools (i.e. 1AB National and Provincial¹) had little purchasing power at school level, and also experienced great uncertainty. These schools had irregularly received money for selected subjects to purchase consumables and perishables for the classroom. I call these practices ‘basic SBRM’ throughout my study. Other schools are denoted as ‘non-SBRM’ throughout the study.

However, all pupils in the system followed the same curricula, and all of them finally sat for one national-level examination. The results of these examinations are the main indicator of education outputs. Further, education tended to be examination-oriented, as a result of competition in the labour market, although mismatch between education and the economy was evident for several decades. Consequently, much of the labour market was dominated by graduates from a small number of schools. The unequal treatment of schools was the one of the main reasons for this unfair situation.

1.1.3 New outlook for school financing and SBRM in Sri Lanka

All the governments which have come to power during the last 56 years have attempted to eliminate disparities in the resourcing of schools (i.e. physical, human, financial resources). They have been concerned to establish equity, and emphasize the efficient utilization of resources. Educational reforms of 1972, 1981 and 1994, made provisions for equity and efficiency.

In 1981, an education White Paper proposed introducing a ‘school cluster’ system which was aim to supervised school management functions and sharing resources

¹Type 1AB National and Provincial schools: schools with classes up to grade 13, with GCE Advanced Level Science, Arts, and Commerce streams. National schools are directly managed by the central ministry; whereas provincial schools are managed by provincial councils (see 1.2.1).

among the large and small schools. Then, in 1993, school development boards were introduced. Later, in 1994, education reforms introduced school-based management (SBM). These significant events created a new outlook for school financing and SBRM. Some proposals were abandoned as a result of the lack of political commitment. None of them addressed the devolution of resources, both financial and physical, to school level. The Presidential Commission on Youth (1990) and the National Education Commission (NEC) (1992) comprehensively studied this situation and recommended a new system for resourcing schools on a per capita basis. The Presidential Task Force on General Education (PTFGE) (1997) accepted this recommendation, and actions were initiated to implement it through new education reforms. Nonetheless, real action was painfully slow, due to multifarious factors.

Further, international donors played key roles in changing school resourcing practices. Involvements and interventions by the Asian Development Bank (ADB) and World Bank were significant. The World Bank agreed to provide financial assistance for the implementation of the new education reforms. Subsequently, the government of Sri Lanka (GOSL) and the World Bank acted to implement the Second General Education Project (GEP2) related to the education reforms. GEP2 included two components directly related to the financing of schools and SBRM (Chapter Four).

As a result of these interventions, the ME were able to introduce for nation-wide implementation, in 2000, a new system for resource allocation, **known as the norm-based unit cost resource allocation mechanism (NBUCRAM), on a per capita basis, as a sub-set of the formula funding of schools (FFS).** My thesis uses **NBUCRAM as the technical term of FFS.** Therefore, **FFS and NBUCRAM have similar meanings.** NBUCRAM is the mechanism used to determine the funds

allocated for learning resources to each school. These funds are utilized for capital learning equipment, consumables and perishables, and for the maintenance and repair of capital learning equipment (Chapters Four & Five). The prime focus of this thesis will be resource allocation for learning equipment and materials as educational inputs. The term 'learning resources' will be used for these.

Further, the World Bank recommended two further developments to SBRM. The first, was for all public schools to receive cash allocated by formula for spending on learning materials consisting of consumables and perishables (excluding chemicals). I call this, for the purpose of my study, 'strengthened basic SBRM'. Secondly, the World Bank recommended a pilot to extend SBRM to enable schools to also decide on purchases on inexpensive equipment (capital expenditure) to support teaching and learning. I refer to this as 'extended SBRM'.

Since 2000, with the implementation of strengthened basic SBRM, every school has received money for purchasing consumables and perishables at school level for all subjects, and expensive permanent capital learning equipment has been provided by the national and provincial authorities in kind.

However, since 2000, under the extension of SBRM, 'pilot schools' have more extensive delegation of funds to purchase inexpensive capital learning equipment at school level, but not expensive capital learning equipment, such as computers, microscopes. Schools have received these allocations in addition to the allocation for consumables and perishables to which they have been entitled. Hence, these 'pilot schools' receive more freedom to acquire inexpensive capital learning equipment than other schools. The term 'non-pilot schools' denotes the schools which were not

included in the implementation of the extended SBRM programme. Unlike pilot schools, these schools are not granted the additional allocations and decision-making authority to acquire learning equipment, but they have purchasing power for acquiring consumables and perishables. The educational authorities expected all the schools to improve through having more secure funding for and flexibility in purchasing consumables and perishables. In principle, to assess the impact of the resource allocation in terms of efficiency, the need arises to compare the student outputs of extended SBRM pilot schools with those of non-pilot schools. Until this programme was implemented, the system had no experience of funds being devolved to schools to procure capital learning equipment at the school level. Hence, major differences would be expected between the traditional school purchasing patterns and those which are currently formed under SBRM.

1.1.4 The origin of the study

As discussed, GOSL has made several attempts to establish equity across the system. The issues of school financing and SBRM have been discussed for the past two decades, and actions have been taken to lessen resource allocation disparities (Chapter Four). Nonetheless, the unequal distribution of resources to schools continued to exist. Within these circumstances, NEC proposed to introduce a new school financing mechanism and to delegate power to school level, ensuring equity and efficiency respectively. However, remedial measures were very slow. As discussed above, in 2000 the government, with the financial assistance of the World Bank, recommended and assisted the development of NBUCRAM for resource allocation, and two SBRM developments: first, strengthened basic SBRM for all schools, and second, the extension of SBRM on a pilot basis.

Considering the importance of equity, my research will aim to evaluate the impact of NBUCRAM as a mechanism for resource allocation in terms of ensuring equity (procedural and distributional equity including horizontal and vertical equity), for the period from 2000 to 2002 compared to the pre-NBUCRAM period from 1997 to 1999. Not only the Sri Lankan education system, but also other systems have been concerned with establishing equity, and have used different formula funding mechanisms to achieve this target.

Generally school systems are expected to produce better qualified pupils. Therefore, schools should develop more efficient systems for using their limited resources. To achieve this, different countries have selected different strategies, for example, SBM, SBRM, and local management of schools (LMS). The priority of GOSL has been to establish an efficient SBM system. Since GOSL has invested a large sum of money to improve the quality of education, the school authorities are responsible for using these funds efficiently. Considering the importance of the efficiency concept, my research will evaluate the impact of both strengthened basic SBRM and the extension of SBRM in Sri Lanka with reference to its efficiency during the years 1997 to 1999, compared to 2000 to 2002.

The implementation of NBUCRAM, and strengthened basic SBRM, nation-wide, and the extension of SBRM on a pilot basis, new programmes would undoubtedly encounter obstacles and constraints. Therefore, it is crucial to evaluate the impact of any programme and to identify the most suitable measures for achieving its defined targets. To ensure the sustainability of any programme, it should be monitored and evaluated during implementation, enabling us to diagnose and respond to any developments that might cause the programme to deviate from its targets. Particularly

as these programmes were introduced as a collaborative effort with the World Bank, it is important to identify strategies to sustain the programme when the donors and lenders have left the system.

In addition to that, my personal interest also led me to study this area, as it is an important aspect of the education system in Sri Lanka. I have personal experience of both school and national levels of the education system while holding different posts. Moreover, I have firsthand experience of unequal and non-rational distributions of educational resources among, as well as within, schools; notably among and within the rural and urban areas, as well as within and between the provinces. Further, I have professional experience in this particular field of study at national level. This background influenced me in wishing to study the impact of resource allocation and management at school level with special reference to equity and efficiency. However, the views expressed in my research are mine alone and do not necessarily reflect those of ME or GOSL.

Considering these circumstances, my research aims to evaluate the impact, investigate the issues and constraints related to implementation, and identify the strategies for sustainability of NBUCRAM and SBRM. The findings should provide guidance on further improvements to the present mechanisms.

1.1.5 The scope of the study

1.1.5.1 The aims and the research questions

The general aim of the thesis is to evaluate the impact of SBRM and FFS/NBUCRAM in Sri Lanka, in relation to the criteria of efficiency and equity in resource allocation.

Three specific aims have been developed. Hence, the study aims to:

- (a) evaluate the impact on equity of NBUCRAM for allocating entitlements of schools to learning equipment and materials. This will involve examining the equity properties of the ‘traditional’ or ‘received’ school finance system and its problems (in the past and so far as it persists in the present) in Sri Lanka;
- (b) evaluate the impact on decision-making efficiency of strengthened basic SBRM compared to basic SBRM and non-SBRM, and to the extension of SBRM (which is being implemented through the school-based procurement of inexpensive capital learning equipment at school level). The new procedures will be compared with the traditional centralized procurement procedures. This will involve:
 - i. evaluating the efficiency incentives of strengthened basic SBRM compared to basic SBRM and non-SBRM;
 - ii. evaluating the efficiency incentives of the extension of SBRM and comparing pilot and non-pilot schools; and
 - iii. identifying practical issues and disadvantages emerging at school level as a result of both strengthened basic SBRM and the extension of SBRM;
- (c) make recommendations for maintaining transparency, equity and students’ equal rights to education, and efficiency in relation to higher standards of students’ educational achievement in the entire Sri Lankan education system.

The four key research questions (KRQs), developed to achieve the three aims of the study are as follows:

- KRQ1:** What are the policy backgrounds of the formula funding of schools/norm-based unit cost resource allocation mechanism and school-based resource management in Sri Lanka?
- KRQ2:** What has been the impact of NBUCRAM in Sri Lanka in relation to equity considerations in resource allocation?

KRQ3: What has been the impact of strengthened basic SBRM and extended SBRM in relation to efficiency incentives?

KRQ4: How can the present practices be improved and what can be suggested to improve NBUCRAM (funding formulae) and SBRM in Sri Lanka?

Subsidiary research questions (SRQs) of these KRQs are elaborated in Chapter Three.

1.1.5.2 *The theoretical and methodological starting points*

Economists of education typically evaluate formula funding of schools using equity and adequacy criteria. The concept of equity is associated with the notion of fairness and justice (Psacharopoulos & Woodhall, 1985:246; Ladd et al., 1999:9). Especially in measuring the impact of FFS, procedural and distributional equity, including horizontal and vertical equity, can be employed to judge the success of the study as there are good grounds for arguing that the formula method of allocating resources is more equitable and efficient than other funding methods (Levačić, 1992a; 2000:15; Ross & Levačić, 1999; Odden & Picus, 2000:171). The adequacy criterion is concerned with providing sufficient resources so that all schools can enable their pupils to achieve expected outcomes. My study, to evaluate the impact of NBUCRAM/FFS in Sri Lanka in relation to the equity of resource allocation, is limited to procedural and distributional equity (including horizontal and vertical equity). The actual and estimated financial data collected from schools was used to measure adequacy. The impact of equity and adequacy was evaluated using quantitative data which I collected from schools and qualitative data collected through surveys of school principals' and planners' perceptions and views. Further, this evaluation examined the sustainability of the programme through data collected on principals' and planners' perceptions. In summary, this evaluation of impact focused

on both objective measures (i.e. financial data) and on subjective measures (i.e. principals' and planners' attitudes and beliefs) (Chapters Two and Three).

In considering SBRM in relation to efficiency, economists typically view educational outcomes as a function of a variety of school inputs (Bradley et al., 2001:547). Generally a scientific/positive approach is adopted (hypothesis testing using quantitative data) (Easterby-Smith et al., 2002). This approach requires high quality data on outcomes and inputs, with control variables. My research does not use this approach due to difficulties of data and methodology. Instead, key concepts of efficiency are used to evaluate whether schools have adopted the rationalistic approach, especially decision-making process vested at school level, to meet their learning resource requirements. I apply this rationalistic approach only to the following areas: rational school-based planning, resource acquisition and deployment, financial achievements, supervision and monitoring. Further, evaluation of both SBRM programmes paid attention to the process of SBRM models being adopted in schools, management processes for rational decision-making in schools and the adaptation of SBRM, and to whether the staff in schools were judged to be efficiently managing their resources. This evaluation of impact was carried out through qualitative data collected from schools on the perceptions and views of school principals and planners. Hence, the impact of both SBRM programmes was measured largely from subjective measures (i.e. teachers', principals', and planners' personal attitudes and beliefs). However, some objectives measures (i.e. financial input data) were used to measure efficiency (Chapters Two and Three).

Chapter Two presents the theoretical framework for the FFS and SBRM in relation to equity and efficiency, respectively.

Within this theoretical framework, my research employed an ‘intervention research’ methodology; as NBUCRAM, strengthened basic SBRM, and the extension of SBRM can be considered as intervention programmes. Cross-sectional, longitudinal and quasi-experimental research designs are employed for the study (Cohen et al., 2000). My research evaluates efficiency of SBRM using the qualitative interpretative approach. Justification of the research methodology and designs used in my study is given in Chapter Three.

1.1.6 The structure of the thesis

My thesis consists of seven chapters. Chapter One offers an overview of the research including the rationale for the study and its aims. Further, this chapter describes the education system in Sri Lanka including the historical evolution of the school financing system and SBRM and also explores the problems and issues considered in the study.

Chapter Two discusses the conceptualisation and principles of FFS and SBRM, using the international literature, and also examines the two main purposes of the allocation of learning resources: to ensure equity and efficiency. The theoretical component of the thesis will focus on FFS and SBRM definitions in relation to the equity and efficiency principles.

In Chapter Three, the formulated key research questions (KRQs) with subsidiary research questions (SRQs), and methodology will be discussed. Further, this chapter will outline the research strategies adapted to my study.

Chapter Four is devoted to the policy background and evolution of FFS/NBUCRAM and SBRM in Sri Lanka, and relates this to the equity and efficiency principles (KRQ1). This chapter is mainly based on documentary analysis.

Chapter Five evaluates the impact of FFS/NBUCRAM on the equity of resource allocation (KRQ2), which will be the first topic for empirical study.

Chapter Six evaluates the impact of SBRM in Sri Lanka in terms of efficiency in resource allocation (KRQ3), and will present the second topic for the empirical study. The analysis is presented in two sections: the first evaluates the impact of strengthened basic SBRM, comparing basic SBRM and non-SBRM. The second evaluates the impact of the extension of SBRM as an incentive to efficiency by comparing pilot and non-pilot schools.

Chapter Seven provides the summary and conclusions of the thesis. It will draw on the findings and evidence related to the KRQs 1, 2 and 3 outlined in Chapter Three, and documentary and empirical evidence presented in Chapters Four, Five, and Six. Further, based on the conclusion, the chapter presents policy recommendations for further consideration of FFS and SBRM (KRQ4).

1.1.7 Outputs and outcomes of the research

The immediate and important output expected to emerge from my study is the identification of the impact of the new school financial and resource management policy in Sri Lanka. This identification will help to streamline the present formula funding mechanism and the resource management practices in the prevailing system, in order to ensure equity and efficiency in the allocation of resources. In addition, the

identification of the impact will help to raise students' performance levels and generally improve the efficiency and equity of education through establishing sound school financing and a better understanding of SBRM by the education authorities in Sri Lanka.

1.1.8 Constraints and limitations of the research

Basically two types of constraints and limitations have influenced my study; conceptual and operational.

The strengthened basic SBRM programme has been implemented system-wide since 2000, although the extension of SBRM was introduced on a pilot basis. The deviations from strengthened basic SBRM to extended SBRM are very small. Hence it is difficult to distinguish between the inputs of these two programmes. As discussed, strengthened basic SBRM included purchasing power and decision-making authority for consumables and perishables only (except chemicals), while the extension of SBRM extended purchasing power and decision-making authority to inexpensive capital learning equipment. Hence, it is difficult to demarcate the relationship between educational inputs (learning resources) and outputs. This was the main methodological (conceptual) constraint on my research, when evaluating SBRM in relation to efficiency.

The second methodological (conceptual) constraint concerned evaluating the impact of SBRM in terms of efficiency. At present in Sri Lanka no attention has been paid to the relationship between school resources and pupil attainment. Hence, there are no data of good quality on this relationship. Thus I have not been able to use an

education production function analysis when evaluating the impact of SBRM (see Chapter Two).

The non-availability of formal financial databases maintained at the school level is another operational-level constraint and limitation. Most of the data and information in the majority of schools are available in different forms and on an ad-hoc basis. The majority of school principals are not competent in the financial management of their schools. Some see these responsibilities as an added burden on top of their routine work. Traditionally, school principals have concentrated only on academic aspects at school level. Therefore they are not willing to take up the responsibility and accountability for financial matters. Some have negative attitudes towards this. Also, some politicians and bureaucrats are not willing to delegate and devolve power and authority for school financial management to the periphery (schools). Therefore, in order to minimize the difficulties which arose as a result of the lack of sufficient data, the national, provincial, zonal level officials (i.e. policy-makers and educational planners) and principals were interviewed; questionnaires were distributed, and data were triangulated (Chapter Three).

The other critical limitation was the absence of operational definitions of NBUCRAM and SBRM in relation to equity and efficiency respectively. Although the educational authorities have accepted them in principle, the available documentary evidence fails to provide any operational definitions for these concepts. Therefore, to minimize these limitations on my research, the concepts of 'equity' and 'efficiency' were defined in accordance with the international standard definitions (Chapter Two).

Another critical constraint and limitation was the timeframe of the target programmes. One can argue that evaluating the impact of these programmes should take place after a considerable time has lapsed. But the standard practices and implementation of the new policies can be evaluated immediately after launching the programme. Immediate evaluations might be helpful in highlighting the real obstacles and constraints of the programmes, and thereby enabling adjustments to be made.

1.2 Background of education in Sri Lanka

Sri Lanka is an island in the Indian Ocean with a population of 18.7 million. It is a multi-ethnic society, with 74.0 per cent Sinhalese, 18.1 per cent Tamils, 7.1 per cent Moors, and 0.8 per cent others in 2001. It is predominantly an agricultural country; 72.2 per cent of the population lives in rural areas, 21.5 in urban areas, and 6.3 per cent in the plantation sector (CBSL, 2002a). Sri Lanka, as a developing country, faces all the political, economical, and social problems that are common to any such country.

Despite all the above problems, experienced during the past 56 years since independence in 1948, Sri Lanka reached a literacy rate of 91.6 per cent in 2000 (UNESCO/OECD, 2002). The government has accepted that education is a right of each citizen rather than the privilege of small elite. This policy conforms to the contents of Article No.26 of the Universal Declaration of Human Rights, which proclaims that everyone has the right to education (UNO, 1948). The constitution of Sri Lanka, in its chapter on the directive principles of state policy and fundamental duties, assures to all persons the right to universal and equal access to education at all levels (GOSL, 1978). The first step taken in this direction was to pass regulations in

the parliament in 1945, enacting free education from the primary level to the university level.

Changing the medium of instruction from English to the mother tongue (Sinhala or Tamil), in 1945, was another landmark (UNECESO, 2000). Subsequently Sri Lanka has passed legislation to provide free mid-day meals, subsidies for public transport, free school textbooks, and free uniforms to school children, with the intention of minimizing the deprivations of economically less-privileged children and supporting children from poor income families in schools (GOSL, 2002). This principle of providing equal opportunities for education to all students in the country has been a prominent characteristic of the policies of all governments which came to power during 56 years of independence. Provision of financial aid through scholarships to students from families with low incomes is another measure adopted by all governments (Department of Examinations, 2003). In 1997, regulations were enacted in the parliament enforcing compulsory attendance for children in the age range from 5-14 years (GOSL, 1997; UNESCO, 2000). The 'Education for All' declaration affirmed such pupils' need for compulsory education. However, Sri Lanka has not attained equity in education, as there are serious economic imbalances among families, as well as among regions. According to Perera et al. (1998), imbalances in respect of physical and human resources have also contributed to the existing disparities in education. Although it is the right of every citizen to gain a fair education, the inequitable provision of resources has made the education goals unreachable. Economic backwardness, climatic conditions in certain regions, the cultural traditions of certain ethnic groups, and problems in the employment and deployment of teachers in the school system, have caused difficulties in achieving targets.

1.2.1 The public school system

In 2003, the total number of government schools was 9790, educating nearly 3.9 million students, and these schools are classified as:

- Type 1AB - schools with classes up to grade 13, with GCE
Advanced Level Science, Arts, and Commerce streams;
- Type 1C - schools with classes up to grade 13, and with GCE
Advanced Level Arts, and/or Commerce streams;
- Type 2 - schools with classes up to grade 11;
- Type 3 - schools with classes up to grade 5 or 8.

In addition, there is another category of government schools (323 out of 9790) called 'national schools', mainly type 1AB (MHRDECA, 2003a). These schools are directly administered and financed by the central ministry, whereas the administration and finance of the other schools are functions of the Provincial Educational Authorities (PEAs). The total numbers of schools, teachers and pupil enrolments in 2003 are given in Table 1.1.

Table 1.1: Numbers of schools, teachers and pupils by types of schools, 2003

Type of school	No. of schools	No. of teachers	No. of pupils
1AB/1C/Type-2 (National)	323	28040	688739
1AB (Provincial)	322	38640	480233
1C	1715	48375	1228312
Type 2	4266	53510	1168002
Type 3	3164	16471	376399
Total	9790	185036	3941685

Source: MHRDECA (2003a).

Thirty-three per cent of schools in the country are Type 3, and about 40 per cent are Type 2 schools. Types 2 and 3 schools are predominantly found in the rural areas where multi-grade teaching takes place with few teachers. Out of the 9790 schools,

4772 are considered to be 'small schools' with less than 200 students (UNESCO, 2000; GOSL, 2002; MHRDECA, 2003a). Most of the Types 1AB, 1C and Type 2 schools include primary sections. However, typically, schools situated in remote areas have both human and physical resources which are vastly inferior to those available in the better-off, urban schools. Further, some schools are situated on tea and rubber estates where 6.3 per cent of the population live (CBSL, 2002a). According to the government's perception, the level of human poverty is highest in the estate sector (GOSL, 2002:118). In 2002, the percentage of schools in the plantation sector was 7.88 of the total. It was 7.84 in 2001. The percentages of pupils were 3.91 in 2002 and 3.76 in 2001 (MEHE, 2001a; MHRDECA, 2002a). All physical and financial requirements for public schools are borne by the government. School principals act as heads of management and accounting officers for the schools. They are accountable to the government through PEAs. Zonal, provincial and national administrative strata provide necessities for the schools to achieve the educational objectives.

1.2.2 Semi- and non-government educational institutions

In addition to the government schools, there are three other types of educational institutions: *pirivenas* (Buddhist education institutes), private schools, and international schools. Furthermore, there are 18 registered assisted special education schools, a sub-category of private schools, catering for disabled and retarded children (MHRDECA, 2003a; 2002b). Details of such institutions and international schools in 2003 are given in Table 1.2.

Table 1.2: Semi-and non-government educational institutions, 2003

Type of institutions	No. of institutions	No. of teachers	No. of pupils
Pirivenas	600	4989	55725
Private schools	85	4906	99476
Assisted special education schools	18	321	2114
International schools	NA		

Source: MHRDECA (2003a).

Pirivenas attached to Buddhist temples provide formal education from the primary level to higher education for Buddhist monks and lay male students. They are run by the head of each institution and financially assisted by the government under the supervision of ME. Pirivenas are not entitled to capital funds from the government, but every pirivenas is entitled to a per-pupil subsidiary grant provided by the government to cover the annual running costs (GOSL, 1979).

Private schools are run by the management board of each school, and charge pupils for education, although financial assistance is received from the government. Private schools fall under three categories, namely: (i) recognized and certified schools (10 schools with 8008 pupils and 431 teachers); (ii) unaided fee-levying private schools (15 schools with 21938 pupils and 1126 teachers); and (iii) aided non-fee-levying private schools (35 schools with 65146 pupils and 2452 teachers) (MHRDECA, 2003a). The first category does not receive any funds from the government, while the second category receives free textbooks, free school uniforms, and funds for the purchase of consumable and perishable learning materials. The third category is provided with salaries for the teachers, in addition to what the second category of schools is given by the government. The government does not provide capital budgets for any of these categories. They are directed to follow the national curriculum which is common to public schools.

It is notable that 2114 pupils with special educational needs were in assisted special education schools in 2001. The government does not provide capital funds for the special education schools, but the salary bill for teachers is paid by the government. In addition, 58626 out of 3941685 pupils, i.e. 1.49% with various special educational needs, were on the roll in the main stream of normal schools (MHRDECA, 2003a).

The international private schools offer English-medium education; there is no reliable source of information on these institutions. Basic information, such as the existing number of international schools, numbers of students and teachers, syllabi and standards, is not available (CBSL, 2001:102). However, all the international schools have been established as companies and registered with the registrar of companies and the Board of Investment in Sri Lanka. More than 100 international schools were functioning in the whole country in 2002. The government does not provide any financial assistance to these schools. Most international schools follow courses and use examinations conducted by overseas bodies, and charge fees for tuition. Very recently the government has made the legal provision for pupils in international schools to take public examinations (MEHE, 1999a) and also has provided the opportunity to participate in national school athletics games with the pupils in the government and semi-government schools. However, the complete autonomy of these schools keeps them outside the purview of ME, and the absence of a regulatory framework has resulted in a questionable quality of education being provided.

Parents may apply to get their children of age 5+ enrolled by any of aforementioned institutions.

1.2.3 National evaluation system

National evaluations are carried out by the Department of Examinations. Schools carry out school-based assessments. Nationally, education authorities and parents expect educational outputs to be measured by the results of public examinations. To reach the educational objectives and produce educational outputs, the government, as well as others concerned with education, provides resources.

1.2.4 Expenditure on education

There are two main sources of expenditure on education: first, government expenditure and second, private (household) expenditure.

1.2.4.1 *Government expenditure on education*

Free education was introduced in 1945, and in 1961 the assisted schools which were governed by religious centres, the private sector, and individuals were taken over by the government. Since then, the total cost of education has been borne almost wholly by the state. At present, the central government and provincial councils play an important role in the provision of school education. Public expenditure on education for the period 1978-2001 is shown in Table 1.3.

Table 1.3: Expenditure on education, 1978-2001

Category	Education expenditure (current prices: SLRs million)							
	1978	1995	1996	1997	1998	1999	2000	2001*
Government expenditure on education	1164	18908	20402	22329	26294	29294	30930	28286
As a percentage of total government expenditure	6.9	9.3	9.3	9.5	10.0	10.5	9.2	8.5
As a percentage of GDP	2.7	2.8	2.7	2.5	2.6	2.6	2.5	2.0

Source: CBSL (2002a). *Provisional

As Table 1.3 shows, the government's current expenditure on education have increased annually, although as a percentage of GDP, they have decreased. In spite of its impressive achievements in the education sector, by international standards Sri Lanka has spent low amounts in education (World Bank, 1996; Perera et al., 1998; Srivastava, 2000:2; UNICEF, 2003). The World Bank (1996) estimates the international average as five per cent of GDP and 20 per cent of total public expenditure. The Asian averages range from four to eight per cent of GDP and 11 to 18 per cent of total expenditure (Perera et al., 1998:22). As shown in Table 1.3, in 2001 the government spent 2.0 per cent of GDP and 8.5 per cent of total government expenditure on education. Though the educational expenditure in Sri Lanka has increased with the expansion of the school system, it has remained between 6 to 10 per cent of overall public spending since 1978. This may however, reflect both positive and negative features in the provision of education. First, it may reflect low unit costs and second, it may reflect less than desirable quality in the sector. Consequently, for further development of education financing, the PTFGE (1997:4) recommended that while current expenditure on education was around 2.9 per cent of GDP, the allocation should be increased within the next few years to above 4.5 per cent of GDP. However, remedial actions have hitherto been only at the documentary level.

Because of the way that the school system has been organized, assessing expenditure on primary and secondary separately has been difficult. Until 1999, expenditure on education was not computed separately for primary and secondary education. Since 2000, the budget allocation has included separate headings for primary and secondary education (MFP, 2001), especially as a result of the interventions and involvements of international donor agencies (e.g. the Department for International Development-

funded Primary Education Planning Project). However, in 2000, recurrent public education expenditure was approximately thirty-eight per cent on primary education, fifty-three per cent on secondary education and nine per cent on higher education (MFP, 2000).

The PEAs have the main responsibility for providing education for children in schools, although there are many national schools located within the provinces which receive funding directly from the central government. The Finance Commission (FC) is involved in determining the overall provincial education budget allocation. The allocation flow for education in Sri Lanka is shown in Appendix 1.1. The role of the public sector in providing these services in different provinces may be quite different. Until very recently, funds were allocated for three programmes, namely general education, general administration, and teacher education (MFP, 1999). Expenditure on education from 1997 to 2002, including overall per-pupil expenditure, is shown in Table 1.4.

Table 1.4: Overall per-pupil expenditure, 1997–2002

Year	Expenditure on education (current prices: SLRs million)			Total number of pupil	Overall nominal per-pupil expenditure SLRs
	Provincial	Ministry*	Total		
1997	12540.0	8890.6	21430.6	4260989	502.9
1998	15375.0	10821.9	26196.9	4136029	633.4
1999	14560.0	13476.0	28036.0	4134082	678.2
2000	13354.4	12830.7	26185.0	4193908	624.4
2001	12006.4	11535.6	23542.0	4184957	562.5
2002**	21340.6	14375.4	35715.9	4134082	863.9

*Excluding higher education **Provisional

Source: basic data: CBSL (1997-2000; 2002ab); MEHE (1999b).

As Table 1.4 shows, nominal per-pupil expenditure has increased annually.

Calculations in 2003 by MHRDECA of the actual cost of educating an individual

student in schools suggest that the cost per primary student (grades 1-5) is SLRs 9554.49; per secondary student (grades 6-11) SLRs 8037.63 and per collegiate student (grades 12-13) SLRs 21939.79 (MHRDECA, 2003b).

1.2.4.2 *Household expenditure on education*

Next to the cost borne by the state, the second largest financial contribution to education is made by individuals. Household expenditure on education has not been computed at school, zonal, provincial or national levels. This expenditure for schools falls into two types. The first is expenditure contributed directly to school budgets (i.e. school fees for facilities and school development societies). The second is expenditure incurred by the students and parents which does not necessarily go to the school budget (i.e. private tuition fees, transport cost, uniforms, books and stationery, pocket-money, donations to school).

In the first type, school authorities have been given permission to collect very small amount as 'school facilities fees' from the students. Further, school principals collect funds from the parents for the 'school development society'. Most of the schools have their own 'alumni associations' (AAs) which are very helpful, especially in infrastructural development. Although statistics are not available, the total amount of these funds is not negligible. Funds collected by AAs are a lucrative source of school-generated revenues for many popular schools.

Huge investments are being made by parents through private expenditure on education. Lewin & Mallawarachchi (2001:165-195) argue that Sri Lanka has achieved high levels of participation with low costs compared to other Asian countries, by public investments at primary and secondary levels. This depends on the household

contributions. In Sri Lanka, with its examination-oriented system, there is great competition for education. Both poor and rich parents aspire to obtain good quality education for their children. Therefore, they give their first priority to children's education as an investment for the future. Their contributions have not been computed, and little attention has been paid to them when decisions are taken on school financing, or education policies in general.

1.3 Conclusion

The government of Sri Lanka is responsible for providing educational resources to the entire school system. However, intra-provincial and inter-provincial disparities were evident across several decades. Issues of school financing and school-based resource management in Sri Lanka were debated among the local and international education agencies and personal. As a result of these debates, the government with the financial assistance of international donors, introduced new formula for resource allocation and rationalistic resource management practices. My research, includes a study of the impact of these new aspects on the equity and efficiency of resource allocation, especially that of learning resources. For the study, I used a qualitative interpretative approach following intervention research methodology and cross-sectional, longitudinal and quasi-experimental research designs. However, I faced the absence of data that would enable a study to avoid some of the major methodological difficulties of measuring efficiency. Hence, my study is not directly related to efficiency criteria and output-input measures as normally understood.

Hence, Chapter Two attempts to review relevant literature on the conceptualisations and principles of SBRM and FFS in relation to the efficiency and equity of resource allocation.

Chapter Two

Conceptualisation and principles of formula funding of schools and school-based resource management

2.1 Introduction

The objective of this chapter is to review the conceptualisation and principles of SBRM and FFS, drawing on relevant international literature. It will examine how these concepts and theories are operationalized and identify the critical issues raised in the process.

In line with the main aim of the thesis, this chapter reviews the literature relevant to the following issues:

- i. efficiency;
- ii. equity;
- iii. school-based resource management; and
- iv. formula funding of schools.

Efficiency and equity are important concepts in the field of education, and economists use these two criteria to evaluate institutional arrangements from a welfare economics perspective. Education authorities in many countries attempt to establish an efficient education system making the best use of limited resources to achieve defined outputs, and ensuring equity. For these purposes different types of mechanisms have been used. Over the last 15 years, SBM has been advocated to improve the efficiency of using resources. It has been implemented in a number of countries and takes various forms, e.g. SBRM, LMS. SBRM programmes are linked to the efficiency concept. To establish equity in the education system, a well-designed FFS mechanism needs to be used.

To examine these important issues, efficiency and equity concepts will be reviewed in relation to SBRM and FFS, drawing on the international literature.

2.2 Efficiency

The importance of efficiency in education is the same as elsewhere in the economy, where resources are limited and it is therefore desirable that they should be used in such a way as to maximise the educational output(s) from their use (Mace, 1996:7; Mercer, 1991). Efficiency partly depends on productivity. According to Monk (1990:316), production models have three parts: (i) the outcomes sought; (ii) the necessary inputs; and (iii) the process that transforms inputs into specified outcomes. These aspects are linked together by a production function, which reveals the maximum amount of output possible for alternative combinations of inputs (see 2.2.1). The production function can be expressed using mathematical notations as follows:

$$Y=f(X_1, X_2, X_3)$$

where Y is the quantity of output produced per period of time, and X_1 , X_2 , X_3 are three different inputs: for example:- X_1 =quantity of input X_1 (e.g. teacher time per year); X_2 =quantity of input X_2 (e.g. learning equipment); X_3 =level of technical knowledge. If there is technological improvement over time, the level of technical knowledge increases, and a given amount of X_1 and X_2 can produce more output. Efficiency is measured by the relationship between inputs and outcomes (Davies & Braund, 1989:20; Windham & Chapman, 1990:62; Cooper & Cohn, 1997; Bishop & Wößmann, 2001; Hanushek & Luque, 2001:6). The education input-output process is analogous to other technical production relationships (Windham & Chapman, 1990:75).

2.2.1 Educational outputs and outcomes

The production function is normally expressed in terms of output. Hence, education economists usually distinguish between educational outputs and outcomes. The outputs of an educational organization are the direct effects it has on its students in relation to their acquiring knowledge, desirable skills, cognitive attainments (such as examinations performance), attitudes and behaviour. Educational outcomes always involve both quantitative as well as qualitative outputs. However, it is difficult to measure outputs in terms of their qualitative aspects (Levačić, 2000:4-5; Preedy et al., 1997:129; Vignoles et al., 2000:2-3). According to Levačić (2000), learning outcomes that can be measured predominate in research on the relationships between resource inputs and learning outcomes. Educational outcomes are the longer-term impacts on individuals and on society of the educational provision received at some earlier date (Levačić, 2000:4-5) as well as intermediate outcomes which would be displayed within a short period. 'Educational outcomes' is used as a catch-all term to refer to the overall impacts on students' learning as a consequence of experiencing formal programmes of education.

2.2.2 Educational inputs

Educational inputs are divided into the general categories of 'student characteristics, school characteristics, teacher characteristics, and real resources'. The main real inputs can be summarised as: teacher-pupil ratio, class size, teachers' quality (ability, experience), staff, equipment and materials, and buildings used for educational learning activities (Vignoles et al., 2000:2-3; Preedy et al., 1997:129; Levačić, 1989). These inputs are generated and controlled by an education authority or school; but the

authority has less control if the school has some decentralised powers of decision-making over resources and can choose how to spend its budget.

In addition, there are external educational inputs: the pupils' innate abilities, home backgrounds (Levačić, 1989), socio-economic backgrounds etc. (Preedy et al., 1997:129). All these inputs directly or indirectly influence pupils' educational outcomes (attainments). In general, the internal input factors can usually be changed in response to feedback within a short-period. But the external input factors cannot usually be changed within a short-period, and also they vary from pupil to pupil.

2.2.3 Types of efficiency

There are two elements to efficiency: (i) 'productive' or 'internal' efficiency and (ii) 'allocative' or 'external' efficiency (Levin, 1990; Levin, 1997 in Levačić, 2001; 2003). In evaluating the impact of SBRM, it is clearly important to differentiate between these two types.

2.2.3.1 *Productive or internal efficiency*

Productive or internal efficiency is the efficiency with which a given product is produced (not taking into account how much the output is actually valued by society). Productive or internal efficiency consists of two elements: technical and price (economic) efficiency.

A. *Technical efficiency*

Technical efficiency is defined in terms of combinations of X_1 , X_2 , X_3 (inputs), and is concerned with the relationship between physical quantities of inputs and outputs (Atkinson, 1983; Windham & Chapman, 1990:60; Mace, 1996:7; 2000). Technical

efficiency is concerned with schools producing the maximum possible educational output (e.g. as defined by examination performance) from a given quantity of resources. It is not possible to reduce the amount of one input and still produce the same amount of output without increasing the amount of another input used in production. According to Mercer (1991), ‘...technical efficiency means the organization of available resources in such a way that the maximum feasible output is produced’. Technical efficiency is affected by factors including: the size of the operations, managerial practices, and the empowerment of employees at operational levels. Technical efficiency can be defined independently of cost and prices.

B. Price (economic) efficiency

The second element of productive or internal efficiency is price efficiency. Once one has defined the price of X_1 , X_2 , (inputs), one has to work out what combination of inputs is the cheapest production method. Price efficiency refers to the relationship between the cost of the inputs and the education outputs (Mace, 1996:7). This relationship produces a given set of outputs at least cost. It takes account not only of the quantities of resources, but also their relative costs. Price efficiency is achieved where a given level of output is produced at the lowest possible cost, or alternatively, maximum possible outputs for a given total cost. When the ratio of marginal products equal to ratio of input prices (given they are combined).

Price efficiency exists when the production of a good or service is internally or price-efficient when a given quantity is produced at the minimum feasible cost. An alternative way of expressing this is that the maximum possible amount of output is produced for a given total cost. Educational economists are concerned with resources being used efficiently so as to maximize output for a given cost or minimize the costs

of a given output. Since money and educational budgets are limited, it is desirable to produce educational outputs at the lowest possible cost.

2.2.3.2 *Allocative or external efficiency*

Allocative or external efficiency refers to the maximization of consumers' utility. It takes account of consumers and their consumption preferences between two or more goods. Allocative or external efficiency is measured by the relationship between inputs, and consumers' evaluation of outcomes (social value of the output). However, allocative efficiency is not a value-free concept, as the consumers' choices depend in part on their initial endowments of resources, and hence on an initial distribution of these. Economists often use the Pareto definition of efficiency, because it avoids making interpersonal comparisons of utility. Pareto efficiency exists when no person can be made better off by some reallocation of resources without making at least one other person worse off. But this could co-exist with very unequal incomes. An alternative approach is to assume that there is a benign dictator who defines a unique social welfare function for society, which reflects the dictator's preferences. The most socially efficient allocation of resources is one which maximizes social welfare. Clearly, different people would define different social welfare functions, so it is not clear on what basis one function is preferable to another. Applying allocative efficiency to education is about satisfying consumer preferences e.g. giving parents greater diversity in educational provision (i.e. in the school curriculum) from which they can choose.

2.2.3.3 *X-inefficiency*

The concept of x-inefficiency is an aspect of productive or internal efficiency. This concept was introduced by Leibenstein (1966). X-inefficiency exists to the extent that

the cost of a given level of outputs is higher than the feasible minimum due to technical or price inefficiency. X-inefficiency is often much larger than allocative inefficiency (Frantz, 1992). In organizations such as firms or schools, x-inefficiency can arise for various reasons, such as particular producers, workers or managers pursuing or advancing their own interests in terms of job perquisites or slack. As a result of x-inefficiency, institutional outputs may often not be produced in quantities that maximize consumer satisfaction. X-inefficiency may exist due to an indeterminate relationship between inputs and outputs, such as: contracts for labour being incomplete, the production function not being completely specified or known, and not all inputs being marketed or, if marketed, they are not available on equal terms to all buyers (Leibenstein, 1966).

The difference between actual outputs and the feasible maximum is termed “organizational slack”. Hence, in order to minimize x-inefficiency, ‘incentives, motivation, and other organisational dimensions’ should be appropriately set (Leibenstein, 1966; Levin, 1997:303). According to Leibenstein’s (1966:413) argument, the x-inefficiency of all institutions has greater implications for social welfare than allocative inefficiency:

the data suggest that in a great many instances the amount to be gained by increasing allocative efficiency is trivial while the amount to be gained by increasing X-efficiency is frequently significant.

This phenomenon is observed in both industries and schools. In most industries, despite equal scarcity of resources, some firms show greater efficiency than others. Especially, the lack of competition in the educational outputs of schools is associated with greater x-inefficiency. SBM is proposed by its advocates as a way of reducing x-inefficiency by placing decisions closer to the client.

2.2.4 Problems and issues in estimating the efficiency of schools

Estimating the efficiency of schools is, in many respects, quite similar to estimating the efficiency of firms. There are fundamental problems, both theoretical and empirical, in measuring outputs and inputs. In using input-output analysis to estimate the efficiency of an education process, basic problems are encountered in defining and measuring educational outcomes. According to Schwartz and Stiefel (2001) there are other problems in capturing the importance of the environment and of institutional forms and, equally, problems of data scarcity and quality. It is difficult to disentangle the causality of the relationship between inputs and outputs. This complicates the measurement of the efficiency of resource use. Hence, estimating the efficiency of schools is difficult. However, recent developments in the availability of micro-data, that is data estimated at the school or pupil level, have sparked an explosion of research into the estimation of productivity differences across schools and across time. Therefore, estimations of the efficiency of schools have recently been used for measuring the education production function techniques. It is necessary to discuss the methodological issues that exist in relation to my study (to evaluate the impact of SBRM in terms of efficiency incentives).

2.2.4.1 *Education production function*

The education production function is a quantitative representation of the relationship between inputs and outputs. It refers exclusively to the supply-side relationship, and therefore ignores the demand for education (Mayston, 2002; 1996:137-139). Typical inputs in the education production function are the characteristics of the teaching and learning environment, while outputs are generally defined in terms of students' examinations results.

Mayston (1996) shows that the level of resources experienced by a child will be endogenously determined if schools undertake optimising behaviour. It is assumed that a school is given a fixed allocation. Assume also that the school knows that the same level of resource inputs has a very different effect on a student's educational outputs, depending on the socio-economic factors which affect the outputs of the student. The school will take this into account when allocating their fixed amount of resources among their students. In other words, the school will systematically allocate resources to each student, such that the education output of the entire school is maximised. Hence it is difficult to estimate the causal impact of additional resources on learning outcomes, because the resources are not randomly allocated. However, school-level resources are also endogenous when they are related to factors which determine pupil attainments: e.g. compensatory funding formulae or richer parents choosing better resourced schools.

A further problem is that the production function coefficients do not represent what could be accomplished if production were fully efficient, but rather measure what is actually achieved in existing schools, which are probably inefficient. Hence, structural estimates of the production function using data from natural school settings do not estimate the production efficiency frontiers, but only 'average' efficiency. Although psychological aspects also contribute to producing educational outcomes, the measurement of the weight of their contribution is a problem.

There are other difficulties on the input side. One such is that probably no single input has much effect by itself. It is the inter-relationship between inputs which is important, and this is difficult if not impossible to ascertain or to reproduce in other schools. This is particularly due to the fact that many educational decisions are made

by the unobserved teacher in the classroom. Many of the inputs used in estimations are proxies for teacher quality, such as experience, qualifications or salary. The important dimensions of teacher quality are often not captured by the measurement of teacher attributes. Another problem is that efficiency in education cannot be measured using only staff and non-staff inputs supplied by the school, because every pupil brings some hidden inputs to school (i.e. socio-economic background, parents' educational backgrounds and income level, innate ability) which are difficult to distinguish and measure. These must be controlled for when estimating a production function.

One of the other problems is that education production is usually tested by measuring output only in terms of examination or test performance. It is argued that cognitive educational achievement is only one of many outputs of schooling, and not necessarily the most important one. This is because the principal function of schools is not to maximise cognitive achievements but to reproduce the social relationships of production, i.e. by socialising pupils into accepting hierarchal relationships.

Production function analysis must be tentative, for education is too complex to be reduced to a set of equations. Such analysis might be erroneous if all aspects are not considered. However, many empirical studies have been carried out both locally and internationally in the USA, the UK, and other European countries, using the education production function analysis technique.

A. Empirical findings

Empirical findings on the education production function have created a debate on 'whether additional school resources can improve the educational achievement of

students'. Hanushek, Hedges, Lane, Greenwald, and Krueger are the main protagonists in these recent methodological debates (Hedges, et. al., 1994; Burtless, 1996; Wößmann, 2001a). Hanushek (1997:141), referring to his studies of the education production function, argued that 'there is no strong or consistent relationship between school resources and student performance'. Furthermore, there seem to be large differences in the relationship across classrooms and schools, and the distribution of underlying resource parameters suggested that while resources are used effectively in some circumstances, in most circumstances they are not.

According to most relevant literature, no clear positive relationship can be seen in research between expenditure on schooling, or the quantity of resources, and pupil outcomes (Bullock & Thomas, 1997; Vignoles et al. 2000:1).

Hedges et al. (1994), and Krueger (1999 in Wößmann, 2001a) criticize Hanushek's (1997) argument. Hedges et al. (1994) criticise Hanushek's selection of samples for review, for including poor quality studies and including all the regressions in a single study, thus introducing bias. Applying criteria for the inclusion of only good quality studies, Hedges et al. (1994:5-14) reanalyse Hanushek's data, and find that their meta-analysis 'shows systematic positive relations between resource inputs and school outcomes. Moreover, analyses of the magnitude of these relations suggest that the median relation (regression coefficient) is large enough to be of practical importance'. Further, Hedges et al., using meta-analysis, highlighted that if the chances of being positive or negative were even, the odds of observing so many positive estimates would be less than one in a million.

Dewey et al. (2000), using a recent sample of data including 33 papers, and 127 regressions other than the data of Hanushek (1997) or Hedges et al. (1994), have affirmed the argument of Hedges et al. They have revealed a positive relationship between inputs and outcomes. However, their method has been criticised methodologically by Vignoles et al. (2000:18-20).

Furthermore, economic research has concluded that resource-rich schools produce graduates who earn more than graduates from schools where resource endowments are meagre (Burtless, 1996). Pritchett & Filmer (1999:223-239) also show that in developing countries there is a positive relationship between education expenditure, especially human resources, and educational outcomes.

Wößmann (2001b:16) tested the hypothesis that school autonomy has an effect on outcomes, using the third international mathematics and science survey data. Wößmann included control variables for the school environment, the amount of quality of teaching, peer group influences, and student time as inputs. However, these are difficult to define and measure, and they also directly influence ultimate outputs as well as outcomes. Wößmann (2001a) argues that there is little endogeneity bias in the estimate, because school resources do not move across natural boundaries in response to choice by educational decision-makers and so are not endogenous in a cross-national data set.

OECD (2001) carried out a programme to study international student assessment. It gathered data on the relationship between educational inputs and students performance internationally. Such data suggest that there is a relationship between school resourcing (including decision-making) and pupil attainment (OECD, 2001).

Programme to study international student assessment used strong sets of data (i.e. students' background, schooling resources) to support its empirical argument. However, some authors, like Gorard (2001), argued that concerning this type of comparison study, comparing the standards or effectiveness of a school system are not an uncomplicated task of counting outcomes. They showed the methodological difficulties which are associated with these studies. International comparisons are suspected by some authors.

2.2.4.2 *Data envelopment analysis (DEA)*

DEA is an analytical technique that can be used to assist in identifying best practice performance in the use of resources among a group of similar institutions. Such identification can highlight where the greatest gains can be made from improvements in efficiency, and help institutions to achieve their full potential. Further, DEA has been used as a technique to estimate each school's efficiency (technical efficiency) relative to the technical frontier of achievement and also to identify efficient peers for schools that are below the frontier. The frontier of achievement is composed of efficient schools which produce maximum educational attainment levels for given resource input levels and given characteristics of the pupil intake. Estimating the education production function gives an average measure of school efficiency, whereas DEA finds the most efficient schools. Vignoles et al. (2000:14) describe DEA as follows:

DEA estimates the performance of schools, relative to the education production frontier, by identifying those schools on the frontier. The schools on the frontier are the ones that minimise their use of inputs for a given level of output, or conversely maximise their output for a given level of inputs. Hence, DEA singles out the efficient schools operating on the frontier and then measures how far all the other schools are from that frontier.

According to Worthington (2001), DEA essentially calculates the price efficiency of a given organization relative to the performance of other organizations producing the same good or services, rather than against an idealized standard of performance.

DEA provides an efficiency score or index for each school. Inputs have varied from study to study; researchers have included measures of different inputs such as school characteristics (i.e. school size), school inputs (i.e. expenditure per pupil) and teacher inputs (i.e. teacher education, teacher characteristics). Using DEA requires estimating the efficient schools as the best performing ones in the sample and gives guidance on the relative performance of schools. The key advantage of DEA techniques is that they can manage multiple inputs and outputs of schools. Through using them, an outer efficiency frontier, rather than simply an average production function, may be identified. Further, DEA can be applied for measuring un-priced inputs for example decision-making, and on examination results. Hence, DEA techniques provide policy-makers with measures of the relative efficiency of each school.

Nonetheless, there are a number of disadvantages of DEA, the main argument being over the concept itself. DEA techniques require good sets of data to measure school efficiency, and the rigorous use of the techniques. Misclassification and errors in data will affect the reporting of efficient schools. A technical problem of DEA is that it is sensitive to assumptions made about the returns to scale in education production.

My study is intended to evaluate SBRM in terms of efficiency, using the empirical data derived from a sample of schools in Sri Lanka (2.4; Chapters Three; Six: KRQ3). However, at present Sri Lanka does not pay attention to the relation between school resources and pupil attainment. Hence, there is a methodological issue

regarding the evaluation of the impact of SBRM (both strengthened SBRM and the extension of SBRM) on efficiency, because data for DEA or production function analysis are not available.

To summarise, efficiency can be defined as depending on productivity, that is achieving maximum outputs from limited resources. Efficiency has been sub-divided into productive or internal efficiency, and allocative or external efficiency. Productive efficiency comprises technical and price efficiency. There are unsolved methodological problems over defining and measuring educational inputs, outputs, and outcomes, as well as over the education production function. Especially, these problems concern the application of efficiency to measuring multiple outputs and weighting the diverse preferences of different education consumers.

In the absence of data that would enable a study to avoid some of the major methodological difficulties of measuring efficiency, one needs to have recourse to interpretative methods, which require qualitative data. Interpretative data analysis is not concerned with directly testing hypotheses, will place emphasis on the data collection stage (Easterby-Smith et al., 2002:117). The interpretative method can be used for content analysis and grounded analysis.

Hence, in view of these methodological and data difficulties, my research does not use the education production function estimation or DEA to assess the way the policy has been implemented in Sri Lanka.

2.3 Equity

Education economists are also concerned with equity in the distribution of education in terms of both financial and physical resource allocations and outcomes. The equity concept is related to notions of 'fairness' and 'justice' (Psacharopoulos & Woodhall, 1985:246; Simkins, 1995; Ladd et al., 1999:9) and it is 'a goal relating to the way in which resources should be distributed or shared' (Barr, 1987:427 in Lee, 1996:46). Although some writers have used the term 'equity' with a similar meaning to 'equality', Lee (1996:38) states that there is no consensus on whether they are similar or different. Basically, equity issues arise in relation to needs (Lee, 1996), and equity is concerned with how the outputs and the cost of producing them are distributed between individuals and groups in society. Hence, an efficient allocation of resources can be judged as inequitable, depending on one's social preferences (value judgement). In so doing, procedural and distributional equity should be distinguished.

Procedural equity, which refers to the consistent application of agreed rules and regulations, is a dominant criterion for social decisions which is advocated by libertarian or constitutional economists who regard the market process as procedurally equitable (Levačić, 1995:30–31). Procedural equity refers to common rules, in contrast to determination by administrative discretion. On the other hand, distributional equity refers to the distribution of those items that yield welfare to individuals. It can be treated in a number of ways, and the terminology is often confusing and inconsistent (Simkins, 1995). But Levačić (1992b:27) argues that the process of formula funding is procedurally equitable, even if it may not be judged to be distributionally equitable.

Distributional equity is the form of equity which most people associate with the concept of social justice. This concept has particular importance in education. According to Levačić (1995:32) educational attainment is unevenly distributed and is closely associated with the distribution of income and wealth. According to Monk (1990:42) and Wise (1967 in Marsh, 1998) distributional equity is divided into two broad categories: input-based and outcome-based. Input-based distributional equity is judged in terms of criteria such as: the 'distribution of expenditure per pupil', 'maximum variance' (placing a limit on the permitted variance in expenditure per pupil), and 'foundation' (a prescribed minimum level of expenditure provided for all pupils), while outcome-based equity is concerned with criteria such as 'minimum attainment' (sufficient resources should be provided to enable all pupils to reach a minimum level of achievement), 'full opportunity' (resources should be continuously provided until the marginal gains of all pupils are reduced to zero), 'levelling' (resources should be distributed so that the most disadvantaged are favoured most and variances in achievement are minimized), and 'competition' (resources should be provided for all pupils in proportion to pupils' ability to benefit).

Distributional equity can be sub-divided into horizontal equity and vertical equity.

Horizontal equity is the principle that people with similar needs should be treated similarly. It therefore requires that children with similar learning needs should have the same quality and quantity of educational provision. This usually implies that roughly equal amounts should be spent on each child's education.

Vertical equity is the principle that students should be provided with an education which matches their different learning needs. Those with learning difficulties require additional spending in order to have access to the standard of education provided for the majority of children (Levačić, 2000:15).

According to the principles of horizontal equity, every child has an equal right to obtain equal educational opportunities within the available resources. Simkins (1995) and Ladd et al. (1999:18-19) define this as the equal treatment of equals. Pupils have similar educational needs and similar rights. Hence their educational needs should be met without any discrimination. Indeed, according to these principles, education should be used as a vehicle to provide equality of educational opportunities for all social groups. Equity should cover areas such as: access to education (the ex ante aspect), availability of resources for learning, equal performance, and life outcomes (the ex post aspect). Equality of opportunity requires that all students should have an equal chance to succeed, although their actual observed success will depend on personal characteristics, such as motivation, desire, effort, and, to some extent, ability. Ladd et al. (1999:13) argue that equal opportunity means that success should not depend on circumstances outside the control of the child, such as the financial position of the family, geographical location, ethnic or racial identity, gender, and disability. But action to promote equality of opportunity often inverse vertical equity policies not horizontal (equal spending on equality).

Mingat & Tan (1986:276) distinguish between types of equity according to the time scale over which educational benefits are received.

The first relates to the impact of education on the future *distribution of income*, while the second, to *access to schooling*. Restricted enrolment implies scarcity in the supply of graduates. Their future earning in the labour market is therefore likely to be unusually high, implying high private returns to education. Increasing the size of enrolment would counteract this effect, thereby improving equity in the future distribution of income.

Mingat & Tan say that the equitable allocation of resources would increase access to schooling. This, in turn, would increase equity in education and income redistribution.

Equity is a crucial concept for guiding the allocation of resources. The importance of judgement, and hence subjectivity, in the definition is evident from the use of the words 'appropriate', 'potential' and 'needs'. Most developing countries have inequitable features in the horizontal distribution of educational resources, e.g. human, financial and physical resources, among the different types of schools and provinces.

According to Simkins (1995) vertical equity is the 'unequal treatment of unequals'. Applied to education, vertical equity relates to differences in children's specific educational needs. Differences in educational needs can be caused by the external environment (i.e. geographical locations, socio-economic backgrounds). Furthermore, some pupils have different special educational needs unrelated to external social factors e.g. pupils with disabilities or impairments. Vertical equity implies that each child can access an education appropriate to his/her individual learning potential and needs (Levačić, 2000:14).

Some authors argue that, when used as a criterion for resource allocation, needs should reflect differences in pupils' 'objective needs'. Therefore, educational policy-makers have to search for appropriate measures of needs that are not dependent on a single individual's judgements. Furthermore, those who take decisions with respect to equity should have a basic understanding of general concepts of needs and equity. For this, they have to categorise needs and requirements and then prioritise accordingly. Educational economists have recommended factors which should be considered in FFS, such as special educational needs, and social and economic disadvantages. Educational policy-makers and managers need to make equity judgements when

allocating resources among different age groups, different curriculum areas, different courses, and students with different learning needs (Levačić, 2000:15).

2.3.1 Measurement of equity in education

Berne & Stiefel (1984:4-5) present four major practical areas to be addressed in considering equity in education, as follows:

- (i) Who? What is the makeup of the groups for which school finance systems should be equitable?
- (ii) What? What services, resources, or, more generally, objects should be distributed fairly among members of the groups?
- (iii) How? What principles should be used to determine whether a particular distribution is equitable?
- (iv) How much? What quantitative measures should be used to assess the degree of equity?

The first area concerns children who attend the public schools and taxpayers who pay the costs of public education. Equity for children concerns the framework of educational opportunity, and taxpayers are related to the public finance context of the tax burden. Type one measures of equity are not concerned with anything other than differences in the amount received.

The second area concerns the resources that are required for the defined student outcomes. Type two measures, in contrast to type one, are concerned with both the magnitude of the inequality and the identity of those who are treated unequally. For example, in type two, equity income distributions would relate to race or gender in some countries.

The third area relates to the principles that are used to determine whether a particular distribution is equitable. There are three equity principles: those of horizontal, vertical, and equal opportunity.

A fourth area concerned with quantitative measures should be used to assess the degree of equity. In measuring the degree of inequality in a distribution, a number of measures of dispersion are used, for example, comparing the highest and lowest percentiles, or calculating the gini-coefficient. Percentile comparison can be used for measuring the magnitude of the share, while ranking is based on the distributional proportion. The units are divided into equal-sized groups. An understanding of the gini-coefficient presupposes understanding the Lorenz curve. The Lorenz curve builds on the comparison of equal-sized groupings. In this, recipients have to be ranked based upon the magnitude of their respective shares of what is being distributed, and the cumulative percentage distributions then calculated.

To summarize this section, equity deals with the fair distribution of resources in education to fulfil consumers' needs. In such a distribution, there should be procedural equity, with agreed rules and regulations, and distributional equity, both horizontal and vertical. Measuring equity in education has to be done very sensitively and with an understanding of the problems. Therefore, in this research, it is necessary to employ some standard measuring techniques, because it will evaluate the impact of FFS, as operated under NBUCRAM in Sri Lanka, on the equity of resource allocation (2.5 and Chapter Five).

With reference to these two fundamental principles, efficiency and equity, SBRM and FFS will be reviewed, using international literature that is relevant to Sri Lankan policy and practice.

2.4 School-based management

SBRM is one of the key sub-components of SBM, which has been part of the move to decentralized educational management in contemporary education systems. SBM is an important concept for educational reforms in most less-developed countries and newly industrialized countries (Caldwell, 1994) and has influential advocates, including World Bank.

Decentralization refers to the devolution of decision-making authority from the central government or provincial councils (central level) to the school level (lower level of organization), for certain financial powers and responsibilities. It involves a shift in educational policy and administration that repositions power from higher to lower authorities in relation to one or more of the following areas for decision-making: curriculum, budgeting and resource allocation, methods of teaching, management of staff and students, selection of pupils, and in some instances assessment (Caldwell, 1994; Abu-Duhou, 1999:17; European Commission, 2000; Levačić, 1998; 2003). Decentralization in education is entwined with a number of distinct political aspirations, such as greater efficiency and improved performance through a technicist rational approach to management, or worker participation in decision-making as the key to improved performance, or greater participation by service users (Levačić, 1995:3), and greater participation by local communities. According to Mintzberg (1979:181-213) decentralization promotes flexibility in decision-making.

According to Fullan & Watson (2000:453) 'educational decentralization is a worldwide phenomenon, but as a concept it hides more than it reveals'. Decentralized

management has a long history in the private sector (Wohlstetter & Mohrman, 1993). With regard to the decentralisation of school-based budgeting, Grace Lang (2000) points out that 'best practices on decentralization: what kind of things can be effectively decentralized and what will be the implementation arrangements' are still to be explored. Caldwell (1994) and Odden (1997 in Levačić et al., 2000:489) emphasise that 'decentralizing resource management to the school is a world-wide trend undertaken as part of strategies to increase the efficiency' of resource use and to support new school designs for high performance accompanied by increased accountability.

In addition to promoting efficiency in the education system, there may be other reasons for introducing SBM, such as: responding to political and social demands for encouraging the growth of civil society and direct community involvement, and the quantitative development of education (through improving distributional procedures, and securing greater funding in education by mobilizing local resources). Newly industrialised countries have tended to move towards decentralization of powers to the periphery (e.g. in Hong Kong).

According to the aforementioned definitions, some forms of SBM emphasize that parents are given authority in school affairs and have ownership of those activities (Brown, 1990:71). This form of SBM permits autonomy and participatory decision-making at school level (Levačić, 1995:3). Many authors describe features of effective SBM in terms of school financing and management; the main features that SBM may involve include (i) delegation, autonomy, flexibility and responsiveness; (ii) planning by the principal and the school community; (iii) adoption of new roles by the principal; (iv) a participatory school environment; (v) collaboration and collegiality

among staff; (vi) a greater sense of personal efficiency for principals and teachers; and (vii) freedom to adjust to local circumstances (Brown, 1990; Abu-Duhou, 1999:93; Dimmock, 1993:3; The LMS Initiative, 1990). Further, Leithwood & Menzies (1998:327-339) and Murphy & Beck (1995 in Fullan & Watson (2000:455) have identified four control types of SBM: (i) administrative (the principal is dominant); (ii) professional (teachers are dominant); (iii) community (parent/community dominates); and (iv) balanced (parents and professionals are equals).

One of the key functions of any school is that of increasing the level of students' performance (Wohlstetter & Odden, 1992:529). In so doing, schools often have to respond to set targets. Thus, it is advocated that schools should be offered greater autonomy and freedom as well as accountability in achieving defined targets or in satisfying parental preferences. Therefore a decentralized school management programme has been combined in many countries with applying 'quasi-markets'. The term 'quasi-market' denotes that while purchaser and provider are separate, purchasing power comes not directly from consumers, as in normal markets, but from the state (Le Grand, 2001:3; Bradley & Taylor 2002:297-298). However, parents make choices using resources provided by the state. Many quasi-markets have other differences from normal markets, including the appointment of an agent to act as purchaser on behalf of the final consumer, and a preponderance of non-profit or even public providers. According to Adnett & Davies (2002), quasi-markets might be expected to increase productive efficiency in schools: incentives are provided by competition from other schools, and scope to respond to these incentives is provided by the self-management of schools.

SBM advocates an equitable approach to the allocation of resources, and most countries have introduced formula funding mechanisms for the purpose of allocating budgets to schools. Furthermore, SBM has frequently involved the design of formulae to address the issue of equity. One aspects of SBM has often been to introduce and implement SBRM.

2.4.1 School-based resource management

SBRM is a subset of SBM, as it is limited to devolving decision-making authority to school level for financial and resources management, usually within a framework of external accountability (Caldwell, 1994). Thus, considering the common characteristics of both, this chapter is concerned with similar definitions of SBM and SBRM in terms of resource allocation and management, and decision-making power and responsibility, at school level. With respect to an early scheme for devolved financial management in the English Local Education Authority (LEA) of Cambridgeshire, (Downes, 1988:5) the objectives of local financial management/SBRM were to:

- i. enable the governors and head of each school to make the most effective use of the resources available to them;
- ii. give each head flexibility within an agreed budget to manage the school.

It is clear that SBRM is dependent on the quality of decision-making and financial administration at school level, and on the quality of support to schools given by the regional and national level education authorities. Also, SBRM concerns decisions about how to allocate the budget between different spending alternatives. It is conducted efficiently if the school achieves the best possible educational outcomes from the resources allocated to it via the devolved allocations.

2.4.2 Resource delegation

Questions regarding SBRM include what resources can be best managed at school level, and who is to be given responsibility for management (i.e. principals, teachers, community, and governors).

According to Caldwell (1998:449), in relation to SBRM, two broad types of decisions are to be made by governments, namely the total amount of the overall budget to be allocated to schools and how that amount is to be allocated to individual schools. Answers should be found and decisions made prior to devolving resources to schools. Further, the international experiences and reviews of literature have examined and defined the concept of SBRM which guides the policy-makers and education planners. Abu-Duhou (1999:30) and Department for Education and Employment (2000) have listed knowledge, technology, power, material, people, time, and finance as resources to be devolved to school level. It is usual to distinguish between 'human' and 'physical (material)' resources. Human resources can be subdivided into teaching (academic) and non-teaching (non-academic) staff resources. Physical (material) resources can be divided into: buildings, educational learning materials and equipment (including texts and library books), furniture, consumable/perishable materials, stationery, and services [i.e. communication (telephone, postal, mass-media, and newspapers), water, electricity, ground and building maintenance]. Another way these resources are divided is into real and financial. International Institute for Education Planning (1989:2) has distinguished them thus: real resources refer to personnel, equipment, textbooks, building etc; while financial resources serve to pay for the purchase or utilization of real resources. Another important resource is time. School principals have time allocation powers in accordance with the central or

regional/provincial educational legal framework (e.g. timetable management and implementation).

2.4.3 Arguments for and against delegation of resources

There are a number of arguments for and against SBM/SBRM. The first fundamental argument for SBM is that it creates improvements in school efficiency in resource management, because a much greater proportion of decisions are taken at school level where there is better information about the best ways to use resources. Effective budget management involves more than priority setting; it requires planning, monitoring and the creation of appropriate systems and processes to deliver the budget plan (McKeown et al., 1997). On the other hand, in responding to students' performance targets schools should have flexibility and responsiveness. According to Dimmock (1993:4) flexibility will lead to 'generating innovation and creating a more rewarding work environment and a better motivated staff'. Brown (1990:157-158) argues that 'SBRM had increased the flexibility of decision-making'. In practice, flexibility enables schools to match resources to students' needs. Bullock & Thomas (1997:143) express the importance of greater flexibility in allocating monies, financial/management freedom, resourcing, capitation, maintenance, decision-making, and controlling and monitoring.

A second argument for SBM/SBRM is that it will help to devolve powers to stakeholders at grassroots level (Abu-Duhou, 1999:9). Thereby, they have commitment and are accountable for utilizing the allocated resources efficiently and effectively. According to Fullan & Watson (2000:460) SBRM contributes to local problem-solving and the mobilization of effort by all stakeholders. Malen et al. (1990:290) describe SBRM as capable of being viewed conceptually as a formal type

of governance structure that identifies the individual school as the primary unit of improvement and relies on the redistribution of decision-making authority downwards as the primary means through which improvements can be stimulated and sustained.

In addition, SBRM leads to the adoption of a new role by the principal. Chapman (1990:226-227) stated that, as a result of the introduction of the SBRM, principals have found themselves 'working with new values, new decision-makers and a new set of management decisions and responsibilities'. Further to that, principals have to play a role as co-ordinators of different interest groups, with accountabilities to both the school community and the authority (Dimmock, 1993:5).

If the staff take joint decisions for improving students' performance and for developing the quality of education, it is agreed that this participatory approach will establish collaboration and collegiality among members of staff, which help to achieve school-level objectives and tasks. According to David (1989 in Cheng, 1993:7) and Bullock & Thomas (1997:147-153) the participatory approach will establish ownership at the school level. A more participatory environment will enhance the sense of personal efficiency of principals and teachers. Individual expectations will ultimately create a situation which may result in enhanced educational outcomes. However, a participatory approach is not necessarily a feature of SBRM. Schools may evince cultures such as the administrative dominance of the principal or/and of the professional teachers or/and of the parent and community or/and one in which parents and professionals are equals (balanced).

SBRM includes features such as: planning by the principal in collaboration with the entire school and the school community, so that resources are allocated in accordance

with the school-level plan(s). School-level resources should be linked with the learning activities and then with learning outcomes. In the process of SBRM, the school can be analysed as an input-output system. Generally, the school organization has to change and improve pupils' knowledge, skills, values, attitudes, behaviour (disciplinary), punctuality, attendance, and performance. In addition, the school should keep in mind the need to make the best use of the limited resources which they have received from different sources i.e. the central and provincial ministries, and any other organizations.

Almost all these arguments boil down to greater efficiency achieved by different, but related means. However, despite these arguments for SBM/SBRM, there are efficiency arguments against SBM/SBRM as an appropriate application to education of private-sector management models.

Firstly, it is argued that SBRM is an additional burden on principals, teachers and the community, and distracts them from focusing on instruction. Currently, principals have on a daily basis more administrative than academic responsibilities. They think that this kind of function creates additional work for them and does nothing to improve the quality of education at school level. Also, SBRM ignores the economics of scale for resources that it is more efficient to manage at school authority level.

A second critical question is whether SBM/SBRM can contribute to improving students' outcomes. Improving students' performance is affected by other hidden factors, some of which are difficult to measure and evaluate. On the other hand, when it is adopted, there are many more management tasks to distract principals from

instructional leadership, and they may not have time to pay attention to improving pupils' performance.

Thirdly, some authors argue that a centralized system is more accountable to higher authorities than a decentralized system. Also, a centralized system ensures common standards of equality in the education system better than a decentralized system. In particular, less-developed countries have faced different types of micro-political influences which interfere with SBM/SBRM principles. In addition, it is assumed that when SBM/SBRM is implemented, school-level management capacity improves significantly. However, if school principals feel that they lack management capabilities, this situation may lead to the inefficient implementation of such programmes.

Finally, to sum-up the arguments against SBRM, issues and constraints may emerge especially, in less-developed countries, at the operational level. These include financial crises, illiquidity and cash rationing, external and internal influences (micro-politics), the economic conditions of the country, and limited management capacity. Hence, policy-makers and educational planners should diagnose these risk factors in advance, and relate their policies to the existing situation. Thus, monitoring, reporting and evaluations need to taken place continuously. Ignorance of these risk factors, lack of consideration paid to the existing situation in policy and decision-making, the lack of participation by practitioners (e.g. principals, teachers) in decision-making and the lack of technical capacities may constrain the sustainability of a SBRM programme or result in implementation failures.

When evaluating the impact of SBRM in Sri Lanka, one should be mindful of these arguments for and against SBM/SBRM. Hence, it is necessary to review the empirical evidence of how SBRM has been operationalized in different countries, and with what effects.

2.4.4 Empirical evidence of the success of SBRM

This section examines the empirical evidence in relation to SBRM in areas of school-level resource management (budgeting, decision-making), and the promotion of efficiency incentives. Special reference is made to studies of the implementation of SBRM carried out in English-speaking countries. SBM/SBRM in many English-speaking developed countries have been institutionalised and operationalized in different ways. Examples include: 'LMS' in England and Wales; 'Schools of the Future' in Victoria (Australia); 'Better Schools' in Western Australia; and 'School-Based Decision-Making' in Canada (Abu-Duhou, 1999:18-19).

England and Wales, the state of Victoria (Australia), Canada, Hong Kong, New Zealand, and some school districts in the USA have achieved a high level of devolution of financial responsibilities and decision-making powers to school level (Abu-Duhou, 1999:32). In addition, the Netherlands, Sweden, Belgium, Spain, Hungary, Uganda, India, Guatemala, El Salvador, Brazil and Indonesia have achieved substantial progress with SBM/SBRM activities (Abu-Duhou, 1999:36-61; Grace Lang, 2000; European Commission, 2000; McMahon et al., 2001). Some countries mentioned above, e.g. England, the USA, Australia, France and New Zealand, have already devolved decision-making powers in terms of SBRM functions to the school level. India also has delegated more freedom to school level for these functions (World Bank, 2000; Grace Lang, 2000). In the late 1980s, Edmonton in Canada established

‘school-site decision-making’ practices, resulting in the decentralization of the allocation of resources for teaching and non-teaching staff, equipment, supplies and services. These were piloted, and are now institutionalised across the system as a comprehensive approach.

The school management initiative programme in Hong Kong provided greater participation by teachers, parents and past pupils in decision-making and management. This is one of the basic principles of school management initiative. Further, greater flexibility can be seen in school finance, participation in decision-making, and the framework of accountability (Abu-Duhou, 1999:37-40).

Empirical evidence for some states in the USA shows that parents, teachers and principals in each school are empowered to set their own priorities, allocate their budget accordingly, shape their curriculum, and hire and fire personnel (Abu-Duhou, 1999:46-52). Some states in the USA have implemented the shared decision-making model (Los Angeles), while in Australia there is some involvement of parents and teachers in making decisions. Decision-making over the allocation of resources used by schools has increasingly been transferred to the school level, and school-based personnel are generally held more accountable for their performance and for the student outcomes achieved (Abu-Duhou, 1999:43-55).

England, where the term used was LMS, has increased the school governors’ powers of decision-making. Policy-makers predicted that under the LMS changing decision-making structure, local authorities and school management would improve educational outcomes for pupils at the classroom level. LMS, by giving governing bodies and headteachers the power to decide the disposition of the school budget (which accounts

for at least 85 per cent of the resources available for schools, including staff), provides them with the means to secure school improvement (Levačić, 1998:332) through improved resource allocation.

2.4.5 Assessment of impact of SBRM on efficiency

The assessment of the impact of SBRM on efficiency in this section focuses on studies which have been based on the two main methodological approaches -the interpretative perspective, using qualitative data, and the scientific/positive approach (hypothesis testing using quantitative data)- (Easterby-Smith et al., 2002).

Interpretative methods assume that 'reality' is determined by people's beliefs, rather than by objective and external factors (Easterby-Smith et al., 2002:28-30). Hence, the task of the social scientist should not be to gather data and measure how often certain patterns occur, but to appreciate the different ways of constructing and placing meaning upon experience. Attention is paid by the researcher to what people, individually and collectively, are thinking and feeling, and to the ways in which they communicate with each other, whether verbally or non-verbally. Interpretative methods attempt to understand and explain why people have different experiences, rather than search for external causes and fundamental laws to explain their behaviour. The aim of such methods is to increase the general understanding of a situation by incorporating stakeholders' perspectives into the study. The unit of analysis of interpretative methods may include the complexity of the whole situation, and generalization is through theoretical abstraction. Researchers using this method should distinguish between the collection of data and its analysis and interpretation. Within this method, content analysis, sample data and interview data can be used.

The scientific/positive approach, applied to investigating the impact of SBRM, requires sufficient variation in resource allocation policies to generate the data needed to test whether different regimes have different impacts. The scientific method requires formulation of hypotheses, observations, testing and the confirmation or disconfirmation of hypotheses. Further, this method requires a set of high quality data on outcomes and inputs, with controlled variables (Easterby-Smith et al., 2002). Furthermore, the scientific method requires a clear distinction between data and the processes of collection and analysis.

The strengthened basic SBRM programme was not introduced on a pilot basis in Sri Lanka, although the extension of the SBRM programme was introduced on a pilot basis. Therefore, a social experimental research design cannot be used to assess the efficiency of these policies. Only indicators pre and post ‘treatment’ could be compared, though factors other than the ‘policy treatment’ may have affected outcomes such as examination results. Even if we could observe improvements in examination results after controlling for prior attainment, we could not definitely conclude that these improvements were due to the policy, since they could be due to other factors. In addition, there was little deviation between strengthened basic SBRM and the extension of SBRM, making it difficult to distinguish between the inputs over which schools were given decision-making powers.

Given these problems in establishing a causal effect of SBRM, I concluded that the interpretative method was more appropriate for evaluating the impact of the programmes in terms of efficiency. Therefore, it is necessary to review the literature on studies that have followed a similar approach, using interpretative methods, as well as those studies that followed the scientific approach.

Early English studies of SBRM made use of the interpretative/qualitative method. This is because the policy was implemented nation-wide and not on a pilot basis, and there was insufficient coverage of data at pupil level on attainment and its determinants. For example, the studies of the Audit Commission (1993), Maychell (1994), Bullock & Thomas (1994; 1997), Levačić (1995; 1998), Thomas & Martin (1996), and Levačić & Glover (1997; 1998) did not use the scientific/positive approach, with hypothesis testing using quantitative data, because the data to implement a research design within this methodology were not available.

In England, LMS was (politically) intended to promote 'cost efficiency' (in the usage of inputs) through schools having delegated budgets to spend as they determined on staff and material resources, and with the freedom to purchase from a wider range of suppliers than before.

The Audit Commission (1993) studied how schools took over the management of their finances on, or before, April 1991. The sample consisted of 100 schools including 88 local authority and 12 grant-maintained schools. The Commission gathered data from school governors and headteachers on how schools spent public money. Data analysis used an interpretative approach.

The Commission concluded that schools were growing in financial independence. Further, the study revealed that the time spent by staff and headteachers on management functions had increased. The accountability of headteachers focused more than in the past on their use of public money. Changes in the finances of state schools in England and Wales increased as a result of the Education Reform Act in 1988. The Commission's purpose was to find out how the schools were adapting to

taking over new financial management responsibilities, hence, the interpretative method was appropriate. The regulations for financing schools as well as the practical situation in schools were compared and analysed.

Maychell (1994) provided findings from a one-year (1993-1994) study of the impact of LMS on schools' patterns of spending three years after LMS was introduced. Her main purpose was to describe how schools had responded to managing their delegated budgets. Issues and trends, decision-making processes, and the relationship between decision-making and pupil outcomes were examined. Questionnaire surveys, interviews, documentary evidence, and the case study design were used.

Maychell made some important findings about, how schools responded to managing their own budgets. She found that half of the primary schools in her sample had made greater use of classroom assistants since financial delegation, and two-thirds of secondary schools had increased their use of curriculum support staff. Changes in teacher-pupil ratios, the increasing management functions of teachers and headteachers, and increased autonomy of schools were identified. One problem with this study was the lack of school financial data. According to Maychell (1994:6), only 30 per cent of the questionnaires were returned. Evaluating the impact on the relationships between decision-making and pupil outcomes requires a strong set of data, which this study did not have.

Bullock & Thomas (1994), four years after the implementation of LMS, carried out a study to evaluate its impact. Data was gathered from three levels, through questionnaire surveys, semi-structured interviews, and school visits. The sample size

was 800, 188, and 169 schools at three levels. The qualitative data gathered were analysed using the interpretative method.

The findings of the study were categorized under six sections: funding; pupil enrolment; impact on staff; the nature of decision-making; the roles of the three key groups (the headteacher, LEA and governing body); and the impact upon the learning of pupils. They concluded that LMS had a significant positive impact on each element. This study focused on the perceptions and attitudes of headteachers to LMS, and examined the relationship between these attitudes, and their perceptions of the impact of the programme. According to Bullock & Thomas (1994:144), LMS is more open and transparent in terms of formula funding, and over 90 per cent of schools surveyed welcomed the flexibility of the new programme. The schools' role directly impacted on a pupil-led formula budget, and the administrative workload increased as a result of the implementation of LMS. The study was able to obtain data only on headteachers' perceptions of the impact of LMS on students' learning outcomes, not on the actual outcomes.

Levačić (1995) studied local management practices of schools, with the focus on how delegated budgeting improves internal efficiency. The author used the evaluation criteria of efficiency, effectiveness, equity and choice, responsiveness and diversity, the official aims of the LMS policy. Data were gathered mainly from an in-depth study of one LEA and 12 schools. Half had gained by formula funding, and the other six lost budget. The schools varied in size, and included both primary and secondary. Content analysis and descriptive and interpretative frameworks were used for presenting the analysis.

On the findings of the study, Levačić (1995:188) refers to the need for organizational changes to implement policies which achieve their objectives. The majority of schools succeeded in coping with managing their own budget. The main impact of LMS was that school-level decision-making on resource allocation was increased. School-level financial management led to some growth in formalized school planning. Further, LMS affected the role of the headteacher, and an additional burden of management responsibility was placed on the school (Levačić, 1995:194). The main findings of the research were that schools changed their resource uses, and that there was evidence of improved cost efficiency (i.e. internal).

However, this study paid less attention to evaluating how an effective resource allocation process would improve the quality of teaching and learning. Further, the study emphasized the lack of UK research evidence on the education production function (relationships between inputs and learning outcomes).

Thomas & Martin (1996) studied the resource management of 18 secondary schools, including LMS and grant-maintained schools, related to cost-effectiveness in England and Wales. Using survey data, interviews (with governors, headteachers, senior staff, teaching and support staff, parents, and pupils), and case studies, they examined the evidence on three questions. These were: (i) how are these secondary schools using their greater responsibilities over educational resources? (ii) what are the characteristics of the decision-making processes which relate resources to learning? and (iii) how is the exercise of these responsibilities linked to the standard and quality of learning in the schools? (Thomas & Martin, 1996:4). They used an interpretative/perspective method, with qualitative data. They followed a descriptive and interpretative style in reporting the findings of their study.

Thomas & Martin's (1996:161-180) findings revealed that the new resource allocation and management process has given greater flexibility and autonomy for schools. Further, they emphasized that the decision-making process leads to more effective mixed-ability teaching. All the schools in the sample used their delegated powers creatively. In addition, the cost-effectiveness of schools may be affected by the headteacher's management capabilities and capacity. Furthermore, they highlighted the need to make judgements about the impact of resource choice on learning, and that organizational characteristics should be in place to sustain the school as a cost-effective institution. An important feature of this study was that pupil outcome changes and the effects of other contemporary changes were not measured. Also the study does not deal with the indirect benefits of school resource management, because the answers from the sample were inadequate for considering these.

Bullock & Thomas (1997) analysed and evaluated the nature and success of decentralization. They reviewed the literature on decentralization in relation to 'decentralized school management', using evidence from eleven countries. Further, analyses and reported empirical data were gathered from 800 locally managed schools in England and Wales. On the impact of LMS in England and Wales, they discussed some fundamental questions about the effectiveness of new forms of autonomy, and their benefits and equity in terms of provision and learning outcomes.

Concluding their study, they showed that the improvement of management provides more empirical evidence for SBRM. Enhanced management responsibilities for the use of the budget have had great effects on the work of governing bodies and on that of headteachers and senior staff. As a result of these changes, the governing bodies and the headteachers, with the staff, are firmly held accountable for the performance of the

schools. Also the headteacher has a degree of independence from the higher authorities, and considerable powers are vested in the school. Headteachers have to work with teachers and parents, as well as the community, and this leads to improved interpersonal relationship skills for managers. Particular attention was paid to the role of the governing bodies of each school. The study concludes that LMS has contributed to improved efficiency at school level.

There is, however, a lack of firm statistical evidence as to how increasing budgetary flexibility directly impacted on students' performance (Bullock & Thomas, 1997). The study explored the implications of the data for practice, as against the intentions of national policy.

Levačić & Glover (1997) studied the problems of operationalising the key concepts of efficiency and value for money and the extent to which schools have adopted the rational approach to resource management through the contents and statistical analysis of 66 secondary school inspections reports. Schools acquired significantly greater powers and authorities for self-management. They evaluated the efficiency with which a school used its resources as a new dimension to its work.

The study concludes that the most of schools had satisfactorily adopted all elements of rational resource management model which is characterised by the 1998 education reform act. Further, the majority of schools had satisfactory financial management and descriptive school development plans. However, costing plans, monitoring and evaluation were weak areas.

Levačić & Glover (1998) investigated the relationship between the efficiency of resource management and school effectiveness, using data from 117 secondary school inspection reports produced by OFSTED during the period from April to December 1994. These reports concerned different types of schools and geographical areas. Further, four case studies were selected from the sample for in-depth study. The objective of the local management of English schools is to enhance the quality of education by enabling more informed and effective use to be made of the resources used for teaching and learning. Therefore they studied the association between resource input and management processes. Further, they examined educational effectiveness measures. Levačić & Glover outline how the inspection reports provided a useful source of data for examining the extent to which schools were implementing a 'rational-technicist' model of resource management, and the association between the adoption of this model and the educational effectiveness of schools. A framework was developed for assessing and analysing the data on school effectiveness, using both qualitative and quantitative methods. Their study is an example of deriving quantitative measures from qualitative data (Levačić & Glover, 1998). Quantitative indicators of the extent to which schools are assessed as efficient in managing resources were studied at school level. They were assembled following three variables for the analysis: (i) resource inputs into schools, (ii) management processes for rational decision-making on resource allocation, and (iii) educational effectiveness in terms of teaching and learning and examination results. Statistical tests and the content analysis of report texts were used.

The findings of the Levačić & Glover (1998:96) study have been interpreted at two levels. First, it is an investigation of the association between efficient resource management and school effectiveness, using OFSTED's definitions for these concepts

and its framework for gathering and interpreting evidence on these. Second, if the OFSTED inspection reports were constructed for validity and reliability, then the findings of their study were interpreted as a test of the hypothesis that there is a relationship between the efficient deployment of resources in schools and the quality of teaching and learning. Finally, using statistical analysis, Levačić & Glover suggested that there is a positive association between school effectiveness and rational management practice. A systems model of the school implies that efficient management processes lead to efficient resource deployment and consequently to effective educational outcomes.

A strength of this study was that it was based upon an established framework for inspection and a consistent process of reporting, which required inspections to back judgement with evidence. However, as the authors noted, there are differences between data collection for inspection reports and those techniques employed in social science research. Another important issue of this study is the need for caution in interpreting an association between variables. Association does not necessarily imply causation, or in this case a positive level of causalities from rational school institutional planning to educational quality. The authors outlined a number of possible interpretations for the positive association between the two variables, and problems with their conclusions. For example, the problem of their identification of appropriate methods to diagnose a causal relationship between variables and the outcomes. Measuring learning outcomes is difficult, because the intangible nature of educational outcomes makes them difficult to estimate. Also the ambiguity of the relationship in education between the quantity of resource inputs and the resulting outcomes will affect the conclusions. As this study was mainly concerned with the interpretation of

available OFSTED inspections reports, they did not follow a scientific/positive approach.

Levačić (1998) reviewed the evidence of the impact of six years of LMS in England. The study considered a theoretical basis for the link between SBM and local management, and improved school performance in terms of educational outcomes. The LMS policy predicted that changing the decision-making structure would improve educational outcomes for pupils. Hence, the impact of the local management of schools was studied on the basis of efficiency, effectiveness and equity. This study used empirical data and the literature on SBM to investigate the impact on schools. It defined SBM and interpreted the data in relation to the evaluated criteria.

The finding of this research on the impact of LMS, specifically the lack of firm evidence of consequential improved educational outcomes for pupils, is then interpreted in terms of a theoretical basis for local management. Further, empirical evidence has shown that SBM as well as SBRM has promoted collective decision-making and a 'bottom-up' approach in planning and implementation at school level, whereas managers of centrally controlled resources have advocated and promoted 'top-down' planning and implementation of the curriculum. The key feature of LMS, as a theory of school effectiveness, is that it provides school managers with the means to decide how best to allocate available resources in order to meet locally determined priorities for school improvement within an externally set framework of expectations (Levačić, 1998:340). It is claimed that the cost efficiency of resource allocation in schools has improved. However, on the key question of whether local management of schools in England and Wales has improved educational outputs in schools, there is an absence of good empirical evidence, in part because it is methodologically difficult to

obtain (Levačić, 1998:347). However, according to the data analysis, this study emphasised that LMS is required to promote accountability for educational outcomes at the school level.

All the aforementioned empirical studies followed an interpretative perspective, using qualitative data. These studies were focused on school efficiency or the effectiveness of LMS, which was introduced by the government for the entire school system in the 1988 education reform. The studies used descriptive and interpretative methods, due to an absence of good quality empirical data. Most studies emphasised the need for efficient analysis when comparing educational learning outcomes, and mentioned the methodological difficulties and the absence of a sound set of data.

By contrast, for assessing the impact of SBRM on efficiency, a second approach uses the scientific/positive methodology (hypothesis testing using quantitative data). The studies of Bradley et al. (2001); Wößmann (2000; 2001ab); Gundlach, et al. (2000) and Bradley & Taylor (2002) come under this category. To test the hypothesis that SBM/SBRM improves efficiency, they measured a variety of different degrees of decentralization, resources and performance.

Bradley et al. (2001) investigated the performance of all secondary schools in England over the period 1993-1998, using statistical estimations. They used the DEA techniques within the framework of a scientific/positive methodology. They tested their hypothesis, using quantitative data. The study measured the performance of each school on two dimensions of multiple outputs; their performance in examinations, and their attendance rates.

This study concluded that the relative efficiency of the schools was directly related to the amount of competition they faced. They found quasi-market in secondary education has simultaneously given parents greater school choice and increased competition for pupils between schools. Further, they revealed that the least efficient schools have improved as the quasi-market has developed.

Wößmann (2001b:3) investigated pupils' performance using the third international mathematics and science survey data, with samples of students from 39 schooling systems around the world. The data include extensive background information at the student, teacher, school and system levels. Wößmann (2001b:27) emphasized that cross-country differences in student performance are not a mystery. They are related to policy measures. However, the policy measures that particularly matter for schooling output do not seem to be simple resource inputs. Wößmann (2001b:3) shows that spending more money within an institutional system which does not set suitable incentives will not improve student performance. Further, student-level estimation shows that international differences are considerably influenced by institutional differences. Positive effects on pupil performance stem from such institutions as centralized examinations and control mechanisms, school autonomy in personnel and process decisions, individual teachers influencing teaching methods, limits to teacher unions' influence on curriculum scope, the scrutiny of students' performance, and competition from private schools (Wößmann, 2001b).

Bradley & Taylor (2002) revealed strong evidence that the quasi-market has led to a substantial *improvement* in efficiency (as measured by a school's examinations performance (creaming) and by the productivity of staff examination successes per fulltime equivalent staff between 1992 and 1999).

These findings imply that the crucial question for education policy is not one of more resources but one of creating an institutional system where all the people involved face incentives to use resources efficiently, and to improve student performance.

The government policy, SBRM (strengthened basic SBRM and the extension of SBRM) in Sri Lanka is concerned with productive (internal) efficiency rather than external efficiency (school choice). Hence my research on the impact of SBRM on efficiency needed to focus on the factors that affect internal (productive) efficiency (i.e. technical, price efficiency). My research employs an interpretative methodology, because the SBRM policies in Sri Lanka were not introduced as social experiments, and there is a lack of good quality data on resources and pupil performances (outcomes) with controlled variables. Hence, there are methodological difficulties in testing a relevant hypothesis about the impact of SBRM on efficiency, taking account of controlled variables and using the scientific/positive methodology. Therefore, when evaluating the impact of SBRM on efficiency incentives, this research does not estimate the education production function.

2.5 Formula funding of schools

The introduction of SBRM is almost always accompanied by the introduction or use of a formula for determining the amount of budget to be distributed to each school. Different methods for this have been followed in different countries. Some of them are: historic funding with incrementalism, formal bidding by schools, officer direction, and formula funding. Most methods have followed the allocation and expenditure patterns of years, while formula funding is made according to predetermined objective criteria, usually expressed in algebraic form. Some countries

have devolved some financial powers, so that more freedom is given to schools to make decisions at the operational level. On the other hand, some education systems are resourcing schools through a more centralized system; i.e. they follow central or provincial-level bidding process, and distributional formalities, and the decisions are taken by themselves. Apart from these alternatives, some countries determine the school-level allocation for each school while procurements and distributional formalities are still followed at the central or provincial level. However, FFS is one of the key features of SBRM, because FFS concerns the allocation of resources to schools so that they can be managed by schools.

A FFS operates with an agreed set of criteria for allocating resources to schools which is impartially applied to each school (Ross & Levačić, 1999:9). Formulae have been widely used for the provision of resources to schools. The financing of schools according to appropriately designed formulae can improve the efficiency of their resource use and direct resources to learning priorities, thus promoting effectiveness and equity through a transparent policy.

Traditional, more centralized and uniform, school funding methods have been widely criticised for being inequitable and inefficient. These methods increase disparities, inefficiency, and educational wastage, and are not transparent. Some educational systems work out the allocation of resources by using either complex or simple formulae criteria, norms, or principles. Most of the less-developed countries face financial crises from time to time, and these lead them to change their priorities. Also they face political pressures, which influence the provision of resources in relation to educational needs. However, formula funding is not considered as a suitable method for allocating all types of public expenditure for schools (Ross & Levačić, 1999:26;

Levačić et al., 2000:490). For example, allocations for major capital works are not usually delegated to school level. However, among the contemporary developments of funding formulae for schools, some countries, such as the UK, have devolved allocations for some capital works to schools. The growing trend of formula funding has cleared the path towards the SBM/SBRM in many countries (Ross & Levačić, 1999:27). Attempts have been made to develop formula-based funding mechanisms that reflect the actual requirements of each school. Ross & Levačić (1999:4) have emphasised the following three main reasons why educational planners should adopt FFS. Formulae can:

- i. cover all schools in a school system (rather than seeking to identify sub-groups for differential treatment);
- ii. be used to allocate most of a school system's resources (rather than just a few resource fragments linked to particular programmes); and
- iii. focus on a genuine attempt to satisfy agreed educational needs (rather than ignoring those characteristics of students, schools programmes, and school sites that generate genuine differential costs).

However, a funding formula for schools should be consistent with fundamental principles. Allocating school budgets by formula is a basic element in SBM, because it ensures that the education authorities cannot engage in discretionary intervention with respect to individual schools. Therefore, it is necessary to examine the fundamental principles of formula funding.

2.5.1 Fundamental principles of FFS

FFS is concerned with the interrelated issues of distributing and allocating resources for the purposes of children's learning. The three main policy functions, namely the equity function (horizontal and vertical) including equality values, the directive function and the market regulation function, can be included within the design of the

mechanism (Levačić, 1989; Ross & Levačić, 1999:29-31; Levačić et al., 2000:490; Odden & Picus, 2000:156). In addition to the above policy functions, renewed attention has been paid to fiscal neutrality and to adequacy functions taken into account as fundamental principles of FFS (Odden & Picus, 2000:156). Furthermore, FFS should also reflect the principles of efficiency, liberty, fraternity and economic growth (Levačić, 1989; Ross & Levačić, 1999:12-13). These functions should be considered in designing or further improving the funding formulae, depending on the policy context (e.g. whether it is market or equity oriented). Also these main policy functions of funding formulae can be used to decentralize, devolve and delegate financial powers and decision-making authority to schools. The main policy functions and criteria are examined below, because these will help to identify the elements of the formulae that are used in this research to evaluate the impact of FFS.

In delivering policy intentions, funding formulae can serve the policy functions of equity and fiscal neutrality, directive, and market regulation.

2.5.1.1 Equity function and fiscal neutrality criteria

Especially for the distribution of resources among schools or pupils, equitable distribution should be considered with respect to both horizontal and vertical equity. Equality requires pupils to be treated equally in the provision of educational opportunities. Improving the economic conditions of a given country may require more equal outcomes from each pupil. Hence, it is essential to ensure for each child an equitable provision of basic resources. Additionally, transparency and openness should be carefully maintained, acceptance of the need for equality may require altered procedures for allocating resources.

Fiscal neutrality as a part of equity function requires that the amount spent per pupil should not be related to local fiscal capacity per pupil. The structure should allow for local fiscal decision-making, which can produce decisions to spend at different levels.

Further, in relation to economic growth. Stable or declining economic growth can place the provision of services in jeopardy (Ross & Levačić, 1999:13). The achievement of economic growth requires particular knowledge, skills and attitudes nation-wide in terms of life-long learning.

2.5.1.2 Directive function

The directive function is intended to provide a financial incentive to back up the implementation of specific formulae policies. For example, the internal and external funding agencies of many countries prefer to sustain small schools, enabling these to deliver the same quality of curricular provision as other schools. In these instances, the funding formula would give additional allocations to schools with small enrolments (Ross & Levačić, 1999:30). On the other hand the equity function can also be defined as a directive, because it also provides extra allocation for the students with supplementary educational needs i.e. vertical equity.

2.5.1.3 Market regulation function

The market regulation policy has considerably emphasized the parental choice of school and creating a 'quasi-market' or 'market-like' mechanism characterised by separating the roles of purchaser and provider. Parents as purchasers select schools, and the funding agency uses a formula to allocate money to each school according to the number and distinctive characteristics of pupils recognised in the formula.

The following main criteria are usually considered for the purpose of either designing or evaluating a funding formula.

2.5.1.4 *Adequacy criteria*

The adequacy criterion is concerned with providing sufficient funds so that all schools can enable the vast majority of their students to achieve expected academic standards. The formula should deliver a level of spending per school which is adequate for delivering the agreed standard of education. Policy-makers, when determining adequacy, follow three major approaches. The first approach is identifying a set of inputs and costing them. Inputs include the teacher-pupil ratio, the average teacher's salary, the administrator-teacher ratio, the average administrator's salary, and the level of funds for other instructional and school costs. These inputs have to be transformed into expenditure per pupil. The second approach is to link the expenditure per pupil to the level of student outcomes, but this requires knowledge of the production function. In this approach the desired student performance level must first be determined. Secondly the average spending per pupil should be calculated. The third approach to determine the adequate spending level is through building up the required cost from the bottom by identifying the cost of school-wide programmes that produce desired outcomes. These costs indicate an adequate amount of funding to produce the desired levels of achievement (Odden & Picus, 2000:171).

2.5.1.5 *Effectiveness and efficiency*

Effectiveness and efficiency are major concern in a well-designed formula (Levačić, 1989:142). In particular, funding agencies, when evaluating a formula in terms of effectiveness, will audit to what extent the programme meets its objectives.

Effectiveness consists of a close link with the broad policy aims and its translation into operational criteria. There should be measurable and specific objectives. Effectiveness can be assessed in relation to the desired objective and the operational objective. The efficiency principle of FFS is the ratio between the measured outcomes of a programme and the inputs used to produce those outcomes.

2.5.1.6 *Liberty policy and fraternity*

The liberty policy framework is a classic value, but it is manifested in different ways (Swanson & King 1997). Within the state sector, school choice and the diversity of school types and education programmes are manifestations of the principle of liberty. Liberty policy requires providing incentives for producers to offer different kinds of educational provision to parents.

Fraternity is another long-standing value that has underpinned policy on public schooling (Swanson & King 1997). This value is in some ways related to the equality characteristic of public schools, whereby every school endeavours to meet the needs of all pupils, regardless of socio-economic background, regional disparities, and other human or biological differences.

2.5.2 Components of FFS

Any funding formula must contain two sets of elements or components. The first is the set of variables (i.e. pupils' enrolment, pupils' age), and the second is the set of coefficients (e.g. SEN) (Levačić, 1989:140). FFS are normally based on four principal components: (a) the basic student allocation; (b) the curriculum enhancement; (c) the supplementary educational needs of students; and (d) school-site needs (Ross & Levačić, 1999:39-41; Levačić et al., 2000:494-500).

2.5.2.1 *Basic student allocation*

The 'basic student allocation' by grade level is made up of two sub-components: a basic allocation and a grade level supplement. A basic allocation may be made for each teaching group, or for a school defined in terms of the number of students. A grade level supplement is concerned with differentiated supplementary funding by grade level, year group, or age level, and the terminology used here often varies across school systems (Ross & Levačić, 1999:39). The basic student allocation should be calculated from explicit factors such as effectiveness, efficiency, transparency and administrative cost criteria (Ross & Levačić, 1999:40). Within this process, assumptions are made about class size, the number of teaching hours, supporting staff time, curriculum planning, assessment, and recording and reporting pastoral work (Abu-Duhou et al., 1999:59). Other indirect costs, i.e. administrative and management costs, welfare and career counselling, have also to be considered. The form of cost analysis known as 'activity-led funding' has to consider three aspects. They are (i) the quantification and costing of staff time, (ii) the quantification and costing of non-staff resources and (iii) the calculation of per-student cost and the generation of an activity-led funding formula (Abu-Duhou et al., 1999:60-61). Abu-Duhou et al. (1999:59) suggested that, at this point, a 'per-student weighted average cost' should be calculated as the size of the coefficient attached to the number of students differentiated by grade level in the funding formulae. This component is associated with the market regulation functions of the formula funding.

2.5.2.2 *Curriculum enhancement*

The 'curriculum enhancement' component is specific to subject areas such as science, languages, mathematics, aesthetic and technological subjects, in addition to the differentiation by grade level. This component, provided for particular programmes

within the mainstream of the school, is mainly associated with the directive function of formula funding, in that all the pupils in many school systems are following the national curriculum and also studying specific subjects. Also they have different talents and abilities to be extend through their studies. Downes & Forster (1999:121-123) have categorized five main categories for the costs of curriculum enhancement, namely: teaching staff, non-teaching staff, equipment, materials, and buildings.

2.5.2.3 *Students' supplementary educational needs*

The third component is related to vertical equity in terms of pupil-specific factors. It is called 'student supplementary educational needs'. Some pupils require additional resources in order to provide them with the same level of access to the curriculum that is enjoyed by the majority of pupils at their grade level. Pupils come from different socio-economic backgrounds, which are related to different educational needs. The following main areas should be considered (i) socio-economic disadvantages which limit equality and fraternity (Swanson & King, 1997), (ii) disabilities, impairments and learning difficulties, which require a focus on access, and (iii) individual learning needs, which require a focus on outcomes (Hill & Ross, 1999:91-116).

2.5.2.4 *School-site needs or specific factors*

The final main component of the funding formulae is 'school-site needs or specific factors'. This component takes into account structural factors (i.e. the size of the school, the maintenance of buildings, the different locations of one school) and will allocate additional sums to schools according to their site-related average costs. Differences in these are due to the physical characteristics of school buildings, and geographical location. In addition to these factors, day-to-day maintenance activities e.g. electricity supply, postal and other communications, also have to be taken into

account when designing the school-site needs component. The 'school geographical location' factor also has major implications for providing funds. The cost of maintaining the school-site is another factor to be considered. These costs can be divided into internal and external maintenance costs. The services cost also comes under the 'school-site' needs component.

2.5.3 Framework for assessing a funding formula

There are different ways of conceptualising how to assess a school funding formulae. The traditional framework has focused largely on equity criteria. However contemporary developments in assessing FFS have focused on adequacy and productivity as well as equity (Odden & Picus, 2000:46) which are major issues on school financing. Berne & Stiefel (1984) and Odden & Picus (2000:46-74) updated six areas for assessing school financing, instead of the previous four questions relation to equity, namely (i) ex ante versus ex post analysis, (ii) the unit of analysis, (iii) objects, (iv) the group, (v) equity concepts and (vi) measuring adequacy.

Ex post analysis is an assessment of the historical issues of school financing, ex-ante analysis is the appraisal of a policy before deciding whether to implement it. The unit of analysis consists of two aspects. The first concerns the primary measures of the object in relation to historical and traditional issues in school finances (i.e. revenues and expenditure), while the second concerns calculating the statistical measures appropriately. The third category measures children's needs for equity in terms of inputs such as fiscal or physical objects, outputs such as students' achievements, and outcomes such as lifetime incomes. In other words these indicators concern input fiscal variables, educational process variables and student achievement variables. The group-measuring indicator deals with children taken into account as customers. They

cannot be taken into one group, because they have different requirements and circumstances such as low-income family backgrounds, deprived social backgrounds, etc. Hence, vertical equity measures are used to evaluate FFS. Also, must be considered when measuring school financing, the following groups should be concerned: teachers as a group and parents as a group. An adequate spending level should be identified.

In addition, further criteria should be employed: effectiveness, efficiency, integrity, administrative cost, accountability and transparency, local democracy and sensitivity to local conditions (Ross & Levačić, 1999:33-34; Levačić et al., 2000:491).

The effectiveness of an institution or organization can be judged by the extent to which its aims and objectives are achieved. Ross & Levačić (1999:33-34) suggested that efficiency in relation to the designing of a funding formula needs to be considered at two stages, first to it has to be decided which resources can be more efficiently managed at school level and which at central level. Second, attention must be paid to the incentives built into the formula for allocating resources at school level. Developed countries which have been mentioned before have already achieved these two stages in designing and implementing the funding formulae.

The integrity criterion requires that the formula and its components should not provide incentives for schools to be inefficient or to manipulate the data used in the formula. Also the formula should be sustainable over time, and be utilized in making budget calculations for schools with lower administrative costs. The formulae have to provide educational administration with opportunities for ensuring local democracy, and they should be capable of adjustment to local conditions.

2.5.4 Arguments for and against the application of FFS

The arguments for and against for the application of FFS are basically twofold, concerning the funding of schools and management issues. FFS is a policy instrument which can establish an equitable resource allocation to schools, and there is a need to implement it nation-wide in order to reduce inequality. At any rate, FFS accommodates equity properties (i.e. procedural and distributional equity including horizontal and vertical equity) in the education system. This will be shown when investigating empirical evidence from the countries implementing FFS (the UK, USA, Australia, New Zealand and Canada). The ways in which FFS has been practised exemplify different approaches but have been implemented with similar goals. In most of these countries, schools have received power and authority for all the activities within the basic student allocation, curriculum components, students' supplementary educational needs (i.e. SEN, disadvantaged schools) and school-site needs. For example, programmes to meet the special needs of low-income families in USA, SEN in the UK and the disadvantaged school programme in Australia have been operationalized successfully, using allocations for supplementary educational needs (Ross, 1992 in Ross & Levačić, 1999:125).

Thus, FFS, can provide additional benefits for disadvantaged schools and pupils with SEN. Compared to other methods, FFS is the most transparent and accountable resource allocation tool, because pre-determined and objective criteria are evident. Also, FFS does not encourage or regulate hidden funding sources at school level (if schools wish to keep other accounts, they can do so), and its transparency will help to minimise corruption at school level as well as at other levels.

Despite these fundamental arguments for FFS, it remains an open question as to whether it will accommodate procedural and distributional equity properly and encourage efficiency. According to Levačić (2003), in English schools, FFS was initially allocated in accordance with political inertia, giving low funding to primary compared to secondary pupils. A problem in evaluating the equity of FFS is that the amount of additional funding that it is appropriate to give schools for the disadvantaged and pupils with SEN, and how this should be distributed, is a highly subjective issue and one on which we have little objective evidence.

Another argument against FFS is that some countries still depend on some kind of uniform resource allocation pattern rather than a needs-based approach. Most less-developed countries have faced such political issues as a hidden political agenda, financial crises, illiquidity, cash rationing, the uncertainty of funds, and instability of financial allocations. These directly or indirectly impede the implementation of FFS.

One problem of FFS is its bureaucratic approach to resource allocation. Most formulae are very complex and difficult to understand for principals and teachers, as well as other agencies. Another problem is the need for detailed data and for computing capacity to maintain FFS; this can affect the sustainability of the programme. An FFS database needs to be updated quarterly or annually, and it is very expensive for less-developed countries. Another aspect is reliability and complexity, factors strictly relevant to maintaining FFS.

2.5.5 Empirical evidence of FFS

The empirical evidence of FFS discussed here will be limited to equity issues in certain countries, since my study is intended to evaluate the impact of FFS in Sri

Lanka in terms of equity in resource allocation. FFS is used by different levels of government. A number of countries implementing formula funding (Australia, UK, USA, Canada and New Zealand) have strictly followed the basic principles of, transparency, accountability, effectiveness, and efficiency. The UK, USA, Canada and New Zealand have considered administrative issues i.e. low administrative cost, purchasing power, assessment evaluating, and local democracy (except New Zealand), sensitivity, while the UK, Australia, USA and Canada have especially considered equity issues (Ross & Levačić, 1999:139-247; Levačić et al., 2000; Caldwell, 1998). In New Zealand and Victoria (in Australia), schools are funded directly by the Ministry of Education according to a formula and in accordance with the aforementioned principles. In Britain, the arrangements requires LEAs to fund their schools via FFS, and the guidelines for the formulae must be approved by the Department for Education and Skills.

The second key piece of empirical evidence is that in these countries formulae have been constructed based on four principal components: i.e. the basic student allocation; curriculum enhancement; students' supplementary educational needs; and school site needs (Levačić, et al., 2000; Ross & Levačić, 1999). In Australia, the UK, USA, Canada, and New Zealand, the basic student allocation has been divided under two headings: the total enrolment, and grade-level differentiation. The curriculum enhancement component supports special purposes, foreign languages, aboriginals (in Australia), teachers' professional development, and within-school restructuring. Low socio-economics status, lack of fluency in language, low-educational attainment, disabilities, and impairment issues have been considered in designing the supplementary needs components. The school-site needs include school size, locations, and site running costs in budgeting areas.

In the English school system, more explicit consideration has been given to criteria for determining which types of expenditure are better retained at the centre and which are better delegated to schools (Levačić et al., 2000). The funding formulae guidelines enable local education authorities to reflect their own policies with respect to equity considerations by utilizing resources for student supplementary educational needs and school-site needs. They can ensure additional allocations for social and educational disadvantaged pupils, and also schools. The UK, Australia, USA, Canada and New Zealand have provided additional resource allocations for disadvantaged schools and pupils with SEN (Ross & Levačić, 1999) in terms of ensuring vertical equity. Some school districts in USA and Canada have provided equal allocations across education levels under the school-based funding systems.

2.5.5.1 *Empirical evidence of FFS in Sri Lanka*

The objectives of FFS as applied through NBUCRAM in Sri Lanka are to provide a rational and equitable basis (per capita) for allocating finances for educational learning resources to schools. NBUCRAM has included equity criteria for the determination of school allocations.

A. *Procedural equity*

NBUCRAM, to ensure the procedural equity principle, implements a framework for the allocation of learning resources through the provincial and national education budgets. The required norms and criteria have been developed for the distribution of these funds among the schools. All the schools have categorized five sections and seven categories ensuring curriculum enhancement; these norms relate to distributional equity (Chapter Four).

B. Distributional equity

The financial allocation for learning resources is determined by using NBUCRAM for all pupils and all teachers in the school system on a rational and equitable basis. The documentary evidence shows that NBUCRAM is mainly considered only for curriculum aspects (FC, 2000a). It is difficult to see any basic allocation or school-site need allocation for schools. The application of NBUCRAM is used to determine the recurrent, capital, and maintenance and repairs (only for equipment) allocations for all schools, which are identified by school category and student group. To determine the allocation to schools, schools are categorized according to the grades which they include. Five school categories are identified. These are: grades 1-5, 6-9, 10-11, 12-13 Arts/Commerce, and 12-13 Science. Within these categories, seven sub-school categories have been identified, namely grades 1-5, 1-9, 1-11, 1-13 Arts/Commerce, 1-13 Science, 6-13 Arts/Commerce, and 6-13 Science (FC, 2000a). These classifications are based on the existing grades and streams of disciplines in schools.

For each school category, the desired number of students is determined, ensuring that a school can operate with four classes for same grades of a maximum of 30 students for each grade. One repeat class for grades 11 and 13 is also included. The school allocation will be based on the desired number of students in the schools' category (FC, 2000ab).

The maximum allocation for a school category will be based on this desired number of students. For example a school in category 1-9, with four classes of 30 per class, will be assumed to have $(9 \times 4 \times 30)$ 1080 students. Even in the case of a school having 2000 students, the school funds will be only for 1080 students. Within each school category, the allocation should be varied, according to the students' distribution,

calculated based on the desired number of students for that school category. The upper limit of the student group will be the desired number of students. However, for schools below the desired number of students, NBUCRAM ensures that the school will get at least half the amount for a school in its category. NBUCRAM has six sets of weights: 0.5, 0.6, 0.7, 0.8, 0.9 and 1.0. These weights vary by school category. Thus, schools having less than 0.5 of weight are adjusted to the 0.5 weight. The adjusted allocation for each student group of that category is determined and used as a weight for the formula. Student groups are identified, in order to allocate funds based on the numbers of students. Seven student group sizes are identified. These sizes are: 1-100, 101-300, 301-500, 501-750, 751-1000, 1001-1500, and more than 1500 (FC, 2000b).

The unit cost determines the cost per student by school category and student group. This means that all schools within the same school category and student group size will have equal funds, except in the case of disadvantaged schools. The resource allocation is for schools to purchase learning resources, and for the maintenance and repair of equipment.

Since 2000, NBUCRAM has been implemented nationwide, and every school has a fixed allocation for acquiring learning materials. Previous ad-hoc allocation patterns have been ignored, and the uncertainty of funding for schools has been removed. Funds are allocated to schools according to the level of subjects at specific grades (e.g. SLRs 1500.00 for Grade 6 Mathematics). There may be situations where the amount available is not sufficient to purchase an item. For example, to purchase a set of 'centicubes' for Mathematics may cost SLRs 2000.00. In such situations, the section heads and subject coordinators may decide to aggregate the funds for subjects

across the school section. Thus, SLRs 6000.00 may be available for Grades 6-9 in mathematics.

NBUCRAM, to meet the vertical equity principle, gives explicit weighting to schools in poor rural areas, and poor schools in urban and semi-urban areas. Allocations for disadvantaged schools by school category are also identified. Some schools with low student numbers were identified as disadvantaged schools, based on the following variables:

- i. Recurring teacher shortages (weight 40%)
- ii. Difficulties of access to school (weight 6%)
- iii. Lack of basic school facilities (weight 30%)
- iv. Social milieu of the school (weight 24%) (FC, 2000a).

Schools with scores of 50 per cent and above will be entitled to the disadvantaged school allocation, provided the number of students at those schools satisfies the given limits (Chapter Four).

These criteria represent another set of norms used for NBUCRAM. Schools which are identified as disadvantaged are entitled to extra funds. A percentage of the total allocation for equipment (5%) has been used for this purpose. Hence, the allocation for equipment for all schools has been reduced to 95 per cent of the total available in order to fund this reallocation. Disadvantaged schools were identified by FC and MEHE, using the norms prepared by them in collaboration with PEAs.

The significant feature of NBUCRAM is that there is no consideration for an allocation to the pupils with SEN. Further, variables related to schools' own revenues are not included in the determination of schools' allocations for learning resources.

C. Adequacy

NBUCRAM policy has emphasised the long-term financial sustainability required to provide curriculum learning resources. The formulae for calculating the financial entitlement for each school is determined centrally; but the actual quantities of resources are determined by the provinces according to their fiscal capacity. Further, the central level authorities have instructed to PEAs, according to NBUCRAM those schools with less than 50 students should not be given funds (FC, 2000a). This challenges the adequacy criteria on one hand and the horizontal equity principle on the other.

To summarize this section, FFS is almost identified with SBRM, and is used for determining the amount of budget to be distributed to individual schools. FFS always links procedural and distributional equity, including horizontal and vertical equity as well as adequacy criteria. FFS concerns policy functions and criteria. Furthermore, considering variables and coefficient elements, FFS is constructed from four components. However, the assessment of FFS mainly considers equity, adequacy, efficiency criteria manipulated by schools. The impact of FFS can be investigated by means of the statistical analysis resulting budget changes, and of the equity of allocations experienced by all schools. However, this type of analysis requires a set of good quality data for the period before and after implementation of FFS. Furthermore, it requires objective criteria for FFS. However, in Sri Lanka, FFS via NBUCRAM has been implemented nation-wide since 2000, but there is a lack of national data that could be used to construct objective measures. Therefore my research uses methods for analysing interpretative/qualitative data. Hence, adequacy is measured largely by principals' and planners' perceptions (subjective measures) and not by objective measures due to lack of good quality data.

2.6 Conclusion

The aim of this chapter has been to explore the international literature on the general principles of SBRM and FFS in relation to the efficiency and equity of resource allocation. Efficiency depends on productivity, and requires achieving maximum outputs from given resources. Efficiency includes productive or internal efficiency and allocative or external efficiency. Productive efficiency comprises technical and price/economic efficiency. There are unsolved problems in defining and measuring both educational inputs and outputs/outcomes, as well as in estimating production functions.

Equity deals with the fair distribution of resources in education to fulfil consumers' needs. In doing so there should be agreed policies and rules in horizontal and vertical terms. The centralized school financing process has been widely criticised in the field of education; it is argued that it is non-transparent, and creates x-inefficiency, and inequity. Many education systems have moved towards decentralization as a response to pressures to improve efficiency. SBRM has been introduced in many countries delegating responsibilities for decision-making in certain domains and sharing decision-making power amongst the key stakeholders at school level. Consequently SBRM should improve allocative efficiency (i.e. responding to pluralism, and the dispersion of political power), and productive and dynamic efficiency (i.e. the delivery of education). There are other reasons for the introduction of decentralization systems. These include political trends, social demand and organizational effectiveness. The systems require planned distribution mechanisms for resource allocation in terms of ensuring equity and thus establishing an efficient education system.

Considering the literature on efficiency and SBRM, my research on the impact of SBRM on efficiency needed to focus on technical and price efficiency. Further, my research employs an interpretative methodology, because the SBRM policy in Sri Lanka has not been introduced as a social experiment, and there is a lack of good quality data on resources related to pupil performances/outcomes data gathered with controlled variables. Hence, there are methodological difficulties in testing relevant hypotheses about the impact of SBRM on efficiency by using the scientific/positive methodology. Therefore when evaluating the impact of SBRM on efficiency incentives, my research does not estimate the education production function.

The equity concept is linked with FFS, and the relevant equity concepts are procedural equity and distributional equity; these involve the distinction between horizontal and vertical equity. The arguments for and against FFS have also been existed. Existing educational systems have followed different resource allocation formulae, including centralized, decentralized and mixed methods; any FFS policy should be clear, prioritised and widely accepted. Construction of FFS also requires a comprehensive and accurate information database. These data and information are essential for construction of the four principal components of FFS, and must be regularly maintained. If any educational system intends to move towards FFS, it must adopt approaches of transparency and open dialogue. Especially, formulae should be arrived at through the involvement of all parties concerned with education, including: teachers, principals, the school community, regional and national educational authorities, local and national-level politicians, and educational economists. In addition, to sustain FFS, authorities need to carry out research (i.e. impact evaluation and policy research), and necessary changes have to be made in reference to their findings.

Considering the literature on equity and FFS, my research on the impact of FFS/NBUCRAM on equity focuses on procedural and distributional (horizontal and vertical) equity as well as adequacy. Chapter Three develops the methodology for my study.

Chapter Three

Research methodology

3.1 Introduction

The core concept underlying all research is methodology. It is not enough to follow research procedures without an intimate understanding of how research methodology directs the whole endeavour (Leedy, 1997 in Marsh, 1998). This chapter firstly presents the research questions. Secondly, the research designs and their application in the field in relation to the aims of the research are presented. Thirdly, the chapter explores the research strategies, methods for sampling, data collection and issues of validity and reliability of data, and ethical issues of the research.

3.2 Key research questions

The four key research questions (KRQs), developed to achieve the aims of the study are as follows:

KRQ1: What are the policy backgrounds of the formula funding of schools/norm-based unit cost resource allocation mechanism and school-based resource management in Sri Lanka?

I intend to explore KRQ1 through documentary analysis and my own interpretations.

Answering KRQ1 requires examining the following subsidiary research questions (SRQs), clustered under three headings:

Cluster 1: Background and origin of FFS/NBUCRAM

1.1 What are the historical background, rationale, origins, policy implications, concepts, and principles of FFS/NBUCRAM in Sri Lanka?

- a. What was the involvement of international donor agencies in the initiation of FFS/NBUCRAM?
- b. What was the conceptual framework for ensuring equity through FFS/NBUCRAM?

Cluster 2: Background and origin of SBRM

- 1.2 What are the historical background, rationale, origins, policy implications, concepts, and principles of SBRM in Sri Lanka?
 - a. What is the involvement of donor-aided projects that have attempted to improve efficiency in the education system through SBRM?
 - b. What is meant by SBRM, and how does it relate to efficiency incentives?
 - c. What are the significant differences in the regimes for SBRM which have been used in the education system in Sri Lanka?

Cluster 3: National policy on funding schools for learning resources

- 1.3 What is the national policy on funding for learning resources in schools?

KRQ2: What has been the impact of NBUCRAM in Sri Lanka in relation to equity considerations in resource allocation?

KRQ2 relates to evaluating the impact of NBUCRAM on equity in resource allocation after this system was introduced. This evaluation requires the study of the three years before its introduction (1997-1999), and the three years of its implementation (2000-2002). The answer to KRQ2 requires the study of the following SRQs, clustered under two headings.

Cluster 1: New policy initiatives and the understanding of implementers at the grassroots

- 2.1 How was the new policy introduced, and what were the grass-roots implementers' contributions and their knowledge about the conceptual framework of NBUCRAM?

Cluster 2: Impact of NBUCRAM on the equity of resource allocation

Five sub-clusters were identified:

Sub-cluster 1: Impact on procedural equity of NBUCRAM

- 2.2 What has been the impact of NBUCRAM in terms of ensuring procedural equity?
- a. What practices have been followed in existing planning, budgeting and monitoring processes at different implementation levels: i.e. national, provincial, zonal, and especially school level, in the formula funding of schools?
 - b. What are the procedures and practices for the distribution of allocations among the sections, subjects, and grades within the schools?

Sub-cluster 2: Impact on distributional equity of NBUCRAM

- 2.3 What has been the impact of NBUCRAM in terms of ensuring distributional (i.e. vertical and horizontal) equity?
- 2.3.1 What resources have the schools received in addition to the provision for previous years (1997-1999) and how equitable is NBUCRAM: is it horizontally equitable, and does it attempt to implement vertical equity (are students with greater needs allocated more resources)?
- a. In the 'traditional' or 'received' school finance system in Sri Lanka during the period 1997-1999, what were the established

practices in the allocation of inputs/(expenditure)? Has NBUCRAM addressed the horizontal equity criteria?

- b. What need is there to expand NBUCRAM to permit greater variation, among and across school types and to favour poor and needy (disadvantaged) schools?
 - c. Has NBUCRAM included pupils with special educational needs within normal classrooms?
- 2.3.2 What have been the equity implications of (a) indirect expenditure on school education by households (b) sources of school funding outside the formula?

Sub-cluster 3: Impact of NBUCRAM on adequacy

- 2.4 What has been the impact of NBUCRAM in terms of adequacy criteria?
- a. What was the difference between entitlements and the real allocation?
Did the schools receive the full intended allocation?

Sub-cluster 4: Issues and disadvantages of NBUCRAM

- 2.5 What are the perceptions of principals, planners and policy formulators on their responsibilities for school finance, and on any disadvantages encountered at school, zonal and provincial levels as a result of the introduction of NBUCRAM?
- a. What are the practical issues in relation to equity and adequacy criteria arising at school level as a consequence of the implementation of NBUCRAM in the schools?

Sub-cluster 5: Sustainability of NBUCRAM

- 2.6 Can the provision of funds via NBUCRAM be sustained?

KRQ3: What has been the impact of strengthened basic SBRM and extended SBRM in relation to efficiency incentives?

Answering KRQ3 requires two sections. Section one deals with evaluating the impact of strengthened basic SBRM, which was limited to acquiring learning resources, i.e. consumables and perishables, at school level. Section two relates to evaluating the impact of the extension of SBRM, in which power and decision-making authority for acquiring inexpensive capital learning equipment were delegated to school level. The evaluation of strengthened basic SBRM requires the study of the three years before the introduction of strengthened basic SBRM (1997-1999), and the three years after the implementation (2000-2002) of the strengthened basic SBRM programme. The second part, evaluates its impact of the extension of SBRM in relation to the efficiency of resource allocation, especially in providing inexpensive capital learning equipment to schools in pilot and non-pilot schools, during the period 2000-2002. KRQ3 includes the following SRQs, grouped in two clusters.

Cluster 1: Impact of strengthened basic SBRM in terms of efficiency incentives

- 3.1 What is the impact of strengthened basic SBRM in terms of efficiency incentives, compared to basic SBRM and non-SBRM?
 - a. What are the involvement and perceptions of principals, planners, and policy formulators concerning the initiation and functioning of strengthened basic SBRM?
 - b. What practices have resulted in schools from the changes in the system as a result of the implementation of strengthened basic SBRM?
 - c. What resources has each school received as a result of strengthened basic SBRM? Are the schools using resources more efficiently compared to basic SBRM and non-SBRM?

- d. What are the disadvantages encountered at school level as a result of strengthened basic SBRM?

Cluster 2: Impact of the extension of SBRM in terms of efficiency incentives

3.2 What is the impact of the extension of SBRM in terms of efficiency incentives?

- a. What were the involvement and perceptions of principals, planners and policy formulators as regards the functioning of the extension of SBRM?
- b. What practices have been followed in the existing planning, budgeting and monitoring processes at school level (for the distribution of learning equipment among the sections, subjects and grades) with respect to the extension of SBRM?
- c. What resources has each school received as a result of the extension of SBRM? Are the schools using resources more efficiently as a result of the extension of SBRM, compared to non-pilot schools?
- d. What are the disadvantages and practical issues encountered at school level as a result of introducing the extension of SBRM?
- e. Can it be assured that the funds for the extension of SBRM will be sustained over time?

These SRQs examine the efficiency of the utilization of learning resources in classrooms; empirical data were gathered through questionnaires administered among teachers in both pilot for the extension of the SBRM programme and non-pilot schools.

KRQ4: How can the present practices be improved and what can be suggested to improve NBUCRAM (funding formulae) and SBRM in Sri Lanka?

The discussion of KRQ4 synthesises the empirical evidence analysed through Chapters Two, Four, Five and Six to make recommendations and suggestions for further improvement of FFS and SBRM. These will be presented basically within the two sub-components: FFS and SBRM.

Chapters One to Three present the overview and the background of the research, literature on SBRM and FFS, and the methodologies of the research, with a theoretical component reviewing SBRM and FFS in terms of efficiency and equity. Chapters Four to Six present the analysis of the field research conducted through a documentary survey, sample survey, and interviews administered in Sri Lanka. Chapter Seven presents the conclusion of the thesis, policy recommendations and suggestions.

3.3 Research Methodologies

As mentioned in Chapter One, my research employed an intervention research methodology, because NBUCRAM, strengthened basic SBRM, and the extension of SBRM can be considered as intervention programmes. Justification of the intervention research methodology used in my study is given in 3.3.1.

KRQ2 concerns the impact of NBUCRAM on the equity of resource allocation. This programme has been implemented nation-wide. Hence, the allocation of resources to schools before and after this implementation must be studied. The evaluation of its impact will be carried out through comparison, which requires longitudinal (i.e.

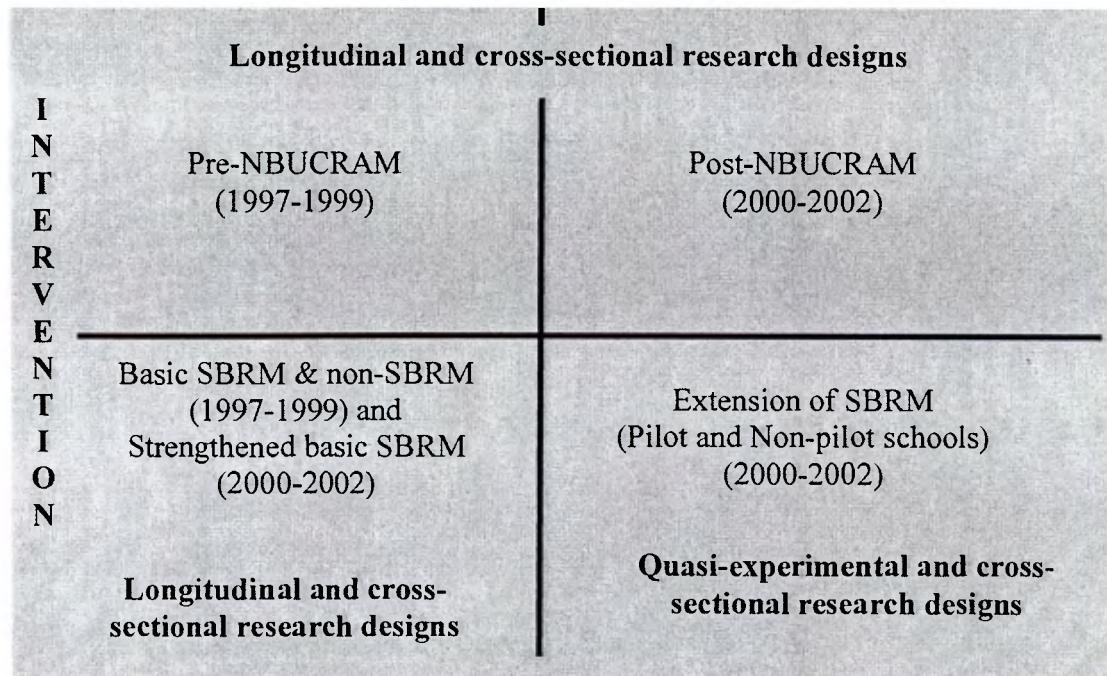
retrospective and qualitative) data within cross-sections. Mostly longitudinal studies imply that researchers are using data collected at different points in time (i.e. cohort data), but my methodology collected retrospective qualitative data at a single point. The data is cross-sectional because five types of schools are sampled. Hence, longitudinal and cross-sectional research designs were adopted for KRQ2.

These designs were used for the first section of the analysis of KRQ3, because that section deals with evaluating strengthened basic SBRM for the period 2000-2002, to compare it with basic SBRM and non-SBRM for the period 1997-1999. Hence, it was necessary to adopt longitudinal data, collecting cross-sections. More elaboration of the longitudinal and cross-sectional research designs is given in 3.3.1.1.

The extension of SBRM has been implemented on a pilot basis. Therefore, section two of KRQ3 aims to evaluate the impact of this extension during the period 2000-2002. Schools with and without this treatment, and quasi-experimental and cross-sectional research designs, were used. These designs are explained in 3.3.1.2.

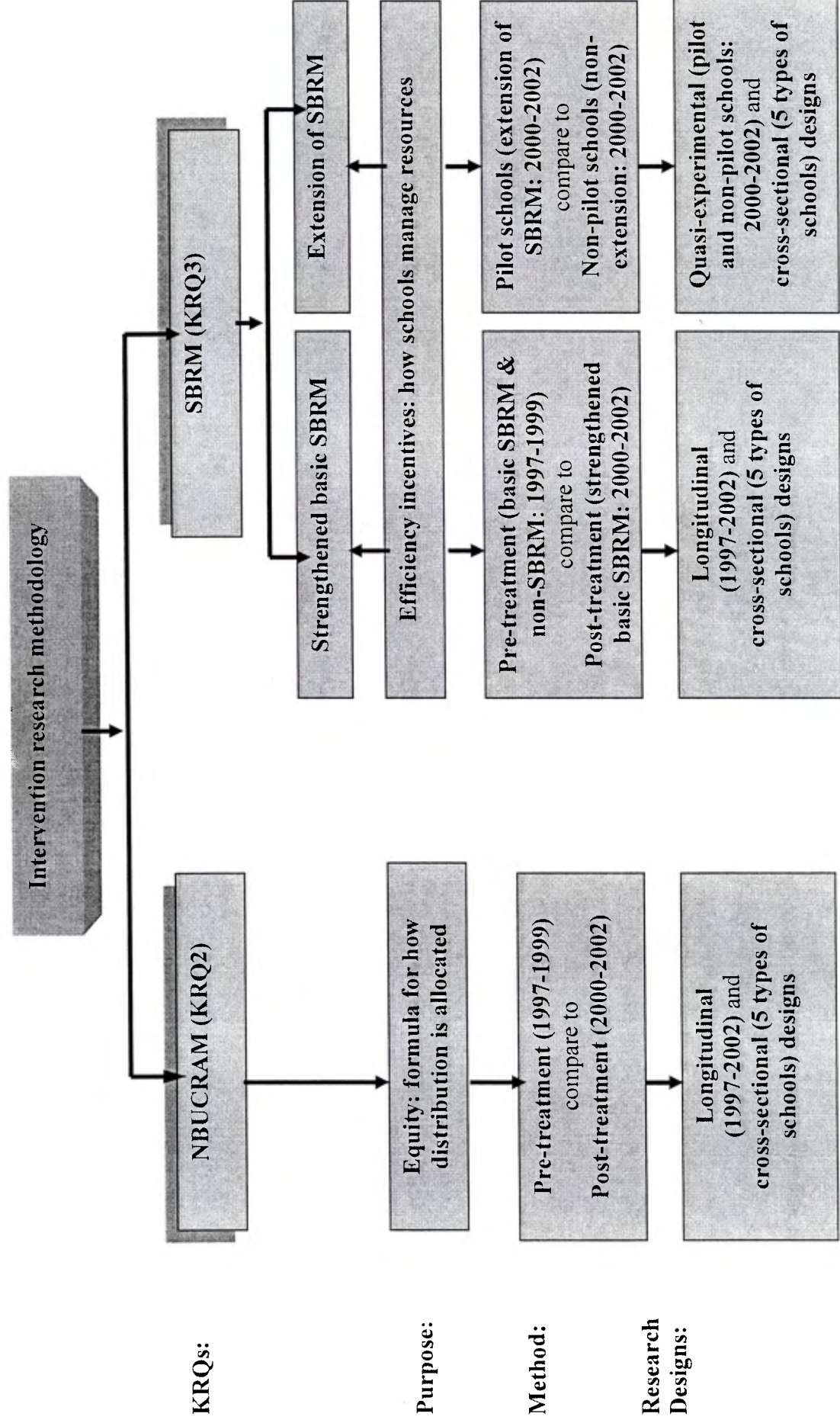
The dimensions of my research are illustrated in Figure 3.1.

Figure 3.1: Dimensions of the research



Within the dimensions of the research, NBUCRAM and both strengthened basic SBRM and the extension of SBRM can be taken into account through interventional studies. The application of the intervention research methodology in relation to longitudinal, cross-sectional, and quasi-experimental designs is further illustrated in Figure 3.2.

Figure 3.2: Framework for application of the research methodology



3.3.1 Intervention research methodology

This study will adopt the simplest method of research for intervention studies, the pre-test and post-test control group design, where the effects of an intervention or treatment are studied by analysing pre-test and post-test conditions (Keeves, 1997:143-144; Bijileveld et al., 1998:27-28). In this design the intervention or treatment is made only on the subjects in the experimental groups; pre- and post-intervention data are collected at successive time-points for a sample of subjects in all the groups. Using this method will help to identify changes resulting from an intervention within a particular programme. This approach is particularly useful for the identification of real changes between the historical and the present situation of a programme before and after intervention (Bailey, 1982:221-229; Cohen et al., 2000:176) or in institutional and operational settings.

These arguments have been highlighted to justify the use of the intervention research design adopted in my study to evaluate the impact of the new FFS/NBUCRAM for the period from 2000 to 2002 and to establish any difference compared with the previous three years, 1997 to 1999. To address KRQ2, pre-implementation data, relating to the period from 1997 to 1999, and post-implementation data, relating to the period of 2000 to 2002, were collected.

For the first section of KRQ3, the impact of strengthened basic SBRM in terms of efficiency is examined by comparing it in the years 2000-2002 to basic SBRM and non-SBRM in the years 1997-1999. Hence, data are required for the period 1997-1999 (i.e. basic SBRM and non-SBRM), and for the period after the introduction of strengthened basic SBRM, that is 2000-2002. These data have been gathered for the five types of schools; hence a cross-sectional research design was required (3.3.1.1).

Since the extension of SBRM has been implemented on a pilot basis, there have been two types of schools, functioning as ‘pilot’ and ‘non-pilot’, since 2000. These two types of schools can be considered as schools ‘with’ and ‘without’ treatment. Hence, a quasi-experimental research design has been employed to deal with the second part of KRQ3. Data were collected from five different types of schools and hence, a cross-sectional research design was adopted (3.3.1.2).

3.3.1.1 *Longitudinal and cross-sectional research designs (KRQ2 & first section of KRQ3)*

Cohen et al. (2000:174) have used the term ‘longitudinal’ to describe a variety of studies that are conducted over a period of time. The longitudinal research methodology has been described by Monk (1990:330-331) as useful to evaluate the impact of an innovation by comparing conditions before and after its implementation. He stressed that most educational researchers who study the educational production function prefer to use the longitudinal research style. Cohen et al. (2000:174) have emphasised that longitudinal studies could range from short-term investigations that may take several weeks or months to long-term studies that can extend over many years. In situations where successive evaluations or measures are taken at different times from the same respondents, the term ‘follow-up study’ or ‘cohort study’ is used. A longitudinal research design is used for the ‘identification of the experience and the present situation’ (Cohen et al., 2000:174). Such a comparison would help to identify a trend if one has emerged as a result of a new process. According to Bijleveld et al. (1998:16-19), ‘longitudinal research and the measurement of changes are defined across occasions or times of measurement’. This research style may vary with the sample size, numbers of variables and numbers of occasions investigated

A cross-sectional research design has been employed in educational research for the assessment of educational progress and changes in certain programmes. Where different respondents are studied at different points in time, the study is called 'cross-sectional' (Cohen et al., 2000:174). Rose & Sullivan (1996) and Cohen et al. (2000:174-175) suggested that cross-sectional studies can use retrospective factual questions, for example on earlier procedures for resourcing schools, and on allocation and expenditure data. Collecting other types of retrospective data in cross-sectional studies is doubtful; as the quality of the data diminishes the further back one asks respondents to recall previous conditions, or even basic facts. A cross-sectional study produces a 'snapshot' of the existing conditions, processes, and outcomes of an educational system at a particular time (Cohen et al., 2000:175; Keeves, 1997:119). More typically, in education, cross-sectional studies involve indirect measures of the nature and rate of changes in representative types of schools. The single 'snapshot' of a cross-sectional study provides educational researchers with data which can contribute to either a retrospective or a prospective inquiry. Cross-sectional studies are not limited to nation-wide information, but can range from the collection of information in a classroom, school, or zone through to a state or province, or a country with common characteristics that would make comparisons meaningful.

Further, this design may involve two or more related cross-sectional studies which are conducted at the same point of time with samples from different groups (Keeves, 1997:140-141; Bijlleveld et al., 1998). The same predictor and variables are observed in each sample. The samples are each drawn from the same larger population, and each sample is drawn independently of any other.

In my research, samples from five types of schools (Types 1AB (National), 1AB (Provincial), 1C, 2, and 3) were examined at the same point of time in the year 2002. Data were collected for the same variables, related to the schools' experience before (1997-1999) and after the implementation of FFS/NBUCRAM (2000-2002), non-SBRM, basic SBRM, and strengthened basic SBRM. Longitudinal and cross-sectional research designs facilitated the study of FFS, basic SBRM and non-SBRM, and strengthened basic SBRM between 1997 and 1999, and between 2000 and 2002, through data collected at a single point of time in the year 2002.

3.3.1.2 *Quasi-experimental and cross-sectional research designs (KRQ3: Section 2)*

Scott & Usher (1999:63) discuss how a range of designs, which do not conform to the requirements of the experimental tradition, can be undertaken as quasi-experimental designs. Educational research cannot usually use a true experimental design as randomisation of exposures is essential if true experimentation is to take place. Hence educational researchers are recommended to use a quasi-experimental style. The term 'quasi-experiment' has been used in various ways. A quasi-experimental design may be defined as:

a research design involving an experimental approach but where random assignment to treatment and comparison groups has not been used (Campbell & Stanley, 1963; Cohen et al., 2000:214; Robson, 2002:133).

According to the above definition, a quasi-experimental design defines 'the who and to whom of measurement' but lacks control over 'the when and to whom of exposure'. Nonetheless, Scott & Usher (1999:63) recommended the quasi-experimental style as one of the best for evaluating the effects of a particular programme. It also allows a comparison of two programmes. Bijleveld et al. (1998:8)

state that the quasi-experimental research style is largely used for measuring situations without treatment and with treatment. Furthermore, a quasi-experimental methodology, which does not slavishly follow predetermined designs, may increase the validity of the data from the sample and reduce the specific problems of the settings.

Section two of KRQ3 focuses on evaluating the impact of the extension of SBRM. A quasi-experimental design was adopted for comparing the pilot (treatment schools) with non-pilot SBRM schools (without treatment) of the extension of SBRM.

The schools selected by the PEAs in consultation with MEHE to implement the extension of SBRM programme are denoted as pilot schools. Before the implementation of strengthened basic SBRM, a very limited number of schools had irregularly received money for selected subjects to purchase consumables and perishables for teaching and learning. Since the implementation of strengthened basic SBRM, every school has received money for purchasing consumables and perishables at school level for all subjects; longer-life learning equipment is provided by the national and provincial authorities in kind. However, under the extension of SBRM money has been released to pilot schools for procuring inexpensive capital learning equipment at school level, but not expensive capital learning equipment: e.g. computers, microscopes. Schools have received these allocations in addition to the allocation for consumables and perishables to which they have been entitled. As a result, these schools receive an additional allocation (for school-level purchasing) and more freedom to acquire inexpensive capital learning equipment at school level than other schools. These are regarded as the 'pilot' (treatment) schools in the quasi-experimental design.

The term 'non-pilot schools' denotes those which were not selected for the implementation of the extended SBRM programme, although they implemented strengthened basic SBRM. These schools were not granted the additional allocations and decision-making authority to acquire learning equipment at school level and can be regarded as schools which did not receive the policy treatment of extended SBRM.

The cross-sections for my study include the five types of schools and, as discussed earlier, represent different socio-economic backgrounds and the sub-division into pilot and non-pilot schools.

3.4 Research strategies and methods

The verb 'to survey' means 'to view comprehensively and in detail'. In another sense it refers specifically to the act of 'obtaining data for mapping' (Denscombe, 1998:6). The survey is a widely used research strategy, and questionnaires, interviews and documentary analysis are popular methods used in surveys. This research employs the survey strategy for gathering data. It uses survey instruments in the form of questionnaire surveys and semi-structured interviews of a representative random sample of the target population. For my research data were collected through documentary analysis and a sample survey.

3.4.1 Documentary analysis

Documentary analysis was one of the primary methods of gathering data to answer all KRQs. Documentary evidence brings multiple benefits to educational research. Denscombe (1998:10) recommends that 'in practice, the strategy of the survey can be applied to documents as well as living people for adding value to the documents in

educational research'. The interpretation of documents of various kinds depends on the relationship between the content and context. The context includes the purpose of the documents as well as institutional, social, cultural and environmental aspects. Content analysis is centrally concerned with reliability and validity. Although there is no systematic and standard evaluative technique for the interpretation of words, researchers should critically evaluate the documents rather than accepting them at their face value. Platt (1981:31-66), Scott (1990:19-35) and Denscombe (1998:167), summarizes four basic criteria to evaluate documents. These are (i) authenticity: is the document genuine? (ii) credibility: is it accurate? (iii) representativeness: does it represent the typical instance? and (iv) meaning: is the meaning clear and unambiguous? To analyse the contents of the documents, an effective starting point is the research question. Then an appropriate sample of documents should be drawn, using explicit criteria. If the relevant documents are very rare, sampling will be difficult.

Advantages of this method are easy access to data, cost-effectiveness, and the permanence of the data. Disadvantages may relate to the credibility of the sources, being reliant on secondary data and the bias due to the interpretations of those who produced the documents.

The documents used in my research consisted of government circulars, reports, policy documents, implementation plans for foreign-funded projects, instructional guidelines, evaluation reports, and empirical research findings (Appendix 3.1). The GOSL and World Bank documents are legitimised, and hence questions of authenticity, credibility and representativeness do not arise. However, some of the documents may be found to have ambiguous meanings, and hence they should be

clearly reviewed. The GOSL and World Bank documents are reviewed in order to examine the historical and policy backgrounds of the introduction of the NBUCRAM and SBRM programmes, their fundamental principles, objectives and goals. Since the analysis will be structured in accordance with the KRQs, evidence gathered through documentary analysis and the empirical research will be described, compared and interpreted together. Especially, KRQ1 is explored using documentary analysis which is related to the policy backgrounds of NBUCRAM and SBRM.

At the beginning of the research a detailed literature review was made using existing published and unpublished articles and data on SBRM and school financing. There was a need to study the 'grey literature' at grass-root levels, which the implementers rarely find time to publish, containing relevant experience and information. The literature review was completed using the international documents and evidence on NBUCRAM/FFS and SBRM.

3.4.2 Selecting samples for surveys

Researchers use two kinds of sampling techniques, probability sampling and non-probability sampling, in gathering field data for surveys and descriptive research. Probability sampling consists of several types: random, systematic, stratified, quota, cluster and multi-stage sampling. Non-probability sampling includes purposive, snowball, theoretical and convenience sampling (Cohen et al., 2000:99-104; Scott & Usher, 1999:69:71). This research employed (i) probability sampling: random stratified sampling and (ii) non-probability sampling: purposive sampling strategies, because these methods enabled me to manage my research within the limits of time and resources.

To answer all SRQs mentioned under KRQs 2 and 3, data were gathered from a variety of primary and secondary sources, using different levels of sampling. The samples were as follows:

Sample 1, for addressing KRQ3 is a random stratified sample from the pilot school population (see 3.4.2.1).

Sample 2, for addressing KRQ3 is a purposive school sample from the non-pilot school population (see 3.4.2.2).

Sample 3 is a combination of samples 1 and 2 above, for collecting data to assess the impact of NBUCRAM – KRQ2 (see 3.4.2.3).

Sample 4 to gather information and professional opinions for addressing KRQs 2, and 3, includes zonal, provincial and national level education planners and officers (see 3.4.2.4).

3.4.2.1 *Sample 1: Random stratified school sample*

The PEAs in consultation with MEHE selected the eight pilot education zones for implementing the extension of the SBRM programme. As already indicated, all the schools within these zones received financial power and freedom to procure inexpensive capital learning equipment at school level, unlike schools in other education zones in each province. The pilot schools received such allocations in addition to the allocation for consumables and perishables to which they have been entitled. The pilot schools are considered as ‘policy treatment’ schools in the research. The selection of schools subjected to SBRM intervention in the eight pilot education zones was the task involved in the selection of sample one. A maximum of ten schools from each pilot education zone was selected [with a maximum of two schools of each type: Types 1AB (National), 1AB (Provincial), 1C, 2, and 3] in each province where the procurement of learning equipment at school level (the extension of

SBRM) was piloted. This limitation enabled me to manage my research within the limits of time and resources. The total number of pilot schools is 73, following a random stratified sampling method for all provinces (Cohen & Manion, 1994; Cohen et al., 2000; Scott & Usher, 1999; Brown & Dowling, 1998).

The population of schools by types of school considered for selecting sample one, and the details of the sample, are given in Table 3.1. The sample includes different types of schools, representing: geographical locations:- urban and rural; gender:- boys, girls and mixed; medium of instruction:- Sinhala and Tamil media. All the eight education zones selected for the implementation of the extension of SBRM are represented.

Table 3.1: Random stratified school sample (pilot schools)

Province	Education zone	Types of school									
		1AB (National)		1AB (Provincial)		1C		2		3	
		Total No. of pilot schools	No. of schools selected for the sample	Total No. of pilot schools	No. of schools selected for the sample	Total No. of pilot schools	No. of schools selected for the sample	Total No. of pilot schools	No. of schools selected for the sample	Total No. of pilot schools	No. of schools selected for the sample
Western	Sri Jayawardanapura	07	02	09	02	22	02	46	02	15	02
Central	Hanuranketa	00	00	01	01	09	02	27	02	31	02
Southern	Galle	14	02	04	02	39	02	71	02	34	02
North-East	Trincornalle	06	02	02	02	16	02	27	02	22	02
North-Western	Nikkawartatiya	03	02	00	00	38	02	77	02	63	02
North-Central	Anuradhapura	03	02	02	02	27	02	73	02	29	02
Uva	Welimada	01	01	02	02	29	02	44	02	32	02
Sabaragamuwa	Nivitigala	02	02	01	01	19	02	63	02	58	02
Sri Lanka		36	13	19	12	199	16	428	16	284	16

Source: primary data: MEHE (1999c).

This sample was used to gather data required for the comparison between the pilot and non-pilot schools using SBRM (KRQ3). The list of pilot schools selected for the sample is given in Appendix 3.2a. The distribution of the sample pilot education zones is shown on the map of Sri Lanka in Appendix 3.2b.

3.4.2.2 Sample 2: Purposive school sample

The second school sample was selected from the non-pilot education zone in each province. Schools having the most common characteristics with those in the first sample were selected, in order to reduce the degree of variation caused by factors other than having or not having the policy treatment of the extension of SBRM. The following variables: types of schools, student population, teacher population, geographical locations (rural and urban), gender (boys, girls or mixed schools) and medium of instruction were considered in matching the samples. The nearest characteristics were accepted. Attempts were made to select non-pilot education zones which bordered on the pilot education zone selected for sample one. Given these selection criteria, the schools in this sample were selected purposively (Cohen et al., 2000:99-104; Scott & Usher, 1999:69-71). Details of the sample are given in Table 3.2.

Table 3.2: Purposive school sample (non-pilot schools)

Province	Education zone	Types of school									
		1AB (National)		1AB (Provincial)		1C		2		3	
		Total No. of schools	No. of schools selected for the sample	Total No. of schools	No. of schools selected for the sample	Total No. of schools	No. of schools selected for the sample	Total No. of schools	No. of schools selected for the sample	Total No. of schools	No. of schools selected for the sample
Western	Homagama	02	02	02	02	14	02	50	02	42	02
Central	Walapane	01	00	01	01	11	02	20	02	50	02
Southern	Elpitiya	03	02	01	01	28	02	60	02	50	02
North-East	Muturu	02	02	03	02	17	02	37	02	68	02
North-Western	Maha	02	02	02	00	39	02	78	02	62	02
North-Central	Thabuthdegama	01	01	02	02	14	02	39	02	16	02
Uva	Mahiyanganaya	01	01	01	01	16	02	40	02	14	02
Sabaragamuwa	Embilipitiya	03	02	02	01	21	02	58	02	38	02
Sri Lanka		15	12	14	10	160	16	382	16	340	16

Source: primary data: MEHE (1999c).

This sample was used for gathering data required to compare pilot and non-pilot schools of the extension SBRM (KRQ3). The list of non-pilot schools selected for the

sample two is given in Appendix 3.3. The distribution of sample non-pilot education zones is shown on the map of Sri Lanka in Appendix 3.2b.

3.4.2.3 *Sample 3: Combination of samples one and two*

The third sample was chosen to address KRQ2. It is a combination of the first and second samples. Data and information collected from these samples were used to assess the impact of NBUCRAM in relation to KRQ2. Since 2000, NBUCRAM has been implemented nationwide. Hence, we can assume that there is no distinction between the pilot and non-pilot schools in terms of the impact of this programme. Therefore there is no contradiction in using the data and information collected for samples one and two to answer all the SRQs under KRQ2 (Appendices 3.2a & 3.3).

3.4.2.4 *Sample 4: Zonal, provincial and national level sample for planners*

The research was designed to collect data on FFS/NBUCRAM and SBRM from education planners at national, provincial and zonal levels. A questionnaire was administered to sample of these planners, as sources of quantitative and qualitative data (including their perceptions) on the implementation of NBUCRAM and both types of SBRM. The sample consisted of 24 education planners [eight from pilot education zones, eight from non-pilot education zones and eight provincial education planners (PEPs)] who operated at zonal and provincial levels. Hence, it covers all the zonal education planners (ZEPs) in pilot education zones and eight ZEPs in non-pilot zones.

Data with regard to NBUCRAM, both strengthened basic SBRM and the extension of SBRM at provincial level, were gathered from all eight PEPs.

In addition, data were collected from six national-level education planners (NEPs). Initially the intention was to collect the required quantitative and qualitative data on NBUCRAM and SBRM from four NEPs who are directly responsible for the educational financial planning and policy-making of MEHE (two officials), the FC (one official) and the National Planning Department (NPD) (one official). However, after the pilot study, I decided to increase the number to six NEPs, in order to gather quantitative and qualitative data in relation to all the KRQs of the research (see 3.6:B). The composition of the fourth sample is given in Table 3.3.

Table 3.3: Composition of fourth sample

Level	Number of respondents				Remarks
	Pilot education zone	Non-pilot education zone	Provincial	National	
Zonal	8	8			
Provincial			8		
National				6	The questionnaire was administered to only one NEP. All six NEPs were invited to interviews (see 3.5.1.3; 3.5.2).

Source: Pilot study (2002).

The six NEPs were from the MEHE (i.e. Policy, Planning and Monitoring Division, GEP2), FC, and NPD of the Ministry of Finance and Planning (MFP).

The matrix for the samples and various research instruments (see 3.5) which were administered are given in Table 3.4.

Table 3.4: The matrix for the samples and various research instruments apply for the study

Sample	Number responded				
	Postal questionnaires	In-depth survey	Teachers' questionnaires	Interviews	Survey on household expenditure on education
Sample 1	65 out of 73	18 out of 18	14 out of 14	5 out of 5	
Sample 2	61 out of 70	15 out of 18	14 out of 14	4 out of 4	
Sample 3	126 out of 143	33 out of 36		9 out of 9	20 out of 20
Sample 4	21 out of 25			14 out of 14	

Details of response rates are given in Chapters Five and Six.

3.5 Data collection tools

3.5.1 Questionnaires

Questionnaires are widely used instruments for gathering data and information in surveys. To increase validity, questionnaires should be piloted and refined before administration. Types of questionnaires range from structured to unstructured. The decision on the type to be used is usually dependent on the size of the sample. Cohen et al. (2000) state that if the sample size is smaller, then qualitative, less structured, and more open and word-based questionnaires may be suitable, though the results are difficult to analyse. Semi-structured questionnaires reduce the difficulty by setting an agenda but still letting the respondents comment in their own words (Cohen et al., 2000:248). Questionnaires are designed in a number of different ways, using different types of questions. Operationalizing the purposes enables us to decide the most appropriate types of questions -dichotomous, multiple choices, with rank orderings, with rating scales, closed, or open-. Questionnaires should ensure that all important issues have been explored, and especially that the data acquired will answer the

research questions. Further, they should produce answers which are easy to analyse, i.e. questions should be closed rather than open, in unambiguous and clear wordings. Questions should ask for a balance of facts and opinions, be clear and simple, and provide instructions on how to respond to each question or set of questions. Questionnaires should be as brief as possible, and balance brevity with politeness (Oppenheim, 1992:100-117; Cohen et al., 2000:261; Scott & Usher, 1999:67-69).

Six questionnaires were developed and employed for the study. They were:

- i. a postal questionnaire for school principals;
- ii. an in-depth study questionnaire for school principals;
- iii. a questionnaire for education planners (ZEPs, PEPs and NEP) ;
- iv. a teachers' questionnaire (pilot schools);
- v. a teachers' questionnaire (non-pilot schools); and
- vi. a questionnaire for the household expenditure mini-survey.

These questionnaires were used for gathering historical evidence and secondary data for answering all KRQs.

3.5.1.1 *Postal questionnaire*

The data and information required in relation to KRQs 2 and 3 were collected from the postal questionnaire (Appendix 3.4) which was administered to 143 (73 pilot and 70 non-pilot) school principals within 16 education zones in eight provinces. The structure of the postal questionnaire is given in Table 3.5.

Table 3.5: Structure of the postal questionnaire

Section	Required data	Respondents
1. General information	General information about the school.	All school principals.
2. Before implementation of NBUCRAM (1997-1999)	Facts and figures on traditional school financing (for KRQ2).	Ditto
3. After implementation of NBUCRAM (2000-2002)	About NBUCRAM: rationale for this new mechanism, impact, and issues (for KRQ2).	Ditto
4. School-generated revenues	Related to NBUCRAM (for KRQ2).	Ditto
5. Basic SBRM and non-SBRM (1997-1999)	About basic SBRM & non-SBRM: practices and issues (for KRQ3).	Ditto
6. Strengthened basic SBRM (2000-2002)	About strengthened basic SBRM: rationale, impact and issues (for KRQ3).	Ditto
7. Non-extension of SBRM (2000-2002)	About practices and issues of schools not included in the extension of SBRM (for KRQ3).	Principals in non-pilot schools.
8. Extension of SBRM (2000-2002)	About practices, impact, and issues of the extension of SBRM (for KRQ3).	Principals in pilot schools.

The technical terms used in the questionnaires, were defined at the beginning of the respective sections, for easy understanding by the respondents.

3.5.1.2 *In-depth study questionnaire*

An in-depth questionnaire for school principals (Appendix 3.6) was designed to collect data relevant to KRQs 2 and 3. The structure of this questionnaire is given in Table 3.6 below.

Table 3.6: Structure of the in-depth study questionnaire

Section	Required data	Respondents
1. Before (1997-1999) and after (2000-2002) implementation of NBUCRAM	Data on: - pupils' parents' income; - learning equipment received from 1997 to 2002; - allocation and expenditure data on SEN disadvantaged and learning resources schools (for KRQ2).	All school principals
2. School-generated revenues (1997-2002)	School-generated revenue data and spending purposes (for KRQ2).	Ditto
3. Strengthened basic SBRM	Data on allocation for and expenditure on learning materials (for KRQ3).	Ditto
4. Extension of SBRM	Data on allocation for and expenditure on learning equipment (for KRQ3).	Pilot school principals
5. Non-pilot programme of the extension of SBRM	Data on allocation for and expenditure on learning equipment (for KRQ3).	Non-pilot school principals

At the beginning of the research it was decided to include 40 (20 pilot and 20 non-pilot schools) out of 143 schools for an in-depth study of the impact of NBUCRAM and both types of SBRM programmes. However, this decision was changed after the pilot study (see 3.6:B), and after considering the practical issues and the availability of the functioning schools (1AB National and Provincial schools) in the sample education zones. Finally 36 (18 pilot and 18 non-pilot) out of 143 schools were selected for this in-depth study of the impact (Appendix 3.5). These schools represent all school types. They were from 8 education zones in 4 provinces. The provinces and education zones selected were:

Western	-	Sri Jayanwardenepura (Pilot)
	-	Homagama (Non-pilot)
Central	-	Hanguranketa (Pilot)
	-	Walapane (Non-pilot)
North-Western	-	Nikawaratiya (Pilot)
	-	Maho (Non-pilot)
Sabaragamuwa	-	Nivitigala (Pilot)
	-	Embilipitiya (Non-pilot).

These provinces represented different socio-economic conditions and levels of educational development. Strategies for in-depth study focused on interviews and extensive questionnaires (Appendices 3.6; 3.11). The framework of schools selected for the in-depth study (by pilot and non-pilot basis) is given in Table 3.7.

Table 3.7: Schools selected from the pilot and non-pilot schools for the in-depth study

Type of school	Pilot		Non-pilot		Total	
	Sinhala	Tamil	Sinhala	Tamil	Pilot	Non-pilot
1AB (National)	3		3		3	3
1AB (Provincial)	3		2	1	3	3
1C	3	1	4		4	4
Type 2	4		4		4	4
Type 3	4		4		4	4
Total	17	1	17	1	18	18

Source: Pilot study (2002).

A maximum of two schools was selected from each type of schools in each education zone, because this limitation enabled me to manage my research. However, the actual number of functioning Types 1AB National and Provincial schools did not make up the maximum number of schools of required.

3.5.1.3 Questionnaire for education planners (ZEPs, PEPs and NEP)

An extended questionnaire (Appendix 3.7) was administered to the 16 ZEPs, 8 PEPs, and to one NEP. The structure of this questionnaire is given in Table 3.8.

Table 3.8: Structure of the questionnaire administered to education planners

Section	Required data	Respondents	Remarks
1. General information	General information about the respondents	NEP, PEPs, ZEPs	
2. Before implementation of NBUCRAM (1997-1999)	Data on the period before NBUCRAM with regard to resource allocation (for KRQ2).	ditto	
3. After implementation of NBUCRAM (2000-2002)	Data on the period after NBUCRAM with regard to resource allocation: rationale, impact, and issues (for KRQ2).	ditto	
4. Basic SBRM and non-SBRM (1997-1999)	Data on basic SBRM and non-SBRM: practices and issues (for KRQ3).	ditto	
5. After implementation of strengthened basic SBRM (2000-2002)	Data on strengthened basic SBRM: rationale, impact, and issues (for KRQ3).	ditto	
6. Non-pilot programme for the extension of SBRM (2000-2002)	About practices and issues of schools not included to the extension of SBRM (for KRQ3).	NEP, PEPs, and ZEPs in the non-pilot zones only.	Not applicable to ZEPs in pilot zones.
7. Extension of SBRM (2000-2002)	About rationale, impact, practices and issues of the extension of SBRM (for KRQ3).	NEP, PEPs, and ZEPs in the pilot zones only.	Not applicable to ZEPs in non-pilot zones.
8. NBUCRAM, strengthened basic SBRM and the extension of SBRM (2000-2002)	Data on allocation for and expenditure on NBUCRAM, strengthened basic SBRM and the extension of SBRM (for KRQs 2 & 3).	NEP, PEPs & ZEPs	

The technical terms used in the questionnaire were defined at the beginning of the respective sections, for ease of understanding by respondents.

3.5.1.4 Teachers' questionnaire (Pilot and non-pilot schools)

Data to assess the impact of learning equipment and materials in classrooms were gathered (Appendices 3.8a; 3.8b) using 28 teachers (14 teachers from pilot schools and 14 teachers from non-pilot schools). Details are given in Appendices 3.9a and 3.9b, and a summary of their selection by relating subjects is given in Table 3.9.

Table 3.9: Teachers' questionnaire administered to the pilot and non-pilot schools

Province	Education zone	Type of school	Pilot schools		Non-pilot schools	
			Science Grade 11	Primary Grade 2	Science Grade 11	Primary Grade 2
Western	Sri Jayawardenepura	1AB	1	1		
		1C	1	1		
		2	1	1		
		3		1		
North-Western	Nikawaratiya	1AB	1	1		
		1C	1	1		
		2	1	1		
		3		1		
Total			6	8		
Central	Walapane	1AB			1	1
		1C			1	1
		2			1	1
		3				1
Sabaragamuwa	Embilipitiya	1AB			1	1
		1C			1	1
		2			1	1
		3				1
Total					6	8

Source: Pilot study (2002).

Grade 11 science and grade 2 primary are the chief subjects and grades which mainly use learning resources. Hence, these selections were based on the above variables. To study the relation between the efficiency of the extension of SBRM and improvements in pupils' performance, selected teachers were asked to identify the most important issues and effects of the utilization of learning resources at classrooms. Selected teachers from non-pilot schools were also asked to identify these, and how they acquired those resources for their schools. The study focused on identifying the relation between the perceived efficiency of SBRM and improvements in pupils' performance, compared to the non-pilot schools.

For easy reference, all teachers were given a brief introduction to the extension of SBRM at the beginning of the questionnaire.

3.5.1.5 *Questionnaire for household expenditure mini-survey*

Equity directly associated with the in-direct education cost. Therefore, it is required to study in-depth, I chose a mini-sample of households within the Western, Central, North-Western, and Sabaragamuwa provinces, with pupils in schools selected for the in-depth survey (Appendix 3.5), using the purposive sample method. The sample represented five income categories, that is: administrators, business persons, teachers and clerical grade staff, semi-skilled and labourers, and farmers. Each category was represented by four persons; the total number was twenty. I administered the questionnaire (Appendix 3.10) on household expenditure on education for the month of January 2002. Sample details are given in Table 3.10.

Table 3.10: Distribution of questionnaires for survey of household expenditure on education

Occupation category	Number selected for the survey by province				
	Western	Central	North-Western	Sabaragamuwa	Total
Administrative	1	1	1	1	4
Business	1	1	1	1	4
Teaching and clerical grade	1	1	1	1	4
Semi-skilled and labouring	1	1	1	1	4
Farming	1	1	1	1	4
Total	5	5	5	5	20

Source: Pilot study (2002).

3.5.2 **Semi-structured interviews**

Interviewing is another essential tool for gathering data in research on education (Scott & Usher, 1999:108). It enables richer data on the preconceptions, perceptions and personal beliefs of the respondents to be collected than from closed-question of the questionnaires. Consideration must be given to the objectives of the interviews, whether to deal with facts, opinions or attitudes, the kind of information expected, and the extent of the interviewer's own insights into the respondent's situation. Along with these considerations the use of open or closed, direct or indirect, and specific or

non-specific questions must be determined. According to Scott & Usher (1999:109) there are three kinds of possible interview approaches: working through questionnaires, structured interviews and semi-structured interviews. The advantages of semi-structured interviews are that they can obtain access to past events and cross-checking against data collected from other different sources.

Hence, to satisfy the requirements of all KRQs, a semi-structured interview technique (Appendix 3.11) was used to collect information from six national-level officials, especially concerning their views on policy initiatives, policy-making, policy objectives and the fundamental principles of NBUCRAM and SBRM. Information was also gathered about the situation before NBUCRAM through the interviews, in order to answer KRQ1. The framework for the selection of interviewees is given in Table 3.11.

Table 3.11: Framework for the selection of interviewees

Level	Number of interviews	Represented levels of interviewees	Code	Date of interview
National	6	MHRDECA	NEP1	08.03.2002
		FC	NEP2	18.07.2002
			NEP3	12.06.2002
		NPD	NEP4	12.09.2002
		GEP2	NEP5	11.03.2002
			NEP6	05.07.2002
Provincial	4	Western	PEP1	23.01.2002
		Central	PEP2	02.04.2002
		North-Western	PEP3	14.06.2002
		Sabaragamuwa	PEP4	09.05.2002
Zonal	4	Sri Jayawardenepura (Pilot)	ZEP1	16.01.2002
		Hanguranketa (Pilot)	ZEP2	30.01.2002
		Maho (Non-pilot)	ZEP3	03.04.2002
		Embilipitiya (Non-pilot)	ZEP4	04.03.2002
School	5	1AB (National):- Nikawaratiya (Pilot)	SP1	09.10.2002
		1AB (Provincial):- Walapane (Non-pilot)	SP2	07.07.2002
		1C:- Sri Jayawardenepura (Pilot)	SP3	18.02.2002
		Type 2:- Embilipitiya (Non-pilot)	SP4	24.10.2002
		Type 3:- Hanguranketa (Pilot)	SP5	09.07.2002

Source: Pilot study (2002).

Initially it was decided to conduct one-day semi-structured focused interviews and discussions with groups of four PEPs and 10 (five pilot schools and five non-pilot) out of 40 principals representing each type of school which was selected for the in-depth study. After consideration of the practical difficulties of meeting principals for discussions, a decision was taken to conduct individual interviews with the aforementioned principals and planners; details are given in Table 3.11.

3.6 Access to the research

All the participants in the research consented to contribute to the study (Appendix 3.12). They had a right to withdraw their participation at any time. I emphasized the independence of my research and that it was not related to any official positions I had. However, my personal experience indirectly affected access to the field, notably for collecting empirical data and documentary evidence.

A. Administration of research instruments

Guidelines for designing questionnaires, and self-administered and structured questionnaires were developed (Bryman & Cramer, 1997; Cohen & Manion, 1994; Cohen et al., 2000). The back-translation technique was used before the administration of all the research instruments in the field.

B. Pilot study

The research instruments (the questionnaires and the interview schedule) were pre-tested in the ten selected schools (five schools each from sample one and sample two) in two education zones (one pilot zone -Sri Jayawardenepura- and one non-pilot zone -Homagama-) in Western province. These two zones have very similar socio-

economic backgrounds, geographical locations and school populations compared to the other zones in the province. The following benefits came from the pilot study:

- i. research instruments were refined according to the results of the pre-testing;
- ii. amalgamations of the questionnaires and semi-structured interview schedule, (with were amalgamated separate sections included for each SBRM regime, not included in the original research instruments);
- iii. more exploration the different SBRM regimes;
- iv. the number of interviewees was increased (cf. Table 3.11);
- v. the interview modes were changed (originally I decided on focused-group interviews; later, individual interviews replaced these); and
- vi. the need for a household expenditure survey was identified and the mini-sample survey administered.

3.7 Methods of data analysis

As I discussed in Chapter Two, the assessment of efficiency and equity can use two main methodological approaches: the interpretative/perspective approach, using qualitative data, and the scientific/positive approach, using quantitative data (Easterby-Smith et al., 2002). The scientific approach requires good quantitative data. NBUCRAM and strengthened basic SBRM were not implemented on a pilot basis in Sri Lanka, whereas, the extension of SBRM was introduced on a pilot basis. The social experimental research design was absent in these programmes. As I discussed in Chapter Two when considering methodological difficulties, the main method of analysing data in my research is within an interpretative perspective, using a qualitative approach. In addition, quantitative data are useful for supplementing and

illustrating the answers to KRQs 2 and 3; a large amount of quantitative (e.g. financial) data to address these KRQs has been collected. Both types of data are used to evaluate the impact of FFS/NBUCRAM and SBRM. The quantitative data are analysed using the Excel computer software. Quantitative data analysis in respect of each KRQ mainly involves statistical descriptions, interpretations and the analysis of percentages (Bryman & Cramer, 1997; Balnaves & Caputi, 2001). These analyses are strengthened by an interpretative perspective using qualitative data. Further, principals' and planners' perceptions of the traditional school financing mechanism, NBUCRAM, and SBRM are assessed by percentage analysis. Crabtree & Miller (1992 in Robson, 2002:457-458) produce a different typology, more closely linked to the methods of qualitative data analysis. They refer to quasi-statistical methods as the template, editing, and immersion approaches. In addition, the perceptions and views of respondents collected through the questionnaires are analysed using the exploration method. Furthermore, documentary analysis (i.e. content analysis) is used to describe and interpret qualitative data.

3.8 The validity and reliability of data and triangulation

The concepts of validity and reliability are important, and the key to effective research. They must be considered in both qualitative and quantitative research (Cohen et al., 2000; Easterby-Smith et al., 2002).

Construct validity is a question of 'how far we can be sure that a test or instrument measures the attribute that is supposed to measure' (Easterby-Smith et al., 2002:134). Cohen et al. (2000:105-117) and Easterby-Smith et al. (2002) categorized different kinds of validity; for example, content, internal, external, descriptive, interpretative,

theoretical, face, and convergent validity. It is impossible for research to be 100 per cent valid; expecting such validity is the optimism of perfection (Cohen et al., 2000:105; Easterby-Smith et al., 2002:134). In qualitative data, the subjectivity of respondents and their opinions, attitudes and perspectives together contribute to a degree of bias. Hence, the best research can only strive to minimize invalidity and maximize validity. Social researchers have to find the answers to the question, 'Do the measures correspond closely to reality?' Further, they should ask themselves whether a sufficient number of perspectives have been included.

In my research, the validity of data was improved through the careful selection of samples. Further, different semi-structured research instruments (questionnaires and interviews) were used. Also, the quantitative and qualitative data were collected from different strata (school, zonal, provincial, national) to check the validity of data. However, there was a limitation on how far the respondents provided valid qualitative data.

Reliability is another essential factor in research as it is one of dimension of validity. Reliability concerns the question, 'Will the measures yield the same result on other occasions?' Reliability is essentially a synonym for consistency and applicability over time, over instruments and over groups of respondents. It is concerned with precision and accuracy. There are three principal types of reliability: stability, equivalence, and internal consistency (Cohen et al., 2000:117-120). Reliability is a measure of consistency over time and with similar samples.

My research takes account of validity factors in relation to both qualitative and quantitative data. The same research instruments have been used for all the data

collections. Before the administration of the research instruments to the whole sample, they were pre-tested, and unreliable aspects were eliminated. Further, the back-translation method was followed before the administration of all the research instruments to the sample, as a strategy for increasing the validity of the data.

Validity and reliability can be ensured by triangulation. Triangulation may be defined as the use in any study of two or more methods of data collection (Cohen et al., 2000:112-113). It is a powerful way of demonstrating concurrent validity, for quantitative and qualitative data. Further, triangulation is required to minimize the errors resulting from personal views and perceptions.

Since triangulation was required to assure the validity of my research, data were collected from the different strata of the education system. School-level data, especially these concerned with financial allocation and expenditure, were triangulated with the data collected from the zonal, provincial and national levels. Further, interviewing the respective officials ensured the validity of the data collected about different situations across the samples. Documentary evidence (i.e. budget reports, progress reports, financial statements) was used to check the validity of the data from other sources.

3.9 Ethical issues of the research

Ethical issues are serious in social research, especially in the field of education. Robson (2002) mentioned ethical considerations as very important factors in such research; several parties, such as principals, teachers, and officials, have been involved as informants.

The adoption of cross-sectional and quasi-experimental research designs raises particular ethical issues. The collection of quasi-experimental data raises ethical issues; in particular data collection from two types of schools with different treatments could be considered as a sensitive issue. But these sensitive issues do not affect my research, as the extended SBRM pilot zones have already been selected by the MEHE with the collaboration of PEAs. The principals, teachers, ZEPs and PEPs involved in the extension of the SBRM programme were the informants. The data which were gathered concerned views and perceptions mostly based on their personal beliefs. The handling and presentation of my research information preserves their anonymity.

The importance of the confidentiality of data is emphasised by Cohen et al. (2000:62). In securing the confidentiality of data, privacy and the anonymity of respondents are the key factors. The education authorities (national and provincial levels), policy-makers, education planners (national, provincial, and zonal), principals, and teachers were the informants for the study. Diener & Crandall (1978 in Cohen et al., 2000:61) stated that there are three different aspects of the privacy of data. These are: the sensitivity of the information obtained, the setting being observed, and the dissemination of information. Privacy, sensitivity and the dissemination of information are all concerns of this research, as those who evaluated policy and practice participated as informants while they were still engaged in their professions. The respondents were asked for their views on policy initiatives, and their perceptions of the school funding mechanism and of their participation in SBRM. All these views and perceptions involve highly confidential data. Consent to participation in the research was obtained from the respondents, and measures have been adopted to secure their anonymity in any dissemination of the information.

To summarize, this research has used various strategies to increase the validity of the data which are used for the analysis. Furthermore, action has been taken to minimize ethical difficulties related to the research findings.

3.10 Conclusion

This chapter presented four KRQs and their SRQs of the research. NBUCRAM and SBRM programmes have been considered as interventions for existing system on school financing and resource management. Therefore, intervention research methodology was employed for this study. Longitudinal and cross-sectional research designs were adopted for the study on the impact of NBUCRAM on the equity of resource allocation and the strengthened basic SBRM in relation to efficiency. Further, quasi-experimental and cross-sectional research designs were employed for the study on the impact of the extension of the SBRM in relation to efficiency. The qualitative interpretative approach is mainly followed in the empirical data analysis due to the lack of objective quantitative data. It is noted the input-output process of efficiency was not evaluated due to the absence of output data and other methodological difficulties. Instead, sample surveys were conducted of school principals and educational planners at national, provincial and zonal level, to collect information on their attitudes and perceptions of equity, adequacy and efficiency.

This chapter is linked to Chapters Four to Six, where the analysis and discussion of empirical evidence collected through the adoption of the discussed methods will be presented.

Chapter Four

Policy background and evolution of formula funding of schools and school-based resource management in Sri Lanka

4.1 Introduction

The main purpose of this chapter is to discuss the policy backgrounds of both FFS/NBUCRAM and SBRM in Sri Lanka. The discussion will explore their evolution in recent decades. The discussion of FFS/NBUCRAM is focused on criteria for equity and adequacy, and the section on SBRM refers to efficiency criteria.

This chapter is related to the KRQ1 outlined in Chapter Three, which is: **what are the policy backgrounds of the FFS/NBUCRAM and SBRM in Sri Lanka?** The answer to KRQ1 requires the study of the following SRQs, clustered under three headings. The mapping of SRQs and the structure of the chapter is shown in Table 4.1.

Table 4.1: Mapping of SRQs and the structure of the chapter

Cluster	SRQ		Structure of the chapter
Background and origin of FFS	1.1	What are the historical background, rationale, origins, policy implications, concepts, and principles of FFS/NBUCRAM in Sri Lanka?	4.2 4.2.1 4.2.2
	a.	What was the involvement of international donor agencies in the initiation of FFS?	4.2.3
	b.	What was the conceptual framework for ensuring equity through FFS/NBUCRAM?	4.2.4 4.2.4.1
Background and origin of SBRM	1.2	What are the historical background, rationale, origins, policy implications, concepts, and principles of SBRM in Sri Lanka?	4.3
	a.	What is the involvement of donor-aided projects that have attempted to improve efficiency in the education system through SBRM?	4.3.1

	b.	What is meant by SBRM, and how does it relate to efficiency incentives?	4.3.2
	c.	What are the significant differences in the regimes for SBRM which have been used in the education system in Sri Lanka?	
National policy on funding schools for learning resources	1.3	What is the national policy on funding for learning resources in schools?	4.4

In this chapter, the discussion will draw mainly on secondary data (i.e. published documents and existing empirical studies), and on my interpretations and descriptions as appropriate. The chapter will examine three topics: the policy background, evolution and origin of FFS, the policy background and evolution of SBRM, and present national policy on funding for learning resources in schools in relation to NBUCRAM, with special focus on adequacy criteria.

4.2 Policy background and origin of formula funding of schools

This section deals with SRQ1.1 of KRQ1, which was outlined in Chapter Three and mapped in Table 4.1. The background and origin of FFS are elaborated under the following four headings:

- 4.2.1 Historical procedures and practices of school financing;
- 4.2.2 Changing trends in school financing;
- 4.2.3 Involvement of international donors and lenders in school financing;
- 4.2.4 Introduction of FFS via NBUCRAM;
 - 4.2.4.1 Conceptual framework of NBUCRAM.

4.2.1 Historical procedures and practices of school financing

Before the western colonization of Sri Lanka, the religious centres delivered education voluntarily, on an honorary basis. Since 1938, the government has had a continuous commitment to implement a ‘free education’ policy. Education has been

free, from kindergarten to university level (Hallak, 1972). The free education scheme recommended by the Special Committee on Education in 1940 was first introduced in 1945 (Little, 1999:91), and fully implemented by 1950, leading to a great expansion of education. As a result of these changes, education became a public responsibility. The school system was designed to provide broad opportunities for children, who were eligible to receive education without any restriction with regard to their gender, ethnicity or geographical locations. The government was directly involved in the provision of education and of the required resources.

In 1962, the government took control of the assisted schools which had been governed by religious centres, the private sector, and individuals. In the later 1960s and 1970s, it implemented major development programmes. Further, health services and the social infrastructure were also improved. With the increasing demand for education a need arose to establish additional public schools (Balasooriya, 1996), and more schools were established island-wide. Some schools were unplanned, and no rationale for them is evident (Wehella, 2001). Nonetheless, the government provided basic educational facilities for these schools, in a very centralized manner. Less attention was paid to the provision of learning resources to schools, and the authorities merely attempted to meet the schools' requirements for infrastructural facilities. The education sector had limited resources to match the unlimited requirements of the unplanned schools. The government was not able to provide sufficient educational resources, including learning resources, for all the schools during the period from 1948 to the 1970s.

In the two decades of the 1980s and 90s, two major educational reforms were launched [White Paper on education (1981); education reforms (1994)], mainly concerning changes in the curriculum. As a result of curriculum changes, the needs for learning resources for teaching and learning were great, compared to the previous decades; but the government was not in a position to increase the educational allocation in accordance with these new requirements. Therefore, educational authorities have tended to develop norms and criteria for resourcing schools.

4.2.2 Changing trends in school financing

The education authorities used a ‘need-based assessment mechanism’ as a tool for providing schools with both learning resources and other infrastructural facilities, but, political and bureaucratic influences on the resourcing of schools were harmful for the disadvantaged schools. The supply of learning resources to most of the small schools (nearly 60% of the total) was restricted as a result of the ‘smallness’ (Appendix 4.1) of their pupil population. This discrimination caused a ‘crisis of small schools’. Less parental demand, poor quality of teaching, low achievement levels, less attention from authorities and parents, negative attitudes of teachers, and lack of supervision led to the closure of small schools. Highly popular schools have not been able to cater to consumer demand.

During the period before NBUCRAM, educational disparities in the resourcing of schools were created across the system. In fact, GOSL invested a large amount of public funds annually for the sake of the qualitative and quantitative development of education, but it is questionable whether these funds were received at the correct points and at the appropriate moments. Further, it appears that educational wastages

occurred. These imbalances led to unrest among the young directly or indirectly. In the 1970s and 80s, there were uprisings in the country. In 1972, after the youth revolution of 1971, the government introduced new educational reforms which proposed to reduce educational disparities and to relate education to the economy of the country. However, in the late 1970s, these proposals were abandoned as a result of the lack of political commitment. Hence, the education system did not gain the expected results from these reforms. In 1988/89 there was a second youth revolution in the country. In 1990, the President of GOSL appointed a commission to investigate youth unrest and make recommendations to overcome it. The Commission revealed that one of the root causes for this unrest was education. The situation was described as follows:

The ever widening disparity in opportunities for advancement between rural and urban youth is captured with telling effect in the popular youth slogan '*Kolambata Kiri Apata Kekiri*'; a pervasive sense of injustice, '*Asadharanaya*' -(in Sinhala language carries such meanings as lack of equality and injustice)-, arising principally from political patronage and empowerment which culminates in a demoralising denial of merit.

Education: in many ways, this is the most important, for it is only through education that the poor and the under-privileged majority can surmount the barriers that keep them disadvantaged, whether these barriers are created by race, creed, caste, class or other social or economic factors (The Presidential Commission on Youth, 1990:xix).

The consumers of education, especially in the remote rural areas, used the slogan in Sinhala '*Kolambata Kiri, Apata Kekiri*' (milk for Colombo - the capital, and '*Kekiri*' - a species of cheap cucumber, mainly grown in dry zones- for the villages). The magnitude of the educational disparities between Colombo and the outstations was well described by this slogan. Moreover, it indicated the actual situation of the country, where there was luxury and privilege for a very limited section and scarcity for the majority in terms of the provision of basic educational resources and the quality of education. As mentioned earlier, the root causes of the youth unrest were

the mismatch between education and the economy and the unequal distribution of educational opportunities and resources. The Commission (p.32) referred to:

...the inequalities with regard to facilities between the urban and rural schools, as well as inequalities within the urban areas between the established schools and the schools in the slums and the shanties.

Further, the Commission (pp.38-39) recommended that:

...a great deal of autonomy should be given to the school, its principal and its school development committee. Every school should be a decentralized unit. The Ministry of Education in this context should be confined, as a matter of deliberate policy, to: (a) the allocation of resources;... (e) postulating a minimum requirement with regard to curricula, allowing for diversity at the district and school level;... the principles set out above will ensure that the school has a substantial degree of autonomy.

The Commission (p.72) critically discussed the existing resource allocation mechanism, and suggested that:

...after the above priorities have been met with regard to resource allocation, the rest of the resources may be granted to the remaining schools, having regard to the number of students in each school. The aim is that the allocation per student should be uniform.

The Commission (pp.72-73) urgently recommended establishing a 'national educational policy' ensuring the reduction of disparities between and within provinces and among schools, so as to ensure equity and efficiency. As a result of these recommendations, the President of GOSL appointed the NEC in 1991 to make recommendations for formulating a national education policy (NEC, 1992:1-4). NEC (1992) recommended immediate action to change the prevailing resource allocation mechanism. NEC (1997:14) observed that 'inadequacies and uncertainties in funding are severe constraints on education development'. The quality of funding for education in an economy can be judged in terms of adequacy, equity, and efficiency. In addition, with growing awareness of regional and racial inequalities, equity

considerations also seem to exert considerable influence on the financing of education.

Furthermore, NEC (1997:17) emphasized that recurrent educational expenditure was largely on personal emoluments, and a very small proportion had been spent on improvements in the quality of education i.e. the provision of learning resources. Also, when implementing a new curriculum, more learning resources are required, i.e. equipment, teaching aids, consumables and perishables. The Commission recommended that allocations for educational resources should be distributed on a unit cost basis. Moreover, NEC (1997:24) recommended devolving powers and authority to school level, under SBM, to formulate school-based development plans and manage resources.

These NEC recommendations were reviewed by the PTFGE which was appointed in 1995 and in 1997. The task force accepted these recommendations, which were included in the educational reforms package. The task force (p.1) was unhappy with the existing resource allocation mechanism.

...it is clear that provinces and districts are not equally provided with physical infrastructure and resources. These differences have a bearing on how the education system functions. They affect the background of the learners, participation in education, the expansion of their potential and their level of achievement...

Further, PTFGE (1997:31) recommended that a substantial portion of the management of the schools should be transferred to the school level. PTFGE advised the following changes to implement SBM as part of the educational reforms:

- a. decisions will be taken with regard to the areas of authority that should be devolved to the school management;

- b. principals will no longer be considered simply as administrators of schools. They will be trained in SBM and will function as policy-makers and financial controllers, in addition to being administrators;...
- c. schools will be managed by school boards,....;
- d. each school and school board will develop a school policy....

Local documentation emphasized the need for a new allocation mechanism for resourcing schools with learning equipment and materials as well as infrastructural facilities. In addition to the involvement of the local policy elites and educationists, international agencies were highly involved, and have intervened during the last three decades.

4.2.3 Involvement of international donors in school financing

In 1972, financing and educational policy in Sri Lanka was studied by Hallak, who explored the disparities in education financing. He showed that historically many obstacles and imbalances in educational finance prevailed in the system. There are few empirical studies of the educational disparities with special focus on educational financing; they have paid little attention to school financing. Among them, the study of Nyström (1985), on schooling and disparities with special reference to the regional differences in Sri Lanka is significant. The main findings of Nyström's study indicated that the socio-economically more favoured areas, with better educational resources, benefited most from government attempts to equalize educational opportunity, and that the gaps were getting wider rather than narrower. Further, he concluded that to achieve equal educational opportunities there was a need for a decentralization of planning and management, coupled with a policy of selective positive discrimination in favour of underprivileged social groups and geographical areas.

ADB in 1989 carried out a comprehensive study of the education sector, and explored the facts and figures of the system. They criticised the prevailing process for the allocation of resources, and highlighted educational disparities in qualitative as well as quantitative development. According to Singhal et al. (1989:234-236) the proportion of expenditure on educational resources compared to other sectors declined during the fifties and sixties. Furthermore, they described the allocation as basically determined in accordance with the numbers of pupils in the schools as well as in the classes. Hence, the schools with a higher percentage of growth in enrolment benefited from following this mechanism. In contrast, small school with few enrolments suffered from a lack of essential resources.

However, the budgetary process was based on the programme budget, and it did not consider any specific educational development project. A large proportion of the government's education budget was allocated for personal emoluments and for capital works. The capital budget depended upon the availability of funds. Considering the prevailing education allocation procedures in Sri Lanka, Singhal et al. (1989:263) suggested the following changes to reduce educational resource disparities in the system:

...community contribution to education should be encouraged;... all allocations to education need not come through the institutions of education alone. Some of the funds deliberately channelled through school-based scholarship... will promote the better utilization of resources being already invested in education....

Furthermore, the ADB study opened education in Sri Lanka to international donors and lenders, as well as to other organizations, for their contributions and patronage. As a result of these studies, ADB and World Bank became directly involved in

providing financial assistance for the qualitative and quantitative development of education.

The World Bank provided financial assistance for education in 1993 through the General Education Project, with special focus on providing infrastructural facilities learning resources for primary schools, and staff development programmes. During the implementation of this project, the Bank carried out a review of the education and training sector in 1994. Their report paid attention to the need for increased spending on learning resources to improve the quality of education (World Bank, 1994:24-25). Furthermore, they computed that a high proportion of the recurrent education expenditure was spent on staff salaries and welfare activities, and considered that the education authorities paid little attention to establishing efficiency. Much wastage occurred as a result of the unplanned manner of resourcing schools; teacher deployment, infrastructure and facilities were provided without estimations of future trends. Hence, World Bank recommended education authorities to re-formulate the resource allocation mechanism in order to ensure equity; the Bank emphasised:

...measures to improve equity in access to quality primary schools, including better allocation of resources; continuing the present investment in schools in disadvantaged areas, and special attention to the needs of schools in disadvantaged areas while working on quality improvement (World Bank, 1994:26-27).

The government accepted and agreed on implementing these recommendations, as this was one of the conditions for receiving the Bank's financial assistance. However, the education system was very slow in implementing the recommendations, for various reasons, and did not introduce the new resource allocation mechanism at the time when it was recommended.

In these circumstances, ADB in 1996 carried out a further comprehensive study of the financing of social services in Sri Lanka. In the meantime, Tilak (1996) prepared a report on the costs and financing of education. These significant studies focused on the inter-sectoral and intra-sectoral allocation of resources to education. Furthermore, they noted that the inadequacies of learning resources as well as of the maintenance of schools were the key elements of school financing in Sri Lanka; these studies highlighted that when allocating and distributing resources among the provinces and schools, the authorities did not consider the size of the population and correspondingly the needs of the provinces as well as schools (ADB, 1996:19-20; Tilak, 1996). Considering this situation, ADB (1996:65-67) recommended that the education system should adopt some mechanism based on resource allocation according to unit cost for the purpose of resourcing schools:

...estimates on the unit cost of education are extremely useful in the allocation of resources and their usefulness would increase..., unit cost based allocations may be an important step towards reducing these inequalities...

Authorities were recommended to take action to devolve their resourcing powers and authority to provincial, zonal and school levels.

Since 1993, World Bank's involvement in education in Sri Lanka has been paving the way for policy-makers to make the necessary reforms for improving the quality of education. During the implementation of World Bank-funded General Education Project, the Bank had second thoughts about developing scenarios for the improvement of the quality of education, and instead of this, quantitative infrastructure development prevailed. In 1997, Aturupane carried out a study with especial reference to educational resource allocation, as a feasibility study to prepare

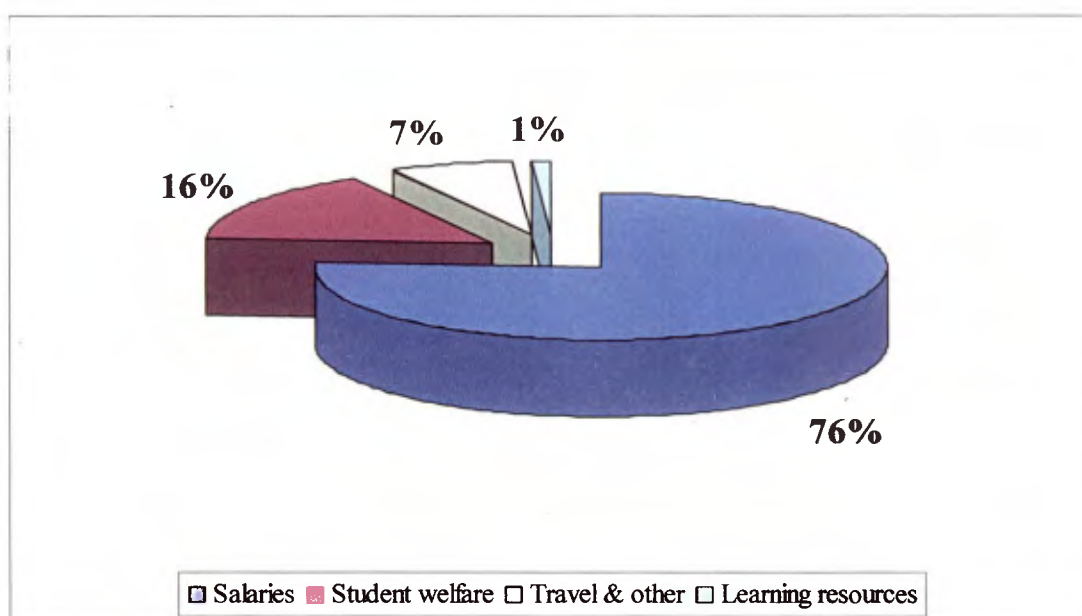
for the World Bank-funded GEP2. Aturupane (1997:1) emphasized adopting and developing the conceptual framework of a NBUCRAM for financial allocations in the education sector. According to Aturupane (1997:19) allocations for the provision of learning resources to schools were highly inadequate, and distribution varied greatly from school to school. Compared with other recurrent expenditure for education, both provincial and national levels had been allocating a negligible amount for learning resources. After further consideration of all these factors, Aturupane (1997:30) suggested that the adoption of NBUCRAM in Sri Lanka would enhance both efficiency and equity in the education sector:

...a NBUCRAM is of particular importance in the development of a scientific framework for the provision of learning resources in an education system. The framework offers a logical, readily comprehensible formula for the allocation of resources, according to a systematic priority ranking, over a wide range of educational learning resources. Application of the framework also provides a logical basis for the calculation of expenditures and the prediction of future resource requirements. Given the current policy emphasis on improving the quality of education in Sri Lanka, a NBUCRAM provides the appropriate framework for the allocation of resources to the education sector.

Further, disparities in the availability of facilities were common in the system, and as a result very few schools became popular among the people. Although a common curriculum was taught in all schools, what the pupils gained was different from school to school. Educationalists have shown the importance of using materials, equipment, and instruments in the classroom if active teaching and learning is expected. But because the allocation made for education from the national income was gradually decreasing, there was a severe disparity in the distribution of physical facilities and learning resources. As discussed, studies carried out by various agencies and personnel had shown that the disparities were very common in the allocation of funds under the education budget.

The total education budget for the year 1996 was SLRs 23 billion, which was equally distributed between the ME and the Provincial Ministry of Education (PME). The sector budget consisted of two categories, recurrent expenditure (81%), on resources defined as consumed within one year, and capital expenditure (19%), for items utilized over a period in excess of one year. The distribution of the recurrent education budget in 1996 by category of expenditure is shown in Graph 4.1a.

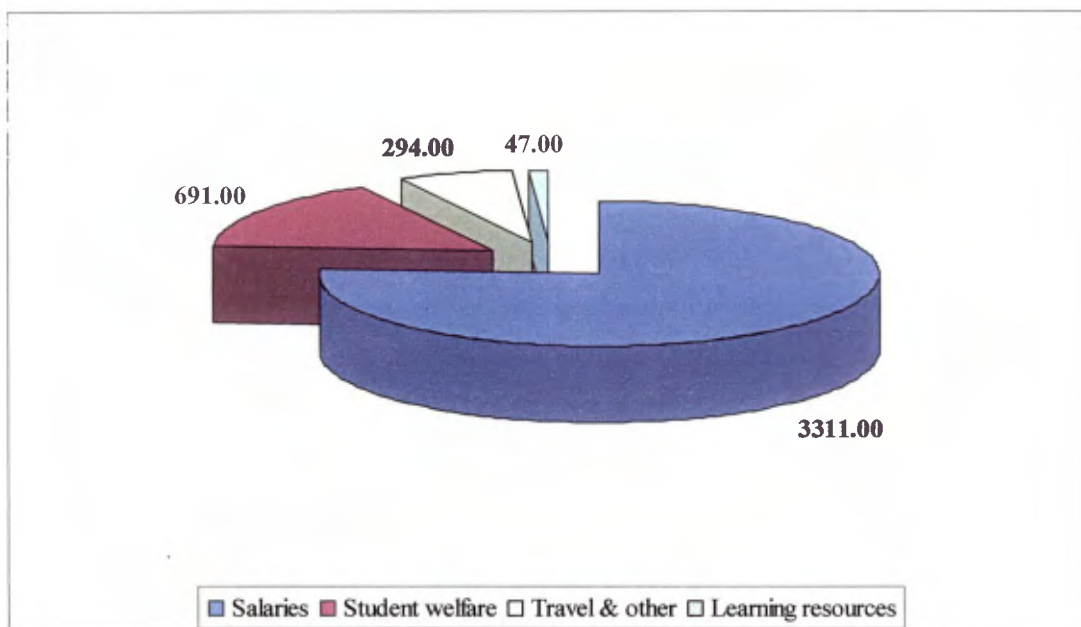
Graph 4.1a: Distribution of recurrent education expenditure by category-1996



Source: World Bank (1997b:12).

As Graph 4.1a shows, the total recurrent sector budget consisted of: 76 per cent for staff salaries, 16 per cent for subsidies and welfare programmes, seven per cent for travel and other expenditures, and one per cent for essential teaching and learning resources, school supplies and school maintenance (Aturupane, 1997:19; World Bank, 1997b:12). The distribution of per-pupil recurrent education expenditure in 1996 is shown in Graph 4.1b.

Graph 4.1b: Distribution of per-pupil recurrent education expenditure (current prices: SLRs) 1996



Source: World Bank (1997b:12).

As Graph 4.1b shows a very high proportion of recurrent education budget was devoted to staff salaries, and a very small amount to per-pupil expenditure for learning resources.

Evidently the Sri Lankan education system pays great attention to certain areas, neglecting more important ones. Much of the education budget is devoted to administrative functions, at both national and provincial levels. Moreover, there are concerns that the authorities have not actually devoted even that small one per cent quota to essential learning resources. These concerns give rise to a number of specific questions. Can we see any basis of equity underlying the allocation of finance for learning resources? Do the teachers utilize efficiently and effectively even the small available amount of learning resources? Have they been given sufficient training for this? Insufficient attention has been paid to disadvantaged schools when supplying and distributing the required resources. The financial support of politicians,

bureaucrats, parents and well-wishers is received only by popular urban schools. A very negative attitude is displayed to disadvantaged rural schools, where the children of poor and less educated parents are educated. The basic reasons for this are the absence of a systematic and rationally based master plan for supplying and distributing the educational inputs of both physical and human resources, and the lack of financing powers at school level. In these circumstances, can a system be expected to ensure equal educational opportunities? When and how could we reach a state of equity? These are some of the issues, which educationalists have to address. A number of studies in the last twenty years have disclosed the need for immediate attention by the authorities to classroom teaching and learning. It is time to change to a 'quality development education approach' instead of the existing 'maintenance education approach'. As NEC (1992) recommended, special attention be paid to active and lively teaching and learning in the classroom. In other words, the education system should be moving from an input-oriented approach to an output-oriented one.

Such an approach would need to consider that total pupil enrolment in the school system is gradually decreasing (MEHE, 1993a; World Bank, 1996; Balasooriya, 1996; Srivastava, 2000:4), but no strategy has been adopted to reduce the teacher population to match this trend. The reason for decreasing pupil enrolment is the decreasing birth rate nation-wide since the 1980s. However, there is no 'manpower requirement approach' in the process of educational planning; inefficiency in education is rising, and contributing to the high percentage, 70 per cent, of the teacher salary component in the recurrent education budget. There is no need to add school buildings to the system, since rolls are falling across the country. Hence, education authorities have to decide whether to improve the quality of education by providing learning resources at

the required level, rather than allowing wastage through a non-rational provision of infrastructural facilities to continue.

Under these circumstances, World Bank and GOSL agreed that the Teacher Education and Teacher Deployment Project was to allocate three per cent of the provincial education block grant to learning resources in 1998, and to increase this allocation by one per cent per year to reach six per cent by the year 2001 (World Bank, 1996; 1997a:41). This innovation did not take place in this timeframe, for various reasons. It became a prerequisite for receiving further financial assistance for the GEP2. The required funds were to be incurred from savings through the implementation of a teacher deployment policy (World Bank, 1996; 1997ab). Further, minimising wastage and inefficiency, through the rationalization of the school system, was expected, and the savings would be used to supply learning resources (World Bank, 1997abc). Considering all this groundwork since 1996 and 1998, the World Bank, the principal international lender, has prioritised improvements in the quality of the system for most of the components of GEP2 and Teacher Education and Teacher Deployment Project.

4.2.4 Introduction of FFS via NBUCRAM

GEP2's objectives were to reduce educational inefficiency through the rationalization of the school system; from the savings, schools could be supplied with learning resources. GEP2 has two components out of eight, namely a 'quality inputs' and an 'education finance', which specially address the financial implications for schools. The quality inputs component mainly focuses on the provision of learning resources to schools on a per capita basis and on matching the new curricula, while the education finance component has been designed to formulate mechanisms for the

provision of resources, both physical and human, to schools. At the initiation stage, the formula has been limited to providing learning resources to schools. It is expected that it will be extended to other areas, such as the provision of infrastructural facilities, and teacher supply. Education finance component has been a function of FC. The objective of this component is:

to provide a rational and equitable basis for the distribution of resources to schools. A norm-based, unit cost resource allocation mechanism for learning resources, reflecting such factors as student numbers, the range and variety of subjects taught, and compensation for past shortfalls in investment in poorer schools, is to be established. FC is in-charge of component implementation (World Bank, 2001:26).

FC, with the collaboration of MEHE, formulated NBUCRAM, which has been implemented nationwide since 2000, without piloting but subject to change after a considerable period. Funding formulae have been designed for the provision of learning resources to schools, as a result of the intervention of international donors. NBUCRAM is used to determine the funds allocated for learning resources to each school to purchase consumables, perishables and low cost capital goods, as well as for the maintenance and repair of existing capital goods (FC, 2000a:1-2).

Since 2000 NBUCRAM has established a fixed allocation and entitlement for every school in the system; it ignores ad-hoc purchasing patterns in the system, and ends the uncertainty of funding for schools. The objectives of quality inputs component are to:

- supply junior schools (grades 1-9) and a limited number of senior schools (grades 10-13), promptly on a per capita basis with sufficient quality educational resources to match the requirements of an evolving and sequential curriculum;
- optimise utilization of the six per cent from the total provincial education block grant by diverting it to learning resources by the year 2001;

- devise a strategy and a formula to decide which learning equipment items are already available in schools;
- allocate one per cent for the maintenance of buildings and equipment from the total Medium Term Investment Programme funds (World Bank, 1997bc).

The following reasons were given for introducing a new policy on the provision of learning resources:

- i. the allocation of funds for learning resources is only one per cent of the total recurrent education budget; this percentage is inadequate;
- ii. resources in sufficient amounts in schools for acquiring learning resources items are not available;
- iii. there is a disparity in provision of learning resources and lack of supervision on distribution;
- iv. a proper plan for the distribution of learning resources at national or provincial level is not available;
- v. teachers' lack of manipulative skills in handling new teaching and learning equipment; some of the teachers have poor attitudes to using such equipment;
- vi. the existing evaluation system is theory-oriented, and also depends on the results of the terminal examination. As a result teachers and pupils have paid less attention to the practical assessments which are included in the syllabi ;
- vii. the amount allocated out of the education budget for provision of learning resources was limited implying a lack of commitment (Wijeratne et al. 1999:4-5).

The norms used for this policy were based on the following:

- i. the student taken as a unit (unit base);
- ii. the class considered as a unit (a class of 35 students has been assumed);
- iii. the school considered as a unit (institutional base);
- iv. the teacher considered as a unit (teacher base) (Wijeratne et al., 1999; MEHE & NIE, 1999; MEHE, 2000b; Aturupane & Abeygunewardena, 2000:157)

Hence, in computing the learning resource requirements, the pupil, the teacher, the class, and the school have been taken into account. Some conditions of the Project Implementation Plan (World Bank, 1997b) with respect to quality inputs component of GEP2 were amended, taking into account the recommendations made by subsequent supervisory reports. World Bank delegation, who visited to supervise the

activities of GEP2 during the period April-May 1999, made recommendations and suggestions for changes (World Bank, 1999). The provinces had to allocate four per cent of their recurrent education budget for learning resources for the fiscal year 1999, since it was a pre-condition of the PEAs for qualifying for financial assistance for GEP2 in the provinces. Further, the provinces were expected to increase this amount to five per cent and six per cent by 2000 and 2001 respectively and also to maintain the six per cent level thereafter (World Bank, 1997b; 1998). This created a serious financial crisis in the provincial councils. Due to various difficulties in the provinces, the authorities had second thoughts. Considering their difficulties, and also the government's financial crisis, it was agreed to change the conditions by the fiscal year 2000; the following allocations would be made available for learning resources in the fiscal year 2000 and onwards (World Bank, 1999; 2000). All provincial councils must allocate:

- two per cent from their total recurrent education budget for consumable learning resources;
- twenty-five per cent from the total PSDG for capital educational learning equipment;
- ten per cent from the total PSDG for the maintenance and replacement of equipment (World Bank, 1999).

In addition, all provinces, in order to receive World Bank financing for educational learning resources, need to satisfy five conditions. They must:

- i. employ teachers only in accordance with the "Ready Reckoner" formula;
- ii. deploy teachers equitably in line with the "Ready Reckoner" formula;
- iii. demonstrate that a minimum of 65 per cent of the schools targeted for rationalization have actually been rationalized;
- iv. show evidence that at least two per cent of recurrent education expenditures and twenty-five per cent of capital education expenditures for learning resources, and ten per cent of capital education expenditures for maintenance and replacement activities, are actually being spent on these activities;

- v. provide evidence that resources for learning resources have been devolved to school level with financial responsibility for the purchase of learning equipment and materials (World Bank, 2001:17).

Funds allocated from 2000 onwards for learning resources are as follows:

- i. From the provincial education recurrent budget (two per cent of the total):
 - to purchase consumables: 40 per cent of the recurrent allocation;
 - to purchase capital goods: 60 per cent of the recurrent allocation and from the capital budget as indicated below.
- ii. From the PSDG (capital budget) (35 per cent from the total):
 - to purchase capital goods: 25 per cent of the education capital budget;
 - for maintenance and repairs of capital goods: 10 per cent of the education capital budget;
- iii. Funds equally allocated to schools based on school category and student groups, using 95 per cent of the total funds available.
- iv. The remaining five per cent to be used to supplement schools identified as deprived.
- v. Funds for the five school sections, for capital goods.
- vi. Funds for subjects, based on the school timetable (FC, 2000b).

The provincial and foreign-funded project funds have been allocated to provide learning resources in line with the NBUCRAM guidelines.

4.2.4.1 Conceptual framework of NBUCRAM

As discussed, the conceptual framework of NBUCRAM provides a rational and equitable basis for allocating educational resources, notably learning resources, to schools (Chapter Two). In principle, initially, the new mechanism employs three categories of expenditure: school staff salaries, learning resources and basic facilities, and expenditure on maintenance and replacement activities (World Bank, 1997b:3). The present mechanism, however, was formulated for the provision of learning resources, and for the maintenance and replacement of capital learning equipment. The staff salary and basic facilities components (school-site needs) were not

incorporated in the new mechanism. NBUCRAM, however, has considered several equity principles to some extent as its variables.

A. Procedural equity framework of NBUCRAM

As discussed in 4.2.4, in principle, the education authorities are committed to supplying financial provisions for learning resources. Consequently, national and provincial education budgets have created separate sub-budget headings in both recurrent and capital education budgets, for the provision of financial allocation for learning resources. This legal commitment can be interpreted as imposing ***rules and regulations*** to ensure procedural equity. Accordingly, NBUCRAM incorporates ***norms and criteria for resourcing*** allocations for schools, enabling them to meet their learning resource requirements. These norms are related to the distribution of resources among the schools, using the allocation of annual budget. These norms are reviewed in the distributional equity framework of the NBUCRAM which is explained below.

B. Distributional equity framework of NBUCRAM

The distributional equity framework of NBUCRAM is based on horizontal and vertical equity. Within the horizontal equity framework, NBUCRAM has focused primarily on curriculum enhancement rather than the basic pupil allocation component. Further, the allocation has provided for school-site needs for selected activities.

Horizontal equity framework of NBUCRAM:

As discussed in Chapter Two, in NBUCRAM, schools are categorized into five sections based on their grade span and seven sub-school categories have been

identified (cf. Chapter Two: 2.5.5.1B). For each school category, the desired number of students is determined, ensuring that a school can operate with four parallel classes of maximum 30 students in each grade. One repeat class for grades 11 and 13 is also included. The desired numbers of students for the seven school categories are shown in Table 4.2.

Table 4.2: Desired student numbers by school category and number of grades

Category	School category	Number of grades	Desired student numbers
1	1-5	5	600
2	1-9	9	1080
3	1-11	11 ¼	1350
4	1-13 (Arts/Commerce)	13	1620
5	1-13 (Science)	13 ½	1620
6	6-13 (Arts/Commerce)	8 ½	1020
7	6-13 (Science)	8 ½	1020

Source: adopted from: FC (2000ab).

The maximum allocation for a school category will be based on these desired numbers of students (cf. Chapter Two: 2.5.5.1). NBUCRAM has six sets of weights: 0.5, 0.6, 0.7, 0.8, 0.9 and 1.0. These weights vary by school category. Thus, schools having a weight of less than 0.5 are adjusted to the 0.5 weight. The adjusted allocation for each category is determined, and used as a weight for the formula. Student groups are identified, in order to allocate funds based on the numbers of students. Seven student group sizes are identified. These sizes are: 1-100, 101-300, 301-500, 501-750, 751-1000, 1001-1500, and more than 1500 (FC, 2000b).

The formula is weighted by the categories of schools with grades 1-5; 1-9; 1-11; 1-13 (Arts/Commerce); 1-13 (Science); 6-13 (Arts/Commerce) and 6-13 (Science) (FC, 2000a). These categorizations have been made in order to meet the requirements of different age groups and subject streams. Basically, as a result of the implementation

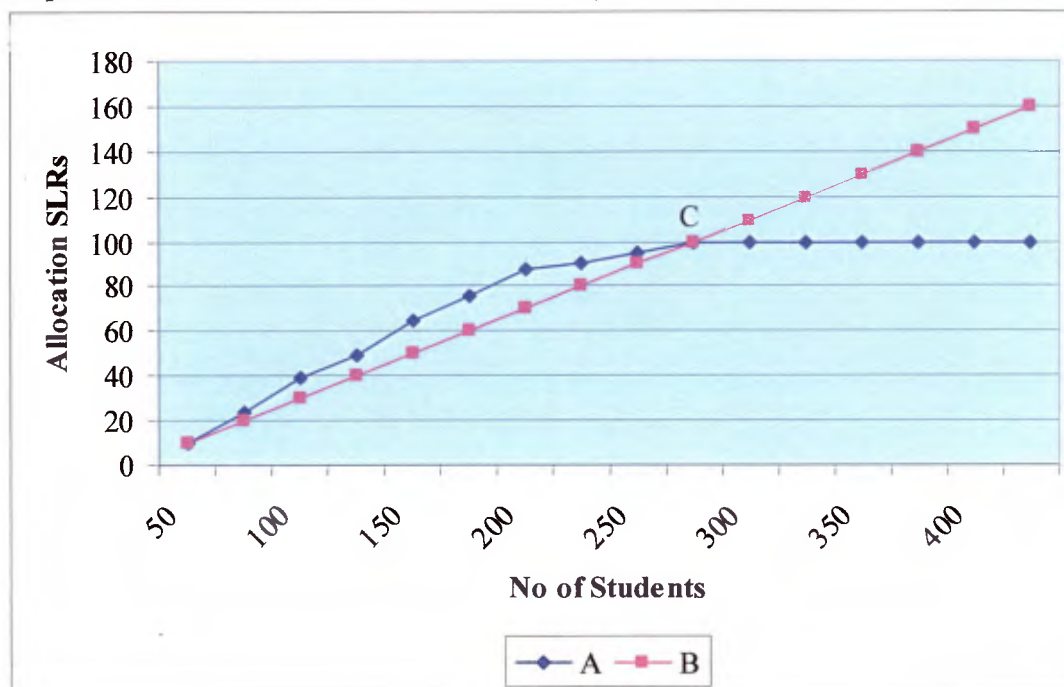
of NBUCARM, every school is entitled to a common allocation according to the variables of the formula. Some of the funds are released to all schools for the procurement of consumables and perishables. The balance of the funds is utilized at provincial and zonal levels to procure capital equipment. Both capital and recurrent funds are allocated for the five school sections, using the weights as shown in Table 4.3.

Table 4.3: Weight of funds allocation for each school section

School section/Grades:	Weight of recurrent allocation	Weight of capital allocation
1-5	25%	15%
6-9	35%	35%
10-11	25%	30%
12-13 (Arts/Commerce)	5%	5%
12-13 (Science)	10%	15%

Source: adopted from: FC (2000b).

Finally, schools receive the allocation according to the allocation positions indicated above. Graph 4.2 shows, as an example, the existing position on school allocations in accordance with NBUCRAM.

Graph 4.2: NBUCRAM school allocation position

Note: see below for an explanation of 'A' and 'B'.

Source: basic concept adopted from: FC (2000a).

Curve 'A' represents the school allocation determined by NBUCRAM. 'B' represents the school allocation calculated strictly according to the pupil enrolment. The intersection of these two curves at 'C' is the desired total enrolment of the school. For each school category, the desired number of students is determined, ensuring that a school can operate with four classes of each grade, with a maximum of 30 students for each grade (cf. Chapter Two: 2.5.5.1). According to the NBUCRAM formula, schools are entitled to the allocation based on this desired or maximum number of pupils, rather than actual numbers. The upper limits are based on the desired total student enrolment for each category of schools (FC, 2000a). If the actual population of students exceeds the desired number, schools are not entitled to any additional allocation for the extra students. That is why curve 'A' remains flat beyond point 'C', rather than increasing with enrolment as it would in curve 'B', which treats equal needs equally, according to horizontal equity.

Vertical equity framework of NBUCRAM:

In principle, vertical equity concerns two issues: disadvantaged schools and pupils with special education needs. At present, NBUCRAM has included only disadvantaged school category. The significant characteristic of NBUCRAM is that there is no evidence for vertical treatment for pupils with special educational needs. Hence, no allocation is provided by NBUCRAM for such vulnerable pupils in normal schools.

Disadvantaged schools

The criteria represent another set of norms used for NBUCRAM. Some schools with low student numbers were identified as disadvantaged schools, based on the variables explained in Chapter Two (cf. 2.5.5.1). These schools are entitled to extra funds. Five per cent of the total allocation for equipment is used for this purpose. The allocation for equipment for all schools was reduced to 95 per cent of the total available, in order to fund this reallocation. As indicated, schools with scores of 50 per cent and above of the weight given by the formula are entitled to the disadvantaged school allocation, provided the number of students at those schools satisfies the limits given in Table 4.4.

Table 4.4: Maximum students per school category for disadvantaged school allocation

Category	School category	Desired student numbers
1	1-5	100
2	1-9	200
3	1-11	240
4	1-13 (Arts/Commerce)	250
5	1-13 (Science)	260
6	6-13 (Arts/Commerce)	150
7	6-13 (Science)	160

Source: FC (2000a).

Another key shortfall is that the formula does not include or consider schools' own-generated revenues; this school factor directly influences the maintenance of equity in the system.

C. Application of adequacy criteria of NBUCRAM

NBUCRAM is committed to ensuring the long-term sustainability at a level of financing adequate to meet the needs for learning resources. The provincial and national level education authorities, as well as other authorities involved in education, have been committed to resourcing schools adequately (4.2.4.1:A). However, it is significant that NBUCRAM was not considered in providing allocations to schools with less than 50 pupils (FC, 2000a). This can be interpreted as a violation of adequacy criteria and the horizontal equity principle. However, the implementation of national policy on funding for learning resources to schools should ensure the maintenance of adequacy criteria (4.4.).

4.3 Policy background of school-based resource management

The policy background of SBRM requires SRQ1.2 to be addressed, which relates to KRQ1 outlined in Chapter Three and indicated in Table 4.1.

The government is committed to providing both physical and human resources to schools according to its fiscal capacity. The examination of SBRM in Sri Lanka reveals several remarkable events in the history of education. Historically, school resourcing was managed centrally through setting policies and issuing guidelines and instructions. However, within the expansion of the school system it was crucial to devolve some management powers and responsibilities to school level. Subsequently, steps have been taken by successive governments towards devolving education

responsibilities and management functions to the periphery, with a view to increasing the efficiency of the school system. These power delegations have increased step by step during recent decades. Among these steps, several notable events are reported below, using documentary evidence.

The first significant decentralization was introduced in 1961, when administrative powers, including the provision of resources to schools, were delegated to the regions instead of being held by one director of the administrative system (Perera & Palihakkara, 1997:255-256). Under this delegation, the Regional Education Office and District Education Office were given responsibilities to meet school-level requirements i.e. school buildings, furniture and equipment, repairs and maintenance, and staff salaries, using the central ministry's funds. This decentralization had positive effects, compared with the centralized system. Nonetheless, disparities in the distribution of resources to schools existed. District-level education authorities were unable to meet the real requirements at school level. In 1966, again, further decentralization took place, and increased the autonomy of administrative units (Perera & Palihakkara, 1997:256). This step mainly focused on day-to-day administrative functions.

Education reforms in 1972 introduced a decentralized curriculum. In 1970, school resource management functions were refined; there were amendments to fees and funds for school facilities and school development societies' funds.

Another memorable milestone in SBRM was the introduction of cluster schools following the Education White Paper proposals of 1981. Under this scheme, the cluster schools became small operational cells, to promote more efficient utilization and

encourage sharing resources between schools in the cluster (ME, 1981; Little, 1999:190-191). The general purpose of the cluster schools was described as:

....better organization, management and development. This will enable a more efficient utilization of the resources of both state and the community... Thus the smallest unit for planning the development and organization of the school system will henceforth be the school cluster (ME, 1981:9).

The clusters were encouraged to move towards greater self-reliance, so that they might shoulder responsibilities and also be vested with greater authority with regard to school-level resource management. The implementation of the cluster system was widely criticised over the identification of clusters and the implementation process; these clusters were abandoned in the late 1980s, as a result of poor implementation, lack of resources, lack of awareness among the respective groups, and the dearth of political commitment.

In 1984, reforms in education management were introduced; these set up the education zonal system, with divisional education offices as an intermediate stratum for administering schools. In this reform, the school principal was viewed as the front-line manager. The principal's role as institutional leader was emphasized. Traditionally, school principals were committed to academic responsibilities rather than administrative functions. These reforms suggested that school principals should be accountable for development activities at school level. The management reform report stated that:

...the government should be given the financial management authority in the school, and should also take action on the 'annual school board of survey' accordingly. The principal of a school should be held responsible for the preparation, implementation, management, control and review of the annual school plan (ME, 1984).

Further, the report recommended power sharing among the staff within the schools. It also emphasized the need to shift from day-to-day administrative functions to

development functions. This system was concerned with resource sharing among the schools of each zone. However, the proposed activities did not bring about efficiency, due to multifarious factors, notably the lack of political commitment and the personal attitudes of implementers at the grass roots.

The Provincial Council Act of 1987, enacted as the thirteenth amendment to the constitution, devolved political and administrative functions to the provincial level. A new administrative structure was introduced giving more autonomy and independence to the provinces to manage their affairs. Education was included as both a devolved function and a central function. The provision of resources to government schools, except national schools, was made a provincial function. This devolution was an attempt to empower actors at the operational level, but did not sufficiently address the actual requirements of the schools.

Presidential Commission on Youth (1990) emphasized that there were disparities within and among provinces in relation to the resourcing of schools. As a result of a recommendation made by this commission, the government took action to establish the NEC in 1991. NEC (1992) after their comprehensive study recommended eliminating disparities in resourcing schools and devolving decision-making authority to schools.

None of the organizations were substantially concerned to devolve power and authority for resource management to school level. Hence, GOSL in 1992 issued regulations for the implementation of 'school development boards' and this was approved by parliament in 1993, a crucial event for SBRM. These boards were a result of the devolution of powers to local level when the government introduced school development boards. The main purposes of the boards were obtaining community

participation in school development, the better utilization of resources provided by the government and the community, and upgrading the operational efficiency of the school system (Balasooriya, 1993). Each school consisted of parents, community representatives, and teachers, with powers to manage school development funds, which mostly came from the community, in order to provide resources for maintenance and other expenditure otherwise impossible to be met (GOSL, 1992; 1993). However, these boards were disbanded in 1994. The school development boards, exemplified a move towards SBM; however, because management at school level was not strengthened enough, their objectives were not achieved. Management at school level was limited to some areas of revenue and of physical and human resource management. The inadequate capacities of management and related problems, affected the qualitative development of the schools.

Generally, school resource management had been very centralized, and there was no opportunity to involve private partners in large-scale school development activities. For example, some organizations, institutions or individuals might consent to assist in providing science laboratories to schools, but principals could not accept these directly because there was no legal authority for them to do so. In reality, the government itself was not in a position to provide such laboratories, due to public fiscal and economic constraints. Frequently, education authorities postponed the provision of learning resources, as well as badly needed infrastructural facilities. As a result, some pupils lost their opportunity for better educational facilities, though their parents' taxes were supporting other pupils in the system. The most disadvantaged rural schools faced this unfortunate situation, because they depended on government funds to meet their requirements.

This situation concerned both local and international agencies (e.g. NEC, World Bank). ADB (1996) stressed the need to strengthen schools, enabling them to manage their resources. Aturupane (1997) carried out a comprehensive study of disparities in the provision of learning resources to schools. Table 4.5 shows the availability of resources by type of schools, as he found this.

Table 4.5: Availability of teaching and learning equipment in schools, by type of schools

Type of teaching equipment	Availability of teaching equipment as a percentage by type of schools				
	1AB (National)	1AB (Provincial)	1C	2	3
Globes	100	83	100	20	33
Charts for teaching	100	100	100		
Duplicating machines	100	100	50	20	
Photocopying machines	25	33			
Radio sets	100	83	33	40	
Television sets	100	100	33	20	
Video cassette players	100	83		20	
Typewriters	100	100	83	80	33
Printers	50	17			
Computers	75	33			
OHPs	25				

Source: Aturupane (1997).

A vast gap between schools can be seen; 1AB National and Provincial schools received more learning equipment than other types of schools. The favoured schools were in the urban areas, and the majority of other schools, in village areas, had a dearth of resources (GOSL, 2002).

Most people concerned with education believed that equity, efficiency and effectiveness when allocating funds for infrastructure facilities and providing resources to schools was achieved. But this was not a reality, especially for per-pupil allocation, as shown in Table 1.4 in Chapter One.

In fact, schools as well as the respective education authorities (i.e. at provincial and national levels) have failed to be responsible and accountable to their taxpayers. The utilization of national income should be kept in line with strict regulations. Unfortunately, since 1989 MEHE/ME has not presented an annual administrative report to the parliament. Visiting the schools in my sample, I realized that many schools had not received any audit inspection of school resources as well as of other functions for several years.

In contrast, according to my computation, the school supervision-staff ratio was 1:3 (approximately) for the supervision of schools in 2001. The per-head salary mid-point is calculated at SLRs 15000.00 per month (see Appendix 4.2). Further calculation shows the wastage of recurrent expenditure on the annual staff salary component. These officers have been engaged in many activities, and it is questionable whether these are their correct functions, and how far their activities increase and improve educational productivity. In my view, the system includes adequate staff for this purpose, if they have a proper plan.

In these circumstances, resource management has been implemented in an ambiguous manner. As a result, there has been no school resource management policy, and while small schools are threatened with abolition, a very small number of schools are well provided with resources. The deficiencies of previous school resource management paved the way for discussions in different forums on transforming the traditional situation for a new era.

4.3.1 Donor involvements for improving SBRM

NEC (1992) recommended and PTFGE (1997) accepted the devolution of powers and authority to school level in order to increase school-level efficiency. They believed that this devolution would also help to increase the efficiency of the whole system. This recommendation emerged as a result of studies carried out by NEC (1992), World Bank (1994; 1996), Singhal et al. (1989), ADB, (1996), and other local and international empirical studies (cf. section 4.2.3). World Bank (1994:26-27) emphasized the need for efficient resource utilization in the system; the Bank advocated:

...making more efficient use of resources in the general education sub-sector, especially by addressing the various problems relating to teacher employment and compensation and the efficiency of the school system....

Considering these circumstances, MEHE implemented several reforms, including SBM, under the education reform proposals. MEHE (1996) stated that the 'process of decentralization should go right down to the level of the school', and stressed the urgency of giving greater responsibility to the school. However, action to introduce new resource management practices in schools was painfully slow. Every school experienced SBRM to some extent, but the basic SBRM practices were limited in purpose, and it also varied from school to school.

As discussed above, the situation changed as a result of the intervention of World Bank-funded projects. Quality inputs and education finance components of GEP2 allocated for providing more learning resources to schools on the basis of norms, and for developing a mechanism to provide such inputs to schools.

The quality inputs component had two objectives: first, to strengthen existing basic SBRM practices through providing more learning resources to schools in kind, through cash for purchasing at school level (i.e. for consumables and perishables). The second objective was the extension of SBRM through devolving capital allocations to schools to purchase inexpensive capital learning equipment at school level. Hence, three types of SBRM institutional arrangements may be distinguished; they are now evident in the system of education in Sri Lanka, as explained below.

4.3.2 Different regimes of SBRM in Sri Lanka

The examination of the different regimes of SBRM is required to answer SRQ1.2:C, which was outlined in Chapter Three and mapped in Table 4.1. The distinction between the different SBRM regimes relates to the different types of learning resources for which schools have discretion to purchase.

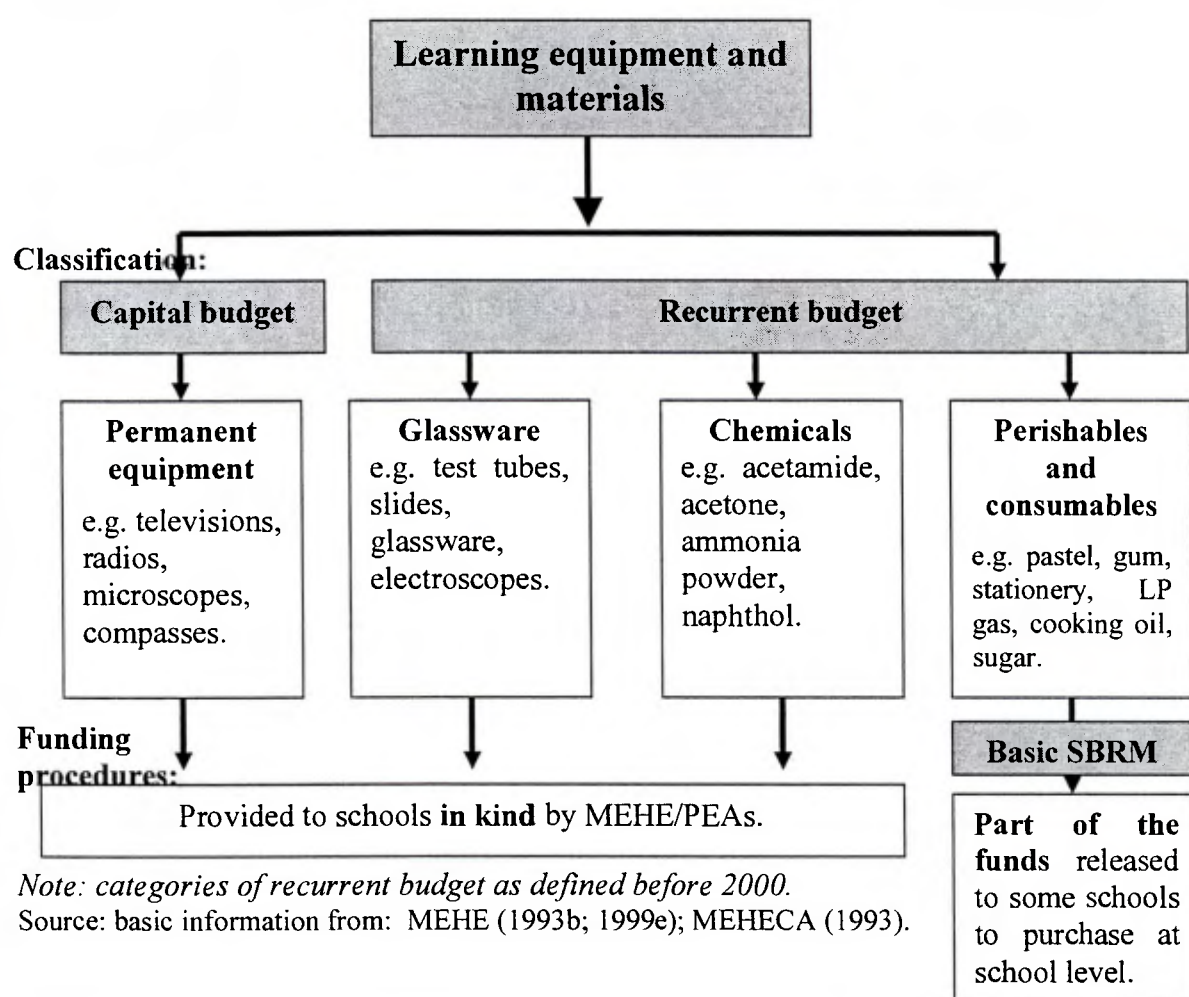
This thesis defines ‘learning equipment and materials’ as those which support teaching and learning in classrooms. Hence, ‘office supplies’ are not included in the category of learning materials, however, some office materials, for example stationery, may be used for teaching and learning purposes, hence, stationery has been included in the “learning materials” category (Figures 4.1; 4.2).

4.3.2.1 *Basic SBRM and non-SBRM*

Before 2000, ME classified learning resources into four types: (i) permanent equipment; (ii) glassware; (iii) chemicals; and (iv) consumables and perishables (MEHECA, 1993; MEHE, 1993b; 1999e).

Permanent equipment can be used for a long period, and may be very expensive. Glassware and chemicals when used for practical teaching and learning in the classroom or laboratory, (chiefly in GCE 'O' and 'A' level science subjects) have a much shorter life. Consumables and perishables can be used only once. The classification of learning resources and the funding process prior to 2000 are shown in Figure 4.1.

Figure 4.1: Classification of learning resources and funding process 1997-1999



No powers were delegated to the principals with regard to the determination of requirements for permanent equipment, glassware, chemicals or consumables at school level. Under the basic SBRM, the entire allocation for consumables and perishables was not released to the schools. Notably, principals were not allowed to

purchase chemicals for science subjects at school level. Such chemicals were provided in kind by the MEHE or the PEAs to eligible schools, but most of these schools received neither money nor resources in kind, and provision varied greatly from province to province.

Further, in the 1960s, notably after the introduction of science teaching in government schools, it was crucial for schools to purchase consumables and perishables. According to the views of planners and principals, the funds allocated by the ME for teaching and learning equipment were restricted at the initial stage to a few subjects, particularly GCE (OL/AL) science, primary, and technical subjects, and also to very few schools. Principals were entitled to funds only for purchasing consumables and perishables at school level. According to MEHECA (1993) and MEHE (1993b; 1999e), financial expenditure for science, for purchasing consumables and perishables, was limited.

Another characteristic of this process was that the released funds were not adequate for the student population in a school. In providing cash for schools, some norms were decided only for science, but not for other subjects. Hence, there were no fixed allocations for them. In addition, there was no regular funding process. Most of the schools did not receive funds, and some large, so-called privileged schools received funds only at the end of the year. Therefore, not only did this allocation process create disparities among the schools, but also, most of the financial resources were wasted; this is because resources were provided to a school without an estimation of whether such items were already available in the school. Another characteristic of this process is that it discriminated against the non-SBRM schools. This situation shows the inefficiency and unfairness of resource management in the system. Further,

disadvantaged schools in the system predominantly depended on government allocations for their requirements, as already stated. The situation was greatly affected by varieties in regional socio-economic backgrounds. As a result, great disparities in resources were created between the schools. However, before 2000, according to the public financial regulations, principals were not allowed to spend more than SLRs 500.00 per year on consumables and perishables. The cash restrictions on procuring consumables and perishables for science at the school level are shown in Table 4.6.

Table 4.6: Cash limits at school level on acquiring consumables and perishables for science subject in 1993 and 1999

Criteria	Expenditure limits (SLRs)	
	1993	1999
Teaching of Beginning Science (Grades 4 & 5)	150.00	150.00
Teaching of Science: For a school with a student population in grades 6 to 11:		
-less than 150	300.00	300.00
-between 150-500	500.00	500.00
-over 500	700.00	700.00
Science (GCE AL) Per student of: -Zoology	8.00	8.00
-Botany	2.00	2.00
-Chemistry	2.00	2.00
-Physics	2.00	2.00
-Biology	0.00	10.00
In addition to these funds, the maximum amount of funds to be obtained within a year by a principal for purchasing of LP gas for teaching science was revised as follows.		
Student population in GCE AL classes:		
-less than 100	800.00	800.00
-over 100	1000.00	1000.00
Student population in grades 6 to 11 is:		
-less than 500 in GCE OL classes	400.00	400.00
-over 500 in GCE OL classes	600.00	600.00

Source: MEHE (1993b; 1999e).

Table 4.6 shows no changes from 1993 to 1999 in terms of releasing funds to the school level. The one considerable change was that by 1999 SLRs 10.00 per student was added for Biology. However, principals were allowed to purchase small perishables and consumables items as indicated in Figure 4.1.

As discussed above, until 2000, a few schools had established basic SBRM practices for restricted subjects. Under the basic SBRM practices, these schools received a certain amount of cash recurrently, to purchase consumables and perishables for specific subjects. However, the uncertainty and inadequacy of allocations were evident. Furthermore, other subjects, as well as many schools, were not provided with cash amounts for similar requirements.

As a result of World Bank-funded project, two types of SBRM practices were established in 2000. First, strengthened basic SBRM provide considerable financial allocations to schools to purchase consumables and perishables; second, extended SBRM, gave decision-making powers to selected school principals and staff to purchase inexpensive capital learning equipment at school level. This second programme was implemented on a pilot basis. These two types of programmes are directly related to the improving efficiency of the system.

4.3.2.2 *Strengthened basic SBRM*

GEP2 identified problems within basic SBRM. The Bank stated that there was:

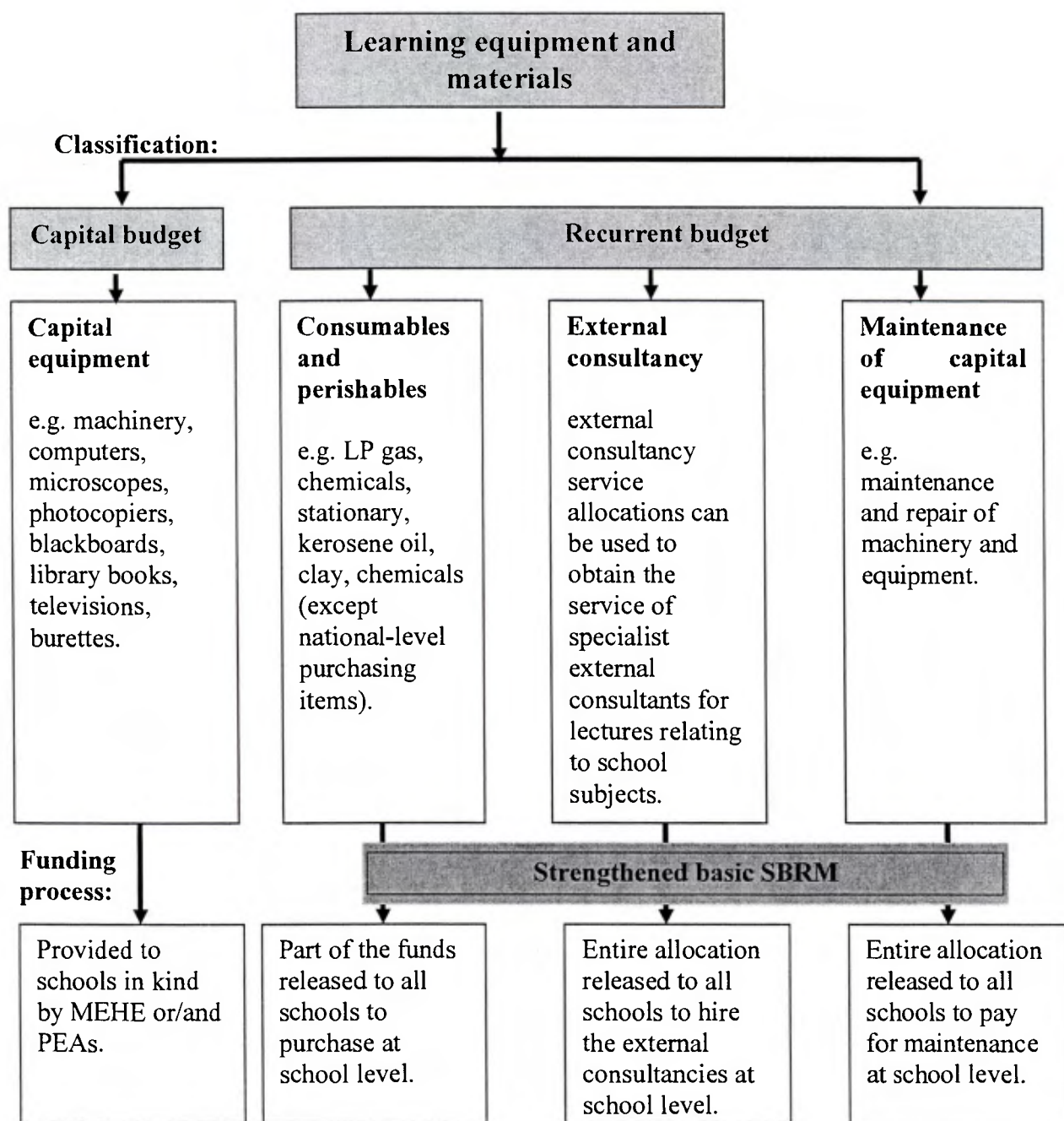
- inadequate identification of the type and nature of learning resources required for each subjects and grade level;
- insufficient lists of learning resources identified for use by children, teachers, class groups, and the school as a whole;
- an insufficient and unspecified budget allocation by the FC and the PEAs for the provision of learning resources for all schools;
- uneven distribution of learning resources in favour of the urban and elite schools and of the senior grades of the schools;.... (World Bank, 1997b:1).

To address these issues, GEP2 acted to provide learning resources for all schools; this was denoted as strengthening basic SBRM. Allocations for learning resources were of two types: recurrent and capital allocations. These allocations were decided using NBUCRAM. They provided a maximum recurrent allocation to schools, enabling

them to purchase appropriate consumables and perishables at school level. Part of the recurrent allocation was retained at zonal, provincial, and national levels and provided in kind by the respective providers, because the 13th amendment of the constitution stated that specific chemicals, used as consumables for teaching science subjects, should be purchased at national level and distributed in kind to respective schools (MEHECA, 1993). However, the entire capital allocation was managed by the zonal, provincial and national levels respectively. The principals' role was strengthened, and they were given some decision-making powers.

In 2000, the pre-classification of learning resources was also changed, due to World Bank interventions. At present, learning resources are classified mainly into four types: (i) capital equipment; (ii) consumables and perishables; (iii) external consultancy; and (iv) maintenance of capital equipment (FC & MEHE 2000). Here, new categories under the recurrent budget, that is external consultancy and the maintenance of capital equipment, have been included; these did not appear in the years 1997 to 1999. In 1997-1999, there were three separate categories, that is, glassware, chemicals, and perishable and consumables (Figure 4.1). However, for the classification in 2000, these three categories were amalgamated into one (Figure 4.2). Since 2000, all the schools have been granted purchasing power and decision-making authority to acquire consumables and perishables, except chemicals, under strengthened basic SBRM (Figure 4.1). The classification and the funding process are shown in Figure 4.2.

Figure 4.2: Classification of learning resources and funding process 2000-2002



Source: basic information from: FC & MEHE (2000).

4.3.2.3 *The extension of SBRM*

In 1999, the World Bank recommended the devolution of financial responsibilities so that capital learning equipment would be procured at school level (initially this had been restricted to inexpensive learning items). This recommendation was not in the original plan for implementing GEP2. In 1998/1999, GEP2 faced several operational

problems, notably the poor disbursement rate of the project loan, and massive delays in the central-level procurement. These delays were the result of restrictive regulations on international competitive biddings and national competitive biddings for learning equipment. Hence, the Bank suggested the development of some alternative arrangements to overcome these problems. Although the government agreed in principle to the extension of SBRM, as NEC (1992) and education reform (1994) recommendations, this did not happen, for unknown reasons. In the meantime, the Bank was taken up with government ambitions and become directly involved in extending SBRM on a pilot basis, with the restriction to purchasing inexpensive capital learning equipment at school level, and without instituting the basic facilities which it would require. The objectives of this programme were to:

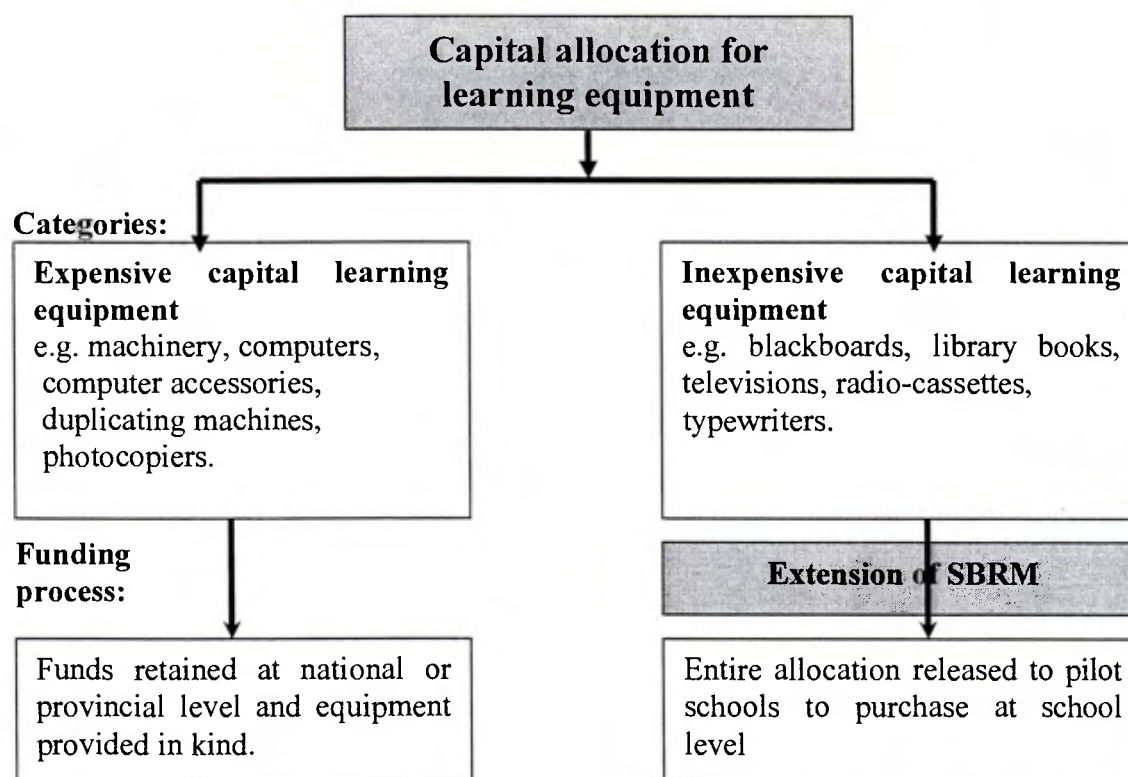
- i. enable principals and teachers to select the learning equipment they need in a timely manner;
- ii. empower principals to move further towards SBRM;
- iii. make them responsible for and accountable for what they have purchased;
- iv. ensure the creation of a dynamic and lively classroom environment enhancing the quality of the teaching and learning;
- v. reduce delay in procurement at national and provincial levels;
- vi. maintain transparency; organize contributions through community participation (MEHE, 2000b).

The programme has been mainly applied (see Chapter Five) to purchase inexpensive capital learning equipment at the school level. Until this programme was implemented, the system had no experience of capital funds being devolved to schools to procure capital learning equipment at that level. Since 2000, on a pilot basis, funds in the range of SLRs 3000.00 to 51000.00 have been allocated (FC & MEHE, 2000; MEHE, 2000a; MHRDECA, 2002e).

A. *New arrangements under the extension of SBRM*

As a result of new policy initiatives, the classification of capital learning equipment was revised, to distinguish expensive and inexpensive learning equipment. This classification was based on the unit cost of the capital items and on access to their purchase in the local market. Since the introduction of the extension of SBRM, funding processes for learning equipment in schools have also been changed; these processes and the classification of capital learning equipment are shown in Figure 4.3.

Figure 4.3: Devolution of financial and management powers to school level under the extension of SBRM



Source: basic information from: MEHE (2000abc); MHRDECA (2002e).

The major differences between the three forms of SBRM can be summarized as follows. Under basic SBRM, a limited number of schools were entitled to purchasing power and the decision-making authority for the acquisition of consumables and perishables, and experienced great uncertainty. Strengthened basic SBRM has

operated in all the government schools since 2000; they have received considerable amounts (depending on pupil enrolment), enabling them to purchase consumables and perishables, external consultancy, and the maintenance of capital learning equipment. Under the extension of SBRM, selected pilot schools were granted additional purchasing power and decision-making authority to acquire inexpensive capital learning equipment. These changes were crucial for the adoption of contemporary local and international developments in education. All the SBRM policy initiatives in the history of education in Sri Lanka were intended to streamline the mechanism for allocating learning resources in order to improve school management practices and education outputs.

My research has revealed the pattern of the resourcing of schools. The system has promoted decentralization, but there are still some directives from the centralised administration. This policy has led to the same or similar functions being carried out at all levels, causing the duplication of roles and functions as well as wastage. The present structure for resourcing schools, especially for the provision of learning resources, is shown in Appendix 4.3. As this Appendix shows, different strata of the education system have been allocated capacities to perform the same functions, leading to inefficiency. These functions should be delegated to schools and a new structure for the delegation of powers and decision-making should be devised to ensure more efficient incentives in the system.

4.4 National policy on funding for learning resources to schools

The agreed national policy on funding for learning resources in schools is linked with the equity principle and adequacy criteria. Further, this policy has the effect of

creating efficiency incentives at school level. The current agreed policy on this funding will affect the maintenance of equity, adequacy and efficiency in the system of education. Hence this section is devoted to addressing SRQ1.3 outlined in Chapter Three and further indicated in Table 4.1.

Several institutions are involved in budgeting for education (Appendix 1.1). MEHE is directly involved with the Ministry of Finance and Planning (MFP) for the entire education sector budget. FC, which is an arm of MFP, plays the main role in allocating the education budget to provincial councils. Provincial councils receive all sectors' recurrent expenditure as a block grant from the FC and allocate recurrent expenditure for education according to the existing agreed rules and regulations for provincial schools. When allocating recurrent expenditure for the provinces, FC considers the expenditure needs of the provinces, including staff salaries, maintenance of capital assets, and also the levels of the revenues generated by the provinces.

The PSDG for capital expenditures is directly released to the Provincial Chief Ministry by MFP, after consultations with the National Planning Department, another arm of MFP, and MEHE. Expenditure under the PSDG for education mainly goes for the construction and provision of capital assets.

Further, provincial councils receive funds from the decentralized central budget, matching grants, and criteria-based grants (Salgado, 1989; Srivastava, 2000). In addition, MEHE handles the funds from foreign-funded projects and the consolidated funds for national schools. Decentralized central budget funds are given to members of parliament and provincial councils. These funds are not directly invested in

education. Matching grants were introduced in 1995; their main objective is to encourage provinces to generate their own income. Criteria-based grants take into account the per capita income, poverty index, unemployment rate, index of education, health and nutrition, and infrastructure of each province (Salgado, 1989:14-21; Tilak, 1996:51-57; Srivastava, 2000:3).

The recurrent and capital budgets are the most prominent funds for schools' resources, although there was no fixed allocation before 1999. In 1999, the government was committed to an increase of six per cent for learning resources from the provincial recurrent education budget in 2001, as a prerequisite of qualifying for financial assistance by World Bank (World Bank, 1997b:44; 1997c). However, considering practical difficulties in the provinces, the policy was amended to increases of two per cent from the recurrent education budget for consumables, and of 25 per cent and 10 per cent from PSDG for capital equipments and for the maintenance and replacement of learning equipments respectively.

4.5 Conclusion.

The aim of this chapter was to analyse the secondary data on the policy background and evolution of FFS/NBUCRAM and SBRM. The way schools have been financed over recent decades has caused vast inequity. To diminish these, educational authorities have discussed the issues widely, both locally and internationally. To decrease the negative effects, NEC recommended the adoption of a new resource allocation mechanism for the education system, and the World Bank was directly involved in the initiation and implementation of NBUCRAM. This mechanism mainly concerns establishing greater equity across the system in the resourcing of schools.

Equity issues have been addressed in a way which was absent in the period before NBUCRAM. Nowadays this mechanism has incorporated norms and agreed policies for resourcing schools. A distributional equity framework has been included in the formula. As a result, horizontal equity principles have been established in the system, although vertical equity is poorly treated.

Before the implementation of GEP2, a small number of schools received some money for selected subjects to purchase consumables and perishables at school level; this system is denoted as basic SBRM. However, many subjects and many schools referred to as non-SBRM, did not receive such allocations. This unfair situation directly or indirectly affected the quality of education, especially in disadvantaged schools, including the pupils' attainments. Insufficient learning resources and the unequal and poor distribution of resources led to devolving decision-making powers and authorities to school level.

The World Bank-funded project firstly strengthened the purchasing power and decision-making authority of schools in relation to acquiring consumables and perishables (excluding chemicals) which are required for teaching and learning.

Several local forums and educational policy-makers discussed the need for decentralizing power and authority to schools; but it is significant that the World Bank was directly involved in changing the institutional arrangements for SBRM. As a result of these involvements, since 2000, the government has agreed to devolve more power and authority to selected schools to meet their learning requirement at their levels, but their power is restricted to inexpensive capital learning equipment.

National policy on funding for schools has hugely affected the adequacy of the system. It is evident that at present provincial allocations depend on the public fiscal capacity, but, provincial revenue levels vary from province to province. There are rich and poor provinces; these disparities affect their allocations for resourcing schools. The adoption of deconcentration and decentralization as a model for the funding formula for schools has been advocated.

My final conclusion in this chapter is that many policy documents have treated equity, adequacy and efficiency as the same concept or as similar, when these should be distinguished. The issues of school financing and SBRM in Sri Lanka have been discussed for a long time, but remedial actions have been painfully slow. Nonetheless, the international donors' and lenders' involvements and interventions have brought about improvements; radical departures from the prevailed school financing system, and moves to SBRM are now taking place on a significant scale. Given these, using empirical evidence, Chapter Five is devoted to evaluating the impact of the FFS via NBUCRAM on the equity of resource allocation. Chapter Six is devoted to evaluating the impact of SBRM on the efficiency of resource allocation.

Chapter Five

The impact of the formula funding of schools via the norm-based unit cost resource allocation mechanism on the equity of resource allocation

5.1 Introduction

The government of Sri Lanka, with the financial assistance of World Bank, has designed a formula for the capital and recurrent allocation of money to schools for learning resources. A capital allocation retained and managed centrally has been set, although it is possible to release a small proportion of the funds to schools. The greater proportion of the recurrent allocation of funds has been released to them. My main purpose in this chapter is to evaluate the impact of FFS/NBUCRAM on the equity of resource allocation. This assessment is restricted to the allocation of spending for learning resources, because NBUCRAM is primarily devoted to allocating funds for such resources.

Hence, the data analysis in this chapter addresses all the SRQs under KRQ2, outlined in Chapter Three, which is: **what has been the impact of NBUCRAM in Sri Lanka in relation to equity considerations in resource allocation?** This evaluation requires the study of the three years before the introduction of NBUCRAM (1997-1999), and the three years of its implementation (2000-2002). The answer to KRQ2 requires the study of all the SRQs shown in Table 5.1, clustered under the two headings which were given in Chapter Three. The mapping of these SRQs and the structure of this chapter are shown in Table 5.1.

Table 5.1: Mapping of SRQs and the structure of the chapter

Cluster	Sub-cluster	SRQ		Structure of the chapter
New policy initiatives		2.1	How was the new policy introduced, and what were the grass roots implementers' contribution and their knowledge about the conceptual framework of NBUCRAM?	5.2 5.2.1 5.2.2
Impact of NBUCRAM on the equity of resource allocation	Impact on procedural equity	2.2	What has been the impact of NBUCRAM in terms of ensuring procedural equity?	5.3.1 5.3.1.1 5.3.1.2
		a.	What practices have been followed in existing planning, budgeting and monitoring processes at different implementation levels: i.e. national, provincial, zonal, and especially school level, in the FFS?	
		b.	What are the procedures and practices for the distribution of allocations among the sections, subjects, and grades within the schools?	
	Impact of distributional equity	2.3	What has been the impact of NBUCRAM in terms of ensuring distributional (i.e. vertical and horizontal) equity?	5.3.2
		2.3.1	What resources have the schools received in addition to the provision for previous years (1997-1999) and how equitable is NBUCRAM: is it horizontally equitable, and does it attempt to implement vertical equity (are students with greater needs allocated more resources)?	5.3.2.1
		a.	In the 'traditional' or 'received' school finance system in Sri Lanka during the period 1997-1999, what were the established practices in the allocation of inputs/(expenditure)? Has NBUCRAM addressed the horizontal equity criteria?	
		b.	What need is there to expand NBUCRAM to permit greater variation, among and across school types and to favour poor and needy (disadvantaged) schools?	5.3.2.2:A

		c.	Has NBUCRAM included pupils with SEN within normal classrooms?	5.3.2.2:B
		2.3.2	What have been the equity implications of (a) indirect expenditure on school education by households? (b) sources of school funding outside the formula?	5.3.2.4 5.3.2.4.2:E 5.3.2.4.1: ABC 5.3.2.4.2: ABCD
	Impact on adequacy	2.4	What has been the impact of NBUCRAM in terms of adequacy criteria?	5.3.3
		a.	What was the difference between entitlements and the real allocation? Did the schools receive the full intended allocation?	
	Issues and disadvantages	2.5	What are the perceptions of principals, planners, and policy formulators on their responsibilities for school finance, and on any disadvantages encountered at school, zonal and provincial levels as a result of the introduction of NBUCRAM?	5.3.2.3 5.3.4
		a.	What are the practical issues in relation to equity and adequacy criteria arising at school level as a consequence of the implementation of NBUCRAM in the schools?	
	Sustainability	2.6	Can the provision of funds via NBUCRAM be sustained?	5.3.5

5.1.1 Data collection and responses to the study

The empirical data are analysed and presented with respect to KRQ2 in relation to the provision of learning resources to schools. In this chapter, I explore these data, using a descriptive and interpretative method for the analysis of the qualitative and quantitative data gathered from school, zonal, provincial, and national levels. Further, documentary evidence is also used in the presentation of data.

5.1.1.1 *Responses to postal questionnaires*

I distributed 143 postal questionnaires (Appendix 3.4) to principals in 16 education zones in 8 provinces, and 126 out of 143 principals responded, i.e. a response rate of 88%. Details are given in Appendix 5.1a.

5.1.1.2 *Responses to in-depth study questionnaires*

Further, 36 schools from four provinces were selected for an in-depth study of resource allocation under the FFS (Appendix 3.5). The in-depth study (Appendix 3.6) was carried out personally, although it was difficult to gather data from three of the schools (Appendix 3.5). As a percentage the overall response rate was 92%. Details are given in Appendix 5.1b.

5.1.1.3 *Responses to education planners' questionnaires*

A further questionnaire (Appendix 3.7) was distributed to 16 ZEPs, 8 PEPs, and NEP1. Among them, the lowest response rates were 33%, 67%, and 67%, from Southern, North-East and North-Central provinces respectively. Details are given in Appendix 5.1c.

5.1.1.4 *Responses on household expenditure in education survey questionnaires*

I selected a small mini-sample within the schools selected for the in-depth study survey (Appendix 3.5), to gather data on household expenditure on education in the year 2002 (Appendix 3.10). The sample represented five levels of income categories from four provinces. Details are given in Appendix 5.1d.

5.1.1.5 *Interviews*

Data from 19 interviews (Appendix 3.11) with principals and planners were used to triangulate the data gathered through the questionnaires (Tables 3.4; 3.11).

Using the data collected in relation to the SRQs mapped in Table 5.1, the evaluation of the impact of FFS in relation to the allocation of funds for learning resources is focused on: procedural and distributional equity, because the policy of NBUCRAM was stated as:

...to improve efficiency, equity, and transparency in the distribution of educational resources....(World Bank, 1997a:34; 1997b:10).

Further, the policy stated:

...the NBUCRAM is to provide a rational and equitable basis for allocating educational resources, especially learning resources to schools. The new mechanism will give explicit weight to schools in poor rural areas, and poor schools in urban and semi-urban area (World Bank, 1997b:24; FC, 1999).

However, this chapter examines only the impact on the equity of resource allocation. Subsequently, Chapter Six will evaluate the impact on efficiency of SBRM, which was implemented in the forms of strengthened basic SBRM and the extension of SBRM. This chapter also examines how far NBUCRAM has delivered adequate resources. The NBUCRAM policy was identified as a key issue, because the allocation of learning resources had not been adequate to meet the needs of the school curriculum (World Bank, 1997b:1). Hence, it is necessary to examine how far NBUCRAM has addressed this issue, and what has been gained through the impact of this programme on schools. The longitudinal (i.e. using time series and retrospective data) and cross-sectional research designs apply for this chapter, within the intervention research methodology.

5.2 Implementation of NBUCRAM

Before proceeding to the presentation and analysis of data on the impact of NBUCRAM on the equity of resource allocation, the institutional arrangements for the new policy will be examined. The policy background of NBUCRAM has already been discussed in Chapter Four. Hence, this section is devoted to answering SRQ2.1, which was outlined in Chapter Three and further indicated in Table 5.1. This section reviews first the perceptions of principals and planners in different strata of the education system on the initiation of NBUCRAM, and secondly the implementers' knowledge about its conceptual framework.

5.2.1 Perceptions of principals and planners on initiation of NBUCRAM

The survey included questions on the knowledge of staff at operational levels on the background of NBUCRAM. Eighty-six per cent of principals and all the planners were aware of NBUCRAM. Principals perceived various institutions and organizations as involved in the initiation of NBUCRAM. As Appendix 5.2 shows, the majority of principals identified World Bank, MEHE, FC, and NEC as initiators of NBUCRAM. In fact, several agencies were involved in the origin of this new mechanism (cf. Chapter Four). This involvement was not communicated to the grassroots. Many thought that this programme emerged as a result of the direct intervention of World Bank. Hence, they had positive attitudes to the intervention of international donors, especially in this kind of programme. Furthermore, when this issue was raised in the interviews with principals and planners, four principals shared the same idea. They stated that:

...involvements of international donors or lenders are welcomed, because a huge barrier against educational development in our country is financial instability. Therefore, sometimes, we couldn't achieve the expected target on time. Further,

schools in rural areas never or rarely received educational resources. Therefore, these international involvements are very useful.

...however, sometimes we received unaffordable conditions and targets. For example, we had to spend a certain amount on or before such a date. Then, principals tended to spend money immediately, but not on the right things. This type of bad experience should be avoided. Our respective policy-makers should be mindful of our actual situation, when negotiating with international donors or lenders for obtaining financial assistance. My personal view is that our policy-makers tend not to give an accurate picture of our context to external agencies (SPs, (3)18.02.2002; (2)07.07.2002; (1)09.10.2002; (4)24.10.2002).

I asked NEPs about these issues, and two NEPs admitted:

...yes, it normally happens. We are committed to utilize these monies within a specific period; hence, some strict regulations were issued by us. Otherwise we couldn't achieve our targets. But we have to try to see good effects of the involvements of international donors. Without their assistance we couldn't have introduced massive programmes like the provision of learning resources, introduction of NBUCRAM and other infrastructural programmes (NEPs, (5)11.03.2002; (6)05.07.2002).

In addition, principals, and planners prioritised the reasons for introducing NBUCRAM as shown in Table 5.2. The details of their responses are given in Appendices 5.3a and 5.3b.

Table 5.2: Reasons for the introduction of NBUCRAM

Reasons	Ranked by perceived importance	
	Principals	Planners
World Bank influence and intervention	2	5
To reduce the vast disparities in resource allocation between the schools (to establish equity across the system)	3	1
To improve the efficiency of resource use in schools	1	2
To establish school financial policies	4	3
To establish a school planning culture	5	4
Unknown reasons	6	6

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 5.2 shows, according to principals the main objective of the new mechanism was to improve the efficiency of resource use in schools. According to planners, the prime need was to reduce the vast disparities in resource allocation among schools.

Principals perceived World Bank influences as the second prioritised reason for the introduction of NBUCRAM. Although NEP1 pointed out that the immediate influences and interventions would be those of World Bank, the issues, and the need for a new mechanism, have been discussed during the last two decades. However, initiation actions were excruciatingly slow (NEP1, 08.03.2002).

Furthermore, principals, and planners, at three levels, were asked about their contribution to the initiation and implementation of NBUCRAM in 2000. Their contributions are shown in Table 5.3.

Table 5.3: Contribution of principals and planners to the initiation and implementation of NBUCRAM

Contribution	Responses as a percentage			
	Principals (n=126)	ZEPs (n=14)	PEPs (n=6)	NEP (n=1)
Participating	75	100	100	100
Preparing awareness documents	12	43	100	100
Conducting workshops	2	71	100	100
Coordinating programmes		79	83	100
Formulating the mechanism				100
Membership of the focus groups	2	7	83	100
No contribution	20			

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

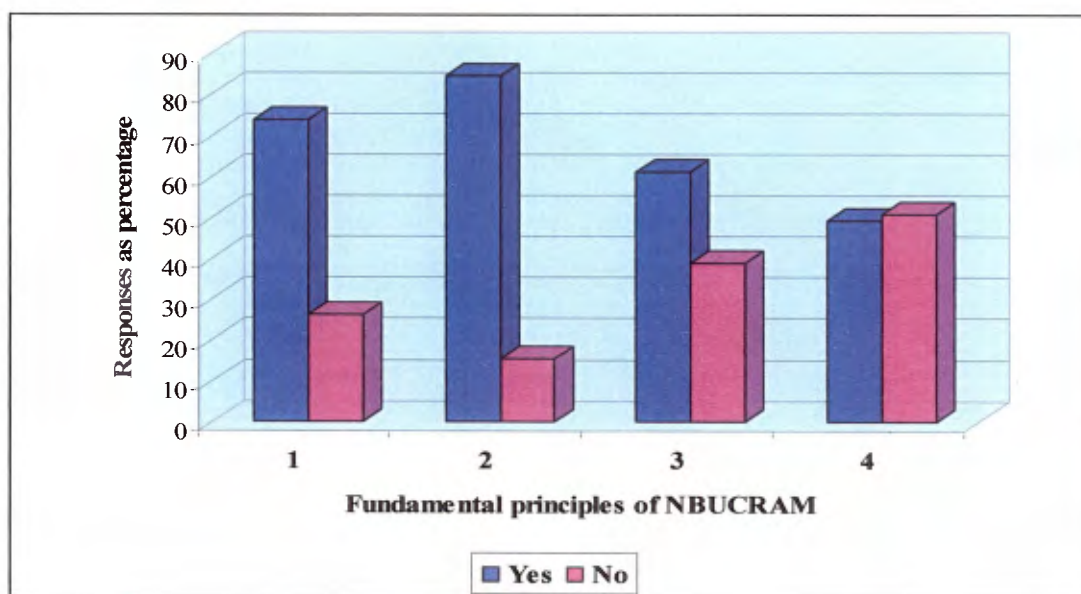
As Table 5.3 shows, a significant number of principals and planners participated in the initiation and implementation of the programme. PEPs and ZEPs contributed considerably to the programme, in different ways. NEP1 contributed enormously in different ways. However, the important factor is that twenty per cent of principals did not contribute in any way. Also the principals in the sample were not involved at all in formulating the mechanism. It was the same at zonal and provincial levels. It is notable that only two per cent of principals and seven per cent of ZEPs served as members of the focus groups. This evidence shows a lack of contribution by

grassroots level implementers, when new policies are introduced into the system. In my view, frequently such participation has been limited to the participants selected for the system. NEPs had a similar view: representatives of all the parties were summoned to the awareness programmes and the focus groups. However, their representation was inadequate for the introduction of this type of policy (NEPs, (1)08.03.2002; (2)18.07.2002).

5.2.2 Implementers' knowledge about the conceptual framework of NBUCRAM

As school principals are the real implementers at the grassroots of the system, I enquired how far the conceptual framework of NBUCRAM had been understood by them. The fundamental principles of NBUCRAM according to the principals' perceptions are indicated in Graph 5.1.

Graph 5.1: Fundamental principles of NBUCRAM



Key: Fundamental principles of NBUCRAM:

1. Mechanism based on unit cost
2. Resource allocation based on number of pupils and grades
3. Upper/maximum allocation limit on desired pupil numbers
4. Distribution of allocation based on norms (weights)

Source: Postal questionnaire survey (2002).

As Graph 5.1 shows, it is clear that the concepts and principles of the mechanism have been grasped by most principals, though they gave different weights for each variable. In fact, equal weight should be given to all the four variables, as they are included in the formula. NEPs emphasized all the criteria included in NBUCRAM (NEPs, (1)08.03.2002; (2)18.07.2002).

I asked the principals and planners: “*do you think that NBUCRAM has succeeded in ensuring equity in the provision of learning resources in schools?*” Seventy-six per cent of principals and all the planners considered that NBUCRAM had succeeded in this, when compared with the previous system. They thought that it required every pupil to be treated equally, without any gender or ethnic discrimination. Ninety-five per cent of planners indicated that NBUCRAM is used to allocate resources equitably to schools and to pupils.

5.3 Impact of NBUCRAM on the equity of resource allocation

For my thesis, the period for the evaluation of the impact of NBUCRAM on the equity properties of resource allocation was limited to its years of implementation, 2000-2002. The impact of NBUCRAM within this period is compared with the three years before its introduction (1997-1999). Hence, this section is answering to SRQs from 2.2 to 2.6 as indicated in Table 5.1.

5.3.1 Procedural equity of NBUCRAM

In evaluating the impact on procedural equity of NBUCRAM, equity will basically be examined under the sub-criteria of agreed policies, rules and norms.

5.3.1.1 Policies and rules for resourcing schools

The questionnaires for principals and planners included five special characteristics of the pre-NBUCRAM period in relation to procedural equity. The percentages of agreement to these five statements are presented in Table 5.4.

Table 5.4: Procedural equity characteristics of pre-NBUCRAM

Characteristics	Responses as a percentage					
	Principals (n=126)		PEPs/ZEPs (n=20)		NEP (n=1)	
	Yes	No	Yes	No	Yes	No
The resources were provided by the government on an annual basis	33	67	5	95		100
Principals negotiated with the ZEO, PDE, and MEHE respectively to acquire the resources	96	4	70	30	100	
Greatly influenced by politicians	78	22	50	50	100	
Greatly influenced by bureaucratic (education officers)	75	25	60	40	100	
Ad-hoc decision-making	85	15	5	95	100	

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 5.4 shows, the majority of the planners, as with most principals, emphasized that in the period before NBUCRAM the opposite of the procedural equity principle was practised. The most important outcome is that all the responses indicated inequitable features in the pre-NBUCRAM regime. A few principals emphasized that in this period *the government generally provided resources annually*. Further analysis of the responses by type of schools revealed that the principals who agreed with this statement were drawn exclusively from 1AB National and Provincial, and 1C schools, and those who disagreed with the statement were drawn exclusively from Types 2 and 3. This further indicated that the system did not apply procedural equity principles for the allocation of resources, and that authorities paid little attention to the standard norms and criteria of the policy. The significant responses made by ZEPs and PEPs regarding the time before NBUCRAM did not refer to any ad-hoc decisions, while the NEP disagreed on this with the ZEPs and PEPs. Another concern was that in

the prevailing system before the implementation of NBUCRAM, principals were involved in negotiating with the zonal, provincial and national levels to meet their requirements, while at the zonal, provincial and national levels officials faced political and bureaucratic influences on the provision from education officials. These responses imply that, historically, the school resource allocation was a bitter experience, notably for small schools in rural areas.

Overall, the evidence indicates that the pre-NBUCRAM system followed a non-rational policy for the provision of learning resources. Further, the responses revealed that this system included negative factors for the resourcing of schools. Although the government had been financing school-level resources, it is questionable whether these procedures had been followed equitably. It may be assumed that the policy-makers thought of using the limited resources to equip a limited number of schools well, rather than distributing them thinly across all schools. Further, in order to minimize disparities, ME was responsible for developing norms and criteria for resourcing schools, but these responses show that the system before the implementation of NBUCRAM lacked firm rules. An overall interpretation is that the system violated the fundamental principles of procedural equity for resourcing schools. For example, in the three previous years (1997-1999) there had been negative experiences in the resourcing of schools. Therefore, it is necessary to examine the pre-NBUCRAM period in relation to procedural equity.

At present the formula has addressed this issue to some extent, as it has included some agreed policies and rules. The principals and planners were given a choice of eight statements to indicate their perceptions of the relevant characteristics of NBUCRAM. Their levels of responses are shown in Table 5.5.

Table 5.5: Characteristics of NBUCRAM

Statement	Responses as a percentage									
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Principals	Planners	Principals	Planners	Principals	Planners	Principals	Planners	Principals	Planners
NBUCRAM is a better way of resourcing schools than traditional school funding	29	29	53	62	16	9	2			
The current NBUCRAM for resource allocation to schools operates fairly	15	14	41	86	35		8		1	
The school is satisfied with the level of consultation which takes place in relation to the introduction and implementation of this new mechanism	12	10	27	38	29	48	22	2	10	2
The current NBUCRAM allocation is not fairly distributed between pupils	8	5	17	24	22	43	40	19	13	9
Schools have received more resources as a result of the introduction of NBUCRAM	17	24	40	76	21		17		5	
Disadvantaged schools have become entitled to additional amounts	5	40	25	27	50	16	16	17	4	
NBUCRAM provides a more transparent mechanism of resource allocation	14	24	51	64	24	10	9	2	2	
Schools receive what they are entitled to by the formula	33	10	49	33	11	29	5	19	2	9

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 5.5 shows, the majority of principals and planners believed that NBUCRAM is a fair and transparent distribution mechanism. More than half the principals and all the planners agreed with the statement that the system operated fairly. However, responses to the questionnaire indicated that the majority of school principals are neutral or dissatisfied on the extent of consultation with grass root level implementers in relation to the introduction of the policy and on receiving funds for disadvantaged schools, whereas the planners were either neutral or expressed satisfaction with the level of consultation. There was general agreement that, as a result of the implementation of NBUCRAM since 2000, the system of resource allocation to schools has improved compared to past periods. Eighty-two per cent of the principals agreed with this statement, and ninety-one per cent of the planners agreed that NBUCRAM is a better way of resourcing schools than traditional school funding.

5.3.1.2 *Norms for resourcing schools*

Norms and criteria are other key elements of FFS in terms of procedural equity. Hence, the arrangements and practices that took place in the system before the implementation of NBUCRAM was carried out must be examined. In general, the two types of norms, at national and school levels, can be distinguished.

A. *Norms followed at national level*

The statements in Table 5.4 help to identify the criteria and norms followed for resourcing schools before the implementation of NBUCRAM. From the responses to these statements, it can be assumed that at that period procedural and distributional criteria and norms for resourcing schools were not properly followed. Further, it is evident that ***‘ad-hoc decision-making’ operated in resourcing schools in the period before NBUCRAM?’*** The majority of principals agreed with this statement.

The responses of principals and planners on the norms and criteria which they followed to determine the appropriate provision of learning resources at school level were analysed. These responses are shown in Table 5.6.

Table 5.6: Norms followed in pre-NBUCRAM period

Statements	Responses as a percentage			
	Principals		Planners	
	Yes	No	Yes	No
Standard norms and criteria provided by:				
MEHE	70	30	71	29
PME	46	54	38	62
PDE	57	43		
ZEO	77	23	33	67
Norms decided at school level	33	67	NA	
Ad-hoc decision-making	79	21	90	10

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

The historical practice in Sri Lanka was that different administrative levels disseminated the norms which were produced by MEHE for the provision of resources to schools. This function was still retained at the centre during the implementation of decentralization. However, as Table 5.6 shows, principals have a perception that norms were provided by different administrative levels. A negligible percentage of planners also complained about the norms provided by the different administrative strata. Some principals were under the impression that the norms were decided by ZEO and not by MEHE. Some of them could not distinguish between norms and instructions sent by ZEO/PDE along with the equipment. This confusion exhibits the lack of awareness of the schools at the managerial levels. This lack will affect the sustainability of the programme.

B. Norms followed at school level

As Table 5.6 shows, 33 per cent of principals further stated that they made decisions at school level. I asked them to indicate *what the norms were?* They considered the number of pupils taking each subject and the usage of general items at school level. The other principals never bothered about the determination of school-level norms, as they rarely received resources. The basis for the distribution of resources provided for different subjects was frequently decided by the providers (ME/PME/PDE) themselves at the time of provision. Further NEP1, emphasized that although standard norms were provided by MEHE, schools very often took decisions on an ad-hoc basis and without an explicit rationale (NEP1, 08.03.2002).

The majority of principals and planners responded as that ad-hoc decision-making took a place in the pre-NBUCRAM period. The analysis of these responses shows that in that period there were norms and criteria, but they were not actually followed (Table 5.6). The responses reveal that there had been a lack of monitoring of implementation. With the contemporary developments in education, the curricula were subjected to several reforms. As a result, more learning resources, to reinforce the curriculum concepts through teaching and learning, were required. Furthermore, practical work was added to the syllabi from time to time, and therefore, the needs for learning resources became intense. However, the educational authorities were not in a position to meet all their needs at this time. Hence, although policy-makers thought that a need-based assessment mechanism was used for the provision of resources, there were vast disparities inside as well as among schools. This resulted in principals tending to use schools' own generated revenues to meet school-level requirements (5.3.2.4).

Although NBUCRAM is based on norms determined centrally, these norms include school sections, school categories, and student groups. The majority of principals emphasised that, although NBUCRAM contained reasonable norms, the current allocation was not fairly distributed between pupils.

5.3.1.3 *Conclusion on procedural equity*

In the pre-NBUCRAM period, the agreed rules and regulations in relation to the provision of learning resources were not accurately implemented. This regime demonstrated inequitable characteristics. Regional imbalances and heterogeneity factors were ignored, and norms were formulated by the centre following a macro-level planning approach. There was no room for deciding norms at implementation levels. Further, it was difficult to gather data on norms followed at school level; a few schools formulated norms for the distribution of resources within the school, but these norms were not accepted at any levels, and hence, they were abandoned.

NBUCRAM has addressed this issue, and included rules, regulations and norms. The school allocations have been determined accordingly. This change can be interpreted as a positive effect of FFS. The educational authorities consider these norms in the preparation of school budgets. However, at present the agreed policies and regulations which are included in NBUCRAM also seem to partially break other regulations (e.g. for grade 1, the class size is 45 pupils per class, but, class size of 35 pupils has been assumed in NBUCRAM for learning resource allocation). Nevertheless the one of the main aims of NBUCRAM is to promote distributional equity.

5.3.2 Distributional equity of NBUCRAM

Distributional equity can be sub-divided into horizontal and vertical equity in the distribution of resources to schools. Hence, when evaluating the impact of distributional equity in this section, horizontal and vertical equity will be discussed separately. Further, this section will discuss the schools' own generated revenues in relation to distributional equity.

5.3.2.1 *Horizontal equity of NBUCRAM*

Horizontal equity, i.e. the equal treatment of equals, requires that every child has an equal right to obtain equal educational opportunities given the available resources. Students with similar education needs have to be given similar resources. Horizontal equity may basically be considered to have two aspects: the basic allocation, and curriculum enhancement. In terms of this conceptualisation of equity, the pre-NBUCRAM procedures were perceived by educational professionals as treating every school as well as all pupils without ethnic or gender discrimination. ZEP3 (03.04.2002) claimed that:

...our attempt is to provide resources to every school without discrimination of school locations, media of instruction, and types of schools. The distribution of the allocations among schools was based on the respective school bids.

But, according to the NEP1 (08.03.2002), this was not the reality in the past. As he explained:

...the procedures followed were not on the basis of pupil numbers and the provincial/zonal/school development plans. In the period before NBUCRAM the education system did not follow planning practices at the respective levels.

NEP1 and ZEPs recalled the inadequacies of the learning resources provided to schools, and argued that the pre-NBUCRAM system was not able to treat every school and every pupil equally. To get a clear insight into this situation, qualitative data gathered from principals and planners were used to triangulate the argument. To look more closely at school, zonal, provincial, and national levels, the questionnaires enquired, *‘what procedures did principals/planners follow for distributing the resources within/among schools/zones/provinces in the period before NBUCRAM?’* The distribution of responses is shown in Table 5.7.

Table 5.7: Procedures of distributing resources within/among the schools/zones/provinces: 1997-1999

Procedures	Responses as a percentage			
	Principals		Planners	
	Yes	No	Yes	No
Grades bids	9	91	NA	
Sectional bids	17	83	NA	
Based on pupil numbers	24	76	29	71
According to provincial/zonal/school plans	6	94	29	71
Provincial/zonal/school bids	NA		33	67

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 5.7 shows, school, zonal, provincial and national levels did not follow any systematic procedures for distributing learning resources within and among the schools, zones and provinces during the pre-NBUCRAM period. This omission affected horizontal equity in relation to receiving resources. School, zones and provinces did not work according to their development plans, so the essential components of SBRM were not adhered to before NBUCRAM. These cross-sectional data imply that historical imbalances in resourcing ensured that all students were not treated equally.

NBUCRAM addressed these issues by implementing horizontal distributional equity. The formula is weighted for school categories and to reflect curriculum enhancements, in order to meet the requirements of different age groups and subject streams. Basically, as a result of the implementation of NBUCRAM, every school is entitled to a common allocation according to the variables in the formula. Some of the funds are released to all schools for the procurement of consumables and perishables under strengthened basic SBRM (Chapter Six). The balance of the funds is utilized at provincial and zonal levels to procure capital learning equipment. Some schools, under the extension of SBRM, are allocated funds for procuring inexpensive capital learning equipment at school level.

For identification of the fundamental issues of NBUCRAM, principals and planners were asked whether they agreed or disagreed that *'the current NBUCRAM allocation is not fairly distributed between pupils'*. The principals' and planners' differed in their responses (Table 5.5). Since subjective perceptions on equity differed between principals and planners, I analysed objective data from the in-depth study to confirm the situation. The in-depth study collected data on real per-pupil expenditure on learning resources: by sections/grades, by types of school, and by province. These data collected from each school and province by subject and by grade (Appendices 3.6; 3.7).

A. Real per-pupil expenditure on learning resources by sections/(grades)

This situation can be analysed through each section by types of schools, as the 'section' variable is the main tool used for the horizontal allocation of resources for schools by NBUCRAM. The indices for these changes have been calculated using the equations given in Appendix 5.4. Indices for each section by type of schools for the

period 1997 to 2002 are shown in Tables 5.8a to 5.8d. Details are given in Appendices 5.5a to 5.5e.

Table 5.8a: Index and real per-pupil expenditure on learning resources for Grades 1-5 by type of schools, 1997-2002

Year	Real per-pupil expenditure (SLRs) and index for per-pupil expenditure on learning resources									
	1AB (Nat) (n=5)		1AB (Prov) (n=3)		1C (n=8)		Type 2 (n=7)		Type 3 (n=8)	
	Real	Index	Real	Index	Real	Index	Real	Index	Real	Index
1997	15.50	100	12.00	100	9.00	100	9.00	100	6.00	100
1998	12.70	82	12.70	106	10.20	113	10.20	113	5.10	85
1999	18.70	121	18.70	156	16.30	181	16.30	181	16.30	271
2000	33.90	219	30.80	257	32.40	360	24.80	275	24.40	406
2001	30.10	194	27.40	229	27.40	305	22.70	252	21.70	361
2002	27.80	180	25.30	211	26.00	289	18.80	209	18.80	313

Note: n=number of schools surveyed.

Source: In-depth study survey (2002); CBSL (2002b).

As the data in Table 5.8a show, on average in grades 1 to 5 real expenditure per pupil in all the types of schools considerably improved compared to the base year. Per-pupil expenditure in Types 1C, 2 and 3 schools was greater as a result of NBUCRAM. However, after 1999, real expenditure in all types of schools decreased. Generally, from the empirical evidence given the section on grades 1-5, it is hard to see any consistency in real expenditure per pupil during the period 1997 to 2002. Horizontal equity issues, in relation to the real per-pupil expenditure, still exist in the system, even after the new policy initiatives of NBUCRAM.

Table 5.8b: Index and real per-pupil expenditure on learning resources for Grades 6-9 by type of schools, 1997-2002

Year	Real per-pupil expenditure (SLRs) and index for per-pupil expenditure on learning resources									
	1AB (Nat) (n=5)		1AB (Prov) (n=5)		1C (n=8)		Type 2 (n=7)		Type 3 (n=4)	
	Real	Index	Real	Index	Real	Index	Real	Index	Real	Index
1997	10.60	100	10.50	100	10.20	100	11.00	100	8.00	100
1998	9.00	85	8.91	85	8.70	85	10.19	93	8.49	106
1999	16.25	153	14.63	139	16.66	163	12.19	111	9.75	122
2000	32.37	305	32.37	308	30.47	299	30.47	277	30.47	381
2001	28.79	272	28.79	274	27.09	266	30.48	277	27.09	339
2002	26.65	251	27.84	265	25.97	255	25.03	228	25.03	313

Note: n=number of schools surveyed.

Source: In-depth study survey (2002); CBSL (2002b).

Real expenditure per pupil for grades 6 to 9 is another sub-set of the financial allocation of NBUCRAM reflecting curriculum enhancement. As Table 5.8b shows, on average, expenditure per pupil for grades 6 to 9 considerably improved in 2000 compared to 1997. Type 3 schools show greater improvement than other schools. However, expenditure per pupil in 2001 and 2002 declined compared to 2000. Real expenditure varied among the schools and indices for each type of schools show the improvements compared to 1997.

Table 5.8c: Index and real per-pupil expenditure on learning resources for Grades 10 & 11 by type of schools, 1997-2002

Year	Real per-pupil expenditure (SLRs) and index for per-pupil expenditure on learning resources							
	1AB (Nat) (n=5)		1AB (Prov) (n=5)		1C (n=8)		Type 2 (n=7)	
	Real	Index	Real	Index	Real	Index	Real	Index
1997	14.50	100	13.50	100	14.00	100	12.50	100
1998	12.31	85	10.61	79	11.84	85	10.19	81
1999	14.63	101	14.63	108	12.19	87	10.56	85
2000	34.27	236	33.51	248	27.04	193	26.66	213
2001	31.16	215	30.48	226	23.71	169	23.71	190
2002	28.78	198	28.16	209	21.90	156	21.90	175

Note: n=number of schools surveyed.

Source: In-depth study survey (2002); CBSL (2002b).

As Table 5.8c shows, as an average, all the types of school increased real expenditure per pupil for grades 10 and 11 during the period 2000 to 2002. However, different per-pupil expenditure for these grades was evident among the types of schools during the pre-NBUCRAM regime. There are small differences among the 1AB National and provincial schools; although it compared to other type of schools it is still some gap.

Table 5.8d: Real per-pupil expenditure on learning resources for Grades 12 & 13 Science and Arts/Commerce, by type of schools, 1997-2002

Year	Real per-pupil expenditure (SLRs) and index for per-pupil expenditure on learning resources									
	Science					Arts/Commerce				
	1AB (Nat) (n=4)		1AB (Prov) (n=5)		1AB (Nat) (n=5)		1AB (Prov) (n=5)		1C (n=8)	
	Real	Index	Real	Index	Real	Index	Real	Index	Real	Index
1997	8.00	100	7.00	100	14.50	100	12.50	100	10.00	100
1998	6.79	85	5.94	85	12.31	85	10.19	81	8.49	85
1999	26.00	325	19.58	280	14.22	98	10.16	81	16.25	163
2000	31.61	395	26.66	381	37.32	257	27.04	216	22.85	228
2001	29.80	373	25.74	368	31.84	220	24.39	195	20.32	203
2002	25.65	321	22.21	317	28.47	196	22.52	180	21.90	219

Note: n=number of schools surveyed.

Source: In-depth study survey (2002); CBSL (2002b).

As Table 5.8d shows, expenditure per pupil for science pupils peaked from 1999 to 2000, and subsequently it went down from 2001 to 2002. However, on average, the improvement compared with 1997 is significant. Traditionally, education authorities have paid little attention to grades 12 and 13 arts/commerce streams in relation to the provision of learning resources, as they have considered these to be less important. However, since 1999, there have been improvements in expenditure per pupil for these grades. In 2000, all the types of schools indicated their high point. Thereafter, all the schools indicated declining compared to 2000.

B. Real per-pupil expenditure on learning resources by types of schools

Changes of expenditure per pupil during the period 1997–2002 are shown in Table 5.9. The details of the calculation are given in Appendix 5.6.

Table 5.9: Index and real per-pupil expenditure on learning resources for all grades, 1997-2002

Year	Index and real per-pupil expenditure (SLRs) and index for per-pupil expenditure on learning resources									
	1AB (Nat) (n=5)		1AB (Prov) (n=5)		1C (n=8)		Type 2 (n=7)		Type 3 (n=8)	
	Real	Index	Real	Index	Real	Index	Real	Index	Real	Index
1997	6.50	100	6.00	100	5.00	100	4.25	100	1.38	100
1998	8.49	131	5.52	92	4.46	89	3.61	85	1.17	85
1999	10.16	156	7.31	122	5.89	118	4.98	117	3.25	236
2000	22.85	352	22.85	381	12.76	255	12.57	296	7.43	538
2001	21.00	323	21.34	356	11.35	227	11.18	263	6.60	479
2002	19.40	298	17.21	287	10.01	200	10.01	236	5.63	408

Note: n=number of schools surveyed.

Source: In-depth study survey (2002); CBSL (2002b).

As Table 5.9 shows, all types of schools improved their indices for real expenditure per pupil compared to the base year. This great improvement has taken place as a result of NBUCRAM; however, looking more closely at horizontal aspects shows disparities among the school. It is notable that schools with low enrolments especially Types 2 and 3 schools, benefited greatly in 2000. However, in all types of schools, in 2001 and 2002 expenditure per pupil decreased compared to the index for 2000. This decreased was caused by the illiquidity and cash rationing both at national and provincial levels, poor expenditure rates, the implications of implementing the programme at operational level, and especially, price deflation.

C. Per-pupil expenditure on learning resources by province

The present national policy for funding learning resources to schools was discussed in Chapter Four (4.4), as this is linked with the distributional equity principle as well as

the adequacy criteria. Here, I shall examine how far the policy addresses the horizontal equity criterion in relation to the provision of learning resources. Hence it is necessary to examine the levels of total expenditure for general education and expenditure for learning resources. These figures are shown in Table 5.10.

Table 5.10: Total expenditure for general education and expenditure for learning resources: 2001

Province	Total provincial/national** expenditure*			Total share for learning resources*				No. of pupils	Per-pupil exp. SLRs
	Recurrent	PSDG/ Capital	Total	2% from recurrent	25% from PSDG/ Capital	10% from PSDG/ Capital	Total		
Western	3389	150	3539	67.78	37.50	15.00	120.28	706587	17.00
Central	2459	85	2544	49.18	21.25	8.50	78.93	472732	16.70
Southern	2278	120	2398	45.56	30.00	12.00	87.56	413004	21.20
North-East	2045	105	2150	40.90	26.25	10.50	77.65	587396	13.20
North-Western	1880	96	1976	37.60	24.00	9.60	71.20	420291	16.90
North-Central	1143	65	1208	22.86	16.25	6.50	45.61	248277	18.40
Uva	1078	78	1156	21.56	19.50	7.80	48.86	248835	19.60
Sabaragamuwa	1694	95	1789	33.88	23.75	9.50	67.13	342100	19.60
National Schools**	4474	4308	8782	89.48	1077.00	430.80	1597.20	745735	214.20
Sri Lanka (Total)	20440	5102	25542	408.8	1275.5	510.2	2194.5	4184957	356.90

* Current prices: SLRs Million

**Recurrent and capital expenditure for national schools is considered only within the general education budget category of MHRDECA budget.

Source: FC (2002); MEHE (2001b); MHRDECA (2002c).

As Table 5.10 shows, there were differences in relation to the provincial levels of expenditure. Further, Table 5.10 clearly indicates overall disparities among the provinces due to the provincial fiscal capacities. As a result per-pupil expenditure varies from province to province. This situation has affected the distribution of resources within the schools as well as among the schools. However, national schools still have been vastly more expenditure per pupil on learning resources. But the differences are small in most provinces; although the North-East province and the Southern province have the biggest gap.

As discussed in Chapter Four, **the conceptual framework for NBUCRAM decided the weight for sections which applied in different allocations.** Obviously the provincial allocation for recurrent or capital expenditure is not the same, as the education budget has not been determined according to the formula. The formula primarily applies to the distribution of the available financial allocation among the schools. Subsequently, different per-pupil expenditures for similar students in different types of schools are evident. My main argument is that expenditure per pupil should be equal; it should not depend upon provincial income or any other factors. **Hence, I suggest that the present mechanism will not help to establish equity at the optimum level. However, this does not imply that the mechanism has failed completely. Some better performance can be seen, compared to previous regimes.** However, further considerations are crucial to apply the distributional equity principles of NBUCRAM.

Furthermore, in all types of schools in 2002, expenditure per pupil decreased, due to the poor disbursement of allocations and delay in passing funds to schools. Since 2000, as a result of the implementation of NBUCRAM, considerable changes are evident. **Every section has received a considerable quantity of learning resources, compared to the pre-NBUCRAM period. However, the present NBUCRAM deliberately restricts school allocations** (Graph 4.2). The rationale for this, as pointed out by NEPs, is that if allocations are decided in accordance with enrolment, large schools obviously are entitled to large amounts, but the resulting allocation may not be affordable, for PEAs or at the national level. Therefore NEPs assumed that it should be controlled for a considerable period of time (NEPs, (1)08.03.2002; (2)18.07.2002). **Moreover, schools with less than 50 students should not be given funds according to NBUCRAM.** According to the national curriculum, each pupil

has to be provided with a similar learning environment. The issue for NBUCRAM is whether it caters for every student equally, or whether it challenges the principles of horizontal equity. Tables 5.8a to 5.8d, and 5.9, show that each pupil is not entitled to equal amounts by NBUCRAM. However, when it is compared with the previous system, NBUCRAM seems more equitable. But if the school has more than the desired number of pupils it gets less funding per pupil for learning resources. I suggest that in this situation the horizontal equity principle is undermined.

Further, the present national policy on funding for learning resources depends upon the fiscal capacity of the provinces. Levels of provincial revenues vary from province to province. As a result, per-pupil expenditure is not consistent.

5.3.2.2 *Vertical equity of NBUCRAM*

The vertical equity of NBUCRAM will be discussed under two sub-headings: disadvantaged schools, and special educational needs.

A. *Disadvantaged schools*

Taking account of factors that disadvantage some schools and pupils relative to others is one of the main equity principles of FFS. The reasons for the difficulties of disadvantaged schools are external environmental factors (i.e. geographical locations, socio-economic backgrounds). These factors must affect pupils who are living in these areas. Therefore, they should be considered in FFS.

In my view, there are two main types of disadvantaged schools: small schools, and schools in the plantation sector. Further, in my interpretation, parents and pupils who live in these disadvantaged areas suffer from 'education poverty' and 'capability

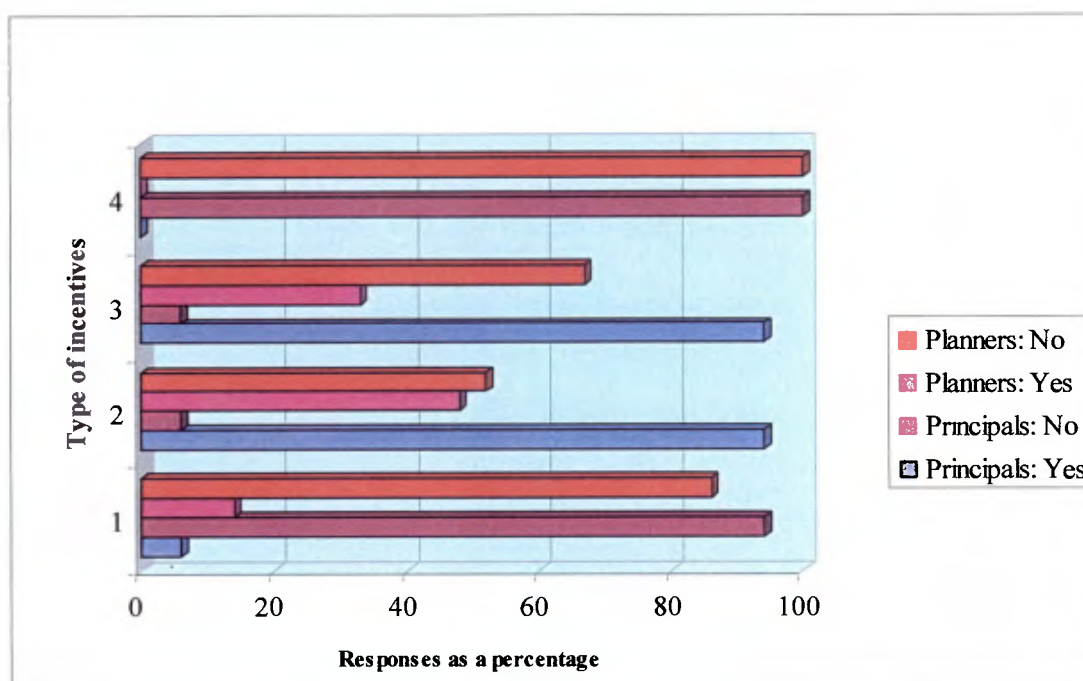
poverty' as well as 'economic poverty'. They have a 'vulnerable demand' for education. Further, there are issues for the quality of teachers.

Small schools are located especially in the remote rural disadvantaged areas. Most of them are socio-economically deprived, and some are geographically isolated. Many of the pupils' parents are involved in the agricultural economy (i.e. 72.2% of the population live in the rural sector: GOSL, 2002:117). The second type of schools is these in the plantation sector.

These two types of disadvantaged schools were categorized as 'very difficult' and 'difficult' in 1980s. This categorization was revised in 1999 into 'very congenial', 'congenial', 'non-congenial', and 'difficult' (MEHE, 1999d), but this revision was not concerned with the allocation of learning resources, only with teacher deployment. Hence in 2000 the FC, with the collaboration of MEHE and the PEAs, re-classified schools strictly for the allocation of learning resources to schools (FC, 2000a). This classification of disadvantaged schools is debated among the principals (SP4, 24.10.2002).

Thirty-six per cent of schools in the sample belonged to the 'disadvantaged schools' category. Out of these, 36 per cent were classed as 'very difficult', and the remaining 64 per cent were included in the 'difficult' category. Forty-five per cent of the principals in the 'disadvantaged school category' said that before the NBUCRAM they had not received any additional assistance. However, 29 per cent of principals pointed out that they received incentives to compensate for their disadvantaged situation. Principals' and planners' responses are given in Graph 5.2.

Graph 5.2: Incentives for disadvantaged schools in the period before NBUCRAM, 1997 -1999



Type of incentives:

1. Provided additional allocation to these schools.
2. Provided special incentives to teachers in these schools.
3. Provided special incentives to principals in these schools.
4. Provided special allocations to pupils in these schools.

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Graph 5.2 shows, the majority of principals (94%) reported that before NBUCRAM they had not received extra funds or resources for their schools because of their disadvantaged position. Those planners (86%) admitted they had no experience of the provision of special allocations for these schools, whereas principals and planners said that some incentives in the past were available for teachers and principals serving in disadvantaged schools. Furthermore, there was no provision of special allocations for pupils who were in the disadvantaged schools. Two principals claimed that the authorities penalized their schools for their disadvantaged situation (SPs, (4)24.10.2002; (5)09.07.2002).

In fifteen per cent of the schools which did not belong to the disadvantaged category, principals claimed that their school was not included in the disadvantaged category in the past or at present, but they emphasized the need to be included for reasons of transport difficulties, geographical location, poor socio-economic background, teacher shortages and quality, and dearth of infrastructural facilities. They claimed that these characteristics should be considered when classifying schools.

NEP1 stated that there were several attempts to discriminate positively in favour of disadvantaged schools by providing special incentives for teachers and principals, but even in these cases the disadvantaged conditions of schools themselves were not considered. The incentives were provided only as a solution to the teacher deployment problem (NEP1, 08.03.2002). In accordance with the principle of vertical equity, NBUCRAM now provides additional allocations for socially and economically disadvantaged schools. Some schools with low student numbers have been identified as disadvantaged schools, based on the variables developed by FC.

The criteria discussed in Chapter Four (4.2.4.1) represent another set of norms used for NBUCRAM. Schools which were identified as disadvantaged were entitled to extra funds. Five per cent of the total allocation for equipment was used for this purpose. The allocation for equipment for all schools was reduced to 95 per cent of the total available in order to fund this reallocation.

Although under the NBUCRAM formula disadvantaged schools are entitled to extra money, this is not generally understood. Table 5.5 showed that the responses of principals and planners to the statement “*disadvantaged schools have become entitled to additional amounts*” was confused: twenty per cent of the principals disagreed

with the statement and fifty per cent were neutral, and although planners showed a greater understanding of the formula than the principals (67% of the planners agreed with the statement), thirty-three per cent of the planners either disagreed or were neutral.

Thirty-three per cent of the schools in the in-depth study were considered to be disadvantaged. Further, the in-depth study showed that schools in North-Western province were not allocated any funds for 2000 and 2001, due to the financial difficulties of the provincial council. I also found that during the years 2000 and 2001 the allocations for disadvantaged schools were not fully distributed in Sabaragamuwa and Central provinces. Per-pupil additional expenditure for disadvantaged schools under the allocation for disadvantage for the period 2000-2002, is given in Table 5.11. Details are given in Appendix 5.7.

Table 5.11: Index and additional real expenditure per pupil for disadvantaged schools by type of schools, 2000-2002

Year	Index and real per-pupil expenditure for disadvantaged schools by type of schools (2000=100)									
	1AB (Nat) (n=1)		1AB (Prov) (n=1)		1C (n=4)		Type 2 (n=3)		Type 3 (n=5)	
	Real	Index	Real	Index	Real	Index	Real	Index	Real	Index
2000	5.50	100	6.00	100	10.50	100	10.50	100	20.00	100
2001	3.73	68	4.06	68	7.11	68	7.11	68	13.55	68
2002	3.44	63	3.75	63	6.57	63	6.57	63	15.64	78

Note: n=number of schools surveyed.

Source: In-depth study survey (2002); CBSL (2002b).

As Table 5.11 shows, on average from 2000 to 2002, all types of disadvantaged schools received additional real expenditure per pupil for learning resources, but the amount was insignificant compared to the base year and so real expenditure remained flat. My in-depth study revealed that the main reason for this decrease was provincial councils' illiquidity and cash rationing difficulties, causing the councils to give less

priority to allocating funds for disadvantaged schools. NBUCRAM had included the category of disadvantaged schools, but it was not properly operationalized, for many reasons.

NBUCRAM includes all disadvantaged schools in one category, although there are two clearly demarcated types. Although schools in the plantation sector are in the disadvantaged sector, they are not given special policy treatments. In recent decades these schools have suffered from socio-economic disadvantages, but they have received donor aid for the specific period.

B. Special educational needs (SEN)

Pupils have different types of special educational needs. In the Sri Lankan context, I prefer to categorize these under three types: (i) pupils with physical and mental impairments and behavioural problems, (ii) slow learners in ordinary classrooms, and (iii) socio-economically deprived children. Socio-economically deprived children are sub-divided into three types: (a) socio-economically deprived children in the rural and agricultural sector, (b) street and slum children, and (c) children affected by the war situation (i.e. displaced children).

Pupils in the first category are enrolled in assisted special schools. The second type of pupil with SEN is enrolled in normal classrooms (cf. Chapter One).

The third type of pupil may be sub-divided into three types. The first is found especially in rural areas, where pupils' absenteeism is high as a result of their economic deprivation. Both human and physical resources are scarce in these schools. Dropout rates and pupil absenteeism, especially in harvest seasons, are high. A poor

quality of education and of pupil performance are evident. Parents in the school community are poorly educated and their voice is weak, but their educational aspirations are high.

The second type lives mainly in urban areas. Some of these children are enrolled in school and some are not. Many parents' income levels are low and they are uneducated; the unemployment rate is high. Pupil absenteeism and dropout rates are higher than in other schools. This is the one of the central issues for the implementation of the compulsory education law (GOSL, 1997). Following the education for all declaration, the government is acting to enrol these children in normal schools.

The third type has suffered from the war situation, and some of them are in normal schools but in a poor educational environment. Provinces adjoining the affected areas also have displaced families and persons, causing disruption in children's education. Moreover, these children have not received even basic education facilities. Dropout rates and pupil absenteeism are high, and there are many other problems. These situations are common or similar in other affected areas (Appendix 5.8). Hence, they require special treatment for their education.

Education authorities in recent decades have officially identified pupils with SEN in the first and second categories, and taken action to allocate funds under the special education budget heading. **Even NBUCRAM has neglected these (SEN) pupils in the third category, as there is no allocation for them.** This is a violation of the vertical equity principle. When interviewed on this unfair situation, as NEP2 (18.07.2002) claimed:

no one raised this issue at the time of formulating NBUCRAM. However, some policy-makers pointed out that the number of these pupils is very small, hence, we have not included these pupils as a separate category. ...yes, I agree with you, I also think these pupils have a right to enjoy educational facilities.

According to the population census, 16.1 per cent of the disabled population are aged less than 10 years. A very large number (87105) of the disabled population did not go to school. This is 31.7 per cent of the disabled population. The same phenomenon can be seen for both sexes (Department of Census and Statistics, 2003:3-4). However, the concept of inclusive education has been put forward by the authorities as an important strategy for the equal participation of children with SEN (Lipsky & Gartner, 1999:5). It is right to provide learning resources for them, and the education authorities should be accountable to the taxpayers in the country for the money allocated. This issue should be considered when allocating funds for providing learning resources.

5.3.2.3 *Disadvantages of NBUCRAM in relation to horizontal and vertical equity*

This section offers answers to SRQ2.5, as outlined in Chapter Three and indicated in Table 5.1. To investigate the problems and issues arising through the implementation of NBUCRAM, I asked principals: *what are the practical problems and issues which emerge as a result of the implementation of NBUCRAM in your school?* Their responses are given in Table 5.12.

Table 5.12: Problems and issues of NBUCRAM

Condition	Problem/Issue	Principals' responses as a percentage	
		Yes	No
Students	Every pupil not taken into account for determination of school allocation of learning resources	75	25
	No special allocation for pupils with SEN	85	15
School	Entire allocation not received	60	40
	Disadvantaged school allocation not given	49	51

Source: Postal questionnaire survey (2002).

As Table 5.12 shows, principals pointed out various issues in relation to horizontal and vertical equity that have arisen as a result of the introduction of NBUCRAM. According to them, the key weakness of *the formula is that each pupil is not taken into account for the determination of the school's allocation for learning resources*, and there is *no special allocation for pupils with SEN*. Further, the data indicated the illiquidity problem of provincial councils; hence, *the entire allocation was not received by the schools and the allocation was not received by disadvantaged schools*.

5.3.2.4 *Schools' own revenues*

This section offers answers to SRQ2.3.2, as explained under KRQ2 in Chapter Three and mapped in Table 5.1. Schools' own revenues are another key criterion for evaluating equity, because they greatly affect equity at school level. Since the 1970s, school revenues are basically two-fold: first, government-based revenues for schools (i.e. staff salaries, civil works, furniture and equipment, maintenance and repairs), and second, revenues generated from the community (e.g. for routine maintenance work at school level).

The contributions of the community for schools include: school development society fees (SDSF), school facilities fees (SFF), and alumni association funds (AAF). Both government-based and school-generated revenue sources are shown in Appendix 5.9, which indicates the existing situation of schools with respect to generating revenues and acquiring resources. However, this does not give an accurate picture of the entire system, especially in the disadvantaged remote areas. Disadvantaged schools, highly affected by their regional socio-economic background, mostly depend on the government for their needs. Therefore it is relevant when assessing equity in the

financing of schools to examine the situation of both government-based and school-generated revenue patterns.

5.3.2.4.1 *Government-based school revenues*

A. *Government funds*

The government provides the required sum of money for buildings, furniture, refurbishment and maintenance, learning equipment and staff salaries. These funds are not received by the schools, but are paid directly by the authorities, so there is no financial control or management responsibility at school level. The incidence of funding for specific types of resources, apart from salaries, varies from school to school. Schools have received learning resources from different sources. A large proportion of government revenue is spent on capital assets, furniture, maintenance and repairs.

B. *Quality inputs (learning resources)*

As a result of the introduction of NBUCRAM and SBRM all schools, since 2000, are supposed to maintain a separate bank account for learning resources. The funds for the maintenance and repair of capital learning equipment are debited to this account. Funds from the government's consolidated funds and foreign-funded projects should be utilized only for these purposes.

C. *Other ministries' and non-government organizations' (NGOs) contributions*

Other ministries and NGOs also contribute, to very few schools and in different ways. Most of the time, these contributions depend on the capacity of principals (i.e. their personal relationships with the other institutions). For most of the time, these contributions do not come under the control of principals. Only two per cent of

schools in the sample have received NGOs' contributions to their learning equipment as complementary grants. These schools were Types 1AB (National), and 3 schools located in a very remote area. Their deprivation entitled them to this additional support by NGOs.

5.3.2.4.2 *School-generated revenues*

A. School facilities fees

The constitution guarantees free education to all citizens in Sri Lanka. However, the schools are allowed to charge a small 'facilities fee'. The government legitimised at school level the responsibility for the management of school facilities fees (ME, 1975). ME provided guidelines on the management of the main school revenues, and the SFF, instructed that these funds must be used for very limited and defined purposes. Approval for spending had to be obtained from ZEO or PDE (ME, 1975).

At present, the maximum fee is set at SLRs 60.00 per annum: SLRs 5.00 per month per student. No other charges may be included under the heading of SFF. According to as ME circular, SFF expenditure has been limited to certain activities (Appendix 5.10).

According to the SFF circular, the amount which principals may spend is limited to SLRs 200.00. This is a very small amount, considering current market prices of goods. The SFF regulations have not been amended since 1975, although principals have demanded changes in the regulations and charges in accordance with the income levels of parents and market price fluctuations.

All the schools have officially maintained SFF as one of the main sources of school-generated revenues, but the revenue collections vary greatly from school to school. 1AB

National and Provincial schools have substantial funds. Other types of schools (Types 2 and 3) have officially maintained SFF, their revenues are very small. The survey found that 14 per cent of schools which have official SFF funding accounts have given up collecting funds, because of the poor socio-economic climate of the school community. All these schools were Types 2 and 3, and located in rural areas. The annual collections of SFF during the period 1997 to 2002 according to my in-depth study data are shown in Table 5.13.

Table 5.13: Percentage of SFF annual revenue collections, by type of school

Revenue Mean SLRs.	Percentage of total SFF revenue collection per annum				
	1AB (Nat) (n=5)	1AB (Pro) (n=5)	1C (n=8)	Type 2 (n=7)	Type 3 (n=8)
Zero				14	14
275					14
751					14
1751					43
3751			43	43	15
7501			43	43	
17501			14		
37501					
75001	80	80			
25001	20	20			

Note: n=number of schools surveyed.

Source: In-depth study survey (2002).

As shown in Table 5.13, 1AB National and Provincial schools have high levels of revenue compared to other schools. 1C schools are in the middle position, and Types 2 and 3 schools are in the lowest position. This situation has been found for several years, and within the schools, the majority of pupils in the primary section have paid fees for facilities, while secondary section and collegiate levels are low, although the spending pattern has been established the other way round. All the principals agreed that although the funds are generated by each grade, spending is not in line with the grades from which the funds are generated. The money is mostly spent for the general purposes of the

school. Further, the spending pattern shows that the majority of schools prioritise secondary level spending relative to primary level. 1AB (National) school principals indicated that the spending mostly goes on the cadet corps team, scouting, aesthetics, and sports. However, these activities are limited to certain sections of the schools. The situation has been examined during the period from 1997 to 2002, and the common results are indicated in Table 5.14.

Table 5.14: Expenditure distribution pattern for SFF per annum by type of schools

Expenditure category	Percentage of total SFF expenditure per annum				
	1AB (Nat)	1AB (Pro)	1C	Type 2	Type 3
Library books and materials	4	4	30	30	25
Stationary	10	10	30	25	30
Consumables	5	3	25	30	35
Purchasing teachers' guides	3	2	4	5	4
Medicine	3	2	4	4	2
Salaries and allowances	20	25	1		
Travelling expenses	25	26	1		
Other	30	28	5	6	4

Source: In-depth study survey (2002).

As shown in Table 5.14, in 1AB National and Provincial schools a large proportion of expenditure was on salaries and allowances, travelling expenses and miscellaneous items, whereas consumables and library books received low percentages. This distribution of expenditure is challengeable in terms of procedural and distributional equity, because pupils in the primary section have not benefited at all, or not to the extent that they should have benefited. These findings highlight the absence of an equal financial and resource management policy for schools.

No major changes in SFF have been evident after the introduction of NBUCRAM. The analysis of school data shows that the generation of revenues through SFF has strictly

followed the ministry guidelines, and the circulars have defined all the headings for expenditure. Beyond these, principals are not given any authority and legal power to collect and spend these funds without the approval of the relevant education authorities. The decision-making powers at school level are small. Further, a review of the documentary evidence shows that the educational authorities have not carried out any study to examine the contributions to education from SFF.

B. School development society fees

School development societies (SDS) are composed of parents, teachers and community representatives (ME, 1982). They generate school development funds from the community and manage these resources to meet expenditure not met otherwise by government grants. The government legitimised the responsibility for financial management of SDSF at school level. ME provides guidelines on the management of the main school revenues and SDSF, and instructed that funds were to be used for very limited and defined purposes. Approval for spending has to be obtained from ZEO or PDE (ME, 1982).

The pattern of collecting SDSF varies to a large extent from school to school. Large schools have very active SDSs, generating large amounts of funds, while the SDS in underprivileged schools are dormant. Under the SDSF system, every member, excluding school teaching staff, has to pay SLRs 15.00 per year for membership. Spending has to be with the approval of the management committee of the society. Principals are allowed to spend up to SLRs 200.00 in cash (ME, 1982).

Ninety-seven per cent of the schools in the sample have maintained their SDF as one of the sources of school revenues. Looking more closely at the data collected for the

in-depth survey, 14 per cent of schools have officially maintained SDSF, but these are not in the charge of the membership of the society, due to the low socio-economic level of the school community. They have not generated any funds from the community, because of its low income. These schools were mostly in disadvantaged rural areas and belong to Types 2 and 3. Although they have maintained accounts, sometimes they have received money from different sources. According to the principals, some schools charged fees for different targets of the SDSF such as security charges and building funds. In addition, some schools raised revenues through different activities (i.e. hiring the school hall or playground, conducting fairs). Though the resources raised from such activities are limited, they are useful to the schools for purchasing necessary inputs at a local level that are not available otherwise. Examination of spending patterns shows that most of the schools favour the same secondary-grade expenses as the SFF (i.e. cadet corps, scouts, aesthetics). Hence, the use of SDSF is also inconsistent with distributional equity principles. With reference to the income-generating pattern under the SDSF from 1997 to 2002, a summary by type of schools is shown in Table 5.15.

Table 5.15: Percentage of SDSF annual revenue collections, by type of school

Revenue Mean SLRs.	Percentage of total SDSF revenue collection per annum				
	1AB (Nat) (n=5)	1AB (Pro) (n=5)	1C (n=8)	Type 2 (n=7)	Type 3 (n=8)
Zero			13		25
300					38
751					
1251					
2001					13
3751				29	13
7501			38	43	
15001	40	40	13		11
35001	20		13	28	
75001		20	13		
300001	20	20	10		
1500001	20	20			

Note: n=number of schools surveyed.

Source: In-depth study survey (2002).

In Table 5.15, two extremes can be seen, with 1AB National and Provincial schools at one end and Types 2 and 3 at the other. 1C schools are at the middle level. It seems that small schools have low revenue, and large schools have significant revenues. SDSFs mostly depend on the income level of the school community and the external relationship with the schools' well-wishers. This research has also considered the spending patterns for such revenues. These patterns are shown in Table 5.16.

Table 5.16: Expenditure distribution pattern for SDSF per annum by type of schools

Expenditure category	Percentage of total SDSF expenditure per annum				
	1AB (Nat)	1AB (Pro)	1C	Type 2	Type 3
Library books	4	5	20	15	20
Extra-curricular activities	25	25	25	25	20
Student welfare	3	5	10	20	20
Learning materials	3	5	10	15	20
Travelling expenses	25	25	15	8	10
Salaries and allowances	25	25	5	2	2
Other	15	10	15	15	8

Source: In-depth study survey (2002).

1AB National and Provincial schools used these funds for school running costs, while other types of schools used them to acquire resources. It is worthwhile to analyse in-depth this spending. 1AB National and Provincial schools spent under the categories of travelling expenses, salaries and allowances, and others spent notably on extra-curricular activities. These activities are basically limited to the secondary section of the schools. Hence, these spending patterns are unfair, as the collections are made on a per-pupil basis. Even though NBUCRAM has been implemented since 2000, there have been no changes in relation to the SDSF. However, principals have demanded changes in SDSF powers at school level, in accordance with the contemporary development of the system.

According to the responses of principals, SDSF expenses have to follow the ministry guidelines, and the circulars have defined all the headings for expenditure. Beyond these, principals do not have legal power at school level. Further, it is apparent that the decision-making powers on generating and spending SDSF at the school level are uncertain. Also, there is a lack of studies of contributions to education by the SDSF.

C. Alumni association funds

Contributions from alumni are yet another modest source of school revenues. Only 33 per cent of the schools in the sample have AAF. These schools are mainly 1AB (National), (Provincial), and 1C schools. However, the amount collected under this heading is small. The majority of schools are located in the rural areas, and their alumni are not prosperous enough to contribute to school development. Most of the alumni associations (AAs) are very much concerned with fund raising programmes to support school development activities. Some of the very prestigious schools have large accounts

held by their AAs, but the quantities of their contributions are not available to the public for auditing.

After the introduction of NBUCRAM, the procedures of AAs did not change. The level of revenues still varies from school to school. According to the survey data, contributions of AAs to schools are very limited and cannot be assessed. The contributions of the alumni are not recorded and the associations are independent. Although funds collected by AAF are a lucrative source of income in popular schools and the ministry regulations indicate that they should be under the supervision of respective school principals (Department of Education, 1961; MEHE, 1995), this is not the case.

D. Other funds

In general, schools are known to have separate funding accounts for sports and aesthetic activities (arts, dancing, and music). These funds vary from school to school. To raise them, some schools conduct special income-generating programmes, which are mentioned under early SFF and SDSF. Two per cent of the schools in the sample have separate accounts for sports and aesthetic subjects. These schools are 1AB National and Provincial schools. This source of revenue has not changed as a result of the implementation of NBUCRAM.

Apart from these funds, the government has not made any legal provision for generating revenues at school level. However, as NEPs pointed out [(1)08.03.2002; (3)12.06.2002], some schools generate funds in different ways, which are not recorded. Donations for the development of school education from parents, community, and other associations are very insignificant and these donations go to the school itself. There is not much

detail on such school revenues and their expenditure, or on private contributions to education. They are believed to be very small; they are received by schools and spent by themselves and do not go into the general treasury. These revenues and expenditures are not properly computed at zonal, or provincial or national levels.

Present school own-generated revenues showed biggest gap between 1AB National and provincial schools compared to other types of schools. This situation considerably affected for the maintenance of equity.

E. Household expenditure on education

Household expenditure on education has not been computed by the government. As explained, household expenditure on schools falls into two types. The first is expenditure contributed directly to school budgets. The second is expenditure incurred by students and parents which does not go to the school budget (cf. Chapter One). This indirect household expenditure on education is very rarely calculated when decisions are taken on school financing or education policies in Sri Lanka.

Household expenditure on education is linked with family income and the socio-economic background of the school community. Limited access to quality education is also linked to poverty, which is distinctly a rural phenomenon, although it can be found in certain urban and semi-urban areas as well (Appendix 5.11). More than 60 per cent of the schools are located in rural areas. I administered a simple questionnaire on household expenditure on education for the month of January 2002 (Appendix 3.10) and have calculated how much money was spent by the parents for their children in 2002. I selected a small sample within the schools selected for the in-depth study survey (Appendix 3.5). The sample represented five levels of income

categories; each category was represented by four persons in four provinces (Appendix 5.1d). Their children were attending government schools. The spending levels are shown in Table 5.17. Details are given in Appendix 5.12.

Table 5.17: Household expenditure on education per month: January 2002

Occupation Category	Income (Mean) SLRs	Total household expenditure on education SLRs	Expenditure as a % of monthly income
Administrative	22500	5383	24
Business	55000	9208	17
Teacher and clerical grades	10500	2513	24
Semi-skilled and labouring	6000	1408	23
Farmers*	4000	665	17

**Farmers are small scale and not landowners, they work for landowners, with daily pay.*

Source: Household expenditure on education mini-sample survey (2002).

As Table 5.17 shows, indirect investment varies for each income category. The highest household expenditure as a percentage of income is incurred by parents in the administrative and the teacher and clerical categories. In absolute terms most is spent by those in business occupations, whereas as a percentage of income their contribution is equal to farmers' expenditure. This expenditure was calculated only for one child, although village families have at least three or four children (Department of Census and Statistics, 2001). According to the in-depth survey, 70 per cent of parents' annual income averaged less than SLRs 6000.00. This imbalance is a severe challenge to establishing equity in the system; it should be considered in the provision of resources for schools, and included in the formulae for the determination of allocations (i.e. when giving weight to schools in disadvantaged areas). The household expenditure factor corresponds with disadvantages; hence these two factors should be carefully studied when schools are classified as disadvantaged for the allocation of resources.

5.3.2.5 *Conclusion on distributional equity*

The longitudinal and cross-sectional evidence shows that in the pre-NBUCRAM period the horizontal distributions were poorly implemented at school, zonal, provincial and national levels. Further evidence demonstrates the absence of policy emphasis on the allocation of learning resources concerning basic and curriculum enhancement during the pre-NBUCRAM regime. Distributional criteria, notably for resourcing schools, were not formulated. This situation shows unequal treatment for equal needs; distributional unfairness was evident, as well as little compensatory funding to promote vertical equity.

This issue has been addressed to some extent by NBUCRAM. The present formula has been weighted according to the different horizontal requirements of schools, ensuring curriculum enhancement. NBUCRAM did not include school-site needs. The significant characteristic of NBUCRAM is that the total of pupils enrolled in certain schools, notably schools with large enrolment, has deliberately not been taken into the calculation of school allocations, although this restriction implies ignoring the horizontal equity principle within distributional equity.

The evidence demonstrates that expenditure per pupil still varies by grade, type of school and province; although the gaps have been reduced to some extent. This reduction can be identified as a positive impact of NBUCRAM, and improvements in expenditure per pupil are significant. The same paradox shows in the data per pupil by grades; when compared by province expenditure per pupil differ to some extent. The reason is that the same variable in the formula has been applied for different financial allocations. On the other hand, provincial councils as well as the central government have frequently faced illiquidity and cash rationing issues, which cannot be ignored

by the authorities. The poor disbursement rate at school and other levels also leads to the fluctuation in expenditure per pupil. In year 2000, all school types had the highest position on expenditure per pupil; later it decreased. However, as for horizontal equity aspects, unequal treatment for equal requirements has hitherto been evident when provinces are compared.

In principle, for the first time in the system of education in Sri Lanka, the authorities have accepted the need for special treatment for disadvantaged schools, notably when resourcing schools. Comparing types of schools has shown that small schools, especially in remote rural areas, have benefited from the new system. NBUCRAM has included reasonable allocations for disadvantaged schools, but problems still remain in releasing funds to schools, due to the low priority of these schools, the under-utilization of funds, and the lack of identification of disadvantaged schools. These lead to the absence of vertical equity. However, the evidence shows that these needy schools have benefited to some extent, although they are receiving meagre policy attentions.

It is significant that pupils with SEN have been neglected by the formula, even though this neglect conflicts with vertical equity as well as the fundamental rights of pupils who depend on special treatment.

Different types of school revenue are maintained, according to the type of schools. There may be shortfalls in the record keeping of school accounts. Furthermore, no explicit rationale for the collecting or spending of funds is evident. Hence it can be argued that school revenue collecting and spending violates distributional equity principles. The school revenue policies and regulations have not been updated.

Generating and spending government-based school revenues have been accountable through public finance regulations, whereas school-generated revenue is accountable only to the school community. This source of funds varies by type of schools. Types 1C, 2 and 3 schools have been concerned to utilize these funds to meet their supplementary curriculum requirements, whereas 1AB National and Provincial schools gave their priority to supporting day-to-day routine activities.

Household expenditure on education is neglected by the authorities when taking policy decisions. However, the contribution of households is significant. Although my sample was very small, it suggested that all the parents, whatever their occupations invest a substantial proportion of income for their children's education (Appendix 5.12). However, it is evident that within NBUCRAM under the distributional equity framework, this household expenditure component has been misused in resourcing schools.

5.3.3 Adequacy criteria of NBUCRAM

This section seeks to answer SRQ2.4 (cf. Table 5.1). As well as equity, the adequacy of school funding is of fundamental importance. Resources could be equitably distributed, but still be inadequate. Hence, the adequacy criterion is essential for the evaluating impact of NBUCRAM. The traditional framework for assessing FFS has focused on equity criteria. However, contemporary developments within the field of education economics for assessing FFS have focused on adequacy criteria as well as equity principles.

Meeting the adequacy criterion requires providing sufficient funds for all students to achieve expected academic standards. Applying it requires examining per-pupil

expenditure distribution horizontally and vertically for the period from 1997 to 1999, compared with the period 2000 to 2002.

Before the implementation of NBUCRAM, the education authorities used a need-based assessment mechanism as a tool for resourcing schools, including learning resources as well as infrastructural facilities. NEP1 (08.03.2002) explains this situation as follows:

the need-based assessment mechanism mainly concerned the provision of resources on a priority basis. Hence, most of the large schools with a high enrolment of pupils always had the higher priority. The mechanism did not include a fixed allocation of the education budget for the provision of learning resources to all schools, and hence, most of the time small schools were neglected.

The other three NEPs [(2)18.07.2002; (4)12.09.2002; (6)05.07.2002] supported this point of view, and emphasized that political and bureaucratic influences on the resourcing of schools were harmful to remote and disadvantaged schools. The supply of learning resources to most small schools was restricted as a result of their low pupil population. It is evident that these schools were inadequately resourced. This discrimination caused a 'crisis of small schools'. In contrast, the few schools (Appendix 4.1) which are highly popular have faced excess demand.

I asked principals and planners: “*were the pre-NBUCRAM funds received adequate for schools’ needs*”? Their responses are shown in Table 5.18. It must be emphasised that these responses show the *perceptions* of school principals and planners of the adequacy of resources, rather than an objective measure of adequacy, as no data were available for objective measurement.

Table 5.18: Adequacy of funds received in the pre-NBUCRAM regime

Statement	Principals' & planners' responses as a percentage									
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	Principals	Planners	Principals	Planners	Principals	Planners	Principals	Planners	Principals	Planners
Resources provided were:										
adequate			8	10			82	66	10	24
fairly adequate	3		6	10			81	66	10	24
inadequate	40	66	51	24			3	10	6	

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

Table 5.18 shows that principals and planners agreed that the pre-NBUCRAM regime did not provide adequate learning resources. All the planners concerned with implementation at various strata emphasized that the government did not provide learning resources annually; not all of them were *satisfied with the adequacy of the provisions*. Basically during this period provision was based on ad-hoc decision-making, rather than on adequacy criteria for resourcing schools.

I collected data on the school principals' estimation of both the requirements, and actually provided learning resources. According to these responses, there is still a problem of adequacy in the system as requirements exceed the amount provided. Details are given in Appendix 5.13. This situation varies from year to year, as well as by type of school, due to the cash rationing problems of the education budget.

Further, NBUCRAM assumes 35 pupils in each class, and the allocations have been weighted for this number. But this number is exceeded in the actual classrooms in schools, especially in the urban areas. Hence, the allocation provided for the desired number obviously leads to the inadequacy of learning resources. In my view, if allocation decisions are based on the desired pupil numbers, schools with large

enrolments are badly affected. The government circular on school admission restricted the maximum class size of grade one to 40 pupils (MEHE, 2001c). But this restriction is exceeded in the many schools with large enrolments. *These contradictory policy statements challenge the adequacy of resourcing for schools.* The financial allocation process does not give weight to the poverty indicator for each province or school; this affects the maintenance of adequate learning resources in schools.

At present, the funding policy is paving the way to a reasonable increase of funds allocated for learning resources, although there are some weaknesses. These will affect distributional equity, both horizontal and vertical, in the system. Further, it is evident that there is a lack of consideration for poverty indicators in the national policy on funding allocations for learning resources; such consideration is required, to maintain the application of adequacy criteria.

5.3.4 Disadvantages of NBUCRAM

This section offers answers to SRQ2.5, as outlined in Chapter Three and indicated in Table 5.1. A weakness of NBUCRAM is that it is *very complex to understand for the recipients and implementers* (ZEP2, 30.01.2002). There is a lack of flexibility within the formula; especially, the present formula has not provided any flexible variables to allow for additions in accordance with factors of provincial disadvantage. NBUCRAM was introduced with much bureaucratic formality. The involvement of recipients of the system was insufficient. Hence, very essential components of FFS were ignored (e.g. pupils with SEN).

One of the issues raised by the principals is that the *amount allocated for purchasing consumables is more than adequate, but the allocation for capital equipment is not*

sufficient to satisfy needs at school level. According to principals: ‘the amounts for consumables and perishables are more than adequate. If we had power to purchase more capital equipment, this money would be more useful’ (SPs, (4)24.10.2002; (5)09.07.2002). *Therefore the formula should be revised to ensure a stronger weighting for capital allocation.*

Especially, this programme was implemented as a component of a foreign-funded project. Therefore, principals and planners suspect that the resource allocation mechanism will be abolished after the disappearance of the foreign funds. This suspicion will affect the sustainability of the programme. My research has revealed that principals and planners have participated in promoting awareness of NBUCRAM; the provincial and national level figures on progress reports indicated that a number of awareness-raising programmes were conducted for different stakeholders (World Bank, 2002ab). Nonetheless, in practice, the application of this awareness shows a lack of knowledge.

5.3.5 Stability and sustainability of programme ensuring equity

In this section, it is crucial to examine and understand the answers to SRQ2.6, which was included under KRQ2 in Chapter Three and mapped in Table 5.1.

Eighty-six per cent of planners gave assurances of the stability and sustainability of the programme. ZEPs and PEPs indicated reasons for supporting the above statement. They mentioned that the commitment of principals and the zonal and provincial levels officials is very important for the sustainability of the programme. Further, they pointed out that recently schools and educational officials have been adopting a planning culture, and this will bring future improvement in the mechanism.

NEP1 (08.03.2002) indicated that the following actions should be taken immediately for the stability and sustainability of NBUCRAM. More extensive school-based management practices should be introduced. Further, legal assurance of school financing should be provided. However, according to NEP1, PEAs and MEHE have in fact consented to financial provisions for this purpose, which are very important for the sustainability of the programme. Further, the FC has taken action to allocate provincial funds under the recurrent and capital budget headings. This step is essential to ensure the stability of the programme. NEP1 (08.03.2002) emphasized:

...that at present the school community is aware to some extent of this programme. About 90 per cent of principals and teachers welcomed and appreciated the new mechanism, and they said that securing future programmes is very useful.

In any case, if this mechanism is withdrawn, beneficiaries, especially in the disadvantaged areas, will suffer. This would harm the authorities. Especially, small schools which are the front-line beneficiaries of this programme.

In the existing situation, legal provisions have given assurance for the sustainability and stability of NBUCRAM. It is required to streamline the present formula in order to gain further benefits for the school pupils.

5.4 Conclusion

Longitudinal and cross-sectional data indicate that school financing led to vast disparities within and between schools in the last 30 years. To reduce these disparities and provide more adequate finance for learning resources, the NEC recommended the adoption of a new resource allocation mechanism, NBUCRAM, for the education system. The World Bank was directly involved in the initiation and implementation of

the new system. The implementers at the grassroots considered that this radical departure was a result of international involvement. Principals gave their views on international involvements related to micro-level issues, while planners were more concerned about macro-level issues. The operational-level stakeholders contributed little to NBUCRAM; this is significant.

The pre-NBUCRAM system had, to some extent, agreed rules and policies on resourcing schools, although the implementation of these was lacking. As a result of this poor implementation, small schools in the system had a dearth of basic learning resources, while parents and authorities expected equal outputs relative to other schools. These expectations were not met. In contrast, schools with a high enrolment of pupils were treated too favourably. However, NBUCRAM has taken account of this situation and included norms and regulations on the size of schools, and classes as variables for the formula. Before NBUCRAM, the norms determined by MEHE for the provisions of all resources, were not followed. In addition, there was no transparency in resource allocation. NBUCRAM contains reasonable norms. There are some weaknesses in the formula, but compared to the previous regime, NBUCRAM improves resourcing of schools.

The pre-NBUCRAM period was characterised by distributional inequity. The system did not provide a guaranteed allocation for learning resources through the budget, and whatever was provided by it was not distributed equally among the schools or pupils within each school. Small schools suffered from severe shortages of learning resources; their needs were neglected and therefore their functioning was threatened. A further feature of the pre-NBUCRAM situation was that political and bureaucratic influences greatly affected the resourcing of schools. Distributional equity in the

resourcing of schools has been an issue both before and after NBUCRAM. Allocations for securing 'curriculum enhancement' have been ensured, but the 'school-site needs' allocations for schools have been neglected.

However, NBUCRAM has been able to moderate the per-pupil expenditure gap among the types of schools, as well as among the sections by types of schools. However, that there are differences among the schools is evident. Overall, hitherto per-pupil expenditure by province has not been equal, due to illiquidity and the cash rationing of the economy.

NBUCRAM deliberately caps the allocations. When the pupil population exceeds the desired number, schools are not entitled to any additional allocation. There are common rules for class size for all the schools, but popular schools do not follow these regulations, due to the lack of inspections. If the schools have more avenues for capitalizing resources, they are not concerned about this type of restriction. However, this restriction may affect the schools in the Type 1C, which have reasonable pupil populations. A further result is that losers and winners have emerged through these restrictions. Schools now receive a fixed allocation per pupil to match pupils' learning requirements. Therefore, schools are likely to attempt to maintain their enrolment at a desirable level. The fixed allocation may limit the excessive numbers in popular schools.

NBUCRAM has introduced transparency in the resource allocation for schools. This did not exist previously. Before NBUCRAM, schools did not receive appropriate amounts for the procurement of learning resources, but the government allocated an

approximately similar amount for all schools whatever their size; what is more, the funds did not fully reach the schools.

In relation to ensuring vertical equity, the periods before and after NBUCRAM were both inadequate. One of the principal impacts of NBUCRAM is that the disadvantaged schools have been accepted as needy, requiring compensatory treatment of their deprivation. This did not happen in the past, and hence it is an extraordinary event for the education system, although weaknesses in implementation have been evident. This discrimination has been influenced by different factors. Schools which need special treatment because of their disadvantaged pupils are disregarded (i.e. schools in the plantation sector and in socio-economically disadvantaged areas). A great problem is illiquidity and the cash rationing of the provincial councils; hence, variation in per-pupil expenditure under budget category for disadvantaged schools are evident.

Pupils with SEN were entirely neglected when designing the formula for allocating resources. This failure violates the human rights of these pupils. The procedure for the identification of needy pupils is categorized in 5.3.2.2:B section and should be included in the formula. I suggest that this is the moment for paying attention to pupils with SEN.

NBUCRAM attempts to reduce disparities within the school and among the schools in terms of learning resources, but the schools' own revenue component has reinforced disparities between schools, as these revenues basically depend on the income level of the school community. It is impossible to overcome such disparities without taking remedial measures for a more equitable income distribution. The empirical evidence

demonstrates that the government-sourced school revenues are managed in accordance with the public financial regulations, and other school-based revenues are accountable only to the school community. It is significant that the rules and regulations for school revenues were made in the late 1960s and 1970s, and amended in the early 1980s. These rules and regulations do not match the current economic and education management systems. The evidence shows that 1AB National and Provincial schools have high levels of revenue collections; in contrast, Types 1C, 2 and 3 schools have little or nothing. The school-based revenues of 1AB National and Provincial schools are spent on day-to-day routine management activities. Types 1C, 2 and 3 schools have spent these revenues to meet their curriculum requirements. The important diagnosis is that the household contribution for education is significant (cf. Chapter One). My evidence highlighted that parents invest large proportions of money for their children's education, regardless of their income level. However, household expenditure on education is related to income and poverty.

National policy on the resourcing of schools has hugely affected the implementation of the distributional equity and adequacy criteria. It is evident that at present provincial allocations depend on the public fiscal capacity, which varies between provinces. The adoption of deconcentration and decentralization as a model for FFS has been advocated. The application of one formula for different allocations has not promoted equity in the entire system. Further, the implementation of one single system may not be workable, as the provinces are heterogeneous and there is no uniform system for provincial allocations. Hence, it is imperative to pay special attention to the socio-economic backgrounds of provinces. On the other hand there is a need to develop a flexible formula within the national policy framework for resourcing schools, to ensure adequacy as well as equity.

Political commitments at both national and provincial levels are essential for the sustainability of this NBUCRAM.

My overall conclusion is that the application of the new mechanism has improved equity in the allocation of learning resources. There are reductions in the gaps in per-pupil expenditure among the types of schools as well as among the sections/(grades). The performance of the programme, although having some weaknesses, has to be judged taking into account its scale and the complexities associated with a widely dispersed and disparate school system. Every educational reform, like the educational policy elites, has used the concept of equity as a slogan, but the actions taken are painfully slow. Although some improvements in the equity of the system can be seen, these are inadequate. Further, some aspects of the equity principle of NBUCRAM have been seriously undermined. However, the reality is that achieving perfect equality is impossible, because assessing equity is a subjective issue, although a high level should be sustained.

To meet further objectives, financial and physical resources need to be used efficiently at school level. Hence, the devolution of power and authority to school level has been extended. The concern is to establish each school as an efficient management unit in the education system; therefore, the devolution of powers and authorities to schools is promoted within strengthened basic SBRM and the extension of SBRM. Chapter Six will evaluate the impact of both strengthened basic SBRM and the extension of SBRM programmes on the efficiency of resource allocation.

Chapter Six

The impact of school-based resource management on the efficiency of resource allocation

6.1 Introduction

As I explained in Chapters One and Four, in the recent development of education in Sri Lanka we can distinguish three main regimes of SBRM: (i) basic SBRM, (ii) strengthened basic SBRM, and (iii) the extension of SBRM.

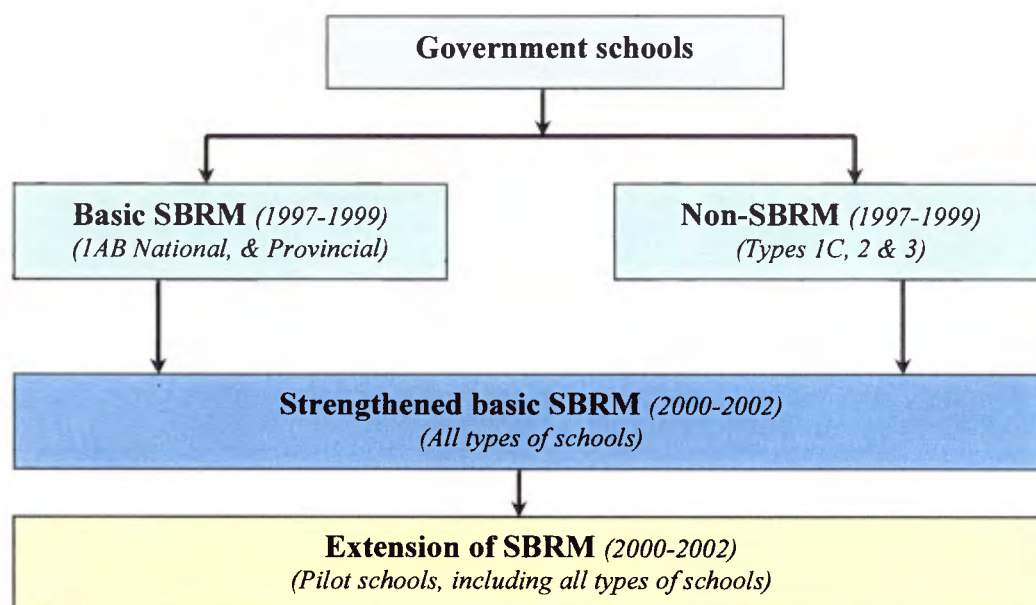
Basic SBRM devolves authority at school level to purchase consumables and perishables used for teaching and learning. This had been established in a few schools for a restricted set of subjects prior to the year 2000 (4.3.2.1). I classify all other schools prior to 2000 as non-SBRM schools.

I use the term ‘strengthened basic SBRM’ to denote the installing of basic SBRM in all schools since 2000. Schools are entitled to purchase learning materials in the form of consumables and perishables, except chemicals, for all the subjects defined in the curriculum (4.3.2.2).

Extended SBRM is operated by schools which have in addition the purchasing power and decision-making authority to acquire inexpensive capital learning equipment. The extension of SBRM has been established only on a pilot basis for selected schools (4.3.2.3). Hence, throughout this chapter ‘pilot schools’ denotes schools selected for the pilot programme for the extension of SBRM. ‘Non-pilot schools’ indicates all other schools, which have strengthened basic SBRM, but were not selected for the implementation of the extension of SBRM.

As discussed in Chapters Three and Four, regimes of SBRM and their status during the period 1997-2002 are shown in Figure 6.1.

Figure 6.1: Different regimes of SBRM in Sri Lanka 1997-2002



In 2002, only two regimes -strengthened basic SBRM and the extension of SBRM- were functioning in the system.

The chapter has two main purposes. The first is to evaluate strengthened basic SBRM. This requires comparing schools' resource management in the three years before the introduction of strengthened basic SBRM (1997-1999), and the three years after its implementation (2000-2002). It is important to evaluate the impact of strengthened basic SBRM on efficiency incentives, compared with schools with basic SBRM and non-SBRM. This assessment of impact is restricted to that of the basic principle of SBRM; which is, the schools' power and authority to acquire consumables and perishables which are part of learning materials (6.2).

The second purpose of this chapter is to evaluate the impact of the extension of SBRM in relation to the efficiency incentives introduced by strengthened basic SBRM. This impact is investigated by comparing pilot and non-pilot schools during the period 2000-2002 (6.3).

Hence, this chapter explores the following KRQ3, including all its SRQs as outlined in Chapter Three: **what has been the impact of strengthened basic SBRM and extended SBRM in relation to efficiency incentives?** The answer to KRQ3 requires the study of all the SRQs which were outlined in Chapter Three. The mapping of these SRQs and the structure of this chapter are shown in Table 6.1.

Table 6.1: Mapping of SRQs and the structure of the chapter

Cluster	SRQ		Structure of chapter
Impact of strengthened basic SBRM	3.1	What is the impact of strengthened basic SBRM in terms of efficiency incentives compared to basic SBRM and non-SBRM?	6.2; 6.2.2; 6.2.2.1; 6.2.2.2
	a.	What are the involvement and perceptions of principals, planners, and policy formulators concerning the initiation and functioning of strengthened basic SBRM?	6.2.2.2.1
	b.	What practices have resulted in schools from the changes in the system as a result of the implementation of strengthened basic SBRM?	6.2.2.2.2
	c.	What resources have each school received as a result of strengthened basic SBRM? Are the schools using resources more efficiently compared to basic SBRM and non-SBRM?	6.2.2.2.3 6.2.2.2.4 6.2.2.2.6
	d.	What are the disadvantages encountered at school level as a result of strengthened basic SBRM?	6.2.2.2.5

Impact of the extension of SBRM	3.2	What is the impact of the extension of SBRM in terms of efficiency incentives?	6.3
	a.	What were the involvement and perceptions of principals, planners and policy formulators as regards the functioning of the extension of SBRM?	6.3.1 6.3.1.1
	b.	What practices have been followed in the existing planning, budgeting and monitoring processes at school level (for the distribution of learning equipment among the sections, subjects and grades) with respect to the extension of SBRM?	6.3.1.2 6.3.2.1 AB
	c.	What resources has each school received as a result of the extension of SBRM? Are the schools using resources more efficiently as a result of the extension of SBRM, compared to the non-pilot schools?	6.3.2.1CDE 6.3.2.2 6.3.2.3 6.3.2.4
	d.	What are the disadvantages and practical issues encountered at school-level as a result of introducing the extension of SBRM?	6.3.2.5
	e.	Can it be assured that the funds for the extension of SBRM will be sustained over time?	6.3.2.6

6.1.1 Data collection and responses to the study

To answer the SRQs related to KRQ3, this chapter will incorporate the findings from the analysis of data gathered from school, zonal, provincial, and national levels (Appendices 3.4; 3.6; 3.7; 3.11). These SRQs concerned the efficiency of the utilization of learning resources in classrooms and empirical data is derived from questionnaires (Appendices 3.9a; 3.9b) administered to teachers, of both pilot and non-pilot schools, in the extension of the SBRM programme. Moreover, quantitative data are also used to triangulate qualitative findings. I have used five types of data collection tools for gathering the required data. Details of responses are as follows.

6.1.1.1 *Responses to postal questionnaires*

I distributed 143 postal questionnaires (Appendix 3.4) to principals. One hundred and twenty-six out of 143 principals (88%) responded, of whom 65 (89%) were in pilot and 61 (87%) in non-pilot schools. Details are given in Appendix 6.1a.

6.1.1.2 *Responses to in-depth study questionnaires*

Thirty-six schools (18 pilot and 18 non-pilot schools) from four provinces were selected for an in-depth study (Appendix 3.5) of strengthened basic SBRM and extended SBRM. The in-depth study (Appendix 3.6) was carried out personally, although it was difficult to gather data from three non-pilot schools. The overall response rate for both pilot and non-pilot schools was 92 per cent. Details are given in Appendix 6.1b.

6.1.1.3 *Responses to education planners' questionnaires*

Sixteen questionnaires (Appendix 3.7) were distributed to both pilot and non-pilot ZEPs, 8 questionnaires to PEPs, and one questionnaire to the NEP1; the total number was 25 questionnaires. Percentage rates for responses were 33%, 67%, and 67% from Southern, North-East and North-Central provinces respectively. Details are given in Appendix 6.1c.

6.1.1.4 *Responses to teachers' (pilot and non-pilot schools) questionnaires*

Twelve teachers of grade 11 Science, and 16 grade 2 teachers of Primary subjects in pilot and non-pilot schools in four provinces, were selected for an in-depth study survey, especially inquiring about the usage of learning resources in the classroom (Appendices 3.8a; 3.8b). All the teachers responded, as detailed in Chapter Three (Table 3.9).

6.1.1.5 Interviews

Nineteen interviews (Appendix 3.11) were conducted, with 5 principals, 4 ZEPs, 4 PEPs, and 6 NEPs, and these data were used to triangulate the data gathered through the questionnaires (Tables 3.4; 3.11).

As I explained in Chapter Four, all the SBRM policies in the history of education in Sri Lanka were intended to streamline the mechanism for allocating learning resources, in order to improve school management practices and educational outputs. In this chapter, which analyses and presents empirical data on strengthened basic SBRM and the extension of SBRM, the efficiency criteria have been limited to 'efficiency incentives'. This is due to methodological and operational problems with establishing a causal relationship between school learning outcomes and resource management practices. Hence, this chapter will include little pure input-output quantitative analysis, although some quantitative aspects are considered.

6.2 Impact of strengthened basic SBRM on efficiency

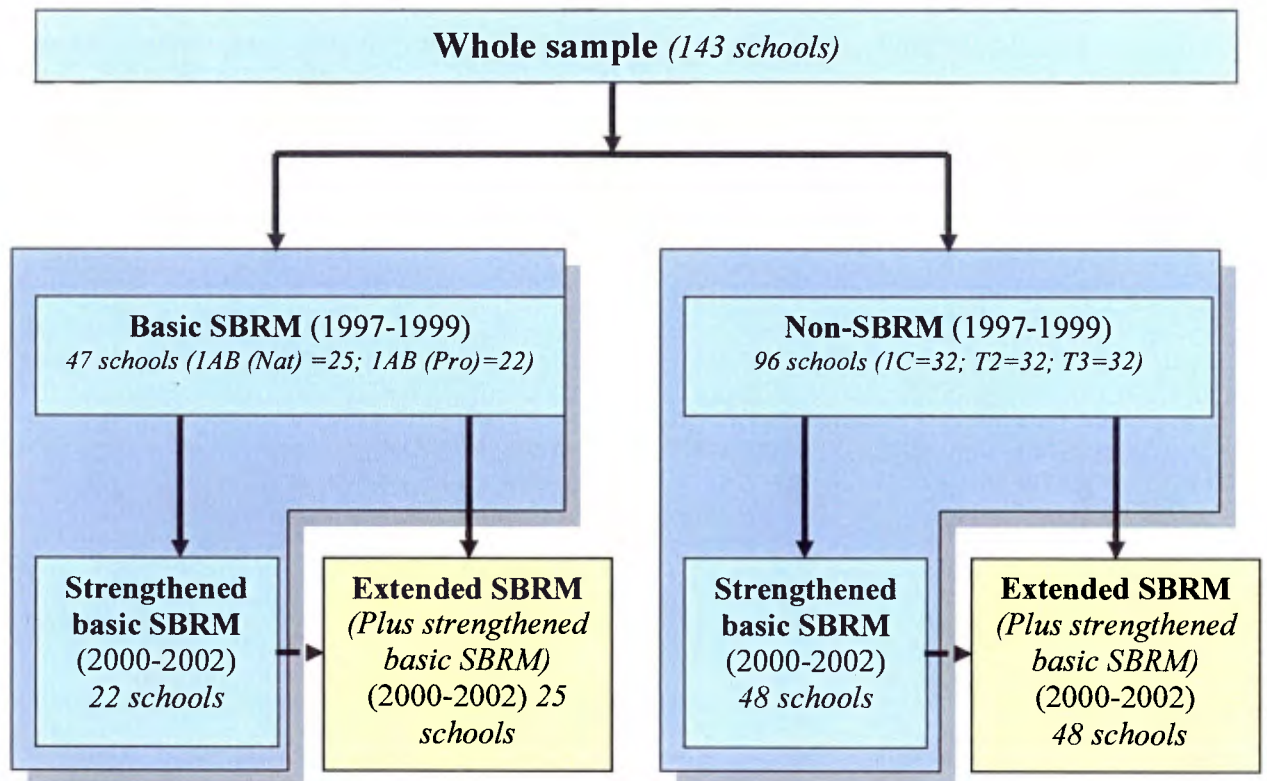
This section addresses the SRQ3.1(a-d) formulated in Chapter Three and mapped in Table 6.1. It will discuss the analytical framework for assessing the impact of strengthened basic SBRM and the impact of strengthened basic SBRM on efficiency incentives, compared to basic SBRM and non-SBRM.

6.2.1 Analytical framework for evaluating the impact of strengthened basic SBRM

For the evaluation of the impact of strengthened basic SBRM, longitudinal and cross-sectional research designs were employed. Descriptive and interpretative methods,

using the qualitative and quantitative empirical data, are adopted for the analysis and presentation. The analytical framework for the evaluation is shown in Figure 6.2.

Figure 6.2: Analytical framework for evaluating the impact of strengthened basic SBRM



My study, which evaluates the impact of strengthened basic SBRM, is limited to comparing two pairs: the basic SBRM and strengthened basic SBRM group, and the non-SBRM and strengthened basic SBRM group. Other groups will not be included in this analysis. The details of responses to the research instruments in relation to the dimensions shown in Figure 6.2 are presented below.

The rates of response to the postal questionnaire are shown in Appendix 6.2a. The data gathered from in-depth study survey have also been used to evaluate the impact of strengthened basic SBRM by comparing basic SBRM and non-SBRM schools. The details of responses to the questionnaires for the in-depth study are shown in

Appendix 6.2b. To triangulate the data which were gathered from schools, planners were used as informants. The details of their rates of response to their questionnaires are given in Appendix 6.2c. All the interviewees responded to the enquiries (Table 3.11 & 6.1.1.5).

The responses given in Appendices 6.2a, 6.2b and 6.2c are used for the analysis which evaluates the impact of strengthened basic SBRM.

6.2.2 Impact of strengthened basic SBRM on efficiency incentives

The impact of strengthened basic SBRM for the period 2000-2002 will be examined, and compared with basic SBRM and non-SBRM practices during the period 1997-1999. The evaluation of impact is limited to SBRM, notably for consumables and perishables as learning resources, for which power and authority were vested at school level. The comparison includes two sub-sections: efficiency practices of the regimes of basic SBRM and non-SBRM, compared to strengthened basic SBRM regime.

6.2.2.1 *Efficiency practices of the regime of basic SBRM and non-SBRM, compared to strengthened basic SBRM*

This section is devoted to identifying the following aspects in relation to the efficiency incentives which existed in the period before the implementation of strengthened basic SBRM:

- A. efficiency incentive characteristics of the basic SBRM and non-SBRM system;
- B. advantages of the period of basic SBRM and non-SBRM; and
- C. disadvantages of the period of basic SBRM and non-SBRM.

A. Efficiency incentive characteristics of basic SBRM and non-SBRM system

The efficiency incentive characteristics of basic SBRM and non-SBRM, during the period 1997 to 1999 will be examined, and then the situation for the years 2000 to 2002, after the new improvements had taken place. Principals in both basic SBRM and non-SBRM schools and planners were asked to identify '*what characteristics have been practised in the regimes of basic SBRM and non-SBRM*'; their responses are shown in Table 6.2.

Table 6.2: Efficiency incentive characteristics of basic SBRM and non-SBRM, 1997-1999

Efficiency incentive characteristics of basic SBRM and non-SBRM	Principals' & planners' responses as a percentage					
	Basic SBRM (n=17)		Non-SBRM (n=44)		Planners (n=21)	
	Yes	No	Yes	No	Yes	No
Requests made by the school were satisfactorily granted by the respective authorities	29	71	23	77	NA	
Requests made by the school and ZEO were fully granted by PEAs and MEHE respectively	NA				24	76
Principal had to accept whatever was provided by the respective agencies	71	29	86	14	NA	
Resources were of low quality	88	12	95	5	14	86
The process was very much controlled by and highly accountable to higher authorities	88	12	95	5	67	33
A very centralized and uniform management process	88	12	95	5	62	38
Less autonomy and flexibility for decision-making in terms of completion of school level requirements than now	88	12	91	5	86	14
Principals only played the role of coordinator	71	29	86	14	67	33
Principals often faced audit queries	47	53	68	32	95	5
Decisions were taken to determine real school-level requirements after consultation with school staff	29	71	23	77	NA	
Parents and teachers were frequently consulted in decision-making on SBRM	29	71	23	77		
Principals made their own decisions on real requirements based on the available data	88	12	91	9		
Principals negotiated with ZEO, PDE, and MEHE respectively to acquire the resources	88	12	93	7		
Ad-hoc decision-making	71	29	86	14	86	14

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 6.2 shows, the majority of principals in non-SBRM schools, and the planners responded negatively to all the statements given in the questionnaires. In contrast, basic SBRM school principals positively responded. This implies that the regime of basic SBRM and non-SBRM had inefficiency characteristics rather than efficiency incentive characteristics. I suggest that these statements highlight the ambiguity in the process of bidding for resources and the lack of formal practices.

This lack was verified by one of the principals. He claimed:

...historically there was no accepted procedure for the provision of resources. Hence, whatever we received we accepted, because if we rejected those items for the reason of poor quality or other justifiable reasons, these resources were transferred to another school. After that, we were not guaranteed that next time we could receive relevant equipment for our children (SP4, 24.10.2002).

Further, these empirical data shows that the regime of basic SBRM and non-SBRM had led to a lack of experience of participatory decision-making at school level. In my view, these processes did not emerged overnight, but were established over several decades, and might even have continued once the new mechanism was in place. Hence, it is necessary to further investigate this situation.

All the principals, in both basic SBRM and non-SBRM schools, and the planners were asked: '*did the basic SBRM and non-SBRM regimes of resource allocation encourage schools to use resources efficiently?*' Principals' and planners' responses are given in Table 6.3.

Table 6.3: Efficiency of resource allocation through basic SBRM and non-SBRM in the period 1997- 1999

Efficiency of resource allocation through basic SBRM and non-SBRM	Principals' & planners' responses as a percentage					
	Basic SBRM		Non-SBRM		Planners	
	Yes	No	Yes	No	Yes	No
By the school/principal being held accountable for the efficient use of resources	59	41	80	20	52	48
By encouraging schools to obtain the best possible student performance	41	59	27	73	24	76
By enabling schools to make their own decisions on resources	41	59	36	64	14	86
By resource decisions for schools being made at provincial and zonal levels which has better information about what is needed	47	53	84	16	76	24
By resource decisions for schools being made at national level which has better information about what is needed	47	53	84	16	86	14
By resource allocation decisions being made at provincial and zonal levels , so saving principals' time	53	47	64	36	67	33
By resource allocation decisions being made at national level , so saving principals' time	53	47	64	36	81	19
By resource allocation decisions being made at provincial and zonal levels , where they can obtain lower prices and save on costs through bulk ordering	59	41	82	18	57	43
By resource allocation decisions being made at national level , where they can obtain lower prices and save on costs through bulk ordering	59	41	82	18	57	43

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 6.3 shows, comparing two types of school respondents and triangulating planners' responses show some differences between basic SBRM and non-SBRM. The principals' different perceptions of basic SBRM and non-SBRM schools can be seen. The centralised system obviously did not encourage efficiency incentives, especially maintenance of rationalistic management practices related to decision-making power and authority.

B. Advantages of the period of basic SBRM and non-SBRM

Principals and planners reported that there were some positive advantages even in basic SBRM and non-SBRM regimes; but these are arguable. To enquire about these

advantages in the two types of schools, the same question was put into all the survey questionnaires. Both principals of basic SBRM and non-SBRM schools and planners prioritised these advantages, as shown in Table 6.4. Details of responses are given in Appendices 6.3a, 6.3b and 6.3c.

Table 6.4: Advantages of basic SBRM

Advantages	Ranked by perceived importance		
	Principals of:		Planners
	Basic SBRM	Non-SBRM	
Best use of available resources	2	1	1
Principals highly accountable to higher authority	1	2	3
Keeping low costs	3	4	2
More efficient management of school resources at zonal than at school level	4	3	4

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

Table 6.4 shows that to some extent the principals of basic SBRM and non-SBRM schools and the planners had similar priorities. Many perceived the best use of available resources and accountability as the main advantages derived. These responses indicate that some advantages, mainly for efficiency, existed during the basic SBRM and non-SBRM regime.

C. Disadvantages of the period of basic SBRM and non-SBRM

Despite these advantages, disadvantages were experienced, as discussed earlier, by the principals and planners during the period of basic SBRM and non-SBRM practices. Principals' and planners' perceptions of disadvantages were prioritised, and are shown in Table 6.5. Details of responses are given in Appendices 6.4a, 6.4b and 6.4c.

Table 6.5: Disadvantages of basic SBRM

Disadvantages	Ranked by perceived importance		
	Principals of:		Planners
	Basic SBRM	Non-SBRM	
Highly centralized and uniform school resource management	2	1	2
No room for decision-making by principals at school level	1	2	3
Principals not involved in policy decisions at provincial and national levels	3	3	1
Political and bureaucratic influences	4	4	4

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

Table 6.5 shows the lack of power and involvement of principals in policy decisions at school, provincial and national levels, although this power and authority is necessary for healthy SBRM practices in any circumstances. These findings indicate that the basic SBRM and non-SBRM regime exhibited the characteristics of inefficiency. Moreover, in any case, school resource management functions were controlled by the centre; but the implementation of one single system may not be workable, as the schools are heterogeneous.

Principals were asked similar questions about aspects of SBRM in 1997-1999 that related to the teachers' and students' conditions. Their views are shown in Table 6.6.

Table 6.6: Problems and issues of basic SBRM and non-SBRM

Condition	Problem/Issue	Principals' responses as a percentage			
		Basic SBRM		Non-SBRM	
		Yes	No	Yes	No
Students	Inadequate provision of learning resources	71	29	89	11
	Resources received were insufficient for distribution among the subjects and grades	71	29	89	11
	Insufficient time and resources/equipment for practical work	71	29	89	11
	Poor student performance due to lack of resources	71	29	86	14
	Unattractive learning environment	65	35	68	32
Teachers	Failure to supply actual requirements	76	24	91	9
	Lack of teaching materials	59	41	89	11
	Poor quality of resources	59	41	91	9
	Failure to supply resources in time	65	35	80	20
	Lack of awareness of resource allocation	53	47	68	32
	Lack of teachers' motivation	65	35	80	20
	Unattractive classroom environment	59	41	80	20

Source: Postal questionnaire survey (2002).

The majority of principals, regardless of their SBRM status, agreed that all the problems listed in Table 6.6 occurred. Student-related conditions indicated the inadequacy of resources and time, and highlighted the importance of resources for pupil output. Teacher-related conditions led to x-inefficiency features at school level, which were directly related to pupil outputs.

Principals, regardless of their position over SBRM, perceived non-efficiency incentives in basic SBRM and non-SBRM, although they faced countless obstacles. A salutary finding is that principals in both types of SBRM practices tended to utilize whatever resources they received, though there were numerous shortfalls and shortcomings. This finding was triangulated by the planners. In both basic SBRM and non-SBRM, some efficiency incentives as well as numerous inefficient features existed.

6.2.2.2 *Impact of strengthened basic SBRM*

This section will attempt to evaluate the impact of strengthened basic SBRM on efficiency incentives during the period 2000 to 2002, compared to the basic SBRM and non-SBRM regimes (1997-1999). The assess considered are:

- 6.2.2.2.1 awareness of strengthened basic SBRM, and grass root level involvements;
- 6.2.2.2.2 decision-making, planning and management practices of strengthened basic SBRM;
- 6.2.2.2.3 impact of strengthened basic SBRM in relation to the allocation and utilization of resources;
- 6.2.2.2.4 advantages of strengthened basic SBRM;
- 6.2.2.2.5 disadvantages of strengthened basic SBRM; and
- 6.2.2.2.6 sustainability of strengthened basic SBRM

6.2.2.2.1 *Awareness of strengthened basic SBRM, and grass root level involvements*

The postal questionnaire survey included questions on the knowledge of implementers at grass root levels about the conceptual framework, background, and origin of strengthened basic SBRM. Seventy-one per cent of principals in basic SBRM schools, 80 per cent of principals in non-SBRM schools, and all the planners were aware of strengthened basic SBRM. I enquired how far its policy framework had been understood by the principals in both basic SBRM and non-SBRM schools and planners at different levels. Their perceptions are indicated in Table 6.7.

Table 6.7: Fundamental principals of strengthened basic SBRM

Fundamental principles	Principals' and planners' responses as a percentage					
	Basic SBRM (n=17)		Non-SBRM (n=44)		Planners (n=21)	
	Yes	No	Yes	No	Yes	No
To delegate power and authority to school to meet their learning resource requirements	35	65	80	20	86	14
To establish efficient school management systems	29	71	80	20	86	14
To diminish delay in provision of learning resources from central-level procurements	71	29	68	32	95	5
To increase community participation in decisions on acquiring learning resources	35	65	57	43	71	29

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 6.7 shows, most implementers at the grassroots level have grasped the fundamental principles of strengthened basic SBRM. However, instead of giving equal weight to the four statements, the principals of basic SBRM schools gave them variable weights.

Further, they were asked about the involvement of agencies in the initiation of strengthened basic SBRM; their responses are given in Appendix 6.5. The majority of principals in both basic SBRM and non-SBRM schools have knowledge about World Bank, MEHE, and FC as initiators and intervening agencies in strengthened basic SBRM system-wide. These agencies were close to the implementers of this programme; hence they were aware of such involvements. This clearly indicates their knowledge about external and internal agencies for the initiation and implementation of the programme of strengthened basic SBRM. As illustrated in Appendix 6.5, other agencies that participated in the policy initiation were poorly identified all the grass root level (4.3; 4.3.1).

Principals were asked for their *views on the intervention of international donors in the introduction of strengthened basic SBRM*. Some principals in both basic SBRM and non-SBRM schools thought positively of such involvements, as they believed that this type of intervention directly or indirectly improves the system of education (SPs, (3)18.02.2002; (2)07.07.2002; (1)09.10.2002; (4)24.10.2002). Moreover, principals in basic SBRM and non-SBRM schools and planners prioritised the reasons for introducing strengthened basic SBRM, as shown in Table 6.8. Details of responses are given in Appendices 6.6a, 6.6b and 6.6c.

Table 6.8: Reasons for the introduction of strengthened basic SBRM

Reasons	Ranked by perceived importance		
	Principals of:		Planners
	Basic SBRM	Non-SBRM	
World Bank influence and intervention	1	1	5
To implement government policy	3	2	4
To improve the efficiency of resource use in schools	4	3	2
To establish SBRM policies	2	4	3
To establish a school planning culture	5	5	1
Unknown reasons	6	6	6

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 6.8 shows, the principals of both basic SBRM and non-SBRM schools thought that the introduction of strengthened basic SBRM was due to World Bank influence and interventions. This implies that neither principals nor planners felt the real urgency of the introduction of this programme; that the implementers just look at the surface, not the depth, of a given policy. Further, I enquired about the contributions of implementers at the grassroots to the initiation and implementation of this programme. Their responses are given in Table 6.9.

Table 6.9: Contribution of principals and planners to the initiation and implementation of strengthened basic SBRM

Contribution	Responses as a percentage		
	Principals		Planners
	Basic SBRM	Non-SBRM	
Participating	59	77	76
Preparing awareness documents			5
Conducting workshops			24
Coordinating programmes			24
No participation	41	23	24

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 6.9 shows, the majority of principals in both type of schools, and of planners, contributed to the new programme as participants in promoting awareness it. However, the empirical evidence shows that a considerable number of principals and planners did not contribute even by participating in the awareness programmes. Looking in more depth at this situation, it can be seen from documentary evidence that this programme was introduced from the top level without a study of feasibility, because the World Bank pressure caused immediate implementation.

6.2.2.2.2 *Decision-making, planning and management practices of strengthened basic SBRM*

Strengthened basic SBRM delegates authority to purchase consumables and perishables as learning materials to school level. The desired objectives were to diminish the delay in the provision of learning materials from the centre, and to give freedom to schools to meet their needs. This mechanism was also used to reduce disparities between schools and provinces in relation to the provision of resource allocations for learning materials. As a result of the introduction of strengthened basic SBRM, management practices at school, zonal, provincial, and national levels were changed. It will be worthwhile to study how far these changes affected the schools and pupils in relation to ensuring efficiency incentives.

A. Decision-making and changes in management practices

I asked the principals in both basic SBRM and non-SBRM schools: '*since 2000, given the additional responsibilities assumed under strengthened basic SBRM, has there been an increased workload for the given groups?*' Their responses are shown in Table 6.10.

Table 6.10: Changes of responsibilities at school level

Responsibilities changed	School principals' responses as a percentage			
	Basic-SBRM		Non-SBRM	
	Yes	No	Yes	No
Principals	82	18	89	11
Deputy Principals	71	29	75	25
Sectional heads	59	41	80	20
Subject coordinators	59	41	80	20
Grade coordinators	59	41	80	20
Other staff	53	47	68	32

Source: Postal questionnaire survey (2002).

As Table 6.10 shows, principals in basic SBRM and non-SBRM schools reported that their functions and responsibilities had increased as a result of the introduction of strengthened basic SBRM since 2000, compared to previous years. Eighty-six per cent of planners perceived that principals' functions and responsibilities in management had increased.

Further, 88 per cent of basic SBRM school principals, 91 per cent of non-SBRM principals, and 86 per cent of planners said that *the time which they spent at work had changed since 2000*. Further, principals and planners were asked '*to what extent do they agree that any of the given changes apply in their school/institution?*' Their levels of agreement with the given statements are shown in Table 6.11.

Table 6.11: Changes of management practices at school, zonal, provincial and national levels

Statement	Responses as a percentage														
	Strongly agree			Agree			Neutral			Disagree			Strongly disagree		
	Basic SBRM	Non-SBRM	Planners	Basic SBRM	Non-SBRM	Planners	Basic SBRM	Non-SBRM	Planners	Basic SBRM	Non-SBRM	Planners	Basic SBRM	Non-SBRM	Planners
Increased administrative workload	33	25	17	67	58	83		5			13				
Less time spent on academic/curriculum/supervision purposes						39			17	67	70	28	33	30	17
Less time spent on decision-making			11	13		11		13		53	50	56	13	38	22
More distanced from pupils			NA			NA			NA	73	75	NA	27	25	NA
More time spent in meetings at zonal, provincial and national levels	80	98	83	13	3	17	7								
More involvement with parents		13	NA	53	50	NA	20	25	NA	27	13	NA			NA

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 6.11 shows, management functions at school level and other respective levels have been changed. However, principals perceived that they maintained their commitment to academic and curriculum matters as before. All the parties used to attend more meetings at the three different levels. Both types of schools indicated that more involvement with parents is significant as an efficiency incentive.

B. Acquiring learning materials at school level

Practices for acquiring consumables and perishables are the main factors which were affected by strengthened basic SBRM. I asked principals, '*what procedures do you follow to procure consumables and perishables at school level?*' Their responses are given in Tables 6.12.

Table 6.12: Procedures for acquisition of learning materials at school level

Statement	Responses as a percentage									
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	Basic SBRM	Non-SBRM	Basic SBRM	Non-SBRM	Basic SBRM	Non-SBRM	Basic SBRM	Non-SBRM	Basic SBRM	Non-SBRM
Requirements for consumables and perishables obtained from individual subject teachers annually	71	23	29	68		9				
Requirements for consumables and perishables obtained from individual sections annually	71	23	29	68		9				
Principal decides what consumables and perishables to purchase			12	11	18		41	45	29	43
SPC decides the quota in accordance with the financial allocation	76	89	24	11						
Open tender procedures	76	89	24	11						
Evaluating bids by the SEC	76	89	24	11						
Ad-hoc decision-making					29	7	41	45	41	48

Source: Postal questionnaire survey (2002).

As Table 6.12 shows, principals are detached from making decisions on acquiring learning materials at school level. Further, this new system cleared the way for transparent and open formalities for procuring learning materials. The key finding is that schools report following a systematic, rational way of acquiring learning materials.

6.2.2.2.3 Impact of strengthened basic SBRM in relation to the allocation and utilization of resource

A. Efficiency concept of strengthened basic SBRM

All the principals and planners in the respective samples were asked, '*do you think that strengthened basic SBRM has succeeded in establishing efficiency in resource management at school level?*' Seventy-one per cent of principals in basic SBRM schools, 70 per cent of principals in non-SBRM schools, and all the planners accepted

that it has improved efficiency. For them efficiency in relation to strengthened basic SBRM means enjoying the freedom to meet their requirements for consumables and perishables at school level in order to improve the quality of teaching and learning. It is this target that has a direct impact on the pupils' performance. Moreover, according to these respondents, efficiency can be improved by giving more extended powers on decision-making authority to schools, and by the implementation of a sound monitoring mechanism (SPs, (3)18.02.2002; (2)07.07.2002; (5)09.07.2002; ZEP2: 30.01.2002). They further expressed the need to ensure resources match the real requirement of schools.

B. Financial inputs

Financial inputs were studied, using the data which I collected from four basic SBRM schools and 12 non-SBRM schools for the in-depth study. Tables 6.13a and 6.13b show changes in the financial inputs in strengthened basic SBRM compared to basic SBRM and non-SBRM schools during the period 1997-2002 (Appendices 5.4; 6.7).

Table 6.13a: Index and real per-pupil expenditure on consumables and perishables of strengthened basic SBRM, compared to basic SBRM and non-SBRM regimes of 1997-2002

Year	Index and real per-pupil expenditure on consumables and perishables by type of schools									
	Basic SBRM (1997=100)				Non-SBRM (2000=100)					
	1AB (Nat) (n=2)		1AB (Prov) (n=2)		1C (n=4)		Type 2 (n=4)		Type 3 (n=4)	
	Real	Index	Real	Index	Real	Index	Real	Index	Real	Index
1997	6.00	100	5.50	100						
1998	7.21	120	6.79	123						
1999	8.13	135	7.72	140						
2000	30.00	100	30.00	100	25.00	100	22.00	100	20.00	100
2001	33.87	113	33.87	113	30.48	122	27.09	123	23.71	119
2002	31.28	104	31.28	104	28.16	113	25.03	114	21.90	109

Source: In-depth study survey (2002); CBSL (2002b).

As Table 6.13a shows, there were substantial increases in the expenditure on consumables and perishables during the period 2000-2002, compared to basic SBRM and non-SBRM schools. During the period 1997-1999, few schools received funds for consumables and perishables, and the majority of schools did not do so. Within basic SBRM, there was not much difference between the 1AB National and Provincial schools. However, all the schools declined their expenditure per pupil in 2002 compared to 2001. Notably from 2000, Types 1C, 2, and 3 schools began to enjoy purchasing power and decision-making authority in relation to acquiring consumables and perishables which are essential for teaching and learning.

The utilization of actual expenditure was studied as a percentage of the financial allocation for consumables and perishables in schools during the period 1997-2002. Details are shown in Table 6.13b.

Table 6.13b: Utilization of actual expenditure as a percentage of financial allocation for consumables and perishables under strengthened basic SBRM, compared to basic SBRM, and non-SBRM by type of schools, 1997-2002

Type of school	1997			1998			1999			2000			2001			2002		
	Allocation*	Expenditure*	Exp. as a % of Allocation	Allocation*	Expenditure*	Exp. as a % of Allocation	Allocation*	Expenditure*	Exp. as a % of Allocation	Allocation*	Expenditure*	Exp. as a % of Allocation	Allocation*	Expenditure*	Exp. as a % of Allocation	Allocation*	Expenditure*	Exp. as a % of Allocation
1AB (Nat) (n=2)	1750	1500	86	1750	1750	100	3250	3250	100	80000	77500	97	125000	110000	88	120000	110000	92
1AB (Prov) (n=2)	1500	1500	100	2250	2250	100	3500	3400	97	80000	77500	97	150000	102500	68	110000	92500	84
1C (n=4)	Non-SBRM																	
Type 2 (n=4)																		
Type 3 (n=4)																		
	15000	11250	75	80000	67500	84	80000	77500	97	80000	77500	97	80000	77500	97	85000	72500	85
	25000	17500	70	25000	17500	70	25000	17500	70	25000	17500	70	25000	17500	70	80000	72500	91
	15000	11250	75	15000	11250	75	15000	11250	75	15000	11250	75	15000	11250	75	28000	16250	58

*SLRs

Source: In-depth study survey (2002).

As Table 6.13b shows, 1AB National and Provincial schools relatively improved their utilization of allocations during the period from 1997 to 1999. This improvement can be considered as related to the efficiency incentive. My interpretation of the reason was that during the period of basic SBRM they received a small amount of funds. However, after the introduction of strengthened basic SBRM no type of school spent all the allocation for the desired purpose during the period 2000-2002; this can be interpreted as an inefficiency feature. In 2001, less improvement in the utilization of financial allocations in all the schools was indicated, due to their lack of knowledge of financial management and to the unexpected allocation which they received. Hence, they were not able to spend the amount which they received within the fiscal year.

Types 1C, 2 and 3 schools are indicated as having less improvement than other schools in terms of expenditure within the respective fiscal years. Principals faced difficulties over access to the local market to procure consumables and perishable items. Further, their lack of knowledge of financial management caused delay in spending the allocations within the respective fiscal year. Furthermore, these principals had a negative attitude to the continuation of funding in the future. They stated:

...yes, we received unexpected money for purchasing consumables and perishables at our level; but our teachers and principals were not aware of how to use these monies. Our understanding is that this money was received as a result of WB-funded project activities. We were afraid to spend this money quickly. We kept the money safe for further purchasing (SPs, (3)18.02.2002; (4)24.10.2002; (5)09.07.2002).

This comment clearly expressed the lack of knowledge of principals on resource allocations.

6.2.2.2.4 *Advantages of strengthened basic SBRM*

The principals in basic SBRM and non-SBRM schools and the planners indicated many advantages which derived from the introduction of strengthened basic SBRM. Their responses are given in Table 6.14. Details of responses are given in Appendices 6.8a, 6.8b and 6.8c.

Table 6.14: Advantages of strengthened basic SBRM

Advantages	Ranked by perceived importance		
	Principals of:		Planners
	Basic SBRM	Non-SBRM	
School determines its own priorities	1	3	5
Ability to target resources	7	5	6
Better school resource information	6	6	7
Improvements in delegated services	5	7	4
More efficient use of resources	2	4	2
More freedom and flexibility in school-level management	3	1	1
Easy way to acquire consumables and perishables in time	4	2	3

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Table 6.14 shows, all the parties recognized the importance of schools' freedom in making decisions to meet their requirements. Further, these changes were perceived to promote efficiency at school level.

6.2.2.2.5 *Disadvantages of strengthened basic SBRM*

Principals of both basic SBRM and non-SBRM schools have recently faced a number of practical issues in relation to strengthened basic SBRM. The majority of principals claimed that:

the allocation received for consumables exceeds the actual requirements, because mostly consumables are needed for some selected subjects such as: science 'O' and 'A' levels, primary classes, technical subjects, aesthetics subjects. Actually we need some durable equipment for these subjects as well as other subjects. Hence we think powers and legal provision to purchase at school level should be delegated

under the supervision of respective levels (SPs, (1)09.10.2002; (2)07.07.2002; (3)18.02.2002; (4)24.10.2002).

This statement highlighted the real voice of the schools. Although at present schools receive a large sum of money for purchasing consumables and perishables, the past financial regulations still apply. The auditors are concerned about these regulations; and implementers face many difficulties.

Principals in both basic SBRM and non-SBRM schools were asked, '*what are the practical problems which emerged as a result of the implementation of strengthened basic SBRM in your school, compared to the basic SBRM and non-SBRM regimes?*' Their responses are given in Table 6.15.

Table 6.15: Disadvantages of strengthened basic SBRM

Condition	Disadvantages	Principals' responses as a percentage			
		Basic SBRM		Non-SBRM	
		Yes	No	Yes	No
Students	More practical work needed	71	29	52	48
Teachers	Increased workload	82	18	52	48
	Increased administrative work	59	41	57	43
	Lack of knowledge of usage of learning resources in appropriate lessons	71	29	55	45
School	Storage problems	82	18	86	14
	Poor quality of learning materials	53	47	50	50
	Lack of supervision and monitoring	76	24	73	27
	Additional work of recording and reporting by the principals to zonal, provincial and national level	82	18	73	27
	Lack of local suppliers	88	12	91	9
	Funds not received from ZEOs and PDEs	71	29	57	43
	Transport difficulties	82	18	86	14
	High unit cost at local market	88	12	91	9

Source: Postal questionnaire survey (2002).

Table 6.15 suggests that some of the problems are due to the enforcement of the regulations about consumables and perishables which must be purchased from the

state corporations. But this is impossible for the schools in the countryside, because principals have to travel to the city to purchase the required resources.

6.2.2.2.6 Sustainability of strengthened basic SBRM

The main factor in the sustainability of strengthened basic SBRM is the implementation of a national policy for funding learning resources in schools. This policy commitment has been ensured by FC and PEAs with MEHE. Seventy-six per cent of planners think that this programme can be implemented smoothly. Further, this programme should be extended in the near future, with more extensive power for schools to acquire inexpensive capital learning resources. However, as Table 6.15 shows, the majority of principals emphasised that the '*lack of funds due from ZEOs and PDEs*' is the main hindrance in the implementation of strengthened basic SBRM; this threatens the sustainability of the programme.

6.2.3 Conclusion on the impact of strengthened basic SBRM

The empirical evidence indicates that the basic SBRM and non-SBRM regimes included inefficient management practices. The fundamental limitations of the schools selected from the entire system led to unplanned and non-rational management practices. Non-SBRM schools had to meet their learning resource requirements by receiving materials in kind from the government. This represents a centralized feature, rather than decentralising. Negative aspects were that principals *merely carried out orders issued by higher authorities*. There was *no involvement in participatory decision-making inside the schools or among the system-managing hierarchy*.

During the period 2000-2002, schools were entitled under the recurrent education budget to allocations for consumables and perishables purchased at school level for all

the subjects. However, the allocation for capital learning equipment has hitherto been retained at the centre and provided in kind.

Principals in both basic SBRM and non-SBRM schools and planners at different levels have knowledge of the conceptual framework of strengthened basic SBRM, but policy initiatives took place without the prior awareness of implementers at the grassroots. Further, despite many arguments about the interventions in the education sector of international donors with regard to this programme, these interventions have impacted positively. However, it is highlighted that the education policy-makers are weak in including national identities in negotiations with international financial organizations. Innovative programmes introduced through the intervention of external agencies, will be badly affected in respect of their sustainability. Once the external interventions end, the programmes will be discontinued.

However, management practices at all the levels have been changed as a result of the introduction of strengthened basic SBRM. Especially, decision-making has been transferred to school-level management instead of top-level bureaucracy. In this circumstance, schools enjoy their freedom to make decisions, and ultimately, this should directly impact on the pupils' attainments. As usual, some principals had negative attitudes to the increase in their administrative workload, and some were positive about this. Significantly, questionnaire evidence shows that the schools are adopting systematic procedures for acquiring learning materials, instead of ad hoc decision-making procedures as used in the basic SBRM and non-SBRM regimes.

Some improvements of input by all types of schools, from 1997 to 2002 in basic SBRM schools, and from 2000 to 2002 in non-SBRM schools can be seen. However,

hitherto, the adequacy of provisions has not been addressed. Moreover, the differences between the allocations and the actual expenditure levels should be further studied.

My research has suggested that strengthened basic SBRM has improved efficiency incentives across the board. Especially, I would like to emphasise some practical issues and problems, rather than the management aspects that principals addressed. Schools have faced various operational-level difficulties. Before the introduction of new policy initiatives in 2000, these problems were considered, but no actions were taken. However, to make strengthened basic SBRM sustainable, solutions to these problems are crucial.

I argue that strengthened basic SBRM has not taken into account regional conditions or institutional heterogeneities. Examined on the surface, this programme is better than the past ones. However, hitherto, difficulties and disparities exist. Nonetheless, it is crucial that further improvements of strengthened basic SBRM should extend the purchasing power and decision-making authority of schools to meet their capital learning resource requirements.

6.3 Impact of the extension of SBRM on efficiency incentives

Research instruments as discussed under section 6.1.1 were used to collect data. For the evaluation of the impact of the extension of SBRM, quasi-experimental and cross-sectional research designs were employed within the intervention research methodology.

The evaluation of impact was restricted to comparisons, in the period 2000-2002, of pilot and non-pilot schools. Before proceeding to present the analysed empirical data on the impact of the extension of SBRM, it is worthwhile to be aware of the understanding and involvement of implementers at the grassroots of new policy initiatives, and also to be aware of the new practices which they adopted in relation to the extension of SBRM.

This section is devoted to answering SRQ3.2a-e, which was given in Chapter Three and further indicated in Table 6.1.

6.3.1 Practices of the extension of SBRM

This section includes two sub-sections, concerning awareness of the extension of SBRM, and grassroots involvement, and practices of the extension of SBRM.

6.3.1.1 *Awareness of the extension of SBRM and grassroots involvement*

Ninety-five per cent of pilot school principals and 50 per cent of planners (excluding ZEPs in non-pilot zones) were aware of the extension of the SBRM pilot programme.

According to NEP1 (08.03.2002), the objectives of this programme were:

...the optimum utilization of the allocation made by NBU CRAM. I do believe that introducing and implementing the extension of SBRM is only one step; it will indirectly help to ensure and sustain the 'free education policy', which was introduced in 1937 by Dr. C.W.W. Kannangara. Further, this programme will cater for and protect 'small schools', and also contribute to increasing the quality of education in the entire system.

The reason for accelerating this programme can be seen in the World Bank agenda. Because the Bank is concerned with improving the efficiency of resource management at school level, it promotes the delegation of power and authority to that level, while also being concerned with the disbursement rate of the loan.

Principals thought that this programme was initiated and implemented as a result of the World Bank's involvement. They did not have a clear perception of the origin of the programme as a policy initiative. ZEPs and PEPs are involved in the extension of the SBRM pilot, but they were not invited to contribute to the initiation of the programme. Identification of the institutions involved in initiating the extension of SBRM is given in Appendix 6.9. As that Appendix indicates, the majority of pilot school principals perceived World Bank and FC as the principal initiators and the intervening main agencies in the initiation and implementation of this programme. The main reasons prioritised by the principals and planners for the introduction of the extension of SBRM are given in Table 6.16 (Appendices 6.10a; 6.10b).

Table 6.16: Reasons for introducing the extension of SBRM

Reasons	Ranked by perceived importance	
	Pilot school principals	Planners
World Bank influence and intervention	4	5
To implement the government's policy	3	4
To establish an efficient SBRM system	5	2
To improve the students' performance	2	3
To give power and authority to the implementation level	1	1
Unknown reasons	6	6

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

Table 6.16 shows that the main perceived reason behind the introduction of the extension of SBRM was to improve efficiency by delegating power to the implementation level.

At that level actors contributed in different ways to the initiation and implementation of the extension of SBRM. Their contributions are shown in Table 6.17.

Table 6.17: Contributions of principals and planners to the initiation and implementation of the extension of SBRM

Contribution	Responses as a percentage			
	Principals (n=65)	PEPs (n=6)	ZEPs (n=7)	NEP
Participating	89	100	71	100
Preparing awareness raising documents	17	83	29	100
Conducting workshops	8	67	43	100
Coordinating programmes		67	14	100
Formulating the mechanism			14	100
Membership of the focus groups	2	50	29	100
No contribution	9		29	

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

For all respondents concerned, their contributions as participants in the initiation of the extension of SBRM are significant, but the implementers' contributions show low percentages. NEP1 contributed to the programme in different ways. However, ZEP1 (16.01.2002) claimed:

...we didn't know anything about the extension of SBRM, until we received the circular from the ministry. We were bound to follow the ministry guidelines. I think our principals also have not aware of the extension of SBRM. Initially their perceptions were that this was a part of NBUCRAM.

This evidence shows that the extension of SBRM was introduced to the system urgently, without institutional groundwork. Further, it shows that 9 per cent of principals and 29 per cent of ZEPs did not contribute even to participation in the awareness raising programmes; this is significant. The ministry introduced the extension in a very bureaucratic manner. However, the system has now been adapted for the implementation of the extension of SBRM, and they used new procedures during the period of 2000-2002. Hence, it is worthwhile to evaluate the impact of the extension of SBRM in relation to the efficiency incentives.

6.3.1.2 *Practices of the extension of SBRM*

The intention of the extension of SBRM is to reduce the role of authorities above the school level in decision-making regarding learning equipment needs, and to expedite the procurement process. The selection of pilot education zones and schools followed bureaucratic formalities. There was no evidence of consultation with implementers at the grassroots level in this process.

A. Decision-making on determination of financial allocation

Initially, allocations for the schools with the extension of SBRM were determined using NBUCCRAM by MEHE, and funds were allotted to these schools directly to purchase inexpensive capital learning equipment. Principals and planners at zonal and provincial levels were not able to negotiate school-level allocations. Further, capital allocation for expensive capital learning equipment was retained at ZEO, PDE, and MEHE, to procure distribution in kind.

B. Changes and practices

As a result of the implementation of the extension of SBRM, traditional practices at school level and other education management strata have been changed. All the principals, 86 per cent of ZEPs, 57 per cent of PEPs, and NEP1 agreed that since the introduction of the extension of SBRM the *process by which money is allocated to individual grades, sections, schools, zones, and provinces has changed*.

Teachers in pilot schools perceived considerable changes as a result of the usage of learning equipment for teaching. Their perceptions are shown in Table 6.18.

Table 6.18: Pilot school teachers' perceptions of changes after the implementation of the extension of SBRM

Statement	Responses as a percentage				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
More time for practical work	21	71	7		
Increased pupil attendance	14	7	57	21	
Improved pupil performance		50	50		
Teachers are more motivated for teaching		64	36		
Improved teaching quality	29	57	14		
Easier to reinforce curriculum concepts	14	86			
Attractive teaching and learning environment	7	57	36		
Pupils enjoy learning more	7	79	14		

Source: Teachers' questionnaire survey (pilot schools) (2002).

As Table 6.18 shows, the majority of the teachers agreed, or strongly agreed with the statements given in the questionnaires. Evidently, changes occurred in the system, as teachers are the best evaluators of it. The responses on *'increased pupil attendance' and improved pupils' performance'* are considerable. Their negative or neutral responses pave the way for further investigation to examine the relationship between resource allocation and pupil outcomes. However, the attitudes shown in the teachers' statements indicate that the new system has encouraged them to improve their professionalism, as well as benefited pupils' learning.

6.3.2 Efficiency incentives of the extension of SBRM

The evaluation of impact compared pilot schools and non-pilot schools for the extension of SBRM. The qualitative data gathered from principals, teachers, ZEPs, PEPs and NEPs are used for the empirical analysis and presentation. The impact of the extension of SBRM is evaluated for the following aspects of efficiency incentives:

6.3.2.1 acquiring learning resources;

- 6.3.2.2 efficiency in management;
- 6.3.2.3 usage of learning resources to improve the pupils' performance;
- 6.3.2.4 relationships between the extension of SBRM and pupils' outcomes;
- 6.3.2.5 problems and disadvantages of the extension of SBRM; and
- 6.3.2.6 sustainability of the extension of SBRM.

All the principals and planners were asked '*whether the extension of SBRM has improved efficiency in the allocation and use of resources at school level;*' 95 per cent of principals and all the planners accepted that it has improved efficiency. NEP1 (08.01.2002) defined efficiency in this programme as follows:

...efficiency is the supply of appropriate learning equipment in time and in the correct place, and the efficiency of learning equipment when used in classrooms.

According to NEP1, these types of efficiency can be achieved by devolving power, freedom and authority to school for the identification and fulfilling of school-level requirements.

6.3.2.1 *Acquiring learning resources*

Acquiring learning resources under the extension of SBRM was evaluated using mainly the data gathered from principals and teachers. Teachers represented grade 11 science and grade 2 primary subjects. Further, pilot and non-pilot schools were compared (6.1.1.4). Officially, two types of committees -school purchasing committees (SPCs) and school evaluation committees (SECs)- at school level should be involved in the acquisition of learning equipment (Appendix 6.11).

A. *School purchasing committee*

All the pilot schools, and 92 per cent of the non-pilot schools were ready to implement the extension of SBRM, and they have already established SPCs to purchase learning resources at school level. Eight per cent of non-pilot schools had not established any committee. In this regard not much difference between pilot and non-pilot schools for the extension of SBRM can be seen.

The SPC can purchase items to the value of up to SLRs 100,000 at a time. SPCs have followed the formalities, obtaining requirements from individual subject teachers and sectional heads, and decided the quota in accordance with the financial provisions by open tender procedures. Thirty-six per cent of teachers in the pilot and non-pilot schools were not serving as committee members. Fifty-six per cent of teachers who were members of committees in the pilot schools served in SPCs, against 78 per cent of teachers in non-pilot schools. Positive and negative perceptions of the role of SPCs among teachers in pilot and non-pilot schools are shown in Table 6.19.

Table 6.19: Teachers' positive and negative responses on the role of SPCs, in pilot and non-pilot schools

Statement	Teachers' response as a percentage							
	Positive (Yes)				Negative (No)			
	Pilot schools		Non-pilot schools		Pilot schools		Non-pilot schools	
	Primary*	Science**	Primary*	Science**	Primary*	Science**	Primary*	Science**
Helpful in acquiring appropriate learning resources	87	100	62	50	13		38	50
Equipment (and materials) has/have been received in time	87	67	75	67	13	33	25	33
Individual teachers' needs are being considered	62	33	62	50	38	67	38	50
The equipment (and materials) acquired are of high quality	62	50	50	50	38	50	50	50
There is a committee but all the decisions are made by the principal	100	83	62	67		17	38	33
The purchased resources are received in time to be used in class	62	67	50	50	38	33	50	50

*grade-2 (n=8) **grade-11 (n=6)

Source: Teachers' questionnaire survey (pilot and non-pilot schools) (2002).

Table 6.19 suggests that on the whole most teachers in both types of schools respond positively to the role of SPC in procuring appropriate learning resources for learning and teaching.

SPCs frequency of meetings varied among schools. For all the pilot and non-pilot schools this frequency in the years 2000 to 2002 was analysed, and the result is shown in Table 6.20.

Table 6.20: Frequency of SPCs' meetings in pilot and non-pilot schools

Frequency of meetings per year	Number of schools as a percentage					
	Pilot			Non-pilot		
	2000	2001	2002	2000	2001	2002
0	31	12	14	49	41	48
1-5	66	80	86	41	46	48
6-10	3	8		10	13	5
10+						

Source: Postal questionnaire survey (2002).

As Table 6.20 shows, a considerable number of schools had no meetings during these years, and no school had more than 10 meetings yearly. Many schools had 1-5 meetings per year. When compared to pilot schools, the majority of non-pilot schools' SPCs were not functioning properly. This situation can be interpreted as relevant to purchasing at school level, although it may be improved through the implementation of sound supervision.

B. School evaluation committees

All the pilot schools and 92 per cent of non-pilot schools have officially established SECs, which meet to evaluate bids. Forty-four per cent of teachers who were members of committees in the pilot schools served in SECs, and 22 per cent of teachers in non-pilot schools.

A problem for these boards is that there is a lack of defined functions and roles for some committee members, for example the fourth member, who is a senior prefect (pupil). How this membership is to be valid for a small school is not clear in guidelines issued by FC and MEHE. However, the majority of the groups' responses showed understanding of the role of the SECs; their positive and negative views are exhibited in Table 6.21.

Table 6.21: Positive and negative responses of teachers in pilot and non-pilot schools on the role of SECs

Statement	Teachers' response as a percentage							
	Positive				Negative			
	Pilot schools		Non-pilot schools		Pilot schools		Non-pilot schools	
	Primary*	Science**	Primary*	Science**	Primary*	Science**	Primary*	Science**
Helpful in acquiring appropriate learning resources	75	67	63	50	25	33	38	50
Helpful in acquiring high quality equipment (and materials)	100	83	63	50		17	38	50
The committee follows a transparent policy	100	67	50	33		33	50	67
Saves money and reduces unnecessary expenses	63	50	38	50	38	50	63	50
Available funds used efficiently	88	67	50	67	13	33	50	33

*grade-2 (n=8) **grade-11 (n=6)

Source: Teachers' questionnaire survey (pilot and non-pilot schools) (2002).

Table 6.21 suggests that on balance teachers responded positively to the role of SEC in procuring appropriate learning resources for learning and teaching in both types of schools, but some teachers exhibit doubts about the transparency of the committee and about saving money.

Moreover, all the teachers from pilot schools, and 93 per cent of teachers in non-pilot schools, were satisfied with the consultation by the SPCs and SECs on the *learning resources required for the curriculum and needed for classroom teaching*. Such procedures never happened in the past. Moreover, it is worthwhile examining the actual functioning rate of these committees. Frequencies of SECs' meetings in pilot and non-pilot schools are given in Table 6.22.

Table 6.22: Frequency of SECs' meetings in pilot and non-pilot schools

Frequency of meetings per year	Number of schools as a percentage					
	Pilot			Non-pilot		
	2000	2001	2002	2000	2001	2002
0	32	14	15	49	41	48
1-5	63	78	85	36	41	41
6-10	5	8		15	18	11
10+						

Source: Postal questionnaire survey (2002).

As Table 6.22 shows, the frequency of meetings per year in pilot schools was the same as that of the SPCs, because the SECs depend upon the activities of SPCs (Table 6.19). A large number of non-pilot schools did not meet between 2000 and 2002 to evaluate the bids and, thus, they were not following the procedures prescribed by the authorities. There is a lack of monitoring at respective levels in the system.

C. Financial management for learning resources

All the pilot and non-pilot schools now have working experience of procuring learning resources at school level. Every school maintains a separate bank account for learning resources for public accounting.

D. Spending patterns of inexpensive capital learning equipment

The improvements in expenditure on inexpensive capital learning equipment in pilot and non-pilot schools after the introduction of the extension of SBRM are shown in Table 6.23. Inexpensive capital learning equipment for non-pilot schools has been received in kind. The comparison of per-pupil expenditure between pilot and non-pilot schools, and the expenditure of non-pilot schools, have been computed by converting the value of real items into monetary values, using the market values for purchases by pilot schools. The index has been developed using the equation given in Appendix 5.4. Details are given in Appendices 6.12a and 6.12b.

Table 6.23: Index and real per-pupil expenditure on inexpensive capital learning equipment, comparing pilot and non-pilot schools by type during the extension of SBRM 2000-2002

Year	Index and real per-pupil expenditure (2000=100)							
	1AB (National)				1AB (Provincial)			
	Pilot (n=3)		Non-pilot (n=2)		Pilot (n=3)		Non-pilot (n=3)	
	Real	Index	Real	Index	Real	Index	Real	Index
2000	75.00	100	50.00	100	75.00	100	50.00	100
2001	91.44	122	37.26	75	90.77	121	40.64	81
2002	81.34	108	37.54	75	75.08	100	37.54	75

Year	Index and real per-pupil expenditure (2000=100)											
	Type 1C				Type 2				Type 3			
	Pilot (n=4)		Non-pilot (n=4)		Pilot (n=4)		Non-pilot (n=3)		Pilot (n=4)		Non-pilot (n=4)	
	Real	Index	Real	Index	Real	Index	Real	Index	Real	Index	Real	Index
2000	66.00	100	40.00	100	85.00	100	30.00	100	80.00	100	30.00	100
2001	96.86	147	37.26	93	87.38	103	30.48	102	85.35	107	27.09	90
2002	91.97	139	40.67	102	88.22	104	25.03	83	104.49	131	25.03	83

Source: In-depth study survey (2002); CBSL (2002b).

As Table 6.23 shows, in pilot schools, the index for expenditure per pupil on inexpensive capital learning equipment for under the extension of SBRM has been substantially improved. Except Type 1C schools in 2002 and Type 2 schools in 2001, in non-pilot schools, the index for per-pupil expenditure on such equipment decreased. Many reasons for the lack of improvement in non-pilot schools have been given; they did not received additional funds for the given purpose, or they still are waiting for the central provisions in kind. This distribution takes time, and resources were not received by the schools for that year due to the financial difficulties of provincial councils as well as at national level. The resources were to be released to schools at the end of the year.

Looking more closely at the learning equipment which pilot schools acquired as inexpensive capital items shows that there have been no radical changes in the

selection of items. All the items are typical. It is rare see any modern technical equipment (e.g. OHPs, TVs, computer-based software) acquired by schools. The education authorities' argument is that they took action to equip schools with modern technical equipment, but this was proved to be an inaccurate statement by looking in-depth at various schools, notably rural schools. Further, I asked teachers in non-pilot schools several questions in relation to the utilization of learning resources. Their responses are shown in Table 6.24.

Table 6.24: Pilot and non-pilot schools teachers' views on the utilization of learning resources

Question	Responses as a percentage					
	Very much		To some extent		No	
To what extent does the utilization of learning resources support students' understanding of the concepts in the curriculum?	Pilot	Non-pilot	Pilot	Non-pilot	Pilot	Non-pilot
	95	93	5	7		
<i>If agree with 'very much' & 'to some extent':</i>			Yes		No	
Have you received adequate equipment to use within the classroom for their subject(s)?			80	43	20	57
Was the money received for consumables and perishables for your subject adequate?	Adequate		Fairly adequate		Inadequate	
	Pilot	Non-pilot	Pilot	Non-pilot	Pilot	Non-pilot
	90	10	5	76	5	14

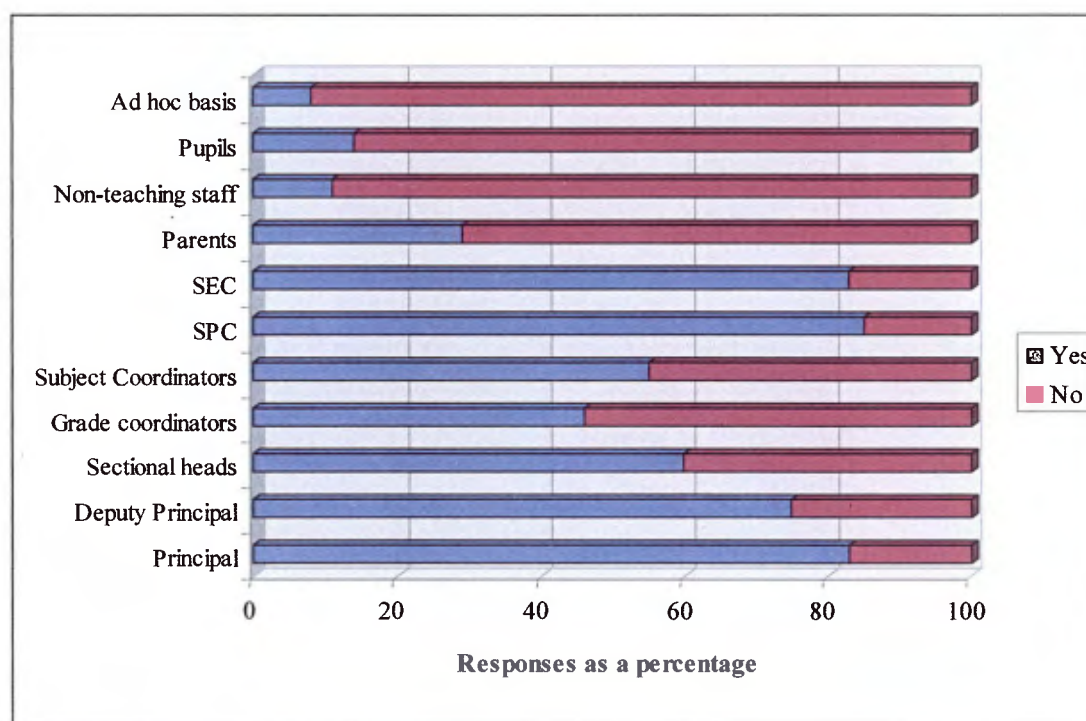
Source: Teachers' questionnaire survey (non-pilot schools) (2002).

As Table 6.24 shows, all the teachers in pilot and non-pilot schools strongly believed that utilizing learning resources supports students' understanding of the concepts in the curriculum; but non-pilot school teachers' perceptions were that equipment was inadequate compared to real requirements. However, both types of teachers were satisfied with the cash for consumables and perishables.

E. Decision-making on acquisition of learning resources

I asked who was involved in acquiring these resources at school level. School-level decision-making involvements in the acquisition of learning resources are shown in Graph 6.1.

Graph 6.1: Direct involvement in the determination of spending allocations within the pilot schools (Principals' responses)



Source: Postal questionnaire survey (2002).

As Graph 6.1 shows in acquiring learning resources at school level the main role according to the responses, has been played by the SPCs and SECs. But it is questionable whether this is the reality as the schools. The principal still serves as the chairman of the SPC in each school; hence his/her power will automatically be great. In the case of some schools this power will have a bad effect on implementation.

Schools follow the procedures shown in Table 6.25 in procuring learning equipment at school level. Principals' understanding of the activities related to the procuring procedures are shown in this table.

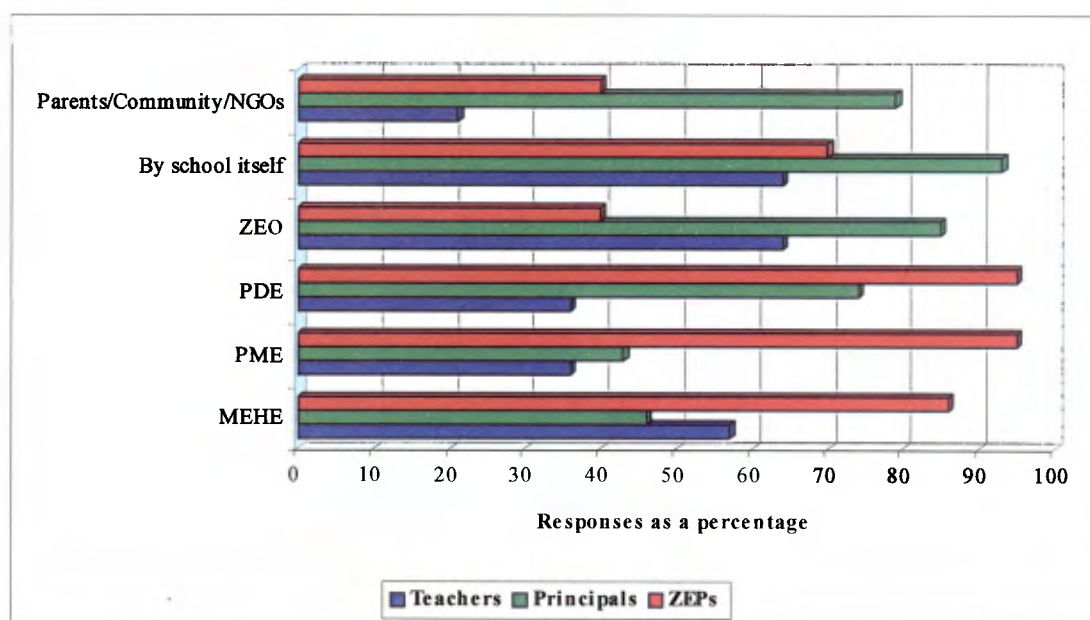
Table 6.25: Pilot school principals' understanding of procurement procedures

Statement	Responses as a percentage				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Learning resource requirements obtained from individual subject teachers annually	55	42	3		
Learning resource requirements obtained from individual sections annually	45	48	3	3	2
Principal decides what to purchase	2	6	14	40	38
SPC decides the quota in accordance with the financial allocation	35	63	2		
Open tender procedures	25	66	6	3	
Bids evaluated by the SEC	37	52	6	3	2
Ad-hoc decision-making		11	11	20	58

Source: Postal questionnaire survey (2002).

As Table 6.25 shows, the majority of principals in pilot schools reported that they follow the practices which are prescribed as ideal by the authorities. It can be presumed that the schools have adopted systematic procedures which were lacking in the past period, when they lagged behind the non-pilot schools in this regard (Tables 6.20; 6.22).

By contrast, to compare the situation in non-pilot schools, I asked the teachers, principals and ZEPs of non-pilot schools and zones *how did they acquire inexpensive capital learning equipment required for teaching and learning?* Non-pilot schools and zones applied different approaches to acquiring learning resources for their schools. They depended on the agencies shown in Graph 6.2.

Graph 6.2: Acquisition of learning resources by non-pilot schools

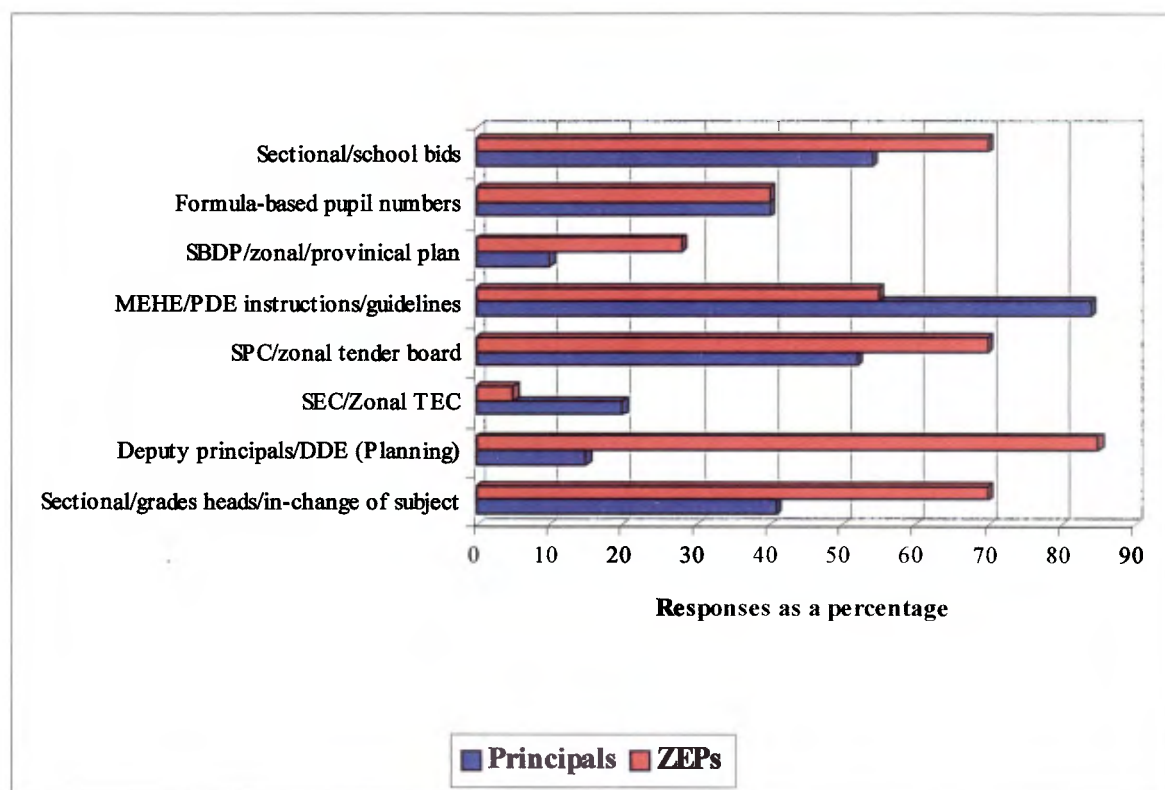
Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002); Teachers' questionnaire survey (non-pilot schools) (2002).

As Graph 6.2 shows, all the parties involved (teachers, principals and planners) in non-pilot schools accept that they have acquired learning resources from all the agencies under consideration. However they perceive the degree of acquisition from each of these differently.

Distributional procedures within and among the schools followed different strategies.

These strategies are shown in Graph 6.3.

Graph 6.3: Determination of learning resources at school and zonal levels in non-pilot schools/zones



Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

As Graph 6.3 shows, principals and planners agree that the distribution of learning resources allocated to schools is based on the same authorities. However, their views differ on the importance of a particular factor (e.g. DDE/Planning) in determining the learning resources a school requires.

Furthermore, the concept of a school-based development plan (SBDP), which is essential for the implementation of SBRM, was not considered in this regard. In my research, I asked about the SBDPs, and how far these are practised at school level. Eighty-five per cent of schools were found to have SBDPs, and 92 per cent of principals emphasized that in the preparation of the plans the whole staff were consulted. However, further research suggested that most of these plans have been prepared according to the formats and guidelines contained in two volumes issued in

1984 by ME. Only two per cent of schools have developed rolling plans for five years, including infrastructural development activities for the school. Further, it was found that there were no financial and resource management components and no evidence of guidelines for monitoring and feedback in the plans. Yet, according to the majority of the principals, the SBDP is one of the essential annual documents approved by ZEO. Further, as Graph 6.4 shows, the involvement of those in-charges of subjects and DDE (Planning) at zonal level in the determination of the distribution of learning equipment has significantly increased. Further, zonal plans were not adapted to the distribution of resources although zonal tender boards were used at the stage of purchasing resources.

6.3.2.2 *Efficiency of management*

As a result of the implementation of the extension of SBRM, schools have gained advantages in their management. These advantages were identified by planners and principals, as shown in Table 6.26. Details of responses are given in Appendices 6.13a and 6.13b.

Table 6.26: Advantages of the extension of SBRM

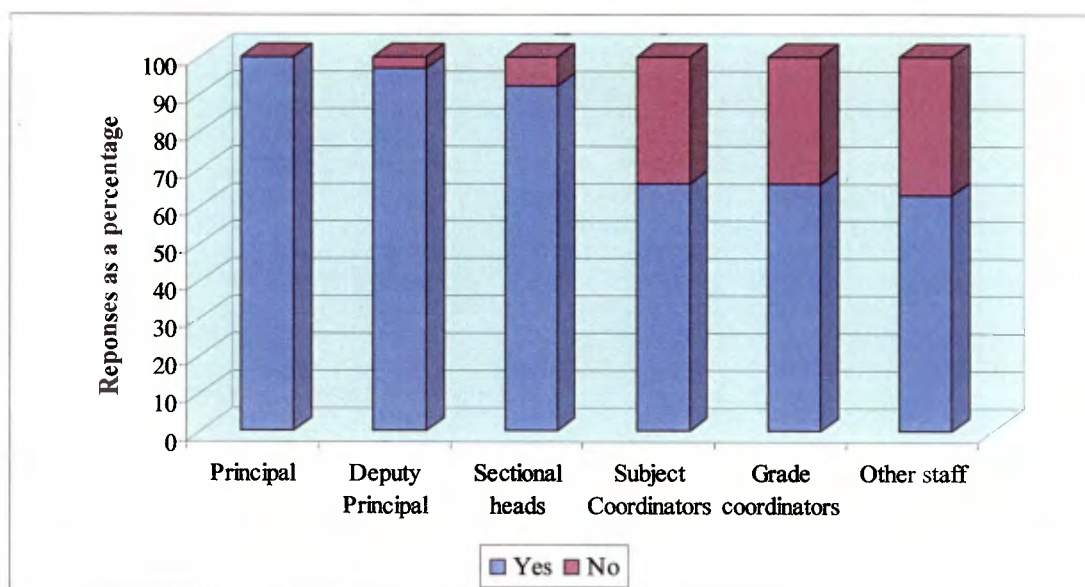
Advantages	Ranked by perceived importance	
	Pilot school principals	Planners
School determines its own priorities	1	1
Ability to target resources	4	6
Better school financial information	5	4
Improvements in delegated services	6	5
More efficient use of resources	3	3
More freedom and flexibility in school-level management	2	2

Source: Postal questionnaire survey (2002); Questionnaire survey for planners (2002).

Table 6.26 indicates that planners and principals have identified efficiency incentive factors as advantages of the extension of SBRM.

As result of this programme, some school-level management issues have emerged. Eighty-six per cent of planners and all the principals said that they have received additional responsibilities other than normal duties under the extension of SBRM since 2000. In addition, principals mentioned that their staff, as well as including themselves have assumed additional responsibilities other than normal duties; the level of increases for principals and other staff is shown in Graph 6.4.

Graph 6.4: Increases of management responsibilities at school level (*Pilot school principals' responses*)



Source: Postal questionnaire survey (2002).

As Graph 6.4 shows, principals responded that all members of the school experienced an increase in their workloads after the implementation of extended SBRM.

The changed responsibilities of principals at school level are shown in Table 6.27.

Table 6.27: Pilot school principals' views on increases and changes in their administrative functions

Statement	Responses as a percentage				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Increased administrative workload	31	62	6	2	
Less time spent on academic/curriculum purposes	3	20	42	31	5
Less time spent on decision-making for teaching and learning	2	20	29	43	6
More distanced from teachers	2		6	72	20
More distanced from pupils	2		9	69	20
More time spent in meetings at zonal, provincial and national levels	25	34	28	11	3
More involvement with parents	6	37	37	18	2

Source: Postal questionnaire survey (2002).

As Table 6.27 shows, management functions in pilot schools have changed. Principals have less time spent on decision-making, and there is no evidence for increasing parental participation at school level, although that is an essential objective of SBRM.

Teachers in pilot schools indicated their attitudes to the statements about major changes in pilot schools as a result of the extension of SBRM. Their attitudes are shown in Table 6.28a.

Table 6.28a: Views of teachers in pilot schools on changes in relation to the extension of SBRM

Statement	Responses as a percentage				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The extension of SBRM:					
is a better way to acquire appropriate learning resources in time than the previous system	29	64	7		
better serves individual teachers' needs in relation to the teaching process	8	36	21	21	14
is more concerned with individual pupils' needs in relation to the learning process	14	57	21		8
Enables high quality resources to be acquired	7	43	29	21	
Gives teachers more opportunity to be involved in making decisions	14	57	21		8
The funds are inadequate in relation to pupil numbers	29	29	7	35	
There have been no changes as a result of the extension of SBRM	7	7	36	43	7
Money wastage because of lack of monitoring		29	14	50	7

Source: Teachers' questionnaire survey (pilot schools) (2002).

As Table 6.28a shows, the majority of teachers in pilot schools had constructive attitudes to the statements given in the questionnaires in relation to the extension of SBRM. They had a good attitude to their participation in making decisions about acquiring the learning equipment which matches the number of pupils in their classrooms.

I asked teachers in non-pilot schools for their views on resourcing schools and the delegation of powers to school level. Their views are shown in Table 6.28b.

Table 6.28b: Views of teachers in non-pilot schools on resourcing their schools and expectations of power delegation

Question	Responses as a percentage (<i>n=14</i>)		
	Very much	To some extent	No
To what extent has the existing process ensured the adequate provision of learning resources:			
among classrooms?		57	43
among pupils of your classroom?		71	29
appropriate for what the curriculum has defined?	50	50	
If your response is 'very much' or 'to some extent': can you ensure the maximum appropriateness of the equipment to curriculum needs when purchasing power is delegated to your school level?	100		

Source: Teachers' questionnaire survey (Non-pilot schools) (2002).

As Table 6.28b shows, most of the teachers responded positively to the existing process for distributing learning resources among both classrooms and pupils. But all the teachers surveyed were confident that if the *powers of decision-making on acquisition had been delegated to them, the purchased materials would have better fitted the curriculum guidelines*. Further, one of the ultimate goals of this programme is the usage of learning resources in classrooms for teaching and learning, so as to improve pupils' performance. Hence, it is necessary to investigate the programme's impact in this respect.

6.3.2.3 *Usage of learning resources to improve pupils performance*

Principals of pilot schools said that their teachers had been motivated to use the learning equipment in the process of teaching in the classroom. Principals' perceptions of the percentages of usage of equipment by teachers and pupils in pilot and non-pilot schools are given in Table 6.29.

Table 6.29: Usage of learning resources for teaching and learning by teachers and pupils in classrooms at pilot and non-pilot schools

Utilization as a percentage of the total number of teachers & pupils	Principals' responses as a percentage			
	Teachers		Pupils	
	Pilot schools	Non-pilot schools	Pilot schools	Non-pilot schools
0%				
1%-25%	2	15		5
26%-50%	12	25		15
51%-75%	60	40	42	40
76%-100%	26	20	58	40

Source: Postal questionnaire survey (2002).

As Table 6.29 shows, the majority of teachers in both types of schools have used these resources to reinforce the curriculum concepts for pupils. As indicates, positive trends have emerged as a result of the implementation of the extension of SBRM. Pupils' active usage of learning resources in the classroom considerably increased, compared to other schools. Overall, I argue that pupils' utilization of equipment has improved regardless of schools being in pilot or non-pilot positions.

A. Relationships between supervision, monitoring and usage of learning resources

Both types of teachers (i.e. primary and science) in pilot schools emphasised the importance of external and internal monitoring and supervision programmes which help improve the utilization of learning resources in the classroom, but data, except for the zonal level, do not show *that such programmes are taking place*. This situation is indicated in Table 6.30.

Table 6.30: Supervision and monitoring process for the extension of SBRM

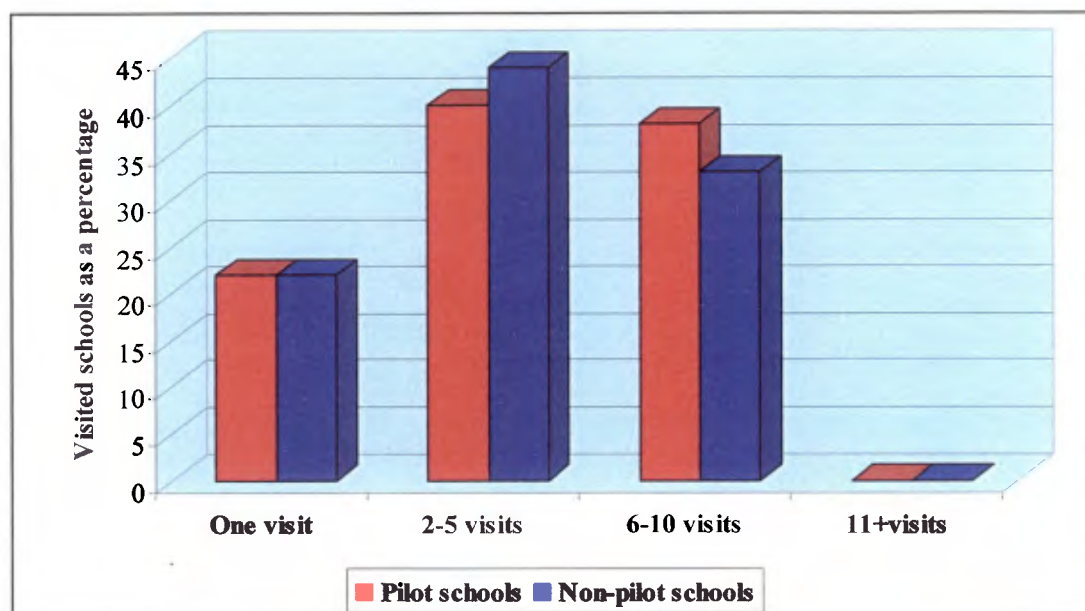
Statement	Pilot school teachers' responses as a percentage				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
In-service advisors have guided the usage of equipment	21	22	57		
School has implemented internal supervision programmes	14	8	21	57	
ZEO has implemented supervision programmes		71	21	8	
PDE has implemented supervision programmes	5	9	29	57	
MEHE has implemented supervision programmes		7	50	43	

Source: Teachers' questionnaire survey (pilot schools) (2002).

Table 6.30 shows that teachers agreed that there has been constructive implementation of supervision and monitoring of SBRM, which promote the achievement of the desired objectives of the programme, but only by ZEOs. A supervision programme should be implemented by in-service advisors and officers who are directly responsible subject specialists at zonal as well as provincial levels.

I asked teachers in pilot and non-pilot schools whether *in-service advisors and officers had visited to supervise and guide the use of learning resources in relation to their subjects?* Sixty-four per cent and 71 per cent of teachers, in pilot and non-pilot schools respectively, responded that they received guidance from in-service advisors and officers on the usage of learning resources in relation to teaching. The frequency of in-service advisors' visits to pilot and non-pilot schools in 2001 is shown in Graph 6.5.

Graph 6.5: Frequency of in-service advisors visits to pilot and non-pilot schools in 2001



Source: Teachers' questionnaire survey (pilot and non-pilot schools) (2002).

As Graph 6.5 shows, the responsible officials were not committed to their duty, as nearly 50 per cent in both pilot and non-pilot schools were visited only 2-5 times in 2001, although the system includes sufficient in-service advisors (Appendix 4.2). These data suggest that monitoring and supervision programmes are required to sustain the programme, as well as to increase its positive impact on pupils' performance in their disciplines.

6.3.2.4 *Relationship between the extension of SBRM and pupils' outcomes*

All principals perceived a positive relationship between the extension of SBRM and improved student performance (i.e. examinations results). They perceived the reasons for this as that students and teachers are actively motivated in learning and teaching, students do more practical work, and teachers endeavour to reinforce the curriculum concepts by using appropriate learning equipment instead of lecture methods. Further, 93 per cent of teachers in pilot schools believed that utilizing learning resources will

improve the pupils' performance. All the teachers in pilot schools were confident there were no destructive effects of utilizing learning resources in the classroom.

However, the identification of a statistical association between raising resource inputs and pupils' outcomes is difficult, since the programmes for strengthened basic SBRM and the extension of SBRM have only small differences. All the schools have purchasing power for consumables and perishables under strengthened basic SBRM. In addition, pilot schools have power and authority only for purchasing inexpensive capital learning equipment at school level. This small policy difference makes it difficult to relate the extension of SBRM to pupils' outcomes.

6.3.2.5 Issues and disadvantages of the extension of SBRM

As a result of the extension of SBRM, several issues have emerged. Firstly, according to FC & MEHE (2000), the official guidelines are lacking on the roles and functions of SPCs and SECs (i.e. the 4th members of SECs). Further, the guidelines do not clearly emphasize the minimum frequency of meetings of such committees. Principals' perceptions of some issues are shown in Table 6.31.

Table 6.31: Issues in acquiring learning resources

Statement	Pilot school principals' responses as a percentage				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Lack of local suppliers	49	35	8	8	
Poor quality of equipment	11	23	35	29	2
Transport difficulties	31	37	14	14	5
High unit cost	26	45	25	3	2
Lack of storage facilities at school level	46	40	9	2	3
Lack of safekeeping of equipment in classrooms	49	40	5	5	2
Mismatch with the desired requirements	12	8	20	43	17

Source: Postal questionnaire survey (2002).

As Table 6.31 shows, one of the major problems of providing learning equipment at school level is the *lack of local suppliers* at zonal and provincial levels. Most of the large-scale suppliers do not bid for small-scale tenders. The schools are limited to purchasing from state cooperatives and franchised shops, as official providers. This limits the purchase of quality goods, as well as increasing the unit cost. School principals stated that:

private suppliers are ready to offer good quality goods with low unit cost, unlike registered public suppliers. A further concern is, the normal practice has been that local suppliers who are currently registered do not provide their orders in time (SPs, (1)09.10.2002; (3)18.02.2002; (4)24.10.2002).

More than 50 per cent of principals have faced this problem, and it is one of the key issues for the implementation of the programme.

Other disadvantages associated with the extension of SBRM were listed by principals, and their responses are shown in Table 6.32. Details are given in Appendix 6.14.

Table 6.32: Disadvantages of the extension of SBRM (*Pilot school principals' responses*)

Disadvantages	Ranked by perceived importance
More time spent on administrative work	1
Greater number of demands on my time	2
Less time allocated for teaching-learning issues	3
Insufficient funding	4
Increased stress for principals and teachers	5

Source: Postal questionnaire survey (2002).

As Table 6.32 shows, they ranked four disadvantages related to their time management, and one external factor (i.e. insufficient funding). The issue of insufficient funds is applicable only to acquiring learning equipment at school level (SPs, (1)09.10.2002; (3)18.02.2002). Further, they indicated their attitude to

implementation issues in relation to this programme; these attitudes are shown in Table 6.33.

Table 6.33: Implementation issues of the extension of SBRM

Statement	Pilot school principals' responses as a percentage				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Inadequate training for SBRM	25	55	14	6	
Inadequate advice and guidelines from PEAs and MEHE	18	51	18	12	
Lack of teacher training	28	48	11	13	

Source: Postal questionnaire survey (2002).

As Table 6.32 shows, principals reported inadequate training for the extension of SBRM, although official documents have shown that programmes have raised awareness sporadically at all levels. Further, advice and guidelines provided from provincial and national levels were not sufficient. In addition, the lack of teacher training restricts the usage of these resources in classrooms. So far, authorities have not taken action to make the teacher-training curriculum deal with contemporary developments of the system.

Teachers in the pilot schools mentioned they had faced practical problems and issues in relation to the utilization of learning resources at their classrooms. Twenty-one per cent of teachers mentioned that their *principals had not allowed equipment to be used because they feared that the pupils might damage it*. Further, 79 per cent of such teachers emphasized that *equipment was inadequate relative to the number of students in a classroom*. In addition, twenty-one per cent of teachers claimed that their *pupils disliked practical work*. Moreover, 21 per cent of teachers were concerned about the *poor quality of equipment*.

Sixty-four per cent of such school teachers said they *did not adequately receive such provisions*. Further, 57 per cent indicated that the *respective providers had not delivered the goods in time*. These issues and problems should be considered for further improvements to the sustainability of the extension of SBRM.

6.3.2.6 *Sustainability of the extension of SBRM*

Eighty-six per cent of planners were confident that the programme was stable, but they advocated further actions to be taken by the authorities to sustain and stabilise SBRM. SBRM is a sub-set of SBM; hence, taking action to implement all the components of SBM will help the sustainability of the extension of SBRM. Moreover, the entire school allocation should be released to purchase required learning resources at school level.

All the non-pilot school principals wanted the extension of the programme to their schools. This is a constructive indication for the sustainability of the programme. In addition, all non-pilot ZEPs considered that they should have more powers to allocate resources, and that more authority should be delegated to school level. ZEPs believed that ZEOs and also principals should have more power. These factors support the sustainability and stability of the programme. FC is ready to release school allocations to school level under the provincial allocation. Schools are confident that they will be able to fulfil their planned budget spending.

6.3.2.7 *Conclusion on the impact of the extension of SBRM*

The evidence indicates that the new policy initiatives for the extension of SBRM were poorly communicated to the implementers at the grassroots. As a result, their involvement in initiatives for the extension of SBRM has been insignificant. The

selection of schools for the implementation of the extension of SBRM were decided by the centre, using the criteria prescribed in NBUCRAM, but there were no evidence of consultation with the implementers at grassroots.

However, the delegation of power and decision-making authority, replacing centralized regimes under this programme, is significant. It is clear that definitions of the role of SPCs and SECs are needed. My research revealed the inadequate number of meetings of such committees in pilot and non-pilot schools. However, teachers in both types of schools are satisfied with their new role in participatory decision-making on acquiring learning resources. Such committees in schools have the ability to follow formalities and to have transparent policies, which were absent in the regimes of basic SBRM and non-SBRM.

After the introduction of the extension of SBRM, the funding process and practices of SBRM at the school level have changed. Expenditure per pupil for inexpensive capital learning equipment in pilot schools has substantially improved. In contrast, non-pilot schools have significantly decreased their per-pupil expenditure on such equipment.

Principals in both pilot and non-pilot schools have procured conventional learning equipment rather than modern, sophisticated equipment. Teachers hitherto complained about the inadequacy of received learning resources to match their pupils in classrooms. Further, the following negative features can be seen in the system: lack of formulation of SBDPs, poor monitoring activities, poor guidance and advice from the top level, lack of re-training for teachers with regard to usage of learning resources, operational-level difficulties such as poor storage, lack of suppliers in local markets, transport difficulties, contradiction of the new policy with public financial

regulations, and increasing administrative workload without facilitating institutional resources, both human and physical.

As negative effects of this programme, non-pilot schools received less funds (in kind) for the same purposes. They have hitherto depended upon centralized supplies. In addition, neither pilot nor non-pilot schools with SBRM have adopted school-level planning practices.

6.4 Conclusion

My conclusions offered here are based on the outcomes from evidence presented throughout this chapter. They will be two-fold concerning the impact of strengthened basic SBRM, and the impact of the extension of SBRM.

As an overall feature of the basic SBRM and non-SBRM regimes, they both demonstrate incentives to inefficiency rather than efficiency incentives. It is significant that the World Bank was directly involved in strengthened basic SBRM and the extension of SBRM. Basically, there are hidden antagonisms regarding the involvement of international donors for education. Despite these problems, the response of the majority of implementers at the grassroots was highly positive. In contrast, some weaknesses can be seen in the implementation of strengthened basic SBRM. In particular, its conceptual framework was not communicated to the periphery; hence, staff were poorly aware of its origin and the rationale for its introduction.

Delegation of power and authority for decision-making to school level is one of the key impacts of strengthened basic SBRM. As a result, a participatory decision-making

approach has been used at school level. It has replaced the ad-hoc decision-making of in the past regimes. Transparency and openness in the acquisition of learning materials at school level is another positive effect gained through this programme. However, some implementers had critical attitudes to their increasing day-to-day administrative functions.

There were some increases among the schools in per-pupil expenditure. However, this programme affected small schools, notably in rural areas, which were non-SBRM. They are the chief beneficiaries of strengthened basic SBRM. All types of schools increased their per-pupil expenditure to a substantial degree. Nonetheless, the failure to spend funds which were allocated to schools is an indication of inefficiency. Especially, Types 1C, 2 and 3 schools are behind the 1AB (National) and (Provincial) schools in spending their allocations; this is due to multifarious factors. Strengthened basic SBRM has improved incentives to efficiency on the input side.

A further positive impact of strengthened basic SBRM is that schools have gained freedom, flexibility, the best usage of resources, time saving, and immediate action to meet their requirements.

Despite those positive effects, numerous shortfalls and shortcomings have existed in schools. The policy is new, whereas the school financial regulations have not been changed. As a result, some principals have been scared to spend money. Furthermore, lack of storage, poor monitoring, the poor quality of materials in local markets, lack of local suppliers, transport difficulties, and the inadequacy of resources in relation to the pupil numbers make difficulties for this programme. As a whole, at the policy

initiative stage of strengthened basic SBRM, the regional imbalances and school heterogeneity factors were not considered.

According to the perceptions of principals and planners, all the basic institutional provisions have been established for the sustainability of the programme. Further, the majority of principals, planners, and parents want more extensive power and decision-making authority, beyond strengthened basic SBRM. Political commitment at the provincial level is crucial for the implementation of the national policy.

My second overall conclusion concerns the impact of the extension of SBRM; the evaluation of this impact has explored different aspects of pilot schools compared to non-pilot schools. Devolving financial responsibilities for purchasing capital equipment to schools is the most notable event in the history of school financing in Sri Lanka. Similar to strengthened basic SBRM, the extension of SBRM was introduced as a result of external intervention, although the rationale was not grasped by the implementers at the grass root level. The policy was initiated in a very bureaucratic way, and hence the conceptual framework of the programme was not communicated to the relevant parties in the system. The result was that many implementers were not in a position to distinguish NBUCRAM from strengthened basic SBRM and the extension of SBRM. As usual in the Sri Lankan education context, the policy was not analysed during its implementation. Hence, many unsolved institutional problems and issues exist, because the extension of SBRM was implemented without feasibility studies. This shows the poor policy initiatives and practices of national and local education authorities, in terms of the implementation of donor assistance programmes.

The conventional roles of principals, planners have rapidly changed as a result of the extension of SBRM. The use of the participatory approach to taking decisions in pilot schools, especially on acquiring learning resources, has noticeably increased. Therefore the power pooled at the centre has been reduced. Further, the resource allocation pattern has changed, and the teaching and learning environment in classrooms has become livelier. Previously many school teachers typically used a 'chalk and talk' teaching methodology. The new outlook on resourcing schools challenged this methodology, and teachers as well as pupils have been motivated. In this regard, poor consultation with the real implementers over the determination of allocations for schools was evident.

The outcomes of my study demonstrate that the schools are adapting in a systematic way to deciding on and acquiring learning equipment at school level. The schools have established committees for school-level purchasing; however, there are some ambiguities regarding the role of committee members and the minimum times for the meetings of such committees. There was much concern about transparency and openness as essential components of SBRM. Teachers' participation is functioning strongly, and has excluded ad-hoc decision-making, micro politics, and macro-level administration in relation to resourcing schools. The formalities are the same for pilot and non-pilot schools for the extension of SBRM, but the functioning levels of these schools varied in different types of schools. The impact of the extension of SBRM is that now schools have met their learning resource requirements without delay and in shorter periods of time.

There are great differences between pilot and non-pilot schools in relation to acquiring inexpensive capital learning equipment. The evidence from my in-depth

study shows considerable increase in pilot schools under the extension of SBRM, and less increase in per-pupil expenditure at non-pilot schools. It should be added that many restrictions were imposed by the authorities. Principals in pilot schools were hesitant to spend the money because of audit queries, legal restrictions, and the lack of access to local markets and institutional capacities. Without these restrictions, pilot schools would be able to achieve more improvement.

However, when investigating the participatory approach to purchasing at school level, I found that the principals' role is still important in the determination of school-level learning requirements, but the evidence is that teachers are confident. The evidence shows that schools are moving towards best practice in resource management, but non-pilot schools are lagging behind. Further, pilot schools, compared to non-pilot schools, have been forward in the adaptation of systematic and rational school management practices association efficiency. While pilot schools depend on their own decisions, non-pilot schools still depend upon decisions from the centre to meet their requirements of capital learning resources. Both pilot and non-pilot schools have not given weight to the development of SBDPs, which are a vital component of SBRM. The parents and the community are still overloaded when non-pilot schools meet their learning resource requirements.

Another positive effect of the extension of SBRM is that the schools are becoming independent management units to some extent. School authorities have developed an understanding about their accountability and responsibility for public funds to the taxpayers. These changes can be interpreted as showing the best way to resource schools; although there are some problems, these can be eliminated during further implementation. However, we cannot ignore some disfunctional aspects, which are

mainly due to personal attitudes. In my opinion, in Sri Lanka, some teachers and principals consider that their professional work is limited to five hours a day. As a result of the extension of SBRM, management and administration functions have apparently increased. If the teachers or principals complete this additional work within the given teaching hours, this will directly affect pupils' learning activities. This practical issue should be followed up.

An improvement in the ability to use learning resources among teachers and pupils is evident. As a result of the implementation of the extension of SBRM, a more attractive and motivating learning environment has been established in classrooms and schools. It is clear that the authorities have thought about the relationship between educational inputs and outputs (pupil performance), but sound monitoring process is required to secure more benefits from the system. There is some evidence of disparities between pilot and non-pilot schools, as well as within the schools.

The increase of per-pupil expenditure can be interpreted as an improvement on the input side of the education production function. As in the case of strengthened basic SBRM, it is crucial to emphasise that poor attention was given by the respective policy elites to initiatives for improving the output side, relative to given inputs, and thus ensuring technical efficiency (Chapter Two).

Policy commitment and a better understanding among the implementers and consumers of education are essential for the sustainability of the programme.

My general conclusion on strengthened basic SBRM and the extension of SBRM is that the evidence shows a lack of formal SBDPs, which should include school

financial and resource management components; these are essential for proper SBRM practices. Further, poor attention is given to the input-output process in education. However, all parents as well as pupils are highly committed to education. For the majority of parents, their children's success in formal education is the best solution for their economic and social difficulties.

Further, it is significant that these sizeable changes occurred without increasing the national education budget for learning resources. It was crucial for education authorities to follow strategies which minimized wastage. Hence, they took action to rationalize the distribution of the education budget and the requirements for funds from the recurrent education budget, through saving by cost-cutting in lower priority areas, rationalizing the school system, and implementing a rational policy for the deployment of teachers. These changes emerged as results of the implementation of the new mechanism.

Finally, the implementation of strengthened basic SBRM and the extension of SBRM have had an evident positive impact on the acquisition of learning resources. This impact can be interpreted as achieving some objectives of the programmes, but the performance of these programmes has some weaknesses. Nonetheless, it can be concluded that the allocations and expenditure for learning resources have increased over the last three years, compared to the previous three years.

It is crucial to make recommendations and suggestions related to evidence, to overcome the problems already identified through the interpretation of qualitative and quantitative data in Chapters Five and Six. No doubt it will be beneficial to revise the present NBUCRAM and SBRM practices, ensuring equity and efficiency

respectively. Therefore, Chapter Seven will conclude the thesis by considering alternative scenarios concerning school financial distributions and SBRM in Sri Lanka in association with contemporary international developments in these areas.

Chapter Seven

Conclusions, recommendations and suggestions

Conclusions, recommendations, and suggestions for further improvements of FFS/NBUCRAM and SBRM are the main concerns of this chapter. In this final chapter, a summary of the findings, and conclusions discussed in line with the KRQs outlined in Chapter Three, are presented.

7.1 Background and context

This thesis is an attempt to evaluate the impact of SBRM and FFS in Sri Lanka, largely from the perspectives of efficiency and equity of resource allocation. These perspectives are crucial for understanding and interpreting FFS and SBRM, since these are changes in the schools' arrangements for allocating resources for learning and management at school level.

To address the issues of unequal distribution of resource allocation of schools, since 2000, the government of Sri Lanka, with international donor financial assistance, has employed a NBUCRAM as a new policy for the FFS, notably for ensuring equity in the provision of learning resources. At the same time the government implemented two types of SBRM programme: 'strengthened basic' SBRM, and the 'extension' of SBRM, to improve efficiency. My study evaluated the impact of SBRM and FFS on the efficiency and equity of resource allocation in Sri Lanka. These two programmes considered as interventions to the existed system, hence, intervention research methodology was employed. Further, longitudinal and cross-sectional research designs were adopted to evaluate the impact of NBUCRAM in relation to equity. The same research designs were applied to study on the impact of strengthened basic

SBRM and quasi-experimental and cross-sectional research designs were employed to study on the impact of the extension of SBRM. It is noted that my study has not dealt with the pure efficiency analysis as a relationship between input-output processes as defined in the field of economics of education. This was due to a lack of quantitative data and methodological difficulties. Hence, the study in relation to efficiency has been limited to evaluating the efficiency with which a school uses its resources as a new dimension of its work. Hence, efficiency incentives studied which are related to vesting decision-making power and authority in schools. The required data were gathered using questionnaires, semi-structured interviews and documentary analysis. A qualitative interpretative and descriptive approach was used for the analysis and presentation of data, and quantitative data were used for the triangulations. This study was based on four key research questions:

- KRQ1:** What are the policy backgrounds of the FFS/NBUCRAM and SBRM in Sri Lanka?
- KRQ2:** What has been the impact of NBUCRAM in Sri Lanka in relation to equity considerations in resource allocation?
- KRQ3:** What has been the impact of strengthened basic SBRM and extended SBRM in relation to efficiency incentives?
- KRQ4:** How can the present practices be improved and what can be suggested to improve NBUCRAM (funding formulae) and SBRM in Sri Lanka?

The KRQ1 emphasised the policy background of NBUCRAM and SBRM. KRQ2 looked at equity and KRQ3 examined efficiency. In relation to KRQ4, recommendations and suggestions have made.

Within this background, this chapter will provide a straightforward summary of the empirical evidence, description and interpretation of NBUCRAM and SBRM. It then proceeds to interpret the evidence associated with the theoretical framework used in

my thesis, and thereby to evaluate NBUCRAM and SBRM against the defined criteria: equity and efficiency.

7.2 Conclusion with respect to equity and adequacy

NBUCRAM was proposed for the allocation of funds for government schools, and successfully implemented in 2000. This mechanism is currently in operation, and has brought about more equitable allocation of funds among schools. NBUCRAM employs an approach based on cost. This mechanism does not include allocation for staffing or the operation and maintenance of buildings, and real resources; it covers only learning equipment and materials. Further, formulae are not included for the following: (i) the purchase of school furniture; (ii) the construction of new buildings and additions; (iii) repairs and maintenance of buildings and grounds; (iv) services for school-side needs (i.e. charges for communications, electricity, water etc.); (v) maintenance and repair of school vehicles and machinery; (vi) staff salaries; (vii) textbooks; and (viii) establishment services (i.e. security services). Therefore the funds required for these activities and items have to be allocated separately. These compartmentalised budgetary processes challenge the maintenance of equity in the system. Within these circumstances, I attempt to understand and interpret the impact of NBUCRAM in relation to equity through the evidence collected in my research.

The customary principle is that any policy initiation requires the application of policy analysis. Especially, education policy should be initiated without a short-term political expectations which is used for the enjoying political powers. More participation of implementers at the grassroots level is vital. According to the evidence given in Chapter Five, the NBUCRAM policy was not well communicated to these involved in

implementation. The majority of respondents perceived World Bank as the agency which directly intervened for the initiation of NBUCRAM. These perceptions support the argument that there is a considerable lack of awareness about the real origin of this new mechanism. In general, among the implementers themselves, there are disagreements as to whether or not institutions such as the World Bank or ADB should intervene. However, with regard to the introduction of NBUCRAM, the majority of principals and planners are positive about these external interventions. It was evident, at the initiation of policy, that the contributions of low-level implementers (i.e. principals and ZEPs) were inadequate. In contrast, the upper-level (i.e. PEPs' and NEPs') contribution was significant. The lack of contributions and the complexities of NBUCRAM were caused by poor understanding of the programme's conceptual framework at the desired levels. NBUCRAM, if understood and implemented properly, will lead to equity in the school system being established.

In relation to procedural equity, the pre-NBUCRAM system demonstrated the absence of apposite implementation of accepted policies and rules for providing learning resources to schools. Therefore one of the goals of NBUCRAM was to improve equity; hence rules, regulations and policies were included in the formula. Changes in school financing have occurred; but previous public financial regulations are still valid. This contradiction is an impediment to the accurate implementation of the formula. Another procedural equity aspect is the norms which are an indispensable and obligatory variable of FFS. There was no evidence that the pre-NBUCRAM system satisfied these norms for resourcing schools. NBUCRAM has included these norms when determining resources for school allocation. Contradictions arising from them were highlighted in my research. These obstacles directly influence distributional equity.

Distributional equity is the leading requirement for making equity prevail among the schools via FFS. On average, NBUCRAM has given more weight to curriculum enhancement as one of the two aspects of horizontal equity, giving preference for enhancing the curriculum by resourcing schools. However, the basic pupil allocation, based on age, also needs consideration. Retrospective evidence on the pre-NBUCRAM situation shows that there has been irrational and unethical distribution of learning resources. The received resources were not matched with pupil numbers. According to the respondents, NBUCRAM has been successful in improving horizontal equity across the system. However, looking more closely, NBUCRAM did not take into account the actual number of pupils in schools. It considered a 'desired number of pupils' for each school, according to their type. Hence, if a school enrolled more pupils than the desired pupil number, it was not entitled to any additional allocation, and also schools with less than 50 pupils were not given funds under NBUCRAM. These features imply that NBUCRAM deliberately controlled the school allocation, challenging the principles of horizontal equity. The empirical evidence shows that one formula was applied for resource allocations among different provinces. Cross-sectional and longitudinal data reveal that per-pupil expenditure for learning resources significantly changed. The gaps among the types of schools were reduced due to the implementation of NBUCRAM. When sections and types of schools are compared we can see substantial improvement in expenditure per pupil. Significantly, all the schools have now received some money according to desired pupil population; this highlights the positive impact of NBUCRAM. Yet attention should be paid to the 'fiscal neutrality criteria' of FFS, as provincial councils and the government frequently face illiquidity and cash rationing difficulties. In Sri Lanka, it is evident there is no uniform system for the funding of provinces, notably for

education. Hence, resource allocation per pupil vary according to provincial fiscal capacities.

NBUCRAM deals with some aspects of vertical equity; the education policy-makers for the first time have legalised additional resources for disadvantaged schools. As a result of including the 'disadvantaged school' category in the formula, such schools enjoy an additional per-pupil expenditure quota. But this policy has many operational-level shortcomings. Five per cent of the total provincial recurrent and capital allocations should be allocated to the disadvantaged schools, but this proportion was not fully released to schools, due to financial difficulties experienced by provincial councils.

NBUCRAM has neglected the special treatment for pupils with SEN, which is one of broad component of the FFS (Hill & Ross, 1999:93-96). This can be interpreted as an unethical treatment of these pupils in the allocation of resources, because their needs are fundamental.

Schools' own total revenues are another crucial criterion for evaluating equity, especially distributional equity. Basically, these revenues are two-fold: government-based and community-based.

Principals at the school level cannot control the revenues obtained from the government. They only handle minor activities such as the payment of staff salaries. After the launch of financial innovations, schools have been instructed to establish a separate fund for learning resources which are provided by the government, consolidated funds and those from foreign-funded projects. NBUCRAM brought

about this significant change. Further, evidence shows some sources of government and NGOs' patronisation of education development, but this is done in an ad-hoc manner.

The constitution of Sri Lanka requires 'free education' for all citizens, even though schools are allowed to charge small amounts, notably for day-to-day administrative activities. Collecting these community-based school-generated revenues is supported by the government, and they also make schools accountable to the community. However, these revenues strictly depend on the socio-economic background of the school community, challenging equity across the system. Examining the school facilities funds, which are one of the school-generated revenues, shows that 1AB National and Provincial schools are in strong positions, and Types 2 and 3 schools are in lower positions. Type 1C schools are in a middle position. It is significant that 1AB National and Provincial schools choose to spend these funds on day-to-day school running costs. Other types of schools are more likely to spend these funds on learning resources. This difference was similar for school development society funds. Alumni association funds strictly depend on the socio-economic position of the alumni. In general, the significant feature is that revenue collection in most Types 2 and 3 schools is dormant, and vigorous in 1AB National and Provincial schools. Hence, the research suggests that concerning school revenues the equity principle has not been fulfilled.

Also, household expenditure on education influences equity. The high-level income group spends a greater proportion of money on the education of their children, but when considering the percentage of income spent, all the parents have spent significant proportions on their children's education, regardless of their income. The

evidence in Chapter Five on household expenditure on education shows that parents from all income groups are highly committed to education. Although the majority of parents are poor and badly educated, they continue to spend on their children's education. The evidence presented in this thesis relating to school revenues has emphasised the importance of income distribution in relation to equity. Education is still not free for children and is expensive for the poor income groups compared to high income groups.

The evidence based on the principals' and planners' perceptions of adequacy issues suggests that adequacy was not achieved in the pre-NBUCRAM system. Practices in that period were centred on schools with large enrolments, and small schools were ill-treated. There is no evidence that 'adequacy criteria' for learning resources had been defined. NBUCRAM has included adequacy criteria in its norms (cf. Chapter Four), but according to school principals' perceptions these norms are not translated in to actual implementation, especially for grade one class sizes. Hence, adequacy is still not secured in the system.

The government has agreed to implement a national policy on funding learning resources for schools. This policy is related to adequacy criteria. However, there are inadequacies in the resource allocation, and this was emphasized by principals.

To conclude the discussion of the performance of NBUCRAM, it must be said that some disadvantages and issues still remain. Not every pupil is taken into account (this challenges horizontal equity); there is no allocation for pupils with SEN (this challenges vertical equity); the entire allocation is not released to schools (due to illiquidity and the cash rationing problems of the provincial councils); and some

disadvantaged schools are not acknowledged as such. In addition, NBUCRAM may be very complex and beyond the understanding of implementers at grassroots. Furthermore, principals pointed out that allocations for consumables and perishables are in excess of what they require, while allocations for capital equipment are insufficient. There is no law requiring the implementation of NBUCRAM. At present, PEAs implement this programme, otherwise they would not receive foreign-funded financial assistance.

Financial guarantees and participation at the grassroots level are crucial if the programme is to be sustained in the long-run. Also, the provincial councils and national levels should continue to provide the financial resources as agreed. Small schools have enjoyed more benefits, compared to the previous system; hence they will demand the protection of their privileges in the future. They will indirectly ensure the stability of the mechanism.

7.3 Conclusion with respect to efficiency

In Chapter Six, with respect to KRQ3, the impact of both strengthened basic SBRM and the extension of SBRM were evaluated in relation to the efficiency incentives, separate from the NBUCRAM for resource allocation. With respect to efficiency, both impact evaluation of strengthened basic SBRM and the extension of SBRM were not taking into account pure efficiency analysis following input-output process. However, this evaluation of efficiency was done according to the achievements of the SBRM objectives, in particular, the extent to which a rationalist management approach was adopted, looking at practices of decision-making power and authority at school level, resource management process at school level, and resource deployment taking into account efficiency incentives.

Longitudinal and cross-sectional data, in relation to basic SBRM and non-SBRM regimes, demonstrate that during these regimes inefficiency often prevailed, as learning resources were not allocated in relation to the need of the curriculum. However, it is significant that some schools, regardless of their SBRM status, had numerous difficulties and disparities in relation to learning resources; they were accountable to higher authorities for their management of these. When comparing sets of data about basic SBRM and non-SBRM across schools, there is sufficient evidence to show that there was a lack of participation by principals when taking decisions at school level. Especially, some schools received basic SBRM resources in kind and some of them did not (non-SBRM), resulting in inadequacy of learning resources for the schools and pupils.

The education system in Sri Lanka depends on external assistance to meet its targets. There are some disputes about the conditions set by the external donors. However, the majority of implementers at the grassroots level did not object to the introduction of strengthened basic SBRM. Nonetheless, poor participation in the initiation of policy is evident. World Bank pressures led to the initiation of strengthened basic SBRM, even though the authorities had not carried out a feasibility study for the programme. According to the implementers, the fundamental principle of strengthened basic SBRM is an attempt to improve efficiency in the schooling system by delegating power and decision-making authority to the school level. However the data demonstrate that the degree of clear understanding of this programme varied, and there was some misunderstanding and misinterpretation of the programme. If a new policy is to be effective, emphasis should be laid on staff understanding that policy.

As a result of the introduction of strengthened basic SBRM, the conventional management practices were changed at school, zonal, provincial, and national levels. At school level, all the staff responsibilities were revised. Some implementers at different strata in the system accepted this new outlook, while some had differences of opinion. The principal innovation of this programme, delegating power and decision-making authority to schools to acquire learning materials, could be interpreted as an addition to efficiency incentives. Participatory decision-making, quick actions to meet learning resource requirements, transparency and a systematic approach to acquiring the learning materials at school level are the principal gains from the programme.

Undoubtedly all the parties (i.e. teachers, principals, planners) concerned in education believed that strengthened basic SBRM succeeded in improving efficiency in resource management at school level. It is evident, however, that there is an unclear demarcations, between the efficiency incentives provided at the school, zonal provincial and national levels. As a result of strengthened basic SBRM, Types 1C, 2 and 3 schools benefited from extra financial inputs, as efficiency incentives, and during the last three years substantial improvements in per-pupil expenditure on consumables and perishables were observed. Prior to 2000, 1AB National and Provincial schools enjoyed freedom in decision-making to acquire learning materials for a few subjects. As a result of illiquidity and the cash rationing problems of the economy, obstruction to the improvements in expenditure per pupil emerged. In fact, some schools, especially Types 1C, 2 and 3 schools, were not in a position to spend their received funds. There were many reasons for the inconsistency of spending patterns. Sound knowledge and clear guidelines are crucial for achieving the desired objectives. 1AB National and Provincial schools are making substantial progress in spending funds for the given purposes.

The impact of strengthened basic SBRM allowed principals in both basic SBRM and non-SBRM schools and planners to enjoy freedom in decision-making. By contrast, as far as the schools were concerned, the allocations required for consumables and perishables were overestimated, whereas then more inadequate for capital equipment. While allocating funds for consumables and perishables at school level, principals have to follow past financial regulations on spending. This requirement implies the lack of a 'system theory' for the initiation of the new policy. Empirical evidence highlights some difficulties which policy-makers need to address. These include institutional problems (i.e. the administrative rather than academic workload of teachers, storage at school level, poor monitoring, transport difficulties, cash limits); curriculum issues (i.e. lack of knowledge of teachers on usage of learning resources, poor quality of resources, pupils needing more time for practical work); and local market access (i.e. lack of local suppliers, high unit cost, poor quality, market risk factors).

A defined policy for allocating funds to schools is the key factor for the sustainability of strengthened basic SBRM. Beyond that, it is crucial to delegate more extensive power to schools, in terms of acquiring all the learning resources, both recurrent and capital. Therefore, political commitment is the one of the main requirements.

My research has suggested that strengthened basic SBRM has not improved efficiency across the board as much as policy-makers expected. Besides, there is a need for good system-wide practice, as this field interacts with many sectors. Before the initiation of a new policy, comprehensive feasibility studies have to be carried out, to diagnose the operational-level capacities and difficulties. In addition, the policy was undermined by the prevailing regional conditions and the heterogeneity of schools. Nonetheless,

compared to the previous regimes, strengthened basic SBRM equips schools better with learning resources.

Quasi-experimental and cross-sectional data lead to the same finding as that on strengthened basic SBRM; this new policy for the extension of SBRM resulted from the World Bank's intervention, although local counterparts during recent decades had identified the need to devolve extensive power and authority to the operational level. Problems arose due to the delay in remedial actions. Principals and planners had different perceptions concerning the initiation of the extension of SBRM. The rationale for initiation was not grasped by the implementers at the grassroots level. At school and zonal levels, implementers' contributions to the initiation of the extension of SBRM have been minimal. According to the evidence, this programme provides a good way to establish an efficient school management system. Further evidence shows, that the extension of SBRM was also implemented on a pilot basis, but the piloting programme was launched straightaway in a bureaucratic way. There may be many reasons to explain this urgent implementation, but World Bank pressures could be presented as the main reason (Chapter Four). Therefore, the conceptual framework of the programme was not communicated to the respective parties in the system. Many implementers, were thus not in a position to distinguish between NBUCRAM, strengthened basic SBRM, and the extension of SBRM. As usual in the context of Sri Lankan education policy-makers, the policy was not analysed before or during its implementation. Overall evidence shows poor initiatives and practices by national and local education authorities, notably in the implementation of programmes assisted by donors.

Determination of school financial allocations under the extension of SBRM followed centralized formalities, without consultation with the implementers. There were no involvements of counterparts at school, zonal and provincial levels in the determination of allocations for schools. Part of the capital allocation (i.e. the allocation for expensive capital learning equipment) was retained at central level and was provided in kind.

As a result of the extension of SBRM, conventional practices at school, zonal, provincial and national levels have been remarkably changed. According to teachers' perceptions, their role has also been changed. Teachers' participation in making decisions, notably on acquiring learning equipment, has been increased under the extension of SBRM. This reduces ad-hoc decision-making, micro politics, and macro-level bureaucrats' administration in relation to resourcing schools. The schools may now meet their learning resource requirements without delay, as they need not wait for central provisions.

As a result of acquiring more equipment teachers reported that teaching methods have changed; and pupils are more motivated in their learning process. Previously, the majority of school teachers typically used 'chalk and talk' as the teaching methods. The teaching and learning environment in classrooms has now become more livelier.

In addition, the resource allocation pattern has changed. Both pilot and non-pilot schools have mostly established systematic and rational procedures (i.e. SPCs, SECs, and bank accounts), for acquiring learning resources. Teachers in both types of schools have positive attitudes to these procedures, although numerous practical issues are evident (such as the functioning and role of SPCs and SECs). The adoption

of systematic procedures is a positive result of this programme; most of the remaining issues can be dealt with through remedial measures. As evidence in relation to the SPCs and SECs shows, there are some ambiguities regarding the role of committee members and the minimum number of meetings of such committees, but these new institutional arrangements have satisfied a necessary condition of SBRM by paving the way to establishing openness and transparency at school level.

The prevailing system for spending on learning resources has changed rapidly. There are considerable distinctions between pilot and non-pilot schools in relation to acquiring inexpensive capital learning equipment. However, the empirical evidence of my study shows a poor disbursement rate for school-level purchasing. Many restrictions were imposed by the policy-makers, and there was a lack of legal backing for the policy. Especially, existing public financial regulations were not modified to suit the requirements of the new programme. Even provision to allow access to local markets, which is a prime factor in the extension of SBRM, was not made.

As a result of the extension of SBRM, some schools are moving towards better practices for purchasing and maintaining learning equipment, although other schools are far behind in this regard. A fundamental component of SBRM is the formulation of SBDPs, but the evidence shows that at present this is ignored. Parents and the community still subsidise non-pilot schools to meet their learning resource requirements, while there is sufficient evidence to show that the level of parental participation under the extension of SBRM is low. However, even if principals continue to be legally accountable for the purchasing of learning resources, teachers' participation in such activities has increased.

One of the main impacts of the extension of SBRM is that the schools are becoming independent management units. School authorities have hitherto been much concerned about their accountability and responsibility for public funds to the taxpayers. These concerns hinder the proper implementation of the extension of SBRM.

My research revealed that teachers' and pupils' ability to use learning resources has been improved. Sound monitoring, which is necessary to secure more benefits from the programme, has not yet been reliability established. Although it is difficult to identify the relationship between educational inputs and educational outputs, studies related to this must be undertaken. Given the limited data available for collection, I was unable to assess whether or not the acquisition of more learning resources leads to an improvement in educational output.

The substantial improvement in per-pupil expenditure can be interpreted as indicating any improvement on the input side of the education production function. The evidence shows much improvement in schools with the extension of SBRM compared to the other schools in terms of acquiring inexpensive capital learning equipment.

Several problems have hampered the implementation of the extension of SBRM. Two of them are the weakness of local markets (i.e. the lack of local suppliers, the poor quality of learning equipment provided locally, high unit costs) and institutional issues (i.e. transport difficulties, the dearth of storage facilities at school level to keep equipment safely in classrooms). Some principals considered the increased management and administrative responsibilities as disadvantages. Some principals highlighted that inadequate training for SBRM, insufficient advice and guidelines

from PEAs and MEHE, and the lack of teacher training can be disadvantageous to the smooth operation of the programme. Also political commitment to the policy is essential, to ensure a good understanding among the implementers and consumers of education and the sustainability of the programme.

Taking together strengthened basic SBRM and the extension of SBRM, it is evident that policy-makers did not pay much attention to technical efficiency; that is, the relation of output to inputs was not examined (Chapter Two). The evidence on strengthened basic SBRM and the extension of SBRM shows an absence of SBDPs which include school financial and resource management components; but these are basic requirements for SBRM.

The government has not increased the education budget, but has followed a cost-cutting approach whereby less has been allocated to lower priority areas of education and wastage minimised. Wastage was cut down through rationalizing the distribution of the education budget and the requirements for funds from the recurrent education budget, rationalizing the school system and implementing a rational policy for the deployment of teachers. This approach can be interpreted as positive in relation to efficiency incentives. On the other hand cost-cutting will challenge the sustainability of the programmes, as these strategies are meant for a short-term period. Hence, it is crucial to modify the framework of this programme so that it will be sustainable in the long term. The implementation of strengthened basic SBRM and the extension of SBRM have positive impacts on the acquisition of learning resources. These impacts can be interpreted as achieving some objectives of the programmes, but the performance of these programmes has numerous shortfalls and shortcomings, as I

discussed earlier. However, the method of allocating resources should continue to be based on a formal mechanism which is efficient and linked to the school curriculum.

Chapter Six dealt with the views of relationship between the resources (inputs) and the pupil outputs. In the economics of education, 'efficiency' is defined in terms of the relationship between inputs and outputs. Efficient schools are those which give good results at a reasonable cost, affordable to the society as a whole and to the different individuals in that society. As explained above, no data are available in Sri Lanka to permit assessment of efficiency in input-output terms, but there are other aspects of efficiency, apart from measurable output. As discussed earlier, another important issue is the management processes of schools, in particular whether these are rationalistic or "ad-hoc". From my view an important aspect of educational efficiency is the educational management procedures adopted by schools. This definition of efficiency implies that schools can be regarded as efficient if they are well managed. This definition focuses on the internal management of the schools. In this definition, it is the cost and efficiency considerations which are dominant. My research shows that although schools still do not adopt a perfect form of rationalistic planning, for example: many schools have not developed SBDBs, there is a poor rate of meeting of school purchasing committees and school evaluation committees and a lack of community participation, SBRM, particularly in its extended form, has led to improvements in internal management and decision-making.

To summarise, the introduction of the extension of SBRM is the most remarkable event in the history of school financing in Sri Lanka. When they consider the benefits from the extension of SBRM, the majority of implementers have a positive outlook on the intervention and involvement of international donors; although there are some

disagreements on such involvements. According to the implementers, with strengthened basic SBRM only limited power can be vested in school personnel, but the extension of SBRM increases their power and enables them to make a greater range of decisions. Finally, it can be reported that schools in both SBRM programmes are practicing a more rationalistic planning approach to resource management at school level. However, it is still an imperfect application of such approach.

When we examine the FFS/NBUCRAM and SBRM programmes in practice, their impacts on student learning cannot be predicted without better data. They tend to remain at the hypothetical level, given that our knowledge of the impact of both NBUCRAM and SBRM (including both regimes of SBRM) is hitherto highly speculative and conjectural.

I suggest, in the second part of this Chapter, ways to improve policy initiation and implementation, ways to overcome the problems and constraints of both NBUCRAM and SBRM, and ways to ensure that equity and efficiency prevail in the educational system.

7.4 Recommendations and suggestions

Building on the findings of my research, one of the aims of this chapter is to present recommendations and suggestions for the improvement of the existing mechanism of FFS/NBUCRAM and SBRM in terms of ensuring equity and efficiency (KRQ4).

7.4.1 Recommendations and suggestions for FFS/NBUCRAM ensuring equity

The overall conclusion is that the application of NBUCRAM has an impact on the allocation of learning resources to schools and is achieving some of the desired

objectives of the policy. The performance of NBUCRAM, although having numerous shortfalls and shortcomings, has to be viewed within its context. Some issues are raised below which pave the way to a wider debate on policy. The recommendations and suggestions which follow may help to revise the present NBUCRAM, and thus, to promote equity in the future.

A policy initiative should follow a framework driven from policy analysis. First, education policy should be initiated without domination by a short-term political expectation, and there should be more participation of implementers at the grassroots. Policies should be clearly defined, to allow people at all levels (i.e. principals, teachers, education officials and parents) to grasp the concepts firmly and thus be able to participate fully while such policies are implemented. The conceptual framework should be simple, clear and specific. Further, legal provisions should be made to ensure that the programme is carried out smoothly. In addition, it is crucial to pay attention to the affordability of any new policy.

The present NBUCRAM should be flexible, to amalgamate provincial requirements within the national policy framework. Hence, it should be re-formulated in accordance with the contemporary development issues. Some issues explored in this thesis need further consideration. Alternative models of decentralization for provinces should be considered.

Policies and rules for resourcing schools should be reconsidered, in review of present contradictions. One policy should be formulated for the entire schooling system, regardless of schools' status as national or provincial.

Norms and criteria should be implemented strictly, to satisfy procedural equity. Defined norms and criteria should grant flexibility to the provinces within a national framework, which could thus provide an escape route from the dominant centralized system. The norms which are included in the present formula must be revised. One set of norms should be developed to meet the criteria for adequacy. Schools should get additional funds according to their extra enrolment, and allocations should give more purchasing power to schools.

A financial entitlement for every pupil should be ensured, to improve distributional equity. NBUCRAM should be revised in order to cater for every pupil in the system and to ensure vertical and horizontal equity. In this case the use of weights is advocated. Weights according to age, curriculum needs, and school-side needs are suggested. Also, the actual enrolment should be considered, instead of the desired number of pupils and the type of school. More capital allocation should be given to schools, as well as more weight, if this is needed.

Every school has specific characteristics which we need to consider when resourcing school-sites. I suggest that two types of disadvantaged schools, small schools and schools in the plantation sector, exist in the system of education. Consideration for them should be included in the formula. The present 'disadvantaged school' category should be revised. Power and authority for classification should be devolved to PEAs, within a national framework. The following factors should be considered for the classification: school revenue level, education poverty index, economic poverty index, and social milieu and facilities. Also resource-based indicators should be developed. These indices should determine all the provisions of resources. Financial provisions

for disadvantaged schools should be released without delay. The classification of disadvantaged schools should be updated every five years.

When re-formulating the allocation mechanism, horizontal equity should also be ensured. Vertical equity requires including a reasonable allocation for pupils with SEN, who are not included in the present formula. A reasonable process for the identification of these pupils was presented in Chapter Five. It should address the disparities of the socio-economic backgrounds of the pupils as well as of the schools.

Schools' own revenues cannot be controlled, as they depend on the socio-economic background of the school community. The national and provincial average level for school revenues should be identified.

An index of educational poverty should be developed and an index of economic poverty, for the purpose of allocating resources to schools. Further, criteria for the adequacy of resourcing schools' resources should be developed and these criteria should be included in the formula, to allow for regional imbalances and heterogeneity factors.

The new formula would include the variables and components suggested in Appendix 7.1. Following these components, the formula should take account of procedural and distributional equity (including horizontal and vertical equity), and the adequacy criteria. Further, the authorities should decide the weight for each section, after wide discussions and after carrying out a comprehensive diagnosis.

7.4.2 Recommendations and suggestions for SBRM ensuring efficiency

The second aspect of the recommendations and suggestions refers to SBRM (both strengthened basic SBRM and the extension of SBRM).

I suggest implementing a single programme in the system, instead of multiple practices. It should introduce the extension of SBRM to all the schools, giving them extensive powers and decision-making authority. It should incorporate other provisions apart from the provision of learning resources (i.e. staff salaries, school-based teacher recruitment, minor constructions, and the maintenance and provision of other supplies and services). Within these circumstances, the authorities should immediately implement SBM, including FFS and SBRM as its sub-components.

Further, I recommend increasing the participation of the beneficiaries in policy decisions. People at the grassroots level should participate in negotiations along with the international and local donors and lenders. The present negotiations are restricted to the government and donor/lender bureaucrats.

Allocation procedures should be revised in accordance with school-level requirements. The decision-making authority on allocations for recurrent and capital needs should be delegated to the school level. The real requirements of the schools will be addressed at this level, and school budgets will vary from school to school, as their needs for resources are different. All the schools should have to formulate their own SBDP, including an annual budget component, and plan other activities. This will lead to a school-based budget planning system, and the provincial and national levels should prepare their budget plans based on schools' budget plans. This will

address the issues of school heterogeneity and different regional conditions. In addition, school allocations should be made at the beginning of the academic year.

Emphasis should be laid on the input-output relationship at schools, so as to increase efficiency at school level. Every school should define its 'average output indices'. A school's achievement of the desired performance level should be rewarded by monetary incentives, and such incentives should be introduced. The formula has to be given a weight to offer incentives for schools which achieve their expected index each year.

Another recommendation is to enable schools themselves to purchase goods with cash, and also to lay down the institutional groundwork for their freedom and flexibility. A 'postal purchasing model' (i.e. calling for bids, ordering, and supplying) should be introduced, to overcome the problem of the lack of suppliers in the local market. This model will ensure more transparent and open market access to learning resources for schools. It will require a joint effort from the educational authorities and the postal services; hence the postal system also should be made more efficient.

Guidelines and circulars on SBRM should be revised, and should address the roles and functions of SPCs and SECs, their members' functions, the frequency of meetings per year, and flexibility in purchasing learning resources.

The introduction of a re-training programme for teachers, helping them to reinforce the pupils' curriculum concepts appropriately, is recommended. Teachers should learn to make the optimum use of learning equipment and materials. Also it is necessary to include a module for this purpose for the teachers who are undergoing training at the

National Colleges of Education, and for those who are taking the Post-graduate Diploma in Education at the universities and at the National Institute of Education. Further, it is necessary to include these new programmes in the management and administration courses for principals as well as deputy principals and sectional heads of schools.

In accordance with the views of teachers, it is recommended that actions should be taken to re-organize the physical arrangement of classrooms, with more facilities and space for storing learning equipment and materials.

The respective authorities should formulate an easy system for reporting, providing transport cost, and should establish school boards to monitor and audit this programme at school level, to ensure transparency and efficiency. An awareness raising programme should be organized for the officials who audit the new scheme.

The allocation for learning resources should be increased after a comprehensive study of current allocations, actual expenditure, and the usage of resources in classrooms.

There is no legal basis for SBRM. All the circulars and guidelines were issued to implement it within the foreign-funded project activities. At present, PEAs have been influenced by the foreign-funded bureaucrats to accept offers which ultimately lead to benefits from the projects. Once a foreign-funded project is complete, PEAs may refuse to continue with the implementation of the programme. Hence, I strongly recommend legal backing for the programmes, making it difficult for PEAs to abandon them once they have started.

7.4.3 General recommendations for both NBUCRAM and SBRM

It is difficult to maintain equity through a single component in the provision of resources. Hence it is crucial to integrate all the components with respect to the provision of physical and human resources to schools. A formula for this purpose should be developed. If different formulae for each category of resources are implemented, this will increase disparities in learning resources and teacher shortages. It is necessary to **develop integrated formulae** for the provision of other school facilities immediately (e.g. the provision of infrastructural facilities, the supply of teachers, and the provision of furniture and other capital assets). In this way, FFS/NBUCRAM may ensure equity. The entire allocation, except for specific needs i.e. major capital civil works, the provision of very expensive capital learning equipment, and special instruments (e.g. microscopes, pianos, band instruments) should be released to every school.

A further recommendation is to implement NBUCRAM for all the national schools. Presently, the national education budget does not provide special allocations for learning resources for national schools, although there is an allocation for 'furniture and equipment'.

The next recommendation is that releasing funds to schools from different branches and divisions of the ministry should be terminated. For example, the Science and the Non-Formal Education Branches of the ministry still handle the releasing of funds to schools for purchasing learning resources, for pupils studying Science and students with special educational needs respectively. These allocations are made according to

other criteria, instead of being based on NBUCRAM. To correct this situation, there should be only one channel through which funds are released to schools.

A sound database at school, zonal, provincial and national levels should be developed and maintained. Further, **a standing committee for school budgets**, to control and monitor the financial resources of schools at national and provincial levels, must be established. Provincial-level committees should be established as a **centre for controlling and monitoring school finance**. These would help to establish equity and efficiency in the system. A proposed structure for resourcing schools is given in Appendix 7.2. In this Appendix, I have suggested delegating extensive power to school, ensuring efficiency and equity in the system. Such delegation is workable beyond the present allocation for learning equipment and materials. All types of resources can be devolved to schools. This proposal suggests a new unit at district level to maintain the standards for education inputs and outputs. It would lessen the duplication of functions and wastage of physical, human and monetary resources.

A school financial and resource management policy should be developed by the government, and the existing school financial regulations should be revised in accordance with contemporary needs. A law should define a school financing and resource management policy for the system.

7.4.4 Further research

A wider debate should be organised on the nature of FFS as well as SBRM. Two major areas for further research stand out in relation to both FFS and SBRM: on the utilization of learning resources for teaching and learning in classrooms and on the

effectiveness of resource allocation and the relationships between educational inputs and outputs.

A. Utilization of learning resources for teaching and learning in classrooms

The first area for future study is the utilization of learning resources in classrooms for teaching and learning. Through to NBUCRAM, funds have been provided for schools to acquire learning resources, using both acquisition at school level and providing in kind. It is crucial to study how these financial and physical resources are actually utilized for the given purposes. My research attempted to investigate how the resources allocation promotes efficiency and meets equity considerations, it was not mainly concerned with the usage of learning resources at the classroom level. The proposed research would be related to teachers' and pupils' perspectives.

B. The effectiveness of resource allocation and the relationships between inputs and outputs

The second area for future study is the relationship between resource allocation and effectiveness. A wider debate on resource allocation as inputs to schools, looking also at educational outputs, is to be encouraged. In this debate, input and output process should be examined; that is, look into the educational 'black box'. Currently, we showed education policy-making elites have paid little attention to this, and my research has not focused on this area due to methodological limits. Every child has a right to obtain education without any discrimination. All governments are ethically committed to ensuring this right, and hence, should provide the required institutional facilities, including learning resources. The education authorities need to monitor constantly the impact of investment in education. In general, according to my experience, with respect to the Sri Lankan context, principals, teachers and officers when asked, "Why do we have schools?", give varying answers. Many of them have

not decided clearly on the desired output. Policy statements have not guided them or assigned a certain output from each institution with given inputs. Some students in every year succeed in the national examinations. The principals as well as education authorities highlighted the number of passes of such examinations. Less attention has been paid to the pupils who have not achieved the desired level, in each subject as well as in overall examinations. Further, staff do not assess the relationship between inputs and output. The missing data lead to the lack of any concept of the relationship between resource inputs and learning outcomes. A wider debate to identify and explore this relationship is required. More case studies are needed, to examine results by subjects and by province in terms of input and output. There is insufficient empirical evidence to support the argument that improvement in educational outcomes can be maintained throughout, but constant improvement in outcomes remains the theoretical target of school management. In order to measure outcomes future research should examine different inputs (i.e. school characteristics: *e.g. class size*, students' characteristics: *e.g. peer groups*, teachers' characteristics: *e.g. teacher quality*, and real inputs: *e.g. learning resources, other resources*).

Such future studies would improve the quality of education in Sri Lanka.

7.5 Conclusion

FFS and SBRM are important allocation strategies for ensuring equity and efficiency in the school system. I believe that schools and pupils are enjoying many benefits as a result of the new practices. However, there are some shortcomings due to poor management practices. Further benefits can be obtained after the full implementation of 'decentralization of power and authority to school level' (Caldwell, 1994; Levačić,

1998; 2003; Abu-Duhou, 1999:17; European Commission, 2000). The empirical evidence of my study suggests revisiting immediately the two areas of FFS and SBRM. The existing formula for resource allocation, and SBRM practices which implement the policy values, notably equity and efficiency, should be revised. Second, attention is required to produce the best pupil outputs and outcomes through the given inputs. Such revisions will pave the way to a debate on the linkage between the utilization of educational resources and educational outcomes. This debate will test the wisdom of policy-makers, and improve productivity and effectiveness as a result of attention to equity and efficiency.

My research has been presented with the aim of showing how far equity and efficiency have been operationalized in the school system in Sri Lanka, and on that basis other practitioners and researchers may expand their understanding of the gains brought to the education system as a whole by NBUCRAM, strengthened basic SBRM and the extension of SBRM.

Finally, I would like to draw the attention of policy-makers in Sri Lanka, and other countries which have similar problems, to the findings of my study. Such attention could lead to improvements in their education systems, especially by promoting equity and efficiency in resource allocation.

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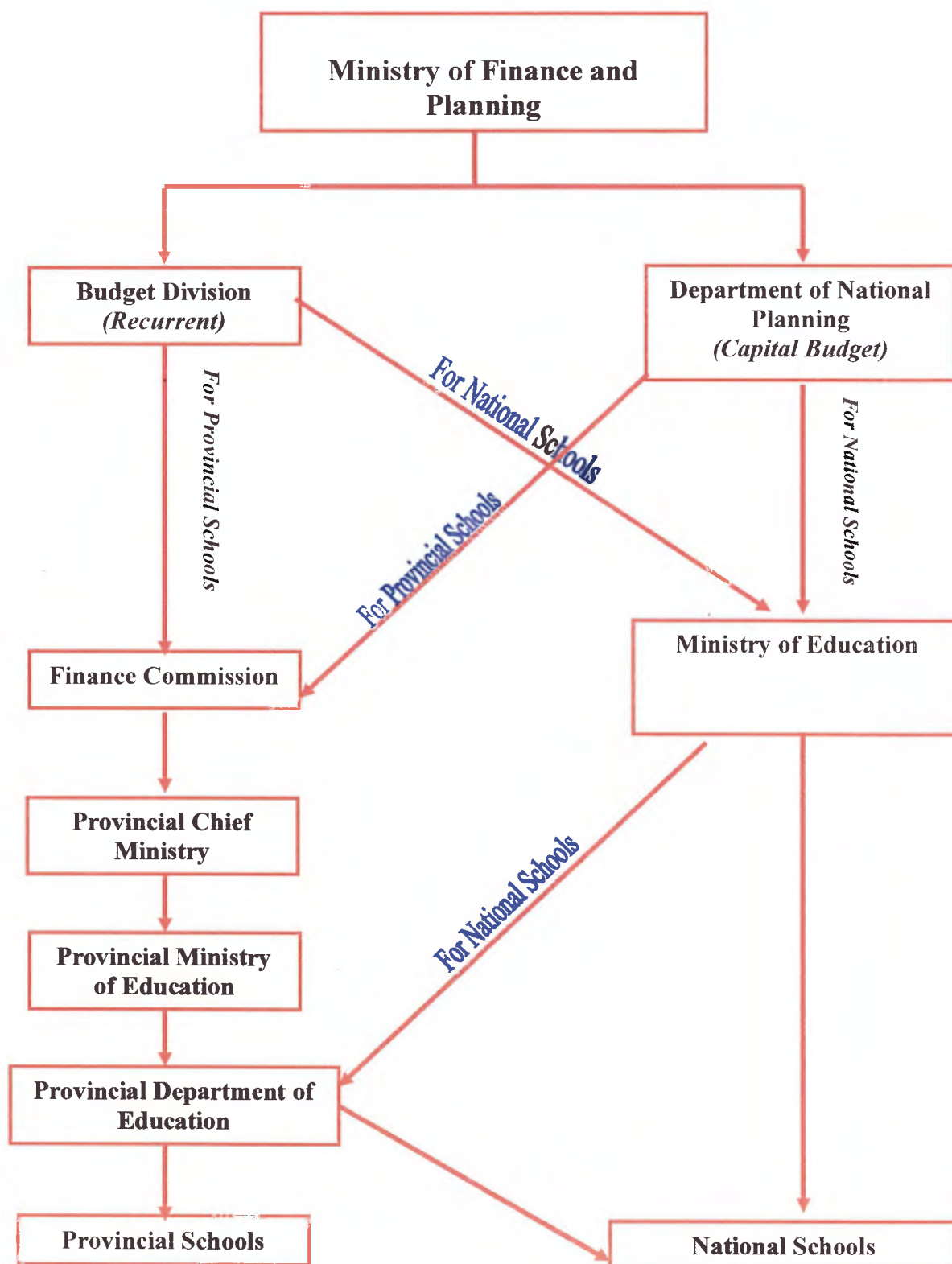
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Appendices

Appendix 1.1: Education financial allocation flow in Sri Lanka - 2003



Appendix 3.1: The list of policy documents and empirical studies referenced for the research

National-level policy documents, policy papers and ministry circulars:

Department of Education (1961) *Past Pupils' Associations, Circular No. 27 of 1961, dated November 20*, Colombo: Department of Education

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Appendix 3.2a: Sample 1: Random stratified sample (Pilot schools)

Province	Education Zone	Type	Ser. No.	Name and Address of the School	Medium of instruction	Gender	Location
Western	Sri Jayawardenepura	1AB Nat	1	Ananda Sasatharalaya College, Kotte	Sinhala	Boys	Urban
		1AB Nat.	2	President College, Rajagiriya	Sinhala	Mix	Urban
		1AB Prov.	3	Malabe Sri Rahula BMV, Malabe	Sinhala	Girls	Urban
		1AB Prov.	4	Samudaradevi BMV, Nugegoda	Sinhala	Girls	Urban
		1C	5	Angoda Sri Rahula MV, Mulleriyawa	Sinhala	Mix	Semi-urban
		1C	6	Sri Rewatha Royal College, Nugegoda	Sinhala	Mix	Urban
		2	7	Kudabuthgamuwa Somadevi BKV, Mulleriyawa	Sinhala	Girls	Semi-urban
		2	8	Sri Parakumba MV, Rajagiriya	Sinhala	Mix	Urban
		3	9	Ranala Models Junior School, Ranala	Sinhala	Mix	Semi-urban
		3	10	Ihala Bomiriya KV, Kaduwela	Sinhala	Mix	Semi-urban
Central	Haguranketa	1AB Prov.	11	Poramadulla MMV, Rikillagaskada	Sinhala	Mix	Rural
		1C	12	Diyatilake MMV, Hanguranketa ***	Sinhala	Mix	Semi-urban
		1C	13	Gangapalatha MV, Gonagantenna	Sinhala	Mix	Rural
		2	14	Pallegalada V, Illagolla	Sinhala	Mix	Rural
		2	15	Poramadulla KV, Rikillagaskada	Sinhala	Mix	Rural
		3	16	Bambaraagama V, Hewaheta	Sinhala	Mix	Rural
		3	17	Martuwela V, Elamulla	Sinhala	Mix	Rural
		1AB Nat	18	Mahinda College, Galle	Sinhala	Boys	Urban
		1AB Nat.	19	Vidyaloka V, Galle	Sinhala	Mix	Urban
		1AB Prov.	20	Secred Heart Convent BMV, Galle ***	Sinhala	Girls	Urban
Southern	Galle	1AB Prov.	21	Kalahe Sri Sumangalodaya V, Wanchawela	Sinhala	Mix	Semi-urban
		1C	22	Lanumodara Vijaya MV, Habaraduwa	Sinhala	Mix	Semi-urban
		1C	23	Paramanada MV, Galle	Sinhala	Mix	Urban
		2	24	Watawana KV, Imaduwa	Sinhala	Mix	Semi-urban
		2	25	Gintota Dhammapala KV, Gintota	Sinhala	Mix	Semi-urban
		3	26	Anuladevi BV, MahaGalle	Sinhala	Mix	Urban
		3	27	Kathaluwa GVS de Silva PV, Ahangama	Sinhala	Mix	Semi-urban

Note: *** Not responded

Province	Education Zone	Type	Ser. No.	Name and Address of the School	Medium of instruction	Gender	Location
North East	Trincomalee	1AB Nat	28	St. Joseph's College, Trincomalee	Tamil	Boys	Urban
		1AB Nat.	29	Vivekananda College, Trincomalee	Tamil	Mix	Urban
		1AB Prov.	30	Methodist Girls College, Trincomalee	Tamil	Girls	Urban
		1AB Prov.	31	Pulmoddai Muslim MV, Pulmoddai ***	Tamil	Boys	Rural
		1C	32	Al-Azhara Muslim MV, Chinabay	Tamil	Boys	Urban
		1C	33	Selvanayagapuram TMV, Trincomalee	Tamil	Boys	Urban
		2	34	Sri Sumedhankara V, China-Bay Trincomalee	Sinhala	Boys	Urban
		2	35	Gopalapuram GTMS, Trincomalee	Tamil	Boys	Urban
		3	36	RKM Saratha V, Thampalakamam	Tamil	Boys	Semi-urban
		3	37	Rotawewa Muslim V, Rotawewa	Tamil	Boys	Rural
North Western	Nikawaratiya	1AB Nat	38	Mahasen MMV, Nikaweratiya	Sinhala	Mix	Rural
		1AB Nat.	39	Sri Parakrama MMV, Kobeigane	Sinhala	Mix	Rural
		1C	40	Katupotha Tissa MV, Katupotha	Sinhala	Mix	Rural
		1C	41	Welpothuwwewa Muslim MV, Boraluwwewa	Tamil	Mix	Rural
		2	42	Dalukgolla Sri Dammarakitha V, Hulugalla	Sinhala	Mix	Rural
		2	43	Kongolla KV, Katupotha	Sinhala	Mix	Rural
		3	44	Habarawa PV, Kanaththwa	Sinhala	Mix	Rural
		3	45	Kuda Mithawa PV, Mommakulama	Sinhala	Mix	Rural

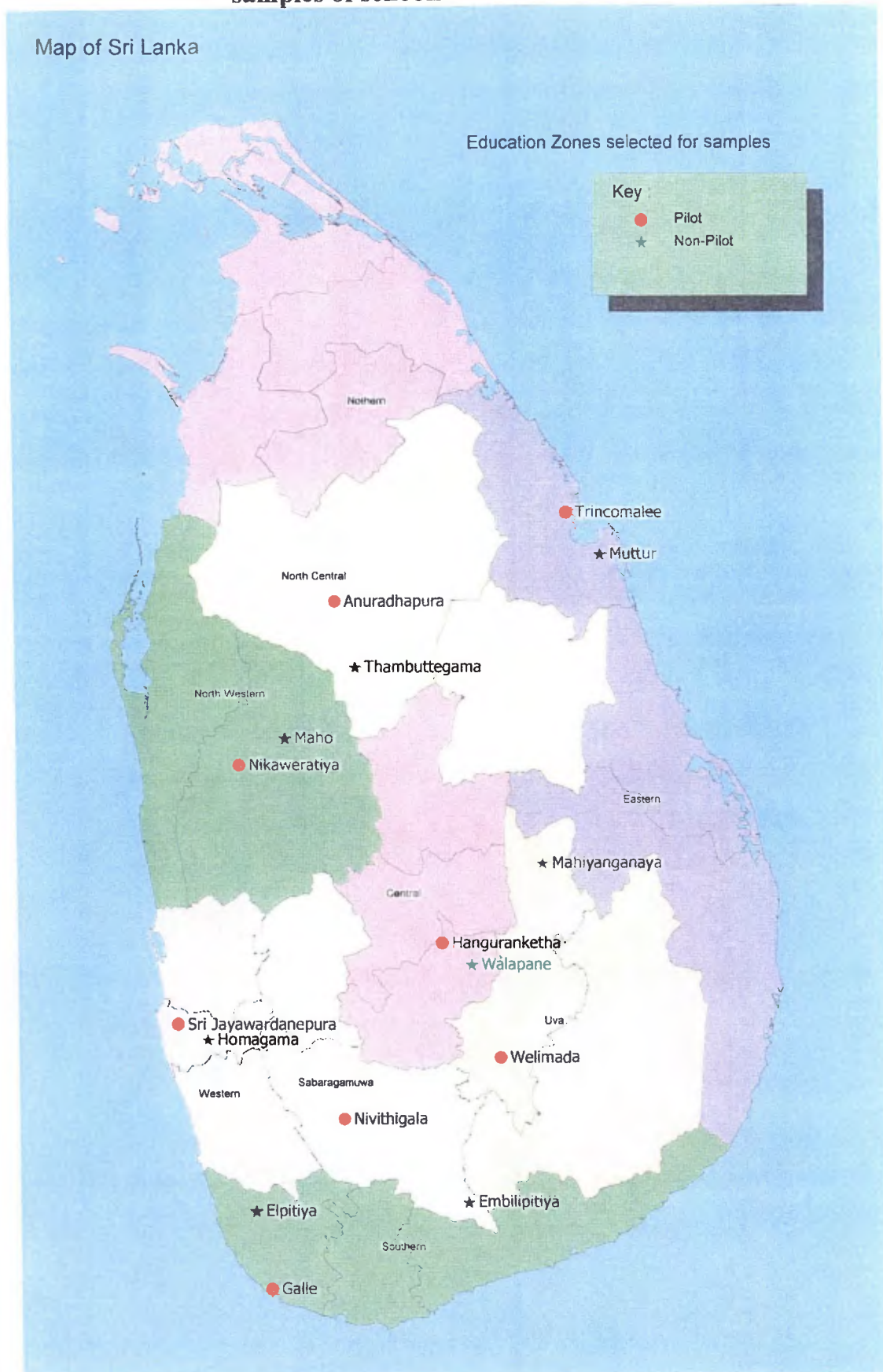
Note: *** Not responded

Province	Education Zone	Type	SN	Name and Address of the School	Medium of Instruction	Gender	Location
North Central	Anuradhapura	1AB Nat	46	Anuradhapura MMV, Anuradhapura ***	Sinhala	Mix	Urban
		1AB Nat.	47	Swarnapali BMV, Anuradhapura	Sinhala	Girls	Urban
		1AB Prov.	48	Nivanthaka Chetiya MMV, Anuradhapura ***	Sinhala	Mix	Urban
		1AB Prov.	49	St. Joseph's College, Anuradhapura	Sinhala	Boys	Urban
		1C	50	Siddhartha MV, Anuradhapura ***	Sinhala	Mix	Urban
		1C	51	Sri Sumangala MV, Galadivulwewa	Sinhala	Mix	Rural
		2	52	Konakumukwewa MV, Kendewa, Anuradhapura	Sinhala	Mix	Semi-urban
		2	53	Manarul uloom MV, Gambirigaswewa	Tamil	Mix	Rural
		3	54	Halambagaswewa V, Gambirigaswewa	Sinhala	Mix	Rural
		3	55	Kivulekada Muslim V, Gambirigaswewa	Tamil	Mix	Rural
		1AB Nat	56	Welimada MMV, Welimada ***	Sinhala	Mix	Rural
		1AB Prov.	57	Gurotalawa Muslim MV, Gurotalawa	Tamil	Mix	Rural
		1AB Prov.	58	Lunuwatta MMV, Lunuwatta	Sinhala	Mix	Rural
		1C	59	Uva Paranagama MV, Uva Paranagama	Sinhala	Mix	Rural
Uva	Welimada	1C	60	Wewegama MV, Ambagahawatta ***	Sinhala	Mix	Rural
		2	61	Gambadda V, Rathkarawwa	Sinhala	Mix	Rural
		2	62	Yahalarawa Tamil V, Yahalarawa, Welimada	Tamil	Mix	Rural
		3	63	Hathkinda PV, Dimbulana	Sinhala	Mix	Rural
		3	64	Madipokuna V, Bambarapana	Sinhala	Mix	Rural

Note: *** Not responded

Province	Education Zone	Type	SN	Name and Address of the School	Medium of instruction	Gender	Location
Sabaragamuwa	Nivitigala	1AB Nat	65	Kalawana MMV, Kalawana	Sinhala	Mix	Rural
		1AB Nat.	66	Karawita Pannananda MMV, Uda-Karavita	Sinhala	Mix	Rural
		1AB Prov.	67	Kalawana Gamini MMV, Kalawana	Sinhala	Mix	Rural
		1C	68	Karngoda MV, Karngoda, Ratnapura	Sinhala	Mix	Rural
		1C	69	Dumbara MV, Minipura, Dumbara	Sinhala	Mix	Rural
		2	70	Gamikkanda V, Ayagama	Sinhala	Mix	Rural
		2	71	Yakdehiwatta V, Nivitigala	Sinhala	Mix	Rural
		3	72	Dellabada Jayanthi V, Karangoda, Ratnapura	Sinhala	Mix	Rural
		3	73	Dumbara Medapola V, Ellagawa	Sinhala	Mix	Rural

Appendix 3.2b: Map of Sri Lanka showing education zones selected for samples of schools



Appendix 3.3: Sample 2: Purposive sample (Non-pilot schools)

Province	Education Zone	Type	Ser. No.	Name and Address of the School	Medium of instruction	Gender	Location
Western	Homagama	1AB Nat	1	Hanwella Rajasinghe MMV, Hanwella	Sinhala	Mix	Semi-urban
		1AB Nat.	2	Seethawaka MMV, Awiasawella	Sinhala	Mix	Semi-urban
		1AB Prov.	3	Siri Piyaratne MMV, Padukka	Sinhala	Mix	Rural
		1AB Prov.	4	Homagama MMV, Homagama	Sinhala	Mix	Semi-urban
		1C	5	St. John Bosco MV, Kaluaggala	Sinhala	Mix	Rural
		1C	6	Kosgama MV, Kosgama	Sinhala	Mix	Rural
		2	7	Thunnana Sri Sumanajothi MV, Hanwella	Sinhala	Mix	Semi-urban
		2	8	Liyanawela KV, Padukka	Sinhala	Mix	Rural
		3	9	Kahatuduwa KV, Polgasovita	Sinhala	Mix	Rural
		3	10	Wethara KV, Wethara	Sinhala	Mix	Rural
		1AB Prov.	11	Ragala TMV, Halgranoya	Tamil	Mix	Rural
		1C	12	Batagolla MMV, Walapane	Sinhala	Mix	Rural
		1C	13	Senarath MV, Kuruppanawela	Sinhala	Mix	Rural
		2	14	Senarathpura V, Halgranoya	Sinhala	Mix	Rural
		2	15	Pannala V, Kubalgamuwa	Sinhala	Mix	Rural
		3	16	Morahela V, Madulla, Udupusellawa	Sinhala	Mix	Rural
		3	17	Rathnayake Pathana V, Halgranoya	Sinhala	Mix	Rural
Central	Walapane						

Province	Education Zone	Type	Ser. No.	Name and Address of the School	Medium of instruction	Gender	Location
Southern	Elpitiya	1AB Nat	18	Ananda MMV, Elpitiya	Sinhala	Mix	Rural
		1AB Nat.	19	Karandeniya MMV, Karandeniya	Sinhala	Mix	Rural
		1AB Prov.	20	Ndipalagoda MV, Pitigala	Sinhala	Mix	Rural
		1C	21	Gurukanda MV, Induruwa	Sinhala	Mix	Rural
		1C	22	Dedduwa MV, Haburugala	Sinhala	Mix	Rural
		2	23	Hipanaawatta KV, Uragaha	Sinhala	Mix	Rural
		2	24	Wathuravila KV, Waturavila, Kahaduwa	Sinhala	Mix	Rural
		3	25	Niyagama KV, Talgaswala	Sinhala	Mix	Rural
		3	26	Densil Kobbakaduwa V, Uragasmankadawela	Sinhala	Mix	Rural
		1AB Nat	27	Mutur MMV, Mutur ***	Tamil	Mix	Rural
North East	Mutur	1AB Nat.	28	Kinniya MMV, Kinniya	Tamil	Mix	Rural
		1AB Prov.	29	Chenaiyoor MMV, Mutur ***	Tamil	Mix	Rural
		1AB Prov.	30	Kinniya Al Aqla MV, Kinniya 2	Tamil	Mix	Rural
		1C	31	Kinniya Alligar MV, Kinniya	Tamil	Mix	Rural
		1C	32	Al Hilal MV, Mutur	Tamil	Mix	Rural
		2	33	Mahawelipura MV, Sooriyapura, Kantale	Sinhala	Mix	Rural
		2	34	Zahira KV, Thoppur ***	Tamil	Mix	Rural
		3	35	Al Madina V, Kakkamini Kinniya	Tamil	Mix	Rural
		3	36	Idman Al Minhaj V, Kinniya	Tamil	Mix	Rural

Note: *** Not responded

Province	Education Zone	Type	Ser. No.	Name and Address of the School	Medium of instruction	Gender	Location
North Western	Maho	1AB Nat.	37	Vijayaba MMV, Maho	Sinhala	Mix	Rural
		1AB Nat.	38	UB Wanninayake MMV, Galgamuwa	Sinhala	Mix	Rural
		1C	39	Sri Sangabo MV, Wannu Kudawewa, Galgamuwa	Sinhala	Mix	Rural
		1C	40	Al-Madeena MV, Maho	Tamil	Mix	Rural
		2	41	Siyabalagamawa KV, Maho	Sinhala	Mix	Rural
		2	42	Talpttiwewa V, Polpitigama	Sinhala	Mix	Rural
		3	43	Wambatuwewa V, Moragollagama	Sinhala	Mix	Rural
		3	44	Hakwatunaoya Janapada V, Thalakolawewa	Sinhala	Mix	Rural
North Central	Thambuthtegama	1AB Nat	45	Eppawela Sri Siddhartha MMV, Eppawela	Sinhala	Mix	Rural
		1AB Prov.	46	Galnewa MMV, Galnewa ***	Sinhala	Mix	Rural
		1AB Prov.	47	Tabuttegama MMV, Tabuttegama	Sinhala	Mix	Rural
		1C	48	Rajanganaya Tract 10 Harischandara MV, Pahala Maragawewa, Gamunupura	Sinhala	Mix	Rural
		1C	49	Ketakele Ithalawewa MV, Kirologama	Sinhala	Mix	Rural
		2	50	Kelediwulwewa V, Mahailuppallama	Sinhala	Mix	Rural
		2	51	Kattiyawa Azad Muslim V, Kattiyawa	Tamil	Mix	Rural
		3	52	Thammennawa Aluttwewa V, Mahailuppallama	Sinhala	Mix	Rural
		3	53	Eriyagama V, Talawa ***	Sinhala	Mix	Rural

Note: *** Not responded

Province	Education Zone	Type	Ser. No.	Name and Address of the School	Medium of instruction	Gender	Location
Uva	Mahiyanganaya	1AB Nat	54	Mahiyanganaya MMV, Mahiyanganaya	Sinhala	Mix	Rural
		1AB Prov.	55	Giradurukotte MMV, Giradurukotte ***	Sinhala	Mix	Rural
		1C	56	Dambarawa MV, Mahiyanganaya	Sinhala	Mix	Rural
		1C	57	Pethiyaya MV, Hewanwatta	Sinhala	Mix	Rural
		2	58	Medayaya KV, Mapakalawewa	Sinhala	Mix	Rural
		2	59	Pangaragammana MKV, Mapakadawewa	Sinhala	Mix	Rural
		3	60	Gurukubura PV, Dambana	Sinhala	Mix	Rural
		3	61	Kalukele PV, Arawa – Baddulla ***	Sinhala	Mix	Rural
		1AB Nat	62	Embilipitiya MMV, Embilipitiya	Sinhala	Mix	Rural
		1AB Nat.	63	Kolonna MMV, Kolonna	Sinhala	Mix	Rural
Sabaragamuwa	Embilipitiya	1AB Prov.	64	Kularatne MMV, Godakawela ***	Sinhala	Mix	Rural
		1C	65	Demuwatha MV, Rakwana	Sinhala	Mix	Rural
		1C	66	Kuburugamuwa MV, Godakawela ***	Sinhala	Mix	Rural
		2	67	Makandura V, Atakalanpanna	Sinhala	Mix	Rural
		2	68	Nindagampetessa V, Embilipitiya	Sinhala	Mix	Rural
		3	69	Tambagamuwa-nawa V, Pallebedda	Sinhala	Mix	Rural
		3	70	Mahagama V, Pallebedda	Sinhala	Mix	Rural

Note: *** Not responded

Appendix 3.4: Postal questionnaire for school principals

Principal,

.....MMV / MV/ BMV / KV

.....

Dear Sir / Madam,

The survey questionnaire for gathering data on school financing and resource management of schools in Sri Lanka

This questionnaire is aimed at gathering data and information regarding the school financing and resource management of schools in Sri Lanka. Further, the questionnaire aims to identify the causes, effects and the impact that have emerged in the schools as a result of introduction of norm-based unit cost resource allocation mechanism and school-based resource management done by the Ministry of Education and Higher Education from year 2000. Data and information gathered will be used for a thesis due to be submitted for the MPhil/PhD degree of the Institute of Education, University of London.

Please complete the questionnaire, in your language (Sinhala, Tamil or English) according to the guidelines stipulated in each section/question and kindly send to the following address, using the stamped envelope provided with the questionnaire.

Jayantha Balasooriya, 66/A/12, Yakkala Road, Bandarawatta, Gampaha.

Your co-operation in this regard is very much appreciated.

Jayantha Balasooriya

Institute of Education, University of London
London - UK
December 1, 2001

Note: This is a specimen of the questionnaire

The survey questionnaire for gathering data on school financing and resource management of schools in Sri Lanka

Section 1 – General Information

School ID

--	--	--	--	--	--	--	--

Instruction: Please circle appropriate number(s).

Name of School and Address:

----- MMV/MV/BMV/KV/V

1.0 Type of school:

1AB (National)	-	1	1AB (Provincial)	-	2
1C	-	3	Type 2	-	4
Type 3	-	5			

1.1 Has the school been a:

Pilot school for the extension of SBRM - 1 (if Yes: Section 7 is not applicable)
Non-pilot school for the extension of SBRM - 2 (if Yes: Section 8 is not applicable)

1.2.1 Has the school been categorized as a disadvantaged school according to the MEHE classification? (SRQ 2.3.1b.)

Yes - 1 No - 2

☐

1.2.2 If 'Yes' whether it is very difficult or difficult?

Very difficult - 1 Difficult - 2

☐

1.2.3 If 'No' do you think your school should come under this category?

Yes - 1 No - 2

☐

1.2.4 If 'Yes' what are the reasons?

1.
2.

1.3 Does the school have a school development plan? (KRQ 3.3a)

Yes - 1 No - 2

☐

1.3.1 If 'Yes', was it developed after discussions with the entire staff?

Yes - 1 No - 2

☐

Section 2 – The period prior to implementation of norm-based unit cost resource allocation mechanism (1997 – 1999)

2.1 What were the characteristics in traditional school financial management, which prevailed before implementation of norm-based unit cost resource allocation mechanism? (SRQs 2.2; 2.4)

Ser. No.	Equity characteristics	Yes	No
1.	The resources were provided by the government to the schools on an annual basis	1	2
2.	Principals negotiated with the zonal education offices, provincial department of education and the Ministry of Education respectively to acquire resources	1	2
3.	Greatly influenced by politicians	1	2
4.	Greatly influenced by bureaucratic (education officers)	1	2
5.	Ad-hoc decision-making	1	2
6.	Other (Please specify)	1	2

2.2 What norms did you follow to determine the provision of appropriate learning equipment and materials at school level? (SRQs 2.2; 2.3)

Ser. No.	Statement	Yes	No
1.	Standard norms and criteria provided by MEHE	1	2
2.	Norms and criteria provided by PME	1	2
3.	Norms and criteria provided by PDE	1	2
4.	Norms and criteria provided by ZEO	1	2
5.	Norms decided at school level	1	2
6.	Ad-hoc decision-making	1	2
7.	Other (Please specify)	1	2

2.2.1 If your answer is '5' please indicate what the norms were:

1.
2.
3.

2.2.2 What procedures did you follow for distributing resources among the sections/grades within the school in traditional system? (SRQ 2.3.1a)

Procedure	Yes	No
1. Grades bids	1	2
2. Sectional bids	1	2
3. Based on pupil numbers	1	2
4. According to school development plan	1	2
5. Other (Please specify)	1	2

2.3 Were the received funds adequate for the school's needs? (1 = Strongly Agree. 2 = Agree. 3 = Undecided. 4 = Disagree. 5 = Strongly Disagree) (SRQ 2.4)

Statement	Agree		Neutral	Disagree	
1. Resources provided were adequate	1	2	3	4	5
2. Resources provided were fairly adequate	1	2	3	4	5
3. Resources provided were inadequate	1	2	3	4	5
4. Other (Pl. specify)	1	2	3	4	5

2.4 What difficulties did you experience in matching resources to the school's needs? (SRQ 2.3)

Ser. No.	Difficulties	Yes	No
1.	Mismatch between allocation of resources and student numbers	1	2
2.	No standard norms	1	2
3.	No formal distributional procedures	1	2
4.	Lack of identification of actual needs	1	2
5.	Lack of planning capacity	1	2
6.	Political influences	1	2
7.	Education bureaucratic influences	1	2
8.	Other (Please specify)	1	2

2.5 (Applicable only if your answer is 'Yes' for question No. 1.2) If your school is disadvantaged, have you received any additional assistance as a result of this? (SRQ 2.3.1b)

Yes - 1 No - 2

☐

2.5.1 If 'Yes', what are those incentives?

Ser. No.	Incentives	Yes	No
1.	Provided additional financial allocations to the school	1	2
2.	Provided special incentives to teachers in the school	1	2
3.	Provided special incentives to principal in the school	1	2
4.	Provided special allocation to pupils in the school	1	2
5.	Other (Please specify)	1	2

- 2.6 How far do you think any of the following aspects of the traditional resource allocation system contribute to a fair allocation of resources? (SRQ 2.2b)

Ser. No.	Incentives	Yes	No
1.	Resources allocation based on pupil numbers	1	2
2.	Entire requirements are provided	1	2
3.	Transparent resource allocation mechanism	1	2
4.	Formal distributional procedures	1	2
5.	Special allocations for pupils with special needs	1	2
6.	Special allocations for disadvantaged schools	1	2
7.	Allocations are adequate for all schools	1	2
8.	Other (Please specify)	1	2

- 2.7 Please indicate in the order of importance to the principal the advantages you perceived in the traditional school financing process? (1 = is the most important). (SRQ 2.2b)

Importance	Priority
1. Equality of provision to all pupils	
2. Equality of provision to all schools	
3. Special attention paid to disadvantaged schools	
4. Other (Please specify)	

- 2.7.1 Please indicate in the order of importance to the principal the disadvantages you perceived in the traditional school financing process? (1 = is the most important) (SRQ 2.2b)

Importance	Priority
1. Lack of transparency in resource allocation	
2. No norms or criteria followed in provision of resources	
3. Political and education bureaucratic influences	
4. Other (Please specify)	

- 2.8 What problems and issues emerged in the implementation of the traditional school financing process? (SRQ 2.3)

Problem or issue area	Problem/Issue	Yes	No
A. Students	1. Inadequate provision of learning equipment and materials	1	2
	2. Resources received were insufficient for distribution among the subjects and grades	1	2
	3. Other (Please specify)	1	2
B. Teachers	1. Failure to supply actual requirements	1	2
	2. Lack of teaching materials	1	2
	3. Other (Please specify)	1	2

Section 3 – After implementation of the norm-based unit cost resource allocation mechanism (NBUCRAM) (2000 – 2002)

3.1 Were you aware of the new norm-based unit cost resource allocation mechanism? (SRQ 2.1)

Yes - 1 No - 2

☐

3.1.1 What do you notice as the fundamental principles in this programme? (SRQ 2.1)

Ser. No.	Fundamental principle	Yes	No
1	Mechanism based on unit cost	1	2
2	Resource allocation based on number of pupils and grades	1	2
3	Upper (maximum) allocation limit on desired pupil numbers	1	2
4	Distribution of allocation is based on norms (weights)	1	2

3.1.2 Who have been involved in the initiation of this programme? (SRQ 2.1)

World Bank	-	1	FC	-	7
ADB	-	2	NPD	-	8
UNESCO	-	3	PME	-	9
NEC	-	4	PDE/ZEO	-	10
MEHE	-	5	Other (Pl. specify)	-	11
MFP	-	6			

3.1.3 What are your views on the intervention of the international donors in the introduction of NBUCRAM? (SRQ 2.1)

1.
2.
3.

3.1.4 What are the reasons for the introduction of the NBUCRAM as you think? [Please place in order of priority. (1= is the most important)]. (SRQ 2.1)

Ser. No.	Reasons	Priority
1.	World Bank influence and intervention	
2.	To reduce the vast disparities in resource allocation between the schools (to establish equity across the system)	
3.	Improve the efficiency in resource use in schools	
4.	To establish school financing policies	
5.	To establish a school planning culture	
6.	Unknown reasons	
7.	Other (Please specify)	

3.1.5 How did you contribute to the initiation and implementation of this programme? (SRQ 2.1)

Participating	-	1	
Preparing awareness documents	-	2	
Conducting workshops	-	3	
Coordinating programmes	-	4	
Formulating the mechanism	-	5	
Membership of the focus groups	-	6	
No participation	-	7	
Other (Please specify)	-	8

3.2 Do you think that NBUCRAM has succeeded in ensuring equity in the provision of learning equipment and materials in schools? (SRQ 2.1)

Yes - 1 No - 2

☐

3.2.1 What do you mean by equity? (SRQ 2.1)

.....

3.3 Please indicate your attitude to the following statements in relation to the major changes between the pre and post implementation of NBUCRAM?
 (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree) (SRQ 2.2)

Ser. No.	Statement	Agree		Neutral	Disagree	
1.	NBUCRAM is a better way of resourcing schools than traditional school funding	1	2	3	4	5
2.	The current NBUCRAM for resource allocation to schools operates fairly	1	2	3	4	5
3.	The school is satisfied with the level of consultation which takes place in relation to the introduction and implementation of this new mechanism	1	2	3	4	5
4.	The current NBUCRAM allocation is not fairly distributed among pupils	1	2	3	4	5
5.	Schools have received more resources as a result of the introduction of NBUCRAM	1	2	3	4	5
6.	Disadvantaged schools have become entitled to additional amounts	1	2	3	4	5
7.	NBUCRAM provides a more transparent mechanism of resource allocation	1	2	3	4	5
8.	Schools receive what they are entitled to by the formula	1	2	3	4	5

- 3.4 What are the practical problems and issues which emerge as a result of implementation of the NBUCRAM in your school? (SRQ 2.5.)

Problem or issue area	Problem/Issue	Yes	No
A. Students	1. Every pupil is not taken into account for the determination of the school allocation of learning equipment and materials	1	2
	2. No special allocation for pupils with special educational needs	1	2
	3. Other (Please specify)	1	2
B. School	1. Entire allocation not received	1	2
	2. Disadvantaged school allocation not given	1	2
	3. Other (Please specify)	1	2

- 3.5 What are your suggestions and recommendations for the sustainability and further improvement of the programme? (SRQ 2.6; KRQ 4.0)

.....

Section 4 – School-generated revenues

- 4.1 What are the sources of funds of school-generated revenues that you maintain? (SRQ 2.3.2)

School Development Society Funds	-	1
School Facilities Fees	-	2
Alumni Association	-	3
Sports Funds	-	4
Aesthetics Funds	-	5
Other Funds (Please specify)	-	6



- 4.1.1 What are the difficulties in collecting school-generated revenues? (SRQ 2.3.2)

1.
 2.
 3.

Section 5 – Basic school-based resource management (1997 - 1999)

*Before the year 2000 some schools (i.e. IAB National and Provincial) had the purchasing power as well as the authority to acquire consumables and perishables at school level. These schools will be termed as **basic SBRM**. Other schools become automatically the **non-SBRM**. This section is dealt with the collecting data from both **basic SBRM** and **non-SBRM**.*

- 5.1 What characteristics have been practiced in regimes of basic SBRM and non-SBRM (which prevailed before implementation of strengthened basic SBRM)? (SRQ 3.1)

Ser. No.	Efficiency characteristics	Yes	No
1.	Requests made by the school were satisfactorily granted by the respective authorities	1	2
2.	School principal had to accept whatever provided by the respective agencies	1	2
3.	Resources were of low quality	1	2
4.	The process was very much controlled by and highly accountable to higher authorities	1	2
5.	A very centralized and uniform management process	1	2
6.	Less autonomy and flexibility for decision-making in terms of completion of school-level requirements than now	1	2
7.	School principals only played the role of coordinator	1	2
8.	School principals often faced audit queries	1	2
9.	Decisions were taken to determine real school-level requirements after consultation with school staff	1	2
10.	Parents and teachers were frequently consulted in decision-making on school resource management	1	2
11.	Principals made own decisions on real requirements based on the available data	1	2
12.	Principals negotiated with ZEO, PDE, and ME respectively to acquire the resources	1	2
13.	Ad-hoc decision-making	1	2
14.	Other (Please specify)	1	2

- 5.2 To what extent did the basic and non-SBRM system of resource allocation encourage schools to use their resources efficiently? (SRQ 3.1)

Ser. No.	Characteristics	Yes	No
1.	By the school/principal being held accountable for the efficient use of resources	1	2
2.	By encouraging schools to obtain the best possible student performance	1	2
3.	By enabling schools to make their own resources decisions.	1	2
4.	By resource allocation decisions for schools being made at provincial and zonal levels which has better information about what is needed	1	2
5.	By resource allocation decision being made at provincial and zonal levels so saving principals' time	1	2
6.	By resource allocation decision being made at provincial and zonal levels where they can obtain lower prices and save on costs through bulk ordering	1	2
7.	By resource allocation decisions for schools being made at	1	2

	national level which has better information about what is needed		
8.	By resource allocation decision being made at national level so saving principals' time	1	2
9.	By resource allocation decision being made at national level where they can obtain lower prices and save on costs through bulk ordering	1	2
10.	Other <i>(Please specify)</i>	1	2

5.3 Please indicate in order of importance to the principal the advantages you perceived in the period of basic and non-SBRM were existence? (*1= is the most important*). (SRQ 3.1)

Importance	Priority
1. Best use of available resources	
2. Highly accountable by principals to higher authority	
3. Keeping low costs	
4. More efficient management of school resources at zonal than at school level	
5. Other <i>(Please specify)</i>	

5.4 Please indicate in order of importance to the principal the disadvantages you perceived in the basic and non-SBRM were existence? (*1= is the most important*) (SRQ 3.1)

Importance	Priority
1. Highly centralized and uniform school financing management	
2. No room for decision-making by principals at school level	
3. School principals not involved in policy decisions at provincial and national level	
4. Political and bureaucratic influences	
5. Other <i>(Please specify)</i>	

5.5 What problems and issues emerged during the period of the basic and non-SBRM process? (SRQ 3.1)

Problem or issue area	Problem/Issue	Yes	No
A. Students	1. Inadequate provision of learning resources	1	2
	2. Resources received were insufficient for distribution among the subjects and grades	1	2
	3. Insufficient time and resources/equipment for practical work	1	2
	4. Poor student performance due to lack of resources	1	2
	5. Unattractive learning environment	1	2
	6. Other <i>(Please specify)</i>	1	2

B. Teachers	1. Poor quality of resources	1	2
	2. Failure to supply resources in time	1	2
	3. Lack of awareness of resource allocation	1	2
	4. Lack of teachers' motivation	1	2
	5. Unattractive classroom environment	1	2
	6. Lack of teaching materials	1	2
	7. Other (<i>Please specify</i>)	1	2

Section 6 – After implementation of strengthened basic school-based resource management (2000 – 2002)

Since 2000, all the schools were entitled to purchasing power and authority to acquire consumables and perishables at school level. This is considered as a **strengthened basic SBRM**. This section is devoted to gather data on strengthened basic SBRM.

6.1 Were you aware of the strengthened basic SBRM programme? (SRQ 3.1a)

Yes - 1 No - 2

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6.1.1 What do you notice as the fundamental principles of this programme? (SRQ 3.1a)

Ser. No.	Fundamental principles	Yes	No
1	To delegate power and authority to school to meet their learning resource requirements	1	2
2	To establish efficient school management system	1	2
3	To diminish delayed of provision of learning resources provided by the central level procurements	1	2
4	To increase community participation on making decisions in acquiring learning resources	1	2
5	Other (<i>Please specify</i>)	1	2

6.1.2 Who has been involved in the initiation of this programme? (SRQ 3.1a)

World Bank	-	1	FC	-	7
ADB	-	2	NPD	-	8
UNESCO	-	3	PME	-	9
NEC	-	4	PDE/ZEO	-	10
MEHE	-	5	Other (<i>Please specify</i>) -	11
MFP	-	6			

6.1.3 What are your views on the intervention of the international donors in the introduction of the strengthened basic SBRM? (SRQ 3.1a)

1.
2.
3.

- 6.1.4 What are the reasons for the introduction of strengthened basic SBRM as you understand? *(Please place in order of priority. 1 = is the most important). (SRQ 3.1a)*

Ser. No.	Urgency/needs	Priority
1	World Bank influence and intervention	
2	To implement government policy	
3	Improve the efficiency in using resources in the schools	
4	To establish school resource management policies	
5	To establish a school planning culture	
6	Unknown reasons	
7	Other <i>(Please specify)</i>	

- 6.1.5 How did you contribute to the initiation and implementation of this programme? *(SRQ 3.1)*

Participating	-	1	
Preparing awareness documents	-	2	
Conducting workshops	-	3	
Coordinating programmes	-	4	
No participation	-	5	
Other <i>(Please specify)</i>	-	6

- 6.2 Do you think that the strengthened basic SBRM has succeeded in establishing efficiency in resource management at school-level? *(SRQ 3.1)*

Yes - 1 No - 2

☐

- 6.2.1 What do you mean by efficiency? *(SRQ 3.1)*

.....

- 6.3 Under strengthened basic SBRM, additional responsibilities were given with effect from the year 2000. As a result has there been an increase in workload (other than normal duties) for the following groups? *(SRQ3.1b)*

1. Principals	Yes	1	No	2
2. Deputy Principals	Yes	1	No	2
3. Sectional heads	Yes	1	No	2
4. Subject coordinators	Yes	1	No	2
5. Grade coordinators	Yes	1	No	2
6. Other staff	Yes	1	No	2

- 6.3.1 Has the way in which the principal spends his/her time at work changed after 2000? *(SRQ 3.1b)*

Yes - 1 No - 2

☐

- 6.3.2 If 'Yes' to what extent do you agree that any of the following changes apply in your school? (1 = Strongly Agree. 2 = Agree. 3 = Undecided. 4 = Disagree. 5 = Strongly Disagree) (SRQ 3.1b)

Ser. No.	Statement	Agree		Neutral	Disagree	
1.	Increased administrative workload	1	2	3	4	5
2.	Less time spent on academic/curriculum purposes	1	2	3	4	5
3.	Less time spent on decision-making	1	2	3	4	5
4.	Principal-pupil distance increased	1	2	3	4	5
5.	More time spent for meetings at zonal, provincial and national levels	1	2	3	4	5
6.	More involvement with parents	1	2	3	4	5
7.	Other (Please specify)	1	2	3	4	5

- 6.4 What procedures do you follow in procuring consumables and perishables at school level? (1 = Strongly Agree. 2 = Agree. 3 = Undecided. 4 = Disagree. 5 = Strongly Disagree) (SRQ 3.1b)

Ser. No.	Procedures	Agree		Neutral	Disagree	
1.	Requirements for consumables and perishables obtained from individual subject teachers annually	1	2	3	4	5
2.	Requirements for consumables and perishables obtained from individual sections annually	1	2	3	4	5
3.	Principal decides what consumables and perishables are needed	1	2	3	4	5
4.	School purchasing committee decides the quota in accordance with the financial allocation	1	2	3	4	5
5.	Open tender procedures	1	2	3	4	5
6.	Evaluating bids by the school evaluation committee	1	2	3	4	5
7.	Ad-hoc decision-making	1	2	3	4	5
8.	Other (Please specify)	1	2	3	4	5

- 6.5. Please indicate in order of importance to the principal the advantages derived from the introduction of strengthened basic SBRM. (1 = is the most important). (SRQ 3.1c)

Advantages	Priority
1. School determines its own priorities	
2. Ability to target resources	
3. Better school resource information	
4. Improvements in delegated services	
5. More efficient use of resources	
6. More freedom and flexibility in school-level management	
7. Easy way to acquire consumables and perishables in time	

- 6.6 What are the practical problems and issues to emerge as a result of implementation of strengthened basic SBRM in your school compared to the basic SBRM and non-SBRM regimes? (SRQ 3.1d)

Problem or issue area	Problem/Issue	Yes	No
A. Students	1. More practical work needed	1	2
	2. Other (Please specify)	1	2
B. Teachers	1. Increased workload	1	2
	2. Increased administrative work	1	2
	3. Lack of knowledge of usage of learning resources in appropriate lessons	1	2
	4. Other (Please specify)	1	2
C. School	1. Storage problems	1	2
	2. Poor quality of learning materials	1	2
	3. Lack of supervision and monitoring	1	2
	4. Additional work of recording and reporting by the principals to zonal, provincial and national level	1	2
	5. Lack of local suppliers	1	2
	6. Funds not received from ZEOs and PDEs	1	2
	7. Other (Please specify)	1	2

- 6.7 What are your suggestions and recommendations for the sustainability and further improvement of the programme? (SRQ3.3c; KRQ 4.0)

.....

Section 7 – Non-pilot schools of the extension of school-based resource management

(This part is to be completed only by non-pilot SBRM schools)

I believe you are aware of the extension of school-based resource management programme, which has been implemented in schools in one zone in your province, although your school is not involved in the said programme. Schools implementing the said programme have received more money to purchase inexpensive capital learning equipment other than consumables and perishables at school-level. But your school needs to fulfil the school-level requirements for the teaching and learning process. Your answers to the following questions are expected to show how you fulfil the school-level requirements for the provision of inexpensive capital learning equipment.

- 7.1 Do you have a 'school purchasing committee'? (SRQ 3.2a)

Yes - 1 No - 2



7.1.1 How often did they meet in: (SRQ3.2a)

(a) 2000 - times (b) 2001 - times
(c) 2002 - times

7.2 Do you have a 'school evaluation committee'? (Please circle as appropriate)
(SRQ 3.2a)

Yes - 1 No - 2

☐

7.2.1 How often did they meet in: (SRQ 3.2a)

(a) 2000 - times (b) 2001 - times
(c) 2002 - times

7.3 Do you have a school 'Quality Inputs Bank Account'? (SRQ 3.2a)

Yes - 1 No - 2

☐

7.4 How do you acquire the inexpensive capital learning equipment required for the teaching and learning? (SRQs 3.2a; 3.3a)

Ser. No.	Method	Yes	No
1.	Provided by MEHE	1	2
2.	Provided by PME	1	2
3.	Provided by PDE	1	2
4.	Provided by ZEO	1	2
5.	Provided by school it self	1	2
6.	Provided by parents	1	2
7.	Other (Please specify)	1	2

7.5 Are the teachers utilizing learning equipment in the process of teaching at the classroom? (SRQs 3.2a; 3.3a)

Teachers never use it - 1
1% - 25% teachers use it - 2
26% - 50% teachers use it - 3
51% - 75% teachers use it - 4
76% - 100% teachers use it - 5

7.5.1 What are pupils' reactions in usage of learning equipment in relation to the teaching process? (SRQs 3.2a; 3.3a)

Pupils dislike using equipment - 1
1% - 25% pupils are like to use equipment - 2
26% - 50% pupils are like to use equipment - 3
51% - 75% pupils are like to use equipment - 4
76% - 100% pupils are like to use equipment - 5

- 7.6 Do you think that you should have more resource allocation powers and that authority should be delegated to school-level? (SRQ 3.3; KRQ 4)

Yes - 1 No - 2

☐

- 7.7 What are your suggestions for the introduction of extension of school-based resource management to all the schools? (KRQ 4.0)

.....

Section 8 – The extension of school-based resource management (SBRM)
(This part not applicable for extension of SBRM non-pilot school principals)

I believe you are aware of that, in the year 2000 selected schools have been devolved purchasing power and authority to acquire inexpensive capital learning equipment at school level. Your school is involved in this programme; hence, you have received more money to purchase inexpensive capital learning equipment other than consumables and perishables. This section expected to gather data in schools which have power and authority to acquire inexpensive capital learning equipment at school level; it is used the term as the extension of SBRM.

- 8.1 Are you aware of the extension of SBRM pilot programme of provision of inexpensive capital learning equipment? (SRQ 3.2)

Yes - 1 No - 2

☐

- 8.1.1 What are the ideas behind this programme as you think? (SRQ 3.2)

1.
 2.
 3.

- 8.1.2 Who were involved in the initiation of this programme? (SRQ 3.2a)

World Bank	-	1	FC	-	7
ADB	-	2	NPD	-	8
UNESCO	-	3	PME	-	9
NEC	-	4	PDE/ZEO	-	10
MEHE	-	5	Other (Please specify)	-	11
MFP	-	6			

8.1.3 What are your views on the intervention of international donors in the initiation and implementation of the extension of SBRM for the system? (SRQ 3.2)

1.
2.
3.

8.1.4 What have been the main reasons for the introduction of the extension of SBRM? (Please place in order of priority from 1 (top priority) to 5). (SRQ 3.2)

Ser. No.	Reasons	Priority
1	World Bank influence and intervention	
2	To implement the government policy	
3	To establish an efficient school management system	
4	To improve the students' performance	
5	To give power and authority to the implementation level	
6	Unknown reasons	
7	Other (Please specify)	

8.1.5 How did you contribute to the initiation and implementation of this programme? (SRQ 3.2)

Participating	-	1	
Preparing awareness documents	-	2	
Conducting workshops	-	3	
Coordinating programmes	-	4	
Formulating the mechanism	-	5	
Membership of the focus groups	-	6	
No contribution	-	7	
Other (Please specify)	-	8

8.2 Do you think that the extension of SBRM has improved the efficiency with which resources are used in the school system? (SRQs 3.2; 3.3)

Yes - 1 No - 2

☐

8.2.1 What do you mean by efficiency? (SRQ 3.2a)

.....

8.2.2 In what ways, if any, has efficiency been improved? (SRQ 3.2a)

.....

- 8.3 Since the introduction of the extension of SBRM has the process by which money is allocated to individual sections/grades changed? (SRQ 3.2a)

Yes - 1 No - 2

☐

- 8.4 Do you have a 'school purchasing committee'? (SRQ 3.2a)

Yes - 1 No - 2

☐

- 8.4.1 How often did they meet in: (SRQ 3.2a)

(a) 2000 - times (b) 2001 - times
(c) 2002 - times

- 8.4.2 Do you have a 'school evaluation committee'? (SRQ 3.2a)

Yes - 1 No - 2

☐

- 8.4.3 How often did they meet in: (SRQ 3.2a)

(a) 2000 - times (b) 2001 - times
(c) 2002 - times

- 8.4.4 Do you have a school 'Quality Inputs Bank Account'? (SRQ 3.2)

Yes - 1 No - 2

☐

- 8.4.5 Who is directly involved in the determination of spending allocation within the school? (SRQ 3.2)

Ser. No.	Involvements	Yes	No
1.	Principal	1	2
2.	Deputy principals	1	2
3.	Sectional heads	1	2
4.	Grade coordinators	1	2
5.	Subject coordinators	1	2
6.	School purchasing committee	1	2
7.	School evaluation committee	1	2
8.	Parents	1	2
9.	Non-teaching staff	1	2
10.	Pupils	1	2
11.	Ad-hoc basis	1	2
12.	Other (Please specify)	1	2

- 8.4.6 What procedures do you follow in procuring inexpensive capital learning equipment at school level? (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree) (SRQ 3.2)

Ser. No.	Procedures	Agree		Neutral	Disagree	
1.	Requirements for learning resources obtained from individual subject teachers annually	1	2	3	4	5
2.	Requirements for learning resources obtained from individual sections annually	1	2	3	4	5
3.	Principal decides what to purchase	1	2	3	4	5
4.	School purchasing committee decides the quota in accordance with the financial allocation	1	2	3	4	5
5.	Open tender procedures	1	2	3	4	5
6.	Evaluating bids by the school evaluation committee	1	2	3	4	5
7.	Ad-hoc decision-making	1	2	3	4	5
8.	Other (Please specify)	1	2	3	4	5

- 8.4.7 Are the suppliers delivered the goods in time? (SRQ 3.2)

Yes - 1 No - 2

☐

- 8.4.8 What difficulties emerged in adopting school-level procurement process? (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree) (SRQ 3.3b)

Ser. No.	Difficulties	Agree		Neutral	Disagree	
1.	Lack of local suppliers	1	2	3	4	5
2.	Poor quality of materials	1	2	3	4	5
3.	Transport difficulties	1	2	3	4	5
4.	High unit cost	1	2	3	4	5
5.	Lack of storages facilities at school level	1	2	3	4	5
6.	Lack of safekeeping of equipment in classrooms	1	2	3	4	5
7.	Mismatch with the desired requirements	1	2	3	4	5
8.	Other (Pl. specify)	1	2	3	4	5

- 8.5 Please indicate in order of importance to the principal the advantages derived from the introduction of the extension of SBRM. (1= is the most important). (SRQ 3.3b)

Advantages	Priority
1. School determines its own priorities	
2. Ability to target resources	
3. Better school financial information	
4. Improvements in delegated services	
5. More efficient use of resources	
6. More freedom and flexibility in school-level management	

- 8.5.1 Please indicate in order of importance to the principal the disadvantages associated with the extension of school-based resource management. (*1= is the most important*). (SRQ 3.3b)

Disadvantages	Priority
1. More time spent on administrative work	
2. High degree of demand on my time	
3. Less time allocated for teaching-learning issues	
4. Insufficient funding	
5. Increased stress for principals and teachers	

- 8.5.2 Do you think that there is any (positive) relationship between the extension of SBRM and increasing student performance? (SRQ 3.3c)

Yes - 1 No - 2

☐

Please give reasons for your answer:

.....

- 8.5.3 Since 2000, given the additional responsibilities assumed under the extension of SBRM, has there been an increase in workload (other than normal duties) for any of the following: (SRQ 3.3)

Ser. No.	Responsibilities	Yes	No
1.	Principal	1	2
2.	Deputy principals	1	2
3.	Sectional heads	1	2
4.	Subject coordinators	1	2
5.	Grade coordinators	1	2
6.	Other staff	1	2

- 8.5.4 Has there been a way in which the principal spends his/her time at work changed since 2000? (SRQ 3.3)

Yes - 1 No - 2

☐

- 8.5.5 If 'Yes' to what extent do you agree that any of the following changes apply in your school? (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree) (SRQ 3.3)

Ser. No.	Changes	Agree		Neutral	Disagree	
1.	Increased administrative workload	1	2	3	4	5
2.	Less time spent on academic/curriculum purposes	1	2	3	4	5
3.	Less time spent on decision-making on teaching learning process	1	2	3	4	5
4.	More distanced from teachers	1	2	3	4	5
5.	More distanced from pupils	1	2	3	4	5
6.	More time spent in meetings at zonal, provincial and national levels	1	2	3	4	5
7.	More involvement with parents	1	2	3	4	5

- 8.6 Are the teachers utilizing learning equipment in the process of teaching at the classroom? (SRQ 3.3)

Teachers never use it	-	1
1% - 25% teachers use it	-	2
26% - 50% teachers use it	-	3
51% - 75% teachers use it	-	4
76% - 100% teachers use it	-	5

- 8.6.1 What are pupils' reactions in usage of learning equipment in relation to the teaching process? (SRQ 3.3)

Pupils dislike using equipment	-	1
1% - 25% pupils are like to use equipment	-	2
26% - 50% pupils are like to use equipment	-	3
51% - 75% pupils are like to use equipment	-	4
76% - 100% pupils are like to use equipment	-	5

- 8.7 What implementation issues emerged in relation to the extension of SBRM? (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree) (SRQ 3.3b)

Ser. No.	Issues	Agree		Neutral	Disagree	
1.	Inadequate training for school-based resource management	1	2	3	4	5
2.	Inadequate advice and guidelines from provincial and national level	1	2	3	4	5
3.	Lack of teacher training	1	2	3	4	5
4.	Other (Please specify)	1	2	3	4	5

- 8.8 What are your suggestions and recommendations for the sustainability and further improvement of the programme? (SRQ 3.3c; KRQ 4.0)

.....

If you have any comments or observations relating to any of the above areas, please make them below:

.....

Signature of the Principal (*Optional*):.....

Name of the Principal:

Date: 2002

<p><i>THANK YOU FOR COMPLETING THE QUESTIONNAIRE</i></p>

Appendix 3.5: The list of schools selected for the in-depth study

Pilot Schools

Province	Education Zone	Type	Ser. No.	Name and Address of the School	Medium of instruction	Gender	Location
Western	Sri Jayawardenepura	1AB Nat	1	President College, Rajagiriya	Sinhala (1-13S)	Mix	Urban
		1AB Prov.	2	Samuddaradevi BMV, Nugegoda	Sinhala (1-13S)	Girls	Urban
		1C	3	Angoda Sri Rahuala MV, Mulleriyawa	Sinhala (1-13AC)	Mix	Semi-urban
		2	4	Kudabuthgamuwa Somadevi BKV, Mulleriyawa	Sinhala (1-11)	Girls	Semi-urban
Central	Hanguranketa	3	5	Ihala Bomiriya KV, Kaduwela	Sinhala (1-5)	Mix	Rural
		1AB Prov.	6	Poramadulla MMV, Rikillagaskada	Sinhala (6-13S)	Mix	Rural
		1C	7	Gangapalatha MV, Gonaganthenna	Sinhala (1-13AC)	Mix	Rural
		2	8	Poramadulla KV, Rikillagaskada	Sinhala (1-11)	Mix	Rural
North Western	Nikkawaratiya	3	9	Bambaragama V, Hewaheta	Sinhala (1-9)	Mix	Rural
		1AB Nat.	10	Sri Parakrama MMV, Kobeigane	Sinhala (1-13S)	Mix	Rural
		1C	11	Welipothuwewa Muslim MV, Boraluwa	Tamil (1-13AC)	Mix	Rural
		2	12	Dalukgolla Sri Dammarakitha V, Hulugalla	Sinhala (1-11)	Mix	Rural
Sabaragamuwa	Nnivitigala	3	13	Kuda Mithawa PV, Monnakulama	Sinhala (1-5)	Mix	Rural
		1AB Nat	14	Karawita Pannananda MMV, Uda-Karavita	Sinhala (1-13S)	Mix	Rural
		1AB Prov	15	Kalawana Gamini MMV, Kalawana	Sinhala (1-13S)	Mix	Rural
		1C	16	Karagoda MV, Karangoda, Ratnapura	Sinhala (1-13AC)	Mix	Rural
		2	17	Gamikkanda V, Ayagama	Sinhala (1-11)	Mix	Rural
		3	18	Dellabada Jayanthi V, Karangoda, Ratnapura	Sinhala (1-9)	Mix	Rural

Non Pilot Schools

Province	Education Zone	Type	Ser. No.	Name and Address of the School	Medium of instruction	Gender	Location
Western	Homagama	1AB Nat	1	Hanwella Rajasinghe MMV, Hanwella ***	Sinhala (6-13S)	Mix	Semi-urban
		1AB Prov.	2	Siri Piyaratne MMV, Padukka	Sinhala (6-13S)	Mix	Rural
		1C	3	St. John Bosco MV, Kaluagala	Sinhala (1-13AC)	Mix	Rural
		2	4	Thunmana Sri Sumanajothi MV, Hanwella ***	Sinhala (1-11)	Mix	Semi-urban
		3	5	Kahatuduwa KV, Polgasovita	Sinhala (1-9)	Mix	Rural
Central	Walapane	1AB Prov.	6	Ragala TMV, Halgranoya	Tamil (1-13S)	Mix	Rural
		1C	7	Senarath MV, Kurupananawela	Sinhala (1-13AC)	Mix	Rural
		2	8	Pannala V, Kubalgamuwa	Sinhala (1-11)	Mix	Rural
		3	9	Rathnayake Pathana V, Halgranoya	Sinhala (1-9)	Mix	Rural
		1AB Nat	10	UB Wanninayake MMV, Galgamuwa	Sinhala (1-13S)	Mix	Rural
North Western	Maho	1C	11	Sri Sangabo MV, Wannu Kudawewa, Galgamuwa	Sinhala (1-13AC)	Mix	Rural
		2	12	Siyabalagsgamuwa KV, Maho	Sinhala (1-11)	Mix	Rural
		3	13	Hakwatunaoya Janapada V, Thalakolawewa	Sinhala (1-5)	Mix	Rural
		1AB Nat	14	Kolonna MMV, Kolonna	Sinhala (1-13AC)	Mix	Rural
		1AB Prov.	15	Kularatne MMV, Godakawela ***	Sinhala (1-13AC)	Mix	Rural
Sabaragamuwa	Embilipitiya	1C	16	Demuwatha MV, Rakwana	Sinhala (1-13AC)	Mix	Rural
		2	17	Nindagampetessa V, Embilipitiya	Sinhala (1-11)	Mix	Rural
		3	18	Mahagama V, Pallededa	Sinhala (1-5)	Mix	Rural

Note: *** Not responded (At the final stage they withdrawn for given details)

Appendix 3.6: In-depth study questionnaire for selected school principals

Principal,

.....MMV / MV/ BMV / KV

.....

Dear Sir / Madam,

The survey questionnaire for gathering data on school financing and resource management of schools in Sri Lanka

This questionnaire is aimed at gathering data and information regarding the school financing and resource management of schools in Sri Lanka. Further, the questionnaire aims to identify the causes, effects and the impact that have emerged in the schools as a result of introduction of norm-based unit cost resource allocation mechanism and school-based resource management by the Ministry of Education and Higher Education from year 2000. Data and information gathered will be used for a thesis due to be submitted for the MPhil/PhD degree of the Institute of Education, University of London.

Please complete the questionnaire, in your language (Sinhala, Tamil or English) according to the guidelines stipulated in each section/question and kindly send to the following address, using the stamped envelope provided with the questionnaire.

Jayantha Balasooriya, 66/A/12, Yakkala Road, Bandarawatta, Gampaha.

Your co-operation in this regard is very much appreciated.

Jayantha Balasooriya

Institute of Education, University of London
London - UK
December 1, 2001

Note: This is a specimen of the questionnaire

The survey questionnaire for gathering data on school financing and resource management of schools in Sri Lanka

School ID

--	--	--	--	--	--	--	--

Instruction: Please circle appropriate number(s).

❖ Name of School and Address:

----- MMV/MV/BMV/KV/V

❖ Type of school:

1AB (National)	-	1	1AB (Provincial)	-	2
1C	-	3	Type 2	-	4
Type 3	-	5			

Section 1 – Before (1997 - 1999) and after (2000 – 2002) implementation of norm-based unit cost resource allocation mechanism

1.1 In general what is the composition of pupils according to their parents' income level? (SRQ 2.3.2)

Pupils' parents income level annually	Percentage	Code
More than SLRs 6000.00		
SLRs 2500.00 – SLRs 5999.00		
Less than SLRs 2500.00		
Total	100%	

1.2 Please give details of the learning equipment you received by subjects and by year. *(Please delete inappropriate word) (SRQs 2.3.1; 2.4a)*

Year: 1997/1998/1999/2000/2001/2002 *(Please provide each sheet per year and per subject)*

Grade	Subject	Item	Number required	Number provided	Gap	Unit cost per item (SLRs)	Total cost (SLRs)
5	Languages (Sinhala/Tamil)/ English/Mathematics/ Primary						
6	Languages (Sinhala/Tamil)/ English/Mathematics/ Environmental Studies						
9	Languages (Sinhala/Tamil)/ English/Science/ Mathematics / Social Studies						
10 - 11	Languages (Sinhala/Tamil) / English/Science/Mathematics/ Social Studies						

Year: 1997/1998/1999/2000/2001/2002 *(Please provide each sheet per year and per subject) (SRQs 2.3.1; 2.4a)*

Grade	Subject	Item	Number required	Number provided	Gap	Unit cost per item (SLRs)	Total cost (SLRs)
12 - 13	GCE (AL) Science						
12 - 13	GCE (AL) Art/Comm.						

[illegible]

Section 3 – Strengthened basic school-based resource management

- 3.1 What amounts did you receive for the purchasing of consumables and perishables as a result of strengthened basic SBRM and what was the actual expenditure of such allocations? (SRQ 3.1c)

Grade and subject	Allocation and expenditure by year (SLRs)					
	2000		2001		2002	
	Allo.	Exp.	Allo.	Exp.	Allo.	Exp.
1 - All the subjects						
2 - All the subjects						
3 - All the subjects						
4 - All the subjects						
5 - All the subjects						
6 - All the subjects						
7 - All the subjects						
8 - All the subjects						
9 - All the subjects						
10 - All the subjects						
11 - All the subjects						
12 - All the subjects						
13 - All the subjects						
Total						

Section 4 – The extension of school-based resource management

(This part to be completed only by the extension of SBRM pilot school principals)

- 4.1 What amounts did you receive as a result of the extension of SBRM and what was the actual expenditure of such allocations? (SRQ 3.3a)

Grade and subject	Allocation and expenditure by year (SLRs)					
	2000		2001		2002	
	Allo.	Exp.	Allo.	Exp.	Allo.	Exp.
1 - All subjects						
2 - All subjects						
3 - All subjects						
4 - All subjects						
5 - All subjects						
6 - All subjects						
7 - All subjects						
8 - All subjects						
9 - All subjects						
10 - All subjects						
11 - All subjects						
12 - All subjects						
13 - All subjects						
Total						

4.1.2 What amounts did you release to the sections, grades by subjects in your schools? (SRQ 3.2a)

Year: 2000/2001/2002 (Please complete separately for each year)

Section Cycle	Grade	Allocation and expenditure by subject (SLRs)										Other subjects	Total
		Sinhala/ Tamil	English	Mathematics	Science	Social Studies	Env. Studies	Primary	GCE AL Science subjects				
Primary 1 – 5 (Allocation)	1				NA	NA	NA		NA				
	2												
	3												
	4												
	5												
Primary 1- 5 (Expenditure)	1				NA	NA	NA		NA				
	2												
	3												
	4				NA	NA	NA		NA				
	5												
Secondary 6 - 11 (Allocation)	6												
	7												
	8							NA	NA				
	9												
	10												
	11												
	12												
Secondary 6 - 11 (Expenditure)	6												
	7												
	8												
	9												
	10												
	11												
	12												
Collegiate level 12 – 13: Allocation	12	NA			NA	NA	NA	NA					
	13												
Collegiate level 12 – 13: Expenditure	12	NA			NA	NA	NA	NA					
	13												

Key: NA = Not Applicable

Section 5 – Schools not piloting the extension of school-based resource management
(This part to be completed only by non-pilot SBRM school principals)

I believe you are aware of the extension of school-based resource management programme, which has been implemented in one zone in your province, although your school is not involved in the said programme. Schools implementing the said programme have received more money to purchase inexpensive capital learning equipment other than consumables and perishables at school level. But your school needs to fulfil the school-level requirements for the teaching and learning process. Your answers to the following questions are expected to show how you fulfil the school-level requirements on the provision of inexpensive capital learning equipment.

5.1 What amounts did you receive for learning resources for the period of year 2000 to 2002? (SRQ 3.3a)

Grade & Subject	2000		2001		2002	
	All.	Exp.	All.	Exp.	All.	Exp.
1 – All Subjects						
2 – All Subjects						
3 – All Subjects						
4 – All Subjects						
5 – All Subjects						
6 – All Subjects						
7 – All Subjects						
8 – All Subjects						
9 – All Subjects						
10 – All Subjects						
11 – All Subjects						
12 – All Subjects						
13 – All Subjects						

If you have any comments or observations relating to any of the above areas, please make them below:

.....

Signature of the Principal (Optional):.....

Name of the Principal:

Date: 2002

THANK YOU FOR COMPLETING THE QUESTIONNAIRE

Appendix 3.7: The questionnaire for planners

Mr./Mrs./Miss./Ms.

Director/Deputy Director/Asst. Director
MHRDECA/Prov. Dept. of Edu./Zonal Edu. Office
.....

Dear Sir / Madam,

The survey questionnaire for gathering data on school financing and resource management of schools in Sri Lanka

This questionnaire is aimed at gathering data and information regarding the school financing and resource management of schools in Sri Lanka. Further, the questionnaire aims to identify the impact, causes and effects that have emerged in the schools as a result of induction of norm-based unit cost resource allocation mechanism and school-based resource management by the Ministry of Education and Higher Education from the year 2000. Data and information gathered will be used for a thesis due to be submitted for the MPhil/PhD degree of the Institute of Education, University of London.

Please complete the questionnaire, in your language (Sinhala, Tamil or English) according to the guidelines stipulated in each section/question and kindly send to the following address, using the stamped envelope provided with the questionnaire.

Jayantha Balasooriya, 66/A/12, Yakkala Road, Bandarawatta, Gampaha.

Your co-operation in this regard is very much appreciated.

Jayantha Balasooriya

Institute of Education, University of London
London - UK
December 1, 2001

Note: This is a specimen of the questionnaire

The survey questionnaire for gathering data on school financing and resource management of schools in Sri Lanka

Only for researcher's use

Category	Code	Status
ZEP	1	Pilot
ZEP	2	Non-pilot
PEP	3	-
NEP	4	-

Instruction: Please circle appropriate number(s).

Section 1 - General information

1.1 Name:

1.2 Designation:

1.3 Official address:

1.4 Responding level belongs to:

Zonal level (Pilot) - 1 Zonal level (Non-pilot) - 2
Provincial level - 3 National level - 4

☐

1.5 When were you assigned to your present position:

..... Date Month Year

Section 2 - Before implementation of norm-based unit cost resource allocation mechanism (1997 - 1999)

2.1 What were the characteristics of the traditional school financial management system (which prevailed before implementation of norm-based unit cost resource allocation mechanism)? (SRQs 2.2; 2.4)

Ser. No.	Equity characteristics	Yes	No
1	The resources were provided by the government on an annual basis to schools	1	2
2	Principals negotiated with the ZEO, PDE and ME respectively to acquire resources	1	2
3	Greatly influenced by politicians	1	2
4	Greatly influenced by bureaucratic (education officers)	1	2
5	Ad-hoc decision-making	1	2
6	Other (Please specify)	1	2

- 2.2 What norms did you follow to determine the appropriate provision of learning equipment and materials at school level? (SRQs 2.2; 2.3)

Ser. No.	Norms	Yes	No
1	Standard norms and criteria provided by ME	1	2
2	Norms and criteria decided at provincial level	1	2
3	Norms and criteria decided at zonal level	1	2
4	Ad-hoc decision-making	1	2
5	Other (Please specify)	1	2

- 2.2.1 On what basis did you distribute the allocation among the provinces/zones/schools: (SRQ 2.3.1a)

Procedures	Yes	No
1. Provincial/zonal/schools bids	1	2
2. Based on pupil numbers	1	2
3. According to provincial/zonal/school development plans	1	2
4. Other (Please specify)	1	2

- 2.3 Were the funds you allocated adequate for schools' needs? (Please circle appropriate number) (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree) (SRQ 2.4)

Statement	Agree		Neutral	Disagree	
1. Resources provided were adequate	1	2	3	4	5
2. Resources provided were fairly adequate	1	2	3	4	5
3. Resources provided were inadequate	1	2	3	4	5
4. Other (Please specify)	1	2	3	4	5

- 2.4 What difficulties in matching resources to schools' individual needs did you experience? (SRQ 2.3)

Ser. No.	Difficulties	Yes	No
1	Mismatch between allocation of resources and student numbers	1	2
2	No standard norms	1	2
3	No formal distributional procedures	1	2
4	Lack of identification of actual needs by school	1	2
5	Lack of identification of actual needs by zone	1	2
6	Lack of planning practices	1	2
7	Priorities frequently change according availability of funds	1	2
8	Political influences	1	2
9	Bureaucratic (education) influences	1	2
10	Other (Please specify)	1	2

2.5 How were disadvantaged schools treated? (SRQ 2.3.1b)

Ser. No.	Incentives for disadvantaged schools	Yes	No
1	Provided additional allocation to these schools	1	2
2	Provided special incentives to teachers in these schools	1	2
3	Provided special incentives to principals in these schools	1	2
4	Provided special allocations to pupils in these schools	1	2
5	Other (Please specify)	1	2

2.6 How fair do you think the traditional resource allocation system is? (SRQ2.2b)

Ser. No.	Statements	Yes	No
1	Resources allocation is based on pupil numbers	1	2
2	Entire requirements are provided	1	2
3	Transparent resource allocation mechanism	1	2
4	Formal distributional procedures	1	2
5	Special allocation for pupils with special needs	1	2
6	Special allocation for disadvantaged schools	1	2
7	Allocations are adequate for all schools	1	2
8	Other (Please specify)	1	2

2.7 Please indicate in order of importance to the principal the advantages you perceived in the traditional school financing process? (1= is the most important). (SRQ 2.2b)

Advantages	Priority
1. Equality of provision to all pupils	
2. Equality of provision to all schools	
3. Special attention paid to disadvantaged schools	
4. Other (Please specify)	

2.7.1 Please indicate in order of importance to the principal the disadvantages you perceived in the traditional school financing process? (1= is the most important). (SRQ 2.2b)

Disadvantages	Priority
1. Lack of transparency in resource allocation	
2. No norms or criteria followed for provision of resources	
3. Political and bureaucratic influences	
4. Other (Please specify)	

2.8 What problems and issues emerged in the implementation of the traditional school financing process? (SRQ 2.3)

1.
2.
3.

Section 3 - After implementation of the norm-based unit cost resource allocation mechanism (NBUCRAM) (2000 – 2002)

3.1 Are you aware of the new norm-based unit cost resource allocation mechanism? (SRQ 2.1)

Yes - 1 No - 2

☐

3.1.1 What in order of priority, do you think, are the reasons for introduction of NBUCRAM? (SRQ 2.1)

Ser. No.	Reasons	Priority
1	World Bank influence and intervention	
2	To reduce the vast disparities in resource allocation between the schools (to establish equity across the system)	
3	To improve the efficiency of resource use in schools	
4	To establish school financial policies	
5	To establish a school planning culture	
6	Unknown reasons	
7	Other (Please specify)	

3.1.2 How did you contribute to the initiation and implementation of this programme? (SRQ 2.1)

Participating - 1
 Preparing awareness documents - 2
 Conducting workshops - 3
 Coordinating programmes - 4
 Formulating the mechanism - 5
 Membership of the focus groups - 6
 No participation - 7
 Other (Please specify) - 8

3.2 Do you think that NBUCRAM has succeeded in ensuring equity in the provision of learning resources in schools? (SRQ 2.1)

Yes - 1 No - 2

☐

3.2.1 If 'Yes' do you think that NBUCRAM allocates resources equitable (a) to schools, (b) to pupils? (SRQ 2.1)

Yes - 1 No - 2

☐

- 3.3 Please indicate your attitude to the following statements in relation to the major changes between the pre and post implementation of NBUCRAM? (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree) (SRQ 2.2)

Ser. No.	Changes	Agree		Neutral	Disagree	
1	NBUCRAM is a better way of resourcing schools than traditional school funding	1	2	3	4	5
2	The current NBUCRAM for resource allocation to schools operates fairly	1	2	3	4	5
3	The school is satisfied with the level of consultation which takes place in relation to the introduction and implementation of this new mechanism	1	2	3	4	5
4	The current NBUCRAM allocation is not fairly distributed among pupils	1	2	3	4	5
5	Schools have received more resources as a result of the introduction of NBUCRAM	1	2	3	4	5
6	Disadvantaged schools have become entitled to additional amounts	1	2	3	4	5
7	NBUCRAM provides a more transparent mechanism of resource allocation	1	2	3	4	5
8	Schools receive what they are entitled to by the formula	1	2	3	4	5

- 3.4 Can you assure the stability of the programme? (SRQ 2.6)

Yes - 1 No - 2

☐

- 3.4.1 If 'Yes' what evidence do you have?

1.
2.
3.

- 3.5 What are the practical problems and issues emerged as a result of implementation of NBUCRAM? (SRQ 2.5)

1.
2.
3.

- 3.6 What are your suggestions and recommendations for the sustainability and further improvement of the programme? (SRQ 2.6; KRQ 4.0)

1.
2.
3.

Section 4 - Basic school-based resource management (1997 - 1999)

Before the year 2000 some schools (i.e. IAB National and Provincial) had the purchasing power as well as authority to acquire consumables and perishables at school level. These schools will be termed as basic SBRM. Other schools become automatically the non-SBRM. This section is dealt with collecting data from basic and non-SBRM.

- 4.1 What were the characteristics that have been practiced in regimes of basic SBRM and non-SBRM, (which prevailed before implementation of strengthened basic SBRM)? (SRQ 3.1)

Ser. No.	Efficiency characteristics	Yes	No
1	Requests made by the school and ZEO were fully granted by PEAs and MEHE respectively	1	2
2	A highly centralized and uniform management process	1	2
3	Highly controlled and accountable to higher authorities	1	2
4	Provision was of low quality	1	2
5	Less autonomy and flexibility for decision-making in terms of completion of school level requirements than now	1	2
6	School principals only played the role of coordinator	1	2
7	School principals often faced audit queries	1	2
8	Ad-hoc decision-making	1	2
9	Other (Please specify)	1	2

- 4.2 To what extent did the basic and non-SBRM regimes of resource allocation encourage schools to use their resources efficiently? (SRQ 3.1)

Ser. No.	Characteristics	Yes	No
1	By the school/principal being held accountable for the efficient use of resources	1	2
2	By encouraging schools to obtain the best possible student performance	1	2
3	By enabling schools to make their own resources decisions	1	2
4	By resource decisions for schools being made at provincial and zonal levels which has better information about what is needed	1	2
5	By resource allocation decision being made at provincial and zonal levels so saving principals' time	1	2
6	By resource allocation decision being made at provincial and zonal levels where they can obtain lower prices and save on costs through bulk ordering	1	2
7	By resource decisions for schools being made at national level which has better information about what is needed	1	2
8	By resource allocation decision being made at national level so saving principals' time	1	2

9	By resource allocation decision being made at national level where they can obtain lower prices and save on costs through bulk ordering	1	2
10	Other <i>(Please specify)</i>	1	2

- 4.3 Please indicate in order of importance to the principal the advantages you perceived in the period of basic and non-SBRM were existence? (*1 = is the most important*). (SRQ 3.1)

Advantages	Priority
1. Best use of available resources	
2. Highly accountable by principals to higher authority	
3. Keeping low costs	
4. More efficient management of school resources at zonal than at school level	
5. Other <i>(Please specify)</i>	

- 4.4 Please indicate in order of importance to the principal the disadvantages you perceived in the period of basic and non-SBRM were existence? (*1 = is the most important*). (SRQ 3.1)

Disadvantages	Priority
1. Highly centralized and uniform school financing management	
2. No room for decision-making by principals at school level	
3. Principals not involved in policy decisions at provincial & national level	
4. Political and bureaucratic influences	
5. Other <i>(Please specify)</i>	

- 4.5 What problems and issues emerged during the period of basic SBRM and non-SBRM process? (SRQ 3.1)

1.
2.
3.

Section 5 – After implementation of strengthened basic school-based resource management

Since 2000, all the schools were entitled for purchasing power and authority to acquire consumables and perishables at school level. This is considered as a strengthened basic SBRM. This section is devoted to gather data on strengthened basic SBRM.

- 5.1 Are you aware of the strengthened basic SBRM programme? (SRQ 3.1a)

Yes - 1 No - 2

☐

5.1.1 What do you see as being the fundamental principles of this programme? (SRQ 3.1a)

Ser. No.	Fundamental principles	Yes	No
1	To delegate power and authority to school to meet their learning resource requirements	1	2
2	To establish efficient school management systems	1	2
3	To diminish delayed of provision of learning resources provided by the central level procurements	1	2
4	To increase community participation on making decisions in acquiring learning resources	1	2
5	Other (Please specify)		

5.1.2 What do you think have been the main reasons for the introduction of strengthened basic SBRM? (1 = is the most important). (SRQ 3.1a)

Ser.No.	Reasons	Priority
1	World Bank influence and intervention	
2	To implement government policy	
3	To establish an efficient school management system	
4	To increase the students' performance level	
5	To give power and authority to the implementation level	
6	Unknown reasons	
7	Other (Please specify)	

5.2 How did you contribute to the initiation and implementation of this programme? (SRQ 3.1)

Participating	-	1	
Preparing awareness documents	-	2	
Conducting workshops	-	3	
Coordinating programmes	-	4	
No contribution	-	5	
Other (Please specify)	-	6

5.3 Do you think that the strengthened basic SBRM has improved efficiency in resources management at school level? (SRQ 3.1)

Yes - 1 No - 2



5.3.1 What do you mean by efficiency? (SRQ 3.1)

1.
2.
3.

5.3.2 In what ways, if any, has efficiency, been improved? (SRQ 3.1c)

1.
2.

- 5.4 Please indicate in order of importance to the principal the advantages derived from the introduction of strengthened basic SBRM. (*1= is the most important*). (SRQ 3.1b)

Advantages	Priority
1. School determines its own priorities	
2. Ability to target resources	
3. Better school resource information	
4. Improvements in delegated services	
5. More efficient use of resources	
6. More freedom and flexibility in school level management	
7. Easy way to acquire consumables and perishables in time at school level	

- 5.4.1 Since 2000, given the additional responsibilities assumed under strengthened basic SBRM has there been an increase in your workload (other than normal duties) by MEHE and PEAs? (SRQ 3.1b)

Yes - 1 No - 2

☐

- 5.4.2 Has there been a way in which the planners spent their time at work changed since 2000? (SRQ 3.1b)

Yes - 1 No - 2

☐

- 5.4.3 If 'Yes' to what extent do you agree that any of the following changes apply in your school? (*1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree*) (SRQ 3.1b)

Ser. No.	Statement	Agree		Neutral	Disagree	
1.	Increased administrative workload	1	2	3	4	5
2.	Less time spent on supervision/planning purposes	1	2	3	4	5
3.	Less time spent on decision-making	1	2	3	4	5
4.	More time spent in meetings at zonal, provincial and national levels	1	2	3	4	5
5.	Other (<i>Please specify</i>)	1	2	3	4	5

- 5.5 Can you assure the stability of funding for the programme in the future? (SRQ 3.3c)

Yes - 1 No - 2

☐

- 5.5.1 If 'Yes' what evidence do you have?

1.
2.
3.

5.6 What are your suggestions and recommendations for the sustainability and further improvement of the programme? (SRQ 3.3c; KRQ 4.0)

1.
2.
3.

Section 6 - Non-pilot programme of the extension of school-based resource management (This part to be completed only by non-pilot zonal officials)

I believe you are aware of the extension of school-based resource management programme, which has been implemented in one zone in your province although your zone is not involved the said programme. Zones implementing the said programme have received more money to purchase inexpensive capital learning equipment other than consumables and perishables at school level. But schools in your zone also need to fulfil the school-level requirements for the teaching and learning process. Your answers to the following questions are expected to show how you fulfil the school-level requirements in relation to zonal level activities on the provision of inexpensive capital learning equipment.

6.1 How do you acquire inexpensive capital learning equipment required for the teaching and learning process in your zone? (SRQs 3.2a; 3.3)

Ser. No.	Methods	Yes	No
1	Provided by Ministry of Education and Higher Education	1	2
2	Provided by Provincial Ministry of Education	1	2
3	Provided by Provincial Department of Education	1	2
4	Provided by NGOs & other organizations	1	2
5	Borne by schools themselves	1	2
6	Other (Please specify)	1	2

6.2 Do you think that you should have more resource allocation powers and that authority should be delegated at school level? (SRQ 3.3c; KRQ 4.0)

Yes - 1 No - 2

☐

6.2.1 Is this consistent? Can zonal officers have more power and also the principals? (KRQ 4.0)

Yes - 1 No - 2

☐

6.3 What are your suggestions for introduction of school-based resource management programme in other zones? (KRQ 4.0)

1.
2.
3.
4.

Section 7 – The extension of school-based resource management
(This part not applicable for the extension of SBRM non-pilot zonal officials)

I believe you are aware on the extension of SBRM. The extension of SBRM denotes that the school granted power and authority to acquire inexpensive capital leaning equipment at school level. This section expected to gather data in schools which have power and authority to acquire inexpensive capital learning equipment at school level; it is termed as the extension of SBRM.

7.1 Are you aware of the extension of SBRM pilot programme of provision of inexpensive capital learning equipment? (SRQ 3.2)

Yes - 1 No - 2

☐

7.1.1 What do you think that have been the main reasons for the introduction of the extension of SBRM? (1 = is the most important). (SRQ 3.2a)

Ser. No.	Reasons	Priority
1	World Bank influence and intervention	
2	To implement government policy	
3	To establish an efficient school management system	
4	To increase the students' performance level	
5	To give power and authority to the implementation level	
6	Unknown reasons	
7	Other (Please specify)	

7.1.2 How did you contribute to the initiation and implementation of this programme? (Please circle appropriate numbers). (SRQ 3.2)

Participating	-	1	
Preparing awareness documents	-	2	
Conducting workshops	-	3	
Coordinating programmes	-	4	
Formulating the mechanism	-	5	
Membership of the focus groups	-	6	
No contribution	-	7	
Other (Please specify)	-	8

7.2 Do you think the extension of SBRM has improved efficiency in the allocation and use of resources at school level? (SRQs 3.2; 3.3)

Yes - 1 No - 2

☐

7.2.1 What do you mean by efficiency? (SRQ 3.2a)

1.
2.
3.

7.2.2 In what ways, if any, has efficiency, been improved? (SRQ 3.2a)

1.
2.
3.

7.2.3 Since the introduction of the extension of SBRM has the process by which money is allocated to individual provinces/zones/schools changed? (SRQ 3.2a)

Yes - 1 No - 2

☐

7.3 Please indicate in order of importance to the principal the advantages derived from the introduction of school-based resource management. (1 = is the most important). (SRQ 3.3b)

Advantages	Priority
1. School determines its own priorities	
2. Ability to target resources	
3. Better school financial information	
4. Improvements in delegated services	
5. More efficient use of resources	
6. More freedom and flexibility in school level management	
7. Other (Please specify)	

7.3.1 Since 2000, given the additional responsibilities assumed under the extension of SBRM has there been an increase in your workload (other than normal duties) by MEHE and PEAs? (SRQ 3.3b)

Yes - 1 No - 2

☐

7.4 Can you assure the stability of funding for the programme in the future? (SRQ 3.3c)

Yes - 1 No - 2

☐

7.4.1 If 'Yes' what evidence do you have?

1.
2.
3.

7.5 What are your suggestions and recommendations for the sustainability and further improvement of the programme? (KRQ 4.0)

1.
2.
3.

Section 8 - NBUCCRAM, Strengthened basic SBRM, and the extension of SBRM

8.1 What amounts did you release to the provinces? (This question to be completed only by National level officers). (SRQs 2.3.1; 3.2b; 3.3a)

Programme	Year *	Category	Sub Category	Allocation and Expenditure by Province (SLRs million)									
				Western	Central	Southern	North East	North Western	North Central	Uva	Sabaragamuwa	Sri Lanka	
NBUCCRAM	2000 2001 2002	Recurrent	Disadvantaged allocation										
			Disadvantaged expenditure										
			SEN allocation										
			SEN expenditure										
			Maintenance allocation										
			Maintenance expenditure										
			Consumables allocation										
			Consumables expenditure										
			Other allocation										
			Other expenditure										
	Capital	Equipment allocation											
		Equipment expenditure											
		Maintenance allocation											
		Maintenance expenditure											
		Other allocation											
		Other expenditure											

Note: SEN – Allocation for pupils with Special educational needs. * Please use separate sheet for each year.

Programme	Year*	Category	Sub Category	Allocation and Expenditure by Province (SLRs million)								
				Western	Central	Southern	North East	North Western	North Central	Uva	Sabaragamuwa	Sri Lanka
SBRM	2000	Recurrent	Allocation									
	2001		Expenditure									
	2002		Equipment Allocation									
		Capital	Equipment Expenditure									

8.2 What amounts did you release to the zones? (This question to be completed only by Provincial level officers). (SRQ 2.3.1)

Programme				Year*	Category	Sub Category	Allocation and Expenditure by Province (SLRs million)																	
							Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Z9	Z10	Z11	Z12	Z13	Z14	Z15	Pro		
NBUCRAM		Recurrent	Disadvantaged allocation																					
			Disadvantaged expenditure																					
			SEN allocation																					
			SEN expenditure																					
			Maintenance allocation																					
			Maintenance expenditure																					
			Consumables allocation																					
			Consumables expenditure																					
			Other allocation																					
			Other expenditure																					
			Capital	Equipment allocation																				
				Equipment expenditure																				
		Maintenance allocation																						
		Maintenance expenditure																						
					Other allocation																			
				Other expenditure																				

* Please use separate sheet for each year.

- 8.3 What amounts did you release to the schools under the SBRM? What was the expenditure? (This question to be completed by only **PILOT zonal level officers**). (Pl. complete allocation and expenditure only for selected schools – the lists of schools is annexed-)(SRQ 3.3a)

Prog.	Year	Category	Allocation and expenditure for sample schools (SLRs)										
			S1 1AB (Nat)	S2 1AB (Nat)	S3 1AB (Prov)	S4 1AB (Prov)	S5 1C	S6 1C	S7 Type 2	S8 Type 2	S9 Type 3	S10 Type 3	Total
SBRM	2000 (Allo.)												
	2000 (Exp.)												
	2001(Allo.)												
	2001(Exp.)												
	2002 (Allo.)												
	2002 (Exp.)												

If you have any comments or observations relating to any of the above areas, please make them below:

.....

.....

.....

.....

Signature of the Officer (Optional):

Name of the Officer:

Date: 2002

- THANK YOU FOR COMPLETING THE QUESTIONNAIRE -

C:\My Document\Questionnaire\questionnaire-B1.doc. – December 1, 2001

Appendix 3.8a: Teachers' questionnaire administered to the pilot schools

Province	Education Zone	Type	Ser. No.	Name of the School	Subject	
					Science Grade 11	Primary Grade 2
Western	Sri Jayawardenepura	1AB	1	Samudradevi BMV, Nugegoda	1	1
		1C	2	Angoda Sri Rahula MV, Mulleriyawa	1	1
		2	3	Kudabutgamuwa Somadavi BV,	1	1
		3	4	Ihala Bomiriya KV, Kaduwela	NA	1
North-Western	Nikaweratiya	1AB	5	Sri Parakrama MMV, Kobeigane	1	1
		1C	6	Welpothuwewa Muslim MV, Boraluwa	1	1
		2	7	Dalukgolla Sri Dammarakkitha V, Hulugalla	1	1
		3	8	Kuda Mithawa PV, Monnakulama	NA	1
Total					6	8

Source: Pilot study (2002).

Appendix 3.8b: Teachers' questionnaire administered to the non-pilot schools

Province	Education Zone	Type	Ser. No.	Name of the School	Subject	
					Science Grade 11	Primary Grade 2
Central	Walapane	1AB	1	Ragala TMV, Halgranoya	1	1
		1C	2	Senarath MV, Kurupanawela	1	1
		2	3	Pannala V, Kubalgamuwa	1	1
		3	4	Rathnayake Pathana V, Halgranoya	NA	1
Sabaragamuwa	Embilipitiya	1AB	5	Kolonna MMV, Kolonna	1	1
		1C	6	Demuwatha MV, Rakwana	1	1
		2	7	Nindagampetessa V, Embilipitiya	1	1
		3	8	Mahagama V, Pallebedda	NA	1
Total					6	8

Source: Pilot study (2002).

Appendix 3.9a: Teacher Questionnaire (Pilot)

Note: This is a specimen of the questionnaire

The survey questionnaire for gathering data on utilization of learning equipment and materials in school classrooms

Only for researcher's use

Category	Code
Pilot	1
Non-pilot	2
Subject	Gr. 11 - Science Gr. 2 - Primary
Ref.	KRQ 3 SRQs 3.2; 3.3

Dear Teacher,

I believe you are aware of the decentralization procurement of inexpensive capital learning equipment at school-level programme, which has been implemented in pilot basis from 2000. Schools implementing the said programme have received more money to purchase inexpensive capital learning equipment other than consumables and perishables at school level. This questionnaire is aimed at gathering data and information regarding utilization of learning equipment at classroom level. Further, the questionnaire aims to identify the causes, effects and the impact that have emerged in the schools as results of introduction of this programme. Your answers to the following questions are expected to show how you fulfil the usage of learning equipment in classroom.

Section 1 - General Information

School ID

--	--	--	--	--	--	--	--

Instruction: Please circle appropriate number(s).

1.1 Name of School and Address:

----- MMV/MV/BMV/KV/V

1.2 Name of the teacher: Mr./Mrs./Ms.

1.3 What is your subject area? *(Please circle appropriate grades)*

<u>Subject</u>	<u>Grade</u>	<u>Code</u>
Science	11	1
Primary	2	2

--

Section 2 – Acquiring learning resources

- 2.1 MEHE Circular No: 2000/13 dated March 14, 2000, has instructed to establish a school purchasing committee in each school. Does your school have a school purchasing committee for purchasing learning equipment (and materials) at school level?

Yes - 1
No - 2
Don't know - 3

☐

- 2.2 Further, the MEHE Circular No: 2000/13 dated March 14, 2000, has instructed to establish a school evaluation committee in each school. Does your school have a school evaluation committee for evaluation of quotation of learning equipment (and materials) at school level?

Yes - 1
No - 2
Don't know - 3

☐

- 2.3 Are you a member of these committees?

Yes - 1 No - 2

☐

- 2.3.1 If 'Yes' in which committee?

School purchasing committee - 1
School evaluation committee - 2

☐

- 2.4 What are your views on the role of the school purchasing committee?

Statement	Yes	No
Helpful in acquiring appropriate learning equipment (and materials)	1	2
Equipment and materials have been received in time	1	2
Individual teachers' needs are being concerned	1	2
The equipment and materials acquired are high quality	1	2
There is a committee but all the decisions are made by the principal	1	2
The purchased resources are on move in time to be used in class	1	2
Other (Please specify)	1	2

2.5 What are your views on the role of the school evaluation committee?

Changes	Yes	No
Helpful in acquiring appropriate learning equipment and materials	1	2
Helpful in acquiring high quality equipment and materials	1	2
The committee follow more transparent policy	1	2
Save money and reduce unnecessary expenses	1	2
Available funds used more efficiently	1	2
Other (Please specify)	1	2

2.6 Have you been consulted by these committees on the learning resources, that you need to use for teaching in the classroom?

Yes - 1 No - 2

☐

Section 3 – Utilization of learning equipment (and materials) in classroom

3.1 Have you been trained for using learning equipment (and materials) in relation to the curriculum guidelines?

Yes - 1 No - 2

☐

3.2 Do you think utilizing learning resources will improve students' learning?

Very much - 1
To some extent - 2
No - 3

☐

3.3 Was the money received for consumables and perishables for your subject adequate?

Adequate - 1
Fairly adequate - 2
Not adequate - 3

☐

3.4 Are there any negative effects of utilizing learning materials in classroom?

Yes - 1 No - 2

☐

3.4.1 If 'Yes' what are those?

1.
2.

☐

- 3.5 Please indicate your attitude to the following statement in relation to the major changes the pilot and non-pilot implementation of the extension of SBRM? (1=strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree)

Statement	Agree		Neutral	Disagree	
The extension of SBRM is a better way to acquire appropriate learning equipment (and materials) in time than the previous system	1	2	3	4	5
The extension of SBRM better serves individual teachers' needs in relation to the teaching process	1	2	3	4	5
The extension of SBRM is more concerned with individual pupils' needs in relation to the learning process	1	2	3	4	5
The extension of SBRM enables high quality resource to be acquired	1	2	3	4	5
Teachers have more opportunity to be involved in making decisions	1	2	3	4	5
The funds are inadequate in relation to pupil number	1	2	3	4	5
There have been no changes as a result of the extension of SBRM	1	2	3	4	5
Money wastage as there is lack of monitoring	1	2	3	4	5
Other (Please specify)	1	2	3	4	5

- 3.6 What changes have come out as a result of using learning equipment (and materials) for the teaching of pupils in classroom? (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree)

Changes	Agree		Neutral	Disagree	
More time for practical work	1	2	3	4	5
Increased pupil attendance	1	2	3	4	5
Increased pupil performance	1	2	3	4	5
Teachers are more motivated for teaching	1	2	3	4	5
Improved teaching quality	1	2	3	4	5
Easy to reinforce curriculum concepts	1	2	3	4	5
Attractive teaching learning environment	1	2	3	4	5
Pupils enjoy learning more	1	2	3	4	5
Other (Please specify)	1	2	3	4	5

- 3.7 What are the external and internal monitoring programmes for improving the utilization of learning equipment in the classroom? (1= Strongly Agree. 2= Agree. 3= Undecided. 4= Disagree. 5= Strongly Disagree)

Statement	Agree		Neutral	Disagree	
In-service advisors have guided on usage of equipment	1	2	3	4	5
School has implemented internal supervision programmes	1	2	3	4	5
ZEO has implemented supervision programmes	1	2	3	4	5
PED has implemented supervision programmes	1	2	3	4	5
MEHE has implemented national level supervision programmes	1	2	3	4	5
Other (Please specify)	1	2	3	4	5

- 3.7.1 Have the in-service advisors and officers visited to supervise and guide on using learning equipment (and materials) in relation to your subject?

Yes - 1 No - 2

☐

- 3.7.2 If 'Yes' how often they visited in year 2001?

One visit - 1
 2 – 5 visits - 2
 6 – 10 visits - 3
 More than 10 visits - 4

☐

- 3.8 What are the practical problems and issues that you face in relation to utilization of learning equipment at classroom?

Problems	Yes	No
Storages/safekeeping problems	1	2
Principal do not allow to use the equipment (and materials) because it could be damaged by the pupils	1	2
Equipment are inadequate relative to the number of students in a class	1	2
Pupils are not interested in practical work	1	2
Equipment are of poor quality	1	2
Other (Please specify)	1	2

Appendix 3.9b: Teacher Questionnaire (Non-Pilot)

Note: This is a specimen of the questionnaire

The survey questionnaire for gathering data on utilization of learning equipment and materials in school classrooms

Only for the researcher's use

Category	Code
Pilot	1
Non-pilot	2
Subject	Gr. 11. - Science Gr. 2 - Primary
Ref.	KRQ 3 SRQs 3.2; 3.3

Dear Teacher,

I believe you are aware of the decentralized procurement of inexpensive capital learning equipment at school-level programme, which has been implemented in pilot basis from 2000, although your school may not be involved in the programme. Schools implementing the said programme have received more money to purchase inexpensive capital learning equipment in addition to the consumables and perishables at school level. But you are using learning equipment for the teaching and learning in classroom. This questionnaire is aimed at gathering data and information regarding utilization of learning equipment at classroom level. Further, the questionnaire aims to identify the causes, effects and the impact that have emerged in the schools as a result of the introduction of this programme. Your answers to the following questions are expected to show how you fulfil the usage of learning equipment in classroom.

Section 1 - General Information

School ID

--	--	--	--	--	--	--	--

Instruction: Please circle appropriate number(s).

1.1 Name of the School and Address:

----- MMV/MV/BMV/KV/V

1.2 Name of the teacher: Mr./Mrs./Ms.

1.3 What is your subject area? *(Please circle appropriate grades)*

<u>Subject</u>	<u>Grade</u>	<u>Code</u>
Science	11	1
Primary	2	2

--

Section 2 – Acquiring learning resources

- 2.1 MEHE Circular No: 2000/13 dated March 14, 2000, has instructed to establish a school purchasing committee in each school. Does your school have a school purchasing committee for purchasing learning (equipment and) materials at school level?

Yes - 1
No - 2
Don't know - 3

☐

- 2.2 Further, the MEHE Circular No: 2000/13 dated March 14, 2000, has instructed to establish a school evaluation committee in each school. Does your school have a school evaluation committee for evaluation of quotation of learning (equipment and) materials at school level?

Yes - 1
No - 2
Don't know - 3

☐

- 2.3 Are you a member of these committees?

Yes - 1 No - 2

☐

- 2.3.1 If 'Yes' in which committee?

School purchasing committee - 1
School evaluation committee - 2

☐

- 2.4 What are your views on the role of the school purchasing committee?

Statement	Yes	No
Helpful in acquiring appropriate learning equipment (and materials).	1	2
Helpful to receive equipment and materials in time	1	2
Individual teachers' needs have been concerned	1	2
The equipment and materials acquired are high quality	1	2
There is a committee but all the decisions are made by the principal	1	2
The purchased resources are on move in time to be used in class	1	2
Other (Please specify)	1	2

2.5 What are your views on the role of the school evaluation committee?

Statement	Yes	No
Helpful in acquiring appropriate learning equipment (and materials)	1	2
Helpful in acquiring high quality equipment and materials	1	2
The committee follows more transparent policy	1	2
Save money and reduce unnecessary expenses	1	2
Available funds are used more efficiently	1	2
Other (<i>Please specify</i>)	1	2

2.6 Have you been consulted by these committees on the learning resources, that you need to use for teaching in the classroom?

Yes - 1 No - 2

☐

2.7 How do you get the inexpensive capital learning equipment used in teaching and learning process?

Provided by MEHE - 1
 Provided by PME - 2
 Provided by PDE - 3
 Provided by ZEO - 4
 Provided by school community - 5
 Born by school itself - 6
 Other (*Please specify*) - 7

2.8 Have you received in kind (equipment and materials) in relation to your subject?

Yes - 1 No - 2

☐

2.8.1 If 'Yes', are those provisions received adequately?

Yes - 1 No - 2

☐

2.9 Are the ministry or provincial authorities delivered goods in time?

Yes - 1 No - 2

☐

Section 3 – Utilization of learning equipment and materials in classroom

3.1 Have you been trained for using learning equipment (and materials) in relation to the curriculum guidelines?

Yes - 1 No - 2

☐

- 3.2 As you believe to what extent the utilization of learning equipment (and materials) support students to understand the curriculum?

Very much	-	1
To some extent	-	2
No	-	3

☐

- 3.2.1 If you agree with 1 or 2 above, have you been received adequate equipment (and materials) to be used within the classroom for your subject(s)?

Yes	-	1	No	-	2
-----	---	---	----	---	---

☐

- 3.3 Was the money received for consumables and perishables for your subject adequate?

Adequate	-	1
Fairly adequate	-	2
Not adequate	-	3

☐

- 3.4 To what extent the existing process has ensured the adequate provision of learning equipment (and materials) among classrooms?

Very much	-	1
To some extent	-	2
No	-	3

☐

- 3.5 To what extent the existing process has ensured the adequately provision of learning equipment (and materials) among pupils of your classroom?

Very much	-	1
To some extent	-	2
No	-	3

☐

- 3.6 To what extent the learning equipment (and materials) received are appropriate with what the curriculum have defined?

Very much	-	1
To some extent	-	2
No	-	3

☐

- 3.6.1 If your response is to '2' or '3' above can you ensure a maximum appropriateness between the equipment and curriculum needs when the purchasing power is delegated to your school level?

Yes	-	1	No	-	2
-----	---	---	----	---	---

☐

- 3.7 Are there any negative effects of utilizing learning equipment (and materials) in classroom?

Yes	-	1	No	-	2
-----	---	---	----	---	---

☐

3.7.1 If 'Yes' what are those?

1.
2.
3.

3.8 Have the in-service advisors and officers visited to supervise and guide on using learning materials and equipment in relation to your subject?

Yes - 1 No - 2

☐

3.8.1 If 'Yes' how often they visited in year 2001?

One visit - 1
 2 – 5 visits - 2
 6 – 10 visits - 3
 More than 10 visits - 4

☐

3.9 What are you suggestions for improving the utilization of learning equipment at classroom in the teaching and learning process?

.....

3.10 What are your suggestions for introduction of decentralized procurement of learning equipment to entire school system?

.....

If you have any comments or observations relating to any of the above areas, please state below:

.....

Signature of the Teacher (*optional*):

Date: 2002

THANK YOU FOR COMPLETING THE QUESTIONNAIRE

Appendix 3.10: Questionnaire for household expenditure on education

The survey questionnaire for gathering data and information on household expenditure on education

Dear Parent,

The aim of this questionnaire is to gather data on household expenditure on education; notably, parents in different income levels spent money for different activities in relation to their children's education. It is a considerable contribution for education. Hence, please provide data and information in relation to the household expenditure on education.

Instruction: Please circle appropriate number(s).

1. Name of parent: Mr./Mrs./Ms.

2. Are you employed?

i. **Father** - Yes - 1 No - 2

ii. **Mother** - Yes - 1 No - 2

3. What is your occupation?

Ser. No.	Occupation category	Father	Mother
1	Administrative	1	2
2	Business	1	2
3	Teacher and clerical grades	1	2
4	Semi-skilled and labouring	1	2
5	Farming	1	2
6	Other (<i>Pl. specify</i>)	1	2

4. What is your monthly income:

Ser. No.	Salary	Father	Mother
1	Less than SLRs 2500.00	1	2
2	SLRs 2501.00 - SLRs 6000.00	1	2
3	SLRs 6001.00 – SLRs 10000.00	1	2
4	SLRs 10001.00 - SLRs 15000.00	1	2
5	SLRs 15001.00 - SLRs 20000.00	1	2
6	More than SLRs 20001.00	1	2

5. Details of your children's school:

Name of school (e.g. Royal College)	Type of School (e.g. IAB)	Location (e.g. Western)	Grade (e.g. 8)
1.			
2.			
3.			
4.			
5.			

6. Details of indirect cost born by you per child per month and annual payments:

Month:

January

Year: 2002

Expenditure category	Per month SLRs	Annual payments SLRs
1. School development society fees		
2. School facilities fees		
3. Sport funds		
4. Security funds		
5. Social events		
6. Extra curricular activities		
7. Religious activities		
8. Library facilities		
9. Building funds		
10. Big matches		
11. Educational tours		
12. Books and stationary		
13. Transport		
14. Tuition fees		
15. Uniforms and shoes etc.		
16. Pocket-money (Daily expenses)		
17. Educational learning equipment and materials		
18. Donations		
19. Examination fees		
20. Boarding fees		
21. Miscellaneous		
22. Other (Pl. specify).....		
Total		

Signature (Optional):

Date: July, 2002

THANK YOU FOR COMPLETING THE QUESTIONNAIRE

Appendix 3.11: Interview schedule for NEPs, ZEPs, PEPs and SPs

The interview for gathering data and information on school financing and resource management of schools in Sri Lanka

Only for researcher's use

Date of interview	
Interview start:	
Concluded:	
Category of interviewee	Code
National education planner	1
Provincial education planner	2
Zonal Education planner	3
School principal	4
Venue	

1.0 General Information

- 1.1 Name of the interviewee:
- 1.2 Designation:
- 1.3 Responsibilities:

2.0 Prior to the implementation of the norm-based unit cost resource allocation mechanism (KRQ 2)

- 2.1 Please describe how you perceive the traditional school finance system (i.e. prior to introduction of NBUCRAM) have worked in Sri Lanka.
- 2.1.1 Please describe any critical events that you have experienced in school financing? When did each occur?
- 2.1.2 In what ways do you think that the traditional school finance system promoted the efficient allocation and use of resource in Sri Lankan schools? In what ways did it inhibit efficiency?
- 2.1.3 Do you think that the traditional system allocates resources fairly? In what ways did/does it allocate equitably and what ways was/is it inequitable? (explore views on disparities)
- 2.1.4 What are the major issues and problems in more centrally controlled school financing system?

3.0 After the implementation of the norm-based unit cost resource allocation mechanism (KRQ 2)

- 3.1 Why has the new resource allocation mechanism been introduced into the system?
- 3.1.1 What were the pressing needs leading to the introduction of the NBUCRAM?

- 3.6 What are the strategies you wish to follow to ensure the sustainability of this programme? *(KRQ 4.0)*
- 3.7 What are your suggestions and recommendations for the sustainability and for the improvement of this programme? *(KRQ 4.0)*
- 3.8 Can you ensure the financial stability of the programme when the international loans and donations have dried up? *(KRQ 4.0) (This question is only for national level officials).*
- 4.0 Basic SBRM and non-SBRM *(SRQ 3.1)***
- 4.1 What are main characteristics of basic SBRM and non-SBRM?
- 5.0 Strengthened basic SBRM *(SRQ 3.1)***
- 5.1 Why was the strengthened basic SBRM (i.e. procurement of learning materials at school level) introduced into the education system?
- 5.1.1 What are pressing and urgent needs for the introduction of the strengthened basic SBRM?
- 5.1.2 Who was involved in the initiation of this programme?
- 5.1.3 What are the defined objectives of this programme?
- 5.1.4 What are the main ideas behind this programme?
- 5.1.5 What are your views on the intervention of the international donors in the introduction of strengthened basic SBRM?
- 5.2 What are the basic ideas underlying the strengthened basic SBRM programme?
- 5.2.1 Have these policies been piloted in the system before launching, and has there been a policy analysis? *(to find out more about this). (This question is only for national level officials).*
- 5.2.2 Has there been any considerable participation of actors at operational level in the policy decision-making of this new programme e.g. School principals? *(This question is only for national level officials).*
- 5.2.3 What strategies did you follow for the introduction and implementation of this programme? *(This question is only for national level officials).*
- 5.3 What are the major differences between basic SBRM and non-SBRM?

Basic SBRM:

Non-SBRM:

- 5.3.1 What are the strengths, weaknesses, advantages and disadvantages of strengthened basic SBRM programme?

Strengths:

Advantages:

Weaknesses:

Disadvantages:

- 5.4 Do you think this programme provides incentives for decision-makers (e.g. school principals) to allocate and use resources more efficiently than the previous system? If so, in what ways?
- 5.5 To what extent do you think that the strengthened basic SBRM promoted the efficient allocation and use of resource in Sri Lankan schools? In what ways did it inhibit efficiency?
- 5.6 What are the problems, issues and constraints encountered in implementation of this programme at different levels?
- | | |
|-----------------------|--------------------|
| i. School level | ii. Zonal level |
| iii. Provincial level | iv. National level |
- 5.7 What are the strategies you wish to follow to ensure the sustainability of this programme? (KRQ 4.0)
- 5.8 What are your suggestions and recommendations for the sustainability and for the improvement of this programme? (KRQ 4.0)
- 5.9 Can you ensure the financial stability of the programme when the international loans and donations have dried up? (KRQ 4.0) (*This question is only for national level officials*).
- 6.0 Pilot programme of the extension of SBRM (SRQs 3.2; 3.3)**
- 6.1 Why was the extension of SBRM (i.e. procurement of inexpensive capital learning equipment at school level) introduced into the education system?
- 6.1.1 What are the pressing and urgent needs for the introduction of the extension of SBRM?
- 6.1.2 Who was involved in the initiation of this programme?
- 6.1.3 What are the defined objectives of this programme?
- 6.1.4 What are the main ideas behind this programme?
- 6.1.5 What are your views on the intervention of the international donors in the introduction of the extension of SBRM?
- 6.2 What are the basic ideas underlying the extension of SBRM programme?

- 6.2.1 Have these policies been piloted in the system before launching, and has there been a policy analysis? *(to be find out more about this). (This question is only for national level officials).*
- 6.2.2 Has there been any considerable participation of actors at operational level in the policy decision-making of this new programme e.g. School principals? *(This question is only for national level officials).*
- 6.2.3 What strategies did you follow for the introduction and implementation of this programme? *(This question is only for national level officials).*
- 6.3 What are the major differences between:
- | | |
|----------------------------------------------|--------------------------------------------------|
| Basic SBRM and non-SBRM:
Pilot programme: | Strengthened basic SBRM:
Non-pilot programme: |
|----------------------------------------------|--------------------------------------------------|
- 6.3.1 What are the strengths, weaknesses, advantages and disadvantages of the extension of SBRM programme?
- | | |
|-------------|----------------|
| Strengths: | Weaknesses: |
| Advantages: | Disadvantages: |
- 6.4 Do you think this programme provides incentives for decision makers (e.g. school principals) to allocate and use resources more efficiently than the previous system? If so, in what ways?
- 6.5 To what extent to you think that the extension of SBRM promoted the efficient allocation and use of resource in Sri Lankan schools? In what ways did it inhibit efficiency?
- 6.6 What are the problems, issues and constraints encountered in implementation of this programme at different levels?
- | | |
|----------------------|--------------------|
| i. School level | ii. Zonal level |
| ii. Provincial level | iv. National level |
- 6.7 What are the strategies you wish to follow to ensure the sustainability of this programme? *(KRQ 4.0)*
- 6.8 What are your suggestions and recommendations for the sustainability and for the improvement of this programme? *(KRQ 4.0)*
- 6.9 Can you ensure the financial stability of the programme when the international loans and donations have dried up? *(KRQ 4.0) (This question is only for national level officials).*

THANK YOU FOR PARTICIPATING FOR THE INTERVIEWE

Appendix 3.12: Specimen of consent letters

Jayantha Balasooriya,
Ministry of Education,
Isurupaya, Battaramulla, Sri Lanka
December 30, 2001

Mr./Ms.....

The survey/interview for gathering data on school financing and resource management of schools in Sri Lanka

I am a Deputy Director of Education, Ministry of Education and presently study for the MPhil/PhD at the Institute of Education, University of London. The purpose of the study is to evaluate the impact of school-based resource management and formula funding of schools in Sri Lanka on the efficiency and equity of resource allocation. This research will help to improve the school financing system in Sri Lanka.

You can help in this study by consenting to complete a survey/participate in the interview. The time to complete the survey/interview will vary, however, it is anticipated that no more than one hour will be necessary. Contained in the survey are questions about level of school-based resource management, formula funding of schools, school financial management and other questions which may be seen as personal and private views in this area. Therefore, participants can decide to withdraw their consent at any time. All the information given during the survey/interview is confidential and no names or other information which might identify you will be used in any publication arising from the research. If you are willing to participate in this study, could you please complete the details below. If you have any questions about this study please feel free to contact either myself by email on bbalasooriya@ioe.ac.uk or telephone 033-24236 or my supervisors in the Institute of Education, University of London via email: Prof. Ros Levačić (r.levacic@ioe.ac.uk) or Prof. Angela Little (a.little@ioe.ac.uk).

Your co-operation in this regard is highly appreciated.

Thank you,

Jayantha Balasooriya

Name:
Designation:
Address:

I have read the information above. Any questions I have been asked have been answered to my satisfaction. I agreed to take part in this study, however, I know that I may change my mind and stop at any time. I understand that all information provided is treated as confidential and will not be released by the researcher unless required to do so by law. I agree that research data gathered for this study may be published provided my name or other information which might identify me is not used.

.....
Signature of participant

Date: 2002

Appendix 4.1: Schools by pupil population 1990-2002

Range	1990			1991			1992			1993			1994			1996		
	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total
0 – 50	752	7.62	7.62	889	9.47	9.47	1015	10.11	10.11	1065	10.48	10.48	1024	10.16	10.16	1221	12.07	12.07
51 – 100	1310	13.28	20.90	1291	13.75	23.22	1280	12.75	22.85	1299	12.79	23.27	1298	12.88	23.04	1392	13.76	25.83
101 – 200	1991	20.18	41.09	1386	14.76	37.98	1918	19.10	41.95	1980	19.49	42.76	1971	19.56	42.60	1923	19.01	44.84
201 – 500	3125	31.68	72.77	3120	33.23	71.22	3110	30.97	72.92	3094	30.45	73.21	3084	30.60	73.21	2964	29.30	74.14
501 -1000	1763	17.87	90.64	1753	18.67	89.89	1770	17.63	90.55	1771	17.43	90.64	1742	17.29	90.49	1658	16.39	90.53
1001 - 1500	559	5.67	96.31	582	6.20	96.09	581	5.79	96.34	577	5.68	96.32	572	5.68	96.17	555	5.49	96.02
1501 - 2000	204	2.07	98.38	198	2.11	98.20	196	1.95	98.29	190	1.87	98.19	201	1.99	98.16	197	1.95	97.96
> 2000	160	1.62	100.00	169	1.80	100.00	172	1.71	100.00	184	1.81	100.00	185	1.84	100.00	206	2.04	100.00
Total	9864	100.00		9388	100.00		10042	100.00		10160	100.00		10077	100.00		10116	100.00	

Range	1997			1998			1999			2000			2001			2002		
	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total	No. of schools	% of Total	Cumm. Total
0 – 50	1253	12.38	12.38	1277	12.65	12.65	1302	12.95	12.95	1294	12.98	12.98	1287	13.02	13.02	1360	13.84	13.84
51 – 100	1409	13.92	26.30	1412	13.99	26.64	1352	13.44	26.39	1351	13.55	26.52	1370	13.86	26.87	1334	13.58	27.42
101 – 200	1958	19.35	45.65	1957	19.39	46.03	1996	19.85	46.24	2005	20.11	46.63	1982	20.05	46.92	1992	20.27	47.69
201 – 500	2920	28.85	74.51	2891	28.64	74.68	2871	28.55	74.78	2830	28.38	75.01	2776	28.08	75.00	2735	27.83	75.52
501 -1000	1632	16.13	90.63	1598	15.83	90.51	1557	15.48	90.27	1480	14.84	89.85	1443	14.59	89.59	1430	14.55	90.08
1001 - 1500	534	5.28	95.91	514	5.09	95.60	528	5.25	95.52	529	5.30	95.16	535	5.41	95.00	504	5.13	95.21
1501 - 2000	193	1.91	97.82	200	1.98	97.58	187	1.86	97.37	198	1.99	97.14	191	1.93	96.94	209	2.13	97.33
> 2000	221	2.18	100.00	244	2.42	100.00	264	2.63	100.00	285	2.86	100.00	303	3.06	100.00	262	2.67	100.00
Total	10120	100.00		10093	100.00		10057	100.00		9972	100.00		9887	100.00		9826	100.00	

Source: Primary data: MEHE (1990 – 2000); 2000d; 2001a; MHRDECA, 2002a

Appendix 4.2: School - supervision staff ratio - 2001

Number of schools	Type of non-academics (supervisory level)	Number of staff could be engaged for supervision	SSSR
9891	Administrative staff (national, provincial and zonal levels) and In-service advisors	4314	2.29
Breakdown of the approved carder by administrative levels:			
Zonal Level			
1X91	Zonal Director of Education		91
5X91	Deputy/Assistant Directors of Education		455
8X91	Subjects Specialists		728
1X91	Accountants		91
2X91	School works supervisors		182
2250	In-service advisors		2250
1X295	Deputy/Assistant Directors of Education for in-charge of Divisions		295
Total			4092
Provincial level			
1X8	Provincial Directors of Education		8
2X8	Additional Provincial Directors of Education		16
7X8	Deputy/Assistant Directors of Education		56
1X8	Chief Accountant		8
1X8	Accountants		8
1X8	Engineers		8
Total			104
National level			
1X1	Secretary		1
5X1	Additional Secretaries		5
91X1	SLEAS officers		91
3X1	Senior Assistant Secretaries		3
6X1	Assistant Secretaries		6
1X1	Chief Accountant		1
7X1	Accountants		7
4X1	Engineers		4
Total			118

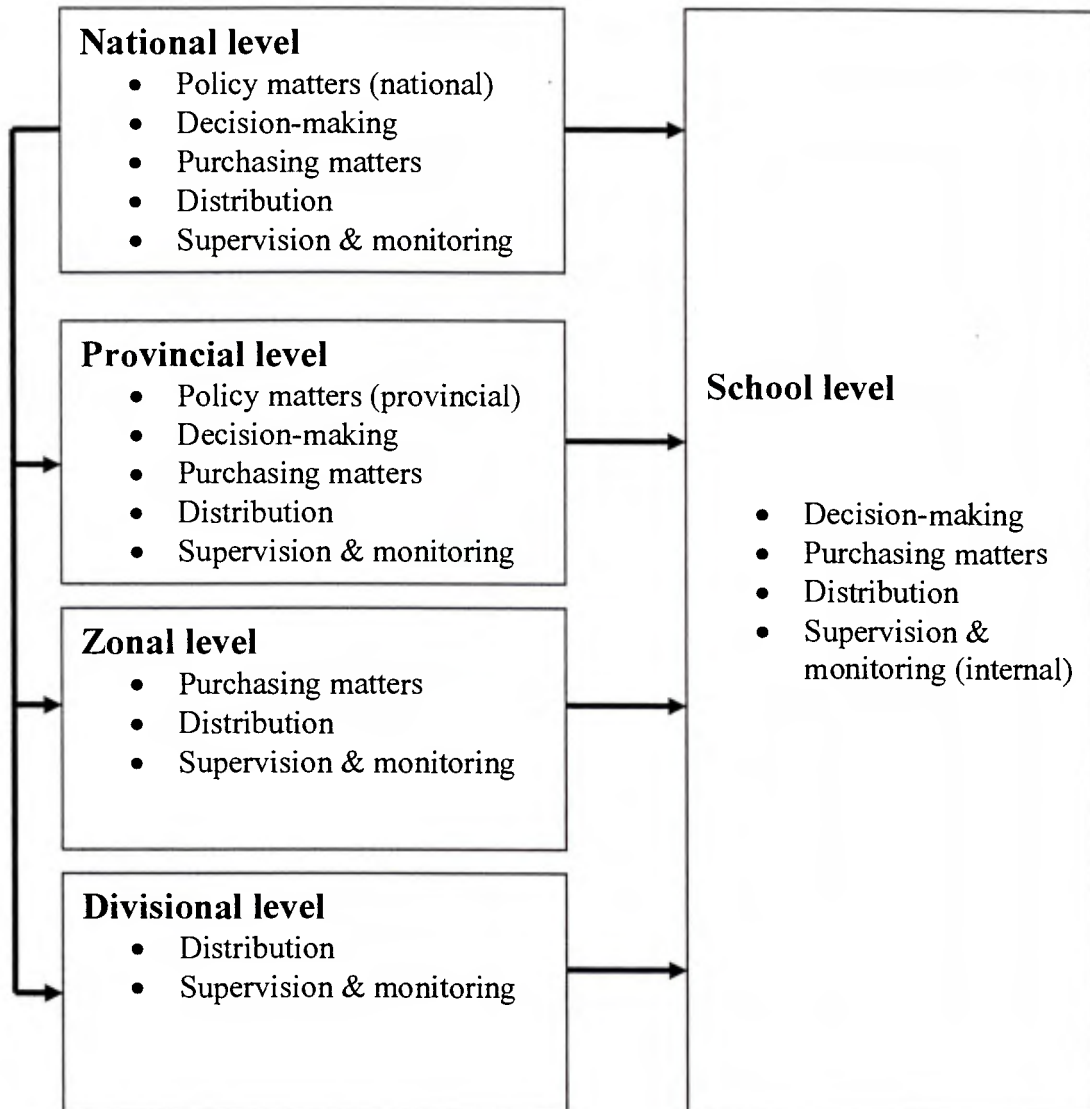
Note: These calculations were made using numbers of non-teaching staff and excluding other supporting staff at any level.

Monthly salaries mean value: SLRs 15000.00

Total mean value of monthly salary: SLRs 64710000.00 (15000 X 4314)

Source: basic data: MHRDECA, (2002d) (Researcher's calculations)

Appendix 4.3: Present structure for resource management



Appendix 5.1a: Response rate for postal questionnaires

Type of school	Number distributed	Number responded	Responses as a percentage*
1AB (National)	25	22	88
1AB (Provincial)	22	15	68
1C	32	28	88
Type 2	32	31	97
Type 3	32	30	94
Total	143	126	88

Source: Postal questionnaire survey (2002).

Appendix 5.1b: Response rate for in-depth study survey questionnaires

Type of school	Number distributed	Number responded	Responses as a percentage*
1AB (National)	6	5	83
1AB (Provincial)	6	5	83
1C	8	8	100
Type 2	8	7	88
Type 3	8	8	100
Total	36	33	92

Source: In-depth study survey (2002).

Appendix 5.1c: Response rate for education planners' questionnaires

Level	Number distributed	Number responded	Responses as a percentage*
Zonal education planners (ZEPs)	16	14	88
Provincial education planners (PEPs)	8	6	75
National education planners (NEPs)	1	1	100
Total	25	21	84

Source: Questionnaire survey for planners (2002).

Appendix 5.1d: Response rate for household expenditure on education survey questionnaires

Occupation category	Number selected and responded for the survey				
	Western	Central	North Western	Sabaragamuwa	Total
Administrative	1	1	1	1	4
Business	1	1	1	1	4
Teacher and clerical grades	1	1	1	1	4
Semi-skilled and labouring	1	1	1	1	4
Farming	1	1	1	1	4

Source: Questionnaire survey for household expenditure on education (2002).

Appendix 5.2: School Principals' responses on the involvement of different agencies in the initiation of NBUCRAM

SN	Agency	Response as a percentage*
1	World Bank	83 (105)
2	Asian Development Bank (ADB)	10 (12)
3	UNESCO	1 (2)
4	National Education Commission (NEC)	46 (58)
5	Ministry of Education and Higher Education (MEHE)	63 (80)
6	Ministry of Finance and Planning	11 (14)
7	Finance Commission (FC)	63 (80)
8	National Planning Department	4 (5)
9	Provincial Ministry of Education	16 (21)
10	Provincial Department of Education and Zonal Education Office	20 (26)

Source: Postal questionnaire survey (2002).

Appendix 5.3a: Reasons for the introduction of NBUCRAM (Principals' responses)

Ser. No.	Reasons	Responses as a percentage* (n=126)						Priority
		Priority rank (Ser. No)						
		1	2	3	4	5	6	
1	World Bank influence and intervention	24	40	24	6	2	5	2
2	To reduce the vast disparities in the resource allocation between the schools (to establish equity across the system)	6	32	48	6	4	5	3
3	To improve the efficiency of resource use in schools	48	12	12	8	9	12	1
4	To establish school financial policies	12	4	5	68	6	5	4
5	To establish a school planning culture	7	6	6	5	67	9	5
6	Unknown reasons	4	6	6	6	12	65	6

Source: Postal questionnaire survey (2002).

Appendix 5.3b: Reasons for the introduction of NBUCRAM (Planners' responses)

Ser. No.	Reasons	Responses as a percentage* (n=21)						Priority
		Priority rank (Ser. No)						
		1	2	3	4	5	6	
1	World Bank influence and intervention	5	10	0	24	52	10	5
2	To reduce the vast disparities in the resource allocation among the schools (to establish equity across the system)	67	10	10	14	0	0	1
3	To improve the efficiency of resource use in schools	14	62	14	0	5	5	2
4	To establish school financial policies	5	5	48	19	14	10	3
5	To establish a school planning culture	0	5	24	43	19	10	4
6	Unknown reasons	10	10	5	0	10	67	6

Source: Questionnaire survey for planners (2002).

Appendix 5.4: Calculation method of real per-pupil expenditure

(1) GDP price deflator at year t:

$$\text{GDP}_t \text{ price deflator} = \frac{\text{GDP}_t \text{ at constant prices}}{\text{GDP}_t \text{ at current prices}}$$

(2) Real per-pupil expenditure per school type at year t (RPPE_t):

$$\text{RPPE}_t = \frac{\text{Per pupil nominal expenditure by type of school at year t}}{\text{GDP}_t \text{ price deflator}}$$

(3) Real expenditure per pupil index = $\frac{\text{RPPE}}{\text{Real school expenditure in base year}} \times 100$

Where:

- GDP figures are at factor costs;
- equation (2) is derived from using the GDP price deflator obtained from equation (1);
- equation (3) is derived by using real per pupil expenditure, RPPE_t from equation (2)

Appendix 5.5a: Calculating real per-pupil expenditure for learning resources of grades 1–5 for schools types and comparative index 1997-2002

Calculation of GDP implicit price deflator (1997=100)

Year	GDP current factor cost price*	GDP 1997 factor cost price*	GDP price deflator
1997	803698	803698	1.000
1998	912839	774796	0.849
1999	994730	808340	0.813
2000	1125259	857035	0.762
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=5)	1AB (Prov.) (n=3)	1C (n=8)	Type 2 (n=7)	Type 3 (n=8)
1997	15.50	12.00	9.00	9.00	6.00
1998	15.00	15.00	12.00	12.00	6.00
1999	23.00	23.00	20.00	20.00	20.00
2000	44.50	40.50	42.50	32.50	32.00
2001	44.50	40.50	40.50	33.50	32.00
2002	44.50	40.50	41.50	30.00	30.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=5)	1AB (Prov.) (n=3)	1C (n=8)	Type 2 (n=7)	Type 3 (n=8)
1997	15.50	12.00	9.00	9.00	6.00
1998	12.70	12.70	10.20	10.20	5.10
1999	18.70	18.70	16.30	16.30	16.30
2000	33.90	30.80	32.40	24.80	24.40
2001	30.10	27.40	27.40	22.70	21.70
2002	27.80	25.30	26.00	18.80	18.80

Real expenditure per pupil indexed to 100=1997 for each school type (Divided each school's expenditure per pupil by its expenditure in 1997)

Year	Index for per-pupil expenditure mean value by type of school				
	1AB (Nat.) (n=5)	1AB (Prov.) (n=3)	1C (n=8)	Type 2 (n=7)	Type 3 (n=8)
1997	100	100	100	100	100
1998	82	106	113	113	85
1999	121	156	181	181	271
2000	219	257	360	275	406
2001	194	229	305	252	361
2002	180	211	289	209	313

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 5.5b: Calculating real per-pupil expenditure for learning resources of grades 6–9 for schools types and comparative index 1997-2002

Calculation of GDP implicit price deflator (1997=100)

Year	GDP current factor cost price*	GDP 1997 factor cost price*	GDP price deflator
1997	803698	803698	1.000
1998	912839	774796	0.849
1999	994730	808340	0.813
2000	1125259	857035	0.762
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)	Type 3 (n=4)
1997	10.60	10.50	10.20	11.00	8.00
1998	10.60	10.50	10.25	12.00	10.00
1999	20.00	18.00	20.50	15.00	12.00
2000	42.50	42.50	40.00	40.00	40.00
2001	42.50	42.50	40.00	45.00	40.00
2002	42.60	44.50	41.50	40.00	40.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)	Type 3 (n=4)
1997	10.60	10.50	10.20	11.00	8.00
1998	9.00	8.91	8.70	10.19	8.49
1999	16.25	14.63	16.66	12.19	9.75
2000	32.37	32.37	30.47	30.47	30.47
2001	28.79	28.79	27.09	30.48	27.09
2002	26.65	27.84	25.97	25.03	25.03

Real expenditure per pupil indexed to 100=1997 for each school type (Divided each school's expenditure per pupil by its expenditure in 1997)

Year	Index for per-pupil expenditure mean value by type of school				
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)	Type 3 (n=4)
1997	100	100	100	100	100
1998	85	85	85	93	106
1999	153	139	163	111	122
2000	305	308	299	277	381
2001	272	274	266	277	339
2002	251	265	255	228	313

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 5.5c: Calculating real per-pupil expenditure for learning resources of grades 10 & 11 for schools types and comparative index 1997-2002

Calculation of GDP implicit price deflator (1997=100)

Year	GDP current factor cost price*	GDP 1997 factor cost price*	GDP price deflator
1997	803698	803698	1.000
1998	912839	774796	0.849
1999	994730	808340	0.813
2000	1125259	857035	0.762
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school			
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)
1997	14.50	13.50	14.00	12.50
1998	14.50	12.50	13.95	12.00
1999	18.00	18.00	15.00	13.00
2000	45.00	44.00	35.50	35.00
2001	46.00	45.00	35.00	35.00
2002	46.00	45.00	35.00	35.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)
1997	14.50	13.50	14.00	12.50
1998	12.31	10.61	11.84	10.19
1999	14.63	14.63	12.19	10.56
2000	34.27	33.51	27.04	26.66
2001	31.16	30.48	23.71	23.71
2002	28.78	28.16	21.90	21.90

Real expenditure per pupil indexed to 100=1997 for each school type (Divided each school's expenditure per pupil by its expenditure in 1997)

Year	Index for per-pupil expenditure* mean value by type of school			
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)
1997	100	100	100	100
1998	85	79	85	81
1999	101	108	87	85
2000	236	248	193	213
2001	215	226	169	190
2002	198	209	156	175

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 5.5d: Calculating real per-pupil expenditure for learning resources of grades 12 & 13 (Science) for schools types and comparative index 1997-2002

Calculation of GDP implicit price deflator (1997=100)

Year	GDP current factor cost price*	GDP 1997 factor cost price*	GDP price deflator
1997	803698	803698	1.000
1998	912839	774796	0.849
1999	994730	808340	0.813
2000	1125259	857035	0.762
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school	
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)
1997	8.00	7.00
1998	8.00	7.00
1999	32.00	24.10
2000	41.50	35.00
2001	44.00	38.00
2002	41.00	35.50

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)
1997	8.00	7.00
1998	6.79	5.94
1999	26.00	19.58
2000	31.61	26.66
2001	29.80	25.74
2002	25.65	22.21

Real expenditure per pupil indexed to 100=1997 for each school type (Divided each school's expenditure per pupil by its expenditure in 1997)

Year	Index for per-pupil expenditure* mean value by type of school	
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)
1997	100	100
1998	85	85
1999	325	280
2000	395	381
2001	373	368
2002	321	317

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 5.5e: Calculating real per-pupil expenditure for learning resources of grades 12 & 13 (Arts & Commerce) for schools types and comparative index 1997-2002

Calculation of GDP implicit price deflator (1997=100)

Year	GDP current factor cost price*	GDP 1997 factor cost price*	GDP price deflator
1997	803698	803698	1.000
1998	912839	774796	0.849
1999	994730	808340	0.813
2000	1125259	857035	0.762
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school		
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)
1997	14.50	12.50	10.00
1998	14.50	12.00	10.00
1999	17.50	12.50	20.00
2000	49.00	35.50	30.00
2001	47.00	36.00	30.00
2002	45.50	36.00	35.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)
1997	14.50	12.50	10.00
1998	12.31	10.19	8.49
1999	14.22	10.16	16.25
2000	37.32	27.04	22.85
2001	31.84	24.39	20.32
2002	28.47	22.52	21.90

Real expenditure per pupil indexed to 100=1997 for each school type (Divided each school's expenditure per pupil by its expenditure in 1997)

Year	Index for per-pupil expenditure mean value by type of school		
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)
1997	100	100	100
1998	85	81	85
1999	98	81	163
2000	257	216	228
2001	220	195	203
2002	196	180	219

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 5.6: Calculating real per-pupil expenditure for learning resources for schools types and comparative index 1997-2002

Calculation of GDP implicit price deflator (1997=100)

Year	GDP current factor cost price*	GDP 1997 factor cost price*	GDP price deflator
1997	803698	803698	1.000
1998	912839	774796	0.849
1999	994730	808340	0.813
2000	1125259	857035	0.762
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)	Type 3 (n=8)
1997	6.50	6.00	5.00	4.25	1.38
1998	10.00	6.50	5.25	4.25	1.38
1999	12.50	9.00	7.25	6.13	4.00
2000	30.00	30.00	16.75	16.50	9.75
2001	31.00	31.50	16.75	16.50	9.75
2002	31.00	27.50	16.00	16.00	9.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)	Type 3 (n=8)
1997	6.50	6.00	5.00	4.25	1.38
1998	8.49	5.52	4.46	3.61	1.17
1999	10.16	7.31	5.89	4.98	3.25
2000	22.85	22.85	12.76	12.57	7.43
2001	21.00	21.34	11.35	11.18	6.60
2002	19.40	17.21	10.01	10.01	5.63

Real expenditure per pupil indexed to 100=1997 for each school type (Divided each school's expenditure per pupil by its expenditure in 1997)

Year	Index for per-pupil expenditure mean value by type of school				
	1AB (Nat.) (n=5)	1AB (Prov.) (n=5)	1C (n=8)	Type 2 (n=7)	Type 3 (n=8)
1997	100	100	100	100	100
1998	131	92	89	85	85
1999	156	122	118	117	236
2000	352	381	255	296	538
2001	323	356	227	263	479
2002	298	287	200	236	408

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 5.7: Calculating real per-pupil expenditure for learning resources in disadvantaged schools for schools types and comparative index 1997-2002

Calculation of GDP implicit price deflator (2000=100)

Year	GDP current factor cost price*	GDP 2000 factor cost price*	GDP price deflator
2000	1125259	1125259	1.000
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=1)	1AB (Prov.) (n=1)	1C (n=4)	Type 2 (n=3)	Type 3 (n=5)
2000	5.50	6.00	10.50	10.50	20.00
2001	5.50	6.00	10.50	10.50	20.00
2002	5.50	6.00	10.50	10.50	25.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=1)	1AB (Prov.) (n=1)	1C (n=4)	Type 2 (n=3)	Type 3 (n=5)
2000	5.50	6.00	10.50	10.50	20.00
2001	3.73	4.06	7.11	7.11	13.55
2002	3.44	3.75	6.57	6.57	15.64

Real expenditure per pupil indexed to 100=1997 for each school type (Divided each school's expenditure per pupil by its expenditure in 1997)

Year	Index for per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=1)	1AB (Prov.) (n=1)	1C (n=4)	Type 2 (n=3)	Type 3 (n=5)
2000	100	100	100	100	100
2001	68	68	68	68	68
2002	63	63	63	63	78

Note: *SLRs

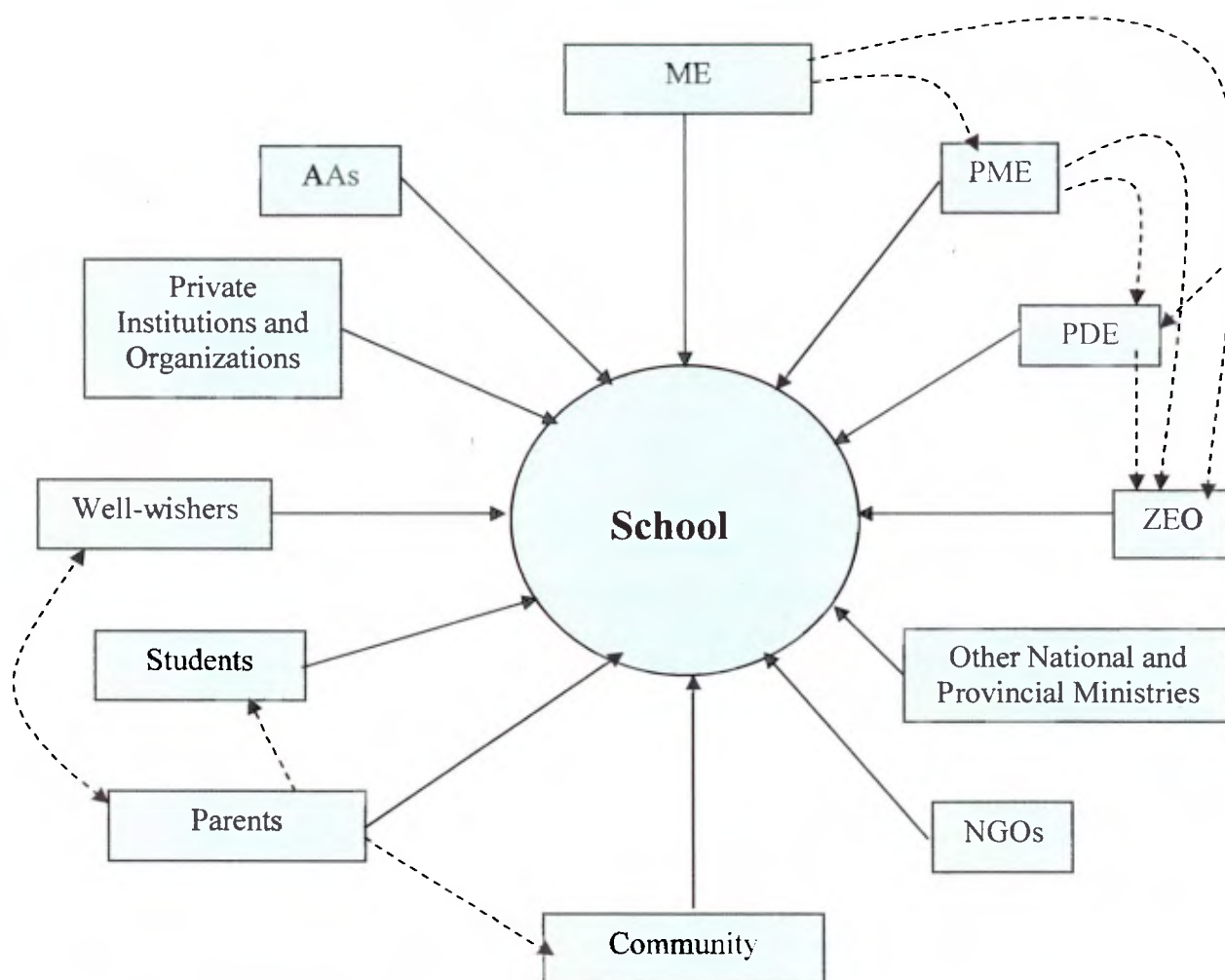
Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 5.8: Information about war situation in Sri Lanka

According to the government and the World Bank calculation, especially in the North-East province around 600,000 to 800,000 persons have been internally displaced, including 172,000 living in refugee camps as a result of the war (GOSL, 2002:114-122; World Bank, 2003:3). The World Bank estimated that 300,000 displaced children were affected by the war, notably in the North-East province where the school dropout rate is double the national average (World Bank, 2003:3). As a GTZ (2002) study from one administrative district in the war-affected area explained:

... there are thousands of affected children who are in and out of schools. Thousand of children of school-going age have not entered schools. Thousand of students are slow learners and low in their attainments. There is an acute shortage of teachers, most primary teachers are not able to teach English, and many primary teachers are not able to teach mathematics (GTZ, 2002:4).

Appendix 5.9: Pattern of provision of school financing and resources 1997 – 2002



Key:

ME - Ministry of Education

PDE - Provincial Department of Education

NGOs - Non-Government Organizations

PME - Provincial Ministry of Education

ZEO - Zonal Education Office

AAs - Alumni Associations

Appendix 5.10: Detail information on School facilities fees

The schools have the option to charge all students or only some (ME, 1975; Singhal et al., 1989:259-260; ADB, 1996:23). The restrictions on collecting revenues are also given. One such restriction is that if parents are not in a position to pay the school facilities fees, principals may exempt them from paying fees. Further, if three children from the same family attend the schools, parents can be excused from paying fees for the third child.

Expenditure limits:

- i. SLRs 150.00 or less for purchasing library books and equipment per year.
- ii. SLRs 150.00 or 5 per cent of the total school facilities fees can be used for purchasing stationery and other consumables per year.
- iii. SLRs 300.00 or less can be used for minor maintenance of school buildings, furniture and equipment per year.
- iv. To purchase teachers' guides.
- v. To purchase first aid medicine.
- vi. To clean sanitary facilities when the minor staff are not deployed by the government.
- vii. Expenses for the cadet corps.
- viii. Travelling costs (only for public transport) to deposit money in a bank.
- ix. To purchase radios for school purposes and drama and music activities (these expenses must be made with the approval of respective authorities) (ME, 1975).

Appendix 5.11: Education and poverty in Sri Lanka

While basic education facilities are widely available, the quality of the education available to the poor is vastly inferior to that available to the better-off urban households (GOSL, 2002:20). According to the Central Bank of Sri Lanka the low poverty line was SLRs 860 per month in 1990s (GOSL, 2002:113). Further, the Department of Census and Statistics data suggested that absolute poverty increased significantly between 1990/91 and 1995/96, i.e. from 31 to 39 per cent according to the high poverty line, and from 20 to 25 per cent, according to the low poverty line. Uva, North Western and North Central provinces having a significantly higher poverty level than the other provinces (excluding the North East). The highest incidence was in Uva (55%) and the lowest in Western (23%) (GOSL, 2002:113-114).

Appendix 5.12: Household expenditure on education – January 2002

Occupation Category 1	Income (Mean) SLRs 2	Household expenditure on education per-month, per-child for selected categories SLRs (Mean value*)										Exp. as a % of monthly income* 14(13/2*100)	
		Tuition fees 3	Travelling 4	School fees 5	Exam fees 6	Books & Stationary 7	Uniforms & Shoes 8	Equipment 9	Daily expenses 10	Donations 11	Miscella neous 12		Total Exp. 13(3+12)
Administrative (n=4)	22500	1250	1625	72	53	609	152	284	300	725	315	5383	24
Business (n=4)	55000	4250	2125	75	70	325	388	250	550	750	425	9208	17
Teacher and clerical grades (n=4)	10500	800	800	60	40	125	63	125	175	75	250	2513	24
Semi-skilled and Labouring (n=4)	6000	375	150	45	15	200	47	50	75	125	327	1408	23
Farming (n=4)	4000	100	75	33	20	150	50	50	88	50	50	665	17

*Note: * = percentage values and other values have been rounded up to the nearest whole number.*

Source: primary data: Household expenditure on education mini-sample survey (2002).

Appendix 5.13: Adequacy of funds received during 2000-2002

Grades	Type of school	Adequacy of per-pupil expenditure (SLRs)								
		2000			2001			2002		
		Required	Provided	Gap	Required	Provided	Gap	Required	Provided	Gap
1-5	1AB (Nat)	60.00	44.50	15.50	70.00	44.50	25.50	70.00	44.50	25.50
	1AB (Prov)	75.00	40.50	34.50	65.00	40.50	24.50	65.00	40.50	24.50
	1C	50.00	42.50	7.50	55.00	40.50	14.50	55.00	41.50	13.50
	2	50.00	32.50	17.50	40.00	33.50	6.50	50.00	30.00	20.00
	3	50.00	32.50	17.50	40.00	32.50	7.50	45.00	30.00	15.00
6-9	1AB (Nat)	50.00	42.50	7.50	55.00	42.50	12.50	60.00	42.60	17.40
	1AB (Prov)	55.00	42.50	12.50	55.00	42.50	12.50	60.00	44.50	15.50
	1C	50.00	40.00	10.00	55.00	40.00	15.00	55.00	41.50	13.50
	2	50.00	40.00	10.00	50.00	45.00	5.00	50.00	40.00	10.00
	3	45.00	40.00	5.00	50.00	40.00	10.00	50.00	40.00	10.00
10-11	1AB (Nat)	55.00	45.00	10.00	60.00	46.00	14.00	60.00	46.00	14.00
	1AB (Prov)	50.00	44.00	6.00	55.00	45.00	10.00	60.00	45.00	15.00
	1C	50.00	35.50	14.50	50.00	35.00	15.00	50.00	35.00	15.00
	2	45.00	35.50	9.50	50.00	35.50	14.50	50.00	35.50	14.50
12-13 (S)	1AB (Nat)	75.00	41.50	33.50	85.00	44.00	41.00	85.00	41.00	44.00
	1AB (Prov)	70.00	35.00	35.00	80.00	38.00	42.00	80.00	35.00	45.00
12-13 (A/C)	1AB (Nat)	60.00	49.00	11.00	60.00	47.00	13.00	60.00	45.50	14.50
	1AB (Prov)	55.00	35.50	19.50	55.00	36.00	19.00	55.00	36.00	19.00
	1C	50.00	30.00	20.00	55.00	30.00	25.00	55.00	35.00	20.00

Note: the requirements calculated according to the NBUCRAM norms. Data collected from the schools.

Source: In-depth study survey (2002).

Appendix 6.1a: Response rate for postal questionnaires

Type of school	Number distributed			Number responded			% of responses*		
	Pilot	Non-pilot	Total	Pilot	Non-pilot	Total	Pilot	Non-pilot	Total
1AB (National)	13	12	25	11	12	23	85	100	92
1AB (Provincial)	12	10	22	9	5	14	75	50	64
1C	16	16	32	13	15	28	81	94	88
Type 2	16	16	32	16	15	31	100	94	97
Type 3	16	16	32	16	14	30	100	88	94
Total	73	70	143	65	61	126	89	87	88

Source: Postal questionnaire survey (2002).

Appendix 6.1b: Response rate for in-depth study questionnaires

Type of school	Number distributed			Number responded			% of responses*		
	Pilot	Non-pilot	Total	Pilot	Non-pilot	Total	Pilot	Non-pilot	Total
1AB (National)	3	3	6	3	2	5	100	67	83
1AB (Provincial)	3	3	6	3	2	5	100	67	83
1C	4	4	8	4	4	8	100	100	100
Type 2	4	4	8	4	3	7	100	75	88
Type 3	4	4	8	4	4	8	100	100	100
Total	18	18	18	18	15	33	100	83	92

Source: In-depth study questionnaire survey (2002).

Appendix 6.1c: Response rate for education planners' questionnaires

Level	Number distributed	Number responded	% of responses*
Zonal education planners (Pilot zones)	8	7	88
Zonal education planners (Non-pilot zones)	8	7	88
Provincial education planners	8	6	75
National education planners	1	1	100
Total	25	21	84

Source: Questionnaire survey for planners (2002).

Appendix 6.2a: Response rate for postal questionnaire

Regimes of SBRM		Number distributed	Number responded	% of responses*
Basic SBRM		47 <i>1AB (Nat)=25</i> <i>1AB (Prov)=22</i>	37 <i>1AB (Nat)=23</i> <i>1AB (Prov)=14</i>	79
Non-SBRM		96 <i>1C=32</i> <i>Type 2=32</i> <i>Type 3=32</i>	89 <i>1C=28</i> <i>Type 2=31</i> <i>Type 3=30</i>	93
Strengthened basic SBRM	<i>Basic SBRM:</i>	22 <i>1AB (Nat)=12</i> <i>1AB (Prov)=10</i>	17 <i>1AB (Nat)=12</i> <i>1AB (Prov)=05</i>	77
	<i>Non-SBRM:</i>	48 <i>1C=16</i> <i>Type 2=16</i> <i>Type 3=16</i>	44 <i>1C=15</i> <i>Type 2=15</i> <i>Type 3=14</i>	92
Extended SBRM	<i>Basic SBRM:</i>	25 <i>1AB (Nat)=13</i> <i>1AB (Prov)=12</i>	20 <i>1AB (Nat)=11</i> <i>1AB (Prov)=09</i>	80
	<i>Non-SBRM:</i>	48 <i>1C=16</i> <i>Type 2=16</i> <i>Type 3=16</i>	45 <i>1C=13</i> <i>Type 2=16</i> <i>Type 3=16</i>	93

Source: Postal questionnaire survey (2002).

Appendix 6.2b: Response rate for in-depth study survey questionnaire

Regimes of SBRM		Number distributed	Number responded	% of responses*
Basic SBRM		12 <i>LAB (Nat)= 6</i> <i>LAB (Prov)= 6</i>	10 <i>LAB (Nat)= 5</i> <i>LAB (Prov)= 5</i>	83
Non-SBRM		24 <i>IC= 8</i> <i>Type 2= 8</i> <i>Type 3= 8</i>	23 <i>IC=8</i> <i>Type 2=7</i> <i>Type 3=8</i>	96
Strengthened basic SBRM	<i>Basic SBRM:</i>	6 <i>LAB (Nat)= 3</i> <i>LAB (Prov)= 3</i>	4 <i>LAB (Nat)= 2</i> <i>LAB (Prov)= 2</i>	67
	<i>Non-SBRM:</i>	12 <i>IC= 4</i> <i>Type 2= 4</i> <i>Type 3= 4</i>	11 <i>IC= 4</i> <i>Type 2= 3</i> <i>Type 3= 4</i>	92
Extended SBRM	<i>Basic SBRM:</i>	6 <i>LAB (Nat)= 3</i> <i>LAB (Prov)= 3</i>	6 <i>LAB (Nat)= 3</i> <i>LAB (Prov)= 3</i>	100
	<i>Non-SBRM:</i>	12 <i>IC= 4</i> <i>Type 2= 4</i> <i>Type 3= 4</i>	12 <i>IC= 4</i> <i>Type 2= 4</i> <i>Type 3= 4</i>	100

Source: In-depth study questionnaire survey (2002).

Appendix 6.2c: Response rate for education planners' questionnaires

Level	Number distributed	Number responded	% of responses*
Zonal education planners	16	14	88
Provincial education planners	8	6	75
National education planners	1	1	100
Total	25	21	84

Source: Questionnaires survey for planners (2002).

Appendix 6.3a: Advantages of basic SBRM (Basic SBRM school principals' responses)

Ser. No.	Advantages	Responses as a percentage* (n=17)				Priority
		Priority rank (Ser. No.)				
		1	2	3	4	
1	Best use of available resources.	24	53	12	12	2
2	Principals highly accountable to higher authority.	47	18	18	18	1
3	Keeping low costs.	12	18	53	18	3
4	More efficient management of school resources at zonal than at school level.	18	12	18	53	4

Source: Postal questionnaire survey (2002).

Appendix 6.3b: Advantages of non-SBRM (*Non-SBRM school principals' responses*)

Ser. No.	Advantages	Responses as a percentage* (n=44)				Priority
		Priority rank (Ser. No.)				
		1	2	3	4	
1	Best use of available resources.	61	11	14	14	1
2	Principals highly accountable to higher authority.	18	50	16	16	2
3	Keeping low costs.	11	18	18	52	4
4	More efficient management of school resources at zonal than at school level.	9	20	52	18	3

Source: Postal questionnaire survey (2002).

Appendix 6.3c: Advantages of basic SBRM (*Planners' responses*)

Ser. No.	Advantages	Responses as a percentage* (n=21)				Priority
		Priority rank (Ser. No.)				
		1	2	3	4	
1	Best use of available resources.	38	24	24	14	1
2	Principals highly accountable to higher authority.	29	24	33	14	3
3	Keeping low costs.	19	38	19	24	2
4	More efficient management of school resources at zonal than at school-level.	14	14	24	48	4

Source: Questionnaire survey for planners (2002).

Appendix 6.4a: Disadvantages of basic SBRM (*Basic SBRM school principals' responses*)

Ser. No.	Disadvantages	Responses as a percentage* (n=17)				Priority
		Priority rank (Ser. No.)				
		1	2	3	4	
1	Highly centralized and uniform school resource management.	18	47	18	18	2
2	No room for decision-making by principals at school level.	53	24	12	12	1
3	School principals not involved in policy decisions at provincial and national levels.	12	18	47	24	3
4	Political and bureaucratic influences.	18	12	24	47	4

Source: Postal questionnaire survey (2002).

Appendix 6.4b: Disadvantages of non-SBRM (*Non-SBRM school principals' responses*)

Ser. No.	Disadvantages	Responses as a percentage* (n=44)				Priority
		Priority rank (Ser. No.)				
		1	2	3	4	
1	Highly centralized and uniform school resource management.	61	23	11	5	1
2	No room for decision-making by principals at school level.	14	50	14	23	2
3	School principals not involved in policy decisions at provincial and national levels.	14	18	52	16	3
4	Political and bureaucratic influences.	11	9	23	57	4

Source: Postal questionnaire survey (2002).

Appendix 6.4c: Disadvantages of basic SBRM (*Planners' responses*)

Ser. No.	Disadvantages	Responses as a percentage* (n=21)				Priority
		Priority rank (Ser. No.)				
		1	2	3	4	
1	Highly centralized and uniform school resource management.	14	43	33	10	2
2	No room for decision-making by principals at school level.	14	19	43	24	3
3	School principals not involved in policy decisions at provincial and national levels.	52	24	10	14	1
4	Political and bureaucratic influences.	19	14	14	52	4

Source: Questionnaire survey for planners (2002).

Appendix 6.5: Responses of principals in basic SBRM and non-SBRM schools with respect to the involvement in initiation of strengthened basic SBRM

No.	Agency	Responses as a percentage*	
		Basic SBRM (<i>n=17</i>)	Non-SBRM (<i>n=44</i>)
1	World Bank	88 (15)	91 (40)
2	Asian Development Bank (ADB)	12 (2)	7 (3)
3	UNESCO	0 (0)	0 (0)
4	National Education Commission (NEC)	35 (6)	57 (25)
5	Ministry of Education	88 (15)	91 (40)
6	Ministry of Finance and Planning	0 (0)	0 (0)
7	Finance Commission (FC)	71 (12)	75 (33)
8	National Planning Department	0 (0)	0 (0)
9	Provincial Ministry of Education	12 (2)	18 (8)
10	Provincial Department of Education and Zonal Education Office	35 (6)	68 (30)

Source: Postal questionnaire survey (2002).

Appendix 6.6a: Reasons for the introduction of strengthened basic SBRM (Basic SBRM school principals' responses)

Ser. No.	Reasons	Responses as a percentage* (n=17)						Priority
		Priority rank (Ser. No.)						
		1	2	3	4	5	6	
1	World Bank influence and intervention.	47	12	6	12	12	12	1
2	To implement government policy.	18	12	41	6	12	12	3
3	Improve the efficiency of resource use in schools.	12	6	18	47	12	6	4
4	To establish school resource management policies.	6	53	12	6	12	12	2
5	To establish a school planning culture.	12	6	12	18	41	12	5
6	Unknown reasons.	6	12	12	12	12	47	6

Source: Postal questionnaire survey (2002).

Appendix 6.6b: Reasons for the introduction of strengthened basic SBRM (Non-SBRM school principals' responses)

Ser. No.	Reasons	Responses as a percentage* (n=44)						Priority
		Priority rank (Ser. No.)						
		1	2	3	4	5	6	
1	World Bank influence and intervention.	68	5	5	9	7	7	1
2	To implement government policy.	5	70	9	7	7	2	2
3	Improve the efficiency of resource use in schools.	5	5	68	5	7	11	3
4	To establish school resource management policies.	7	5	5	68	5	11	4
5	To establish a school planning culture.	11	9	9	7	57	7	5
6	Unknown reasons.	5	7	5	5	18	61	6

Source: Postal questionnaire survey (2002).

Appendix 6.6c: Reasons for the introduction of strengthened basic SBRM (Planners' responses)

Ser. No.	Reasons	Responses as a percentage* (n=21)						Priority
		Priority rank (Ser. No.)						
		1	2	3	4	5	6	
1	World Bank influence and intervention.	5	5	10	24	29	24	5
2	To implement government policy.	14	10	10	43	14	10	4
3	Improve the efficiency of resource use in schools.	10	38	19	10	14	10	2
4	To establish school resource management policies.	14	10	38	10	24	5	3
5	To establish a school planning culture.	43	24	14	5	10	5	1
6	Unknown reasons.	14	14	10	10	10	43	6

Source: Questionnaire survey for planners (2002).

Appendix 6.7: Calculating real per-pupil expenditure for consumables & perishables for strengthened basic SBRM compared to basic SBRM and non-SBRM schools types and comparative index 2000-2002

Calculation of GDP implicit price deflator (1997 and 2000=100)

Year	GDP current factor cost price*	GDP 1997 factor cost price*	GDP price deflator
1997	803698	803698	1.000
1998	912839	774796	0.849
1999	994730	808340	0.813
2000	1125259	1125259	1.000
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=2)	1AB (Prov.) (n=2)	1C (n=4)	Type 2 (n=4)	Type 3 (n=4)
1997	6.00	5.50			
1998	8.50	8.00			
1999	10.00	9.50			
2000	30.00	30.00	25.00	22.00	20.00
2001	50.00	50.00	45.00	40.00	35.00
2002	50.00	50.00	45.00	40.00	35.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=2)	1AB (Prov.) (n=2)	1C (n=4)	Type 2 (n=4)	Type 3 (n=4)
1997	6.00	5.50			
1998	7.21	6.79			
1999	8.13	7.72			
2000	30.00	30.00	25.00	22.00	20.00
2001	33.87	33.87	30.48	27.09	23.71
2002	31.28	31.28	28.16	25.03	21.90

Real expenditure per pupil indexed to 100=1997 and 2000 for each school type (Divided each school's expenditure per pupil by its expenditure in 1997 and 2000)

Year	Index for per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=2)	1AB (Prov.) (n=2)	1C (n=4)	Type 2 (n=4)	Type 3 (n=4)
1997	100	100			
1998	120	123			
1999	135	140			
2000	100	100	100	100	100
2001	113	113	122	123	119
2002	104	104	113	114	109

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 6.8a: Advantages of strengthened basic SBRM (*Basic SBRM school principals' responses*)

Ser. No.	Advantages	Responses as a percentage* (n=17)							Priority
		Priority rank (Ser. No.)							
		1	2	3	4	5	6	7	
1	School determines its own priorities	47	6	6	12	12	12	6	1
2	Ability to target resources	12	12	6	6	12	6	47	7
3	Better school resource information	6	12	12	12	0	47	12	6
4	Improvements in delegated services	12	12	12	12	35	6	12	5
5	More efficient use of resources	6	47	6	12	18	6	6	2
6	More freedom and flexibility in school-level management	12	6	47	6	6	12	12	3
7	To easy way to acquire consumables and perishables in time	6	6	12	41	18	12	6	4

Source: Postal questionnaire survey (2002).

Appendix 6.8b: Advantages of strengthened basic SBRM (*Non-SBRM school principals' responses*)

Ser. No.	Advantages	Responses as a percentage* (n=44)							Priority
		Priority rank (Ser. No.)							
		1	2	3	4	5	6	7	
1	School determines its own priorities	9	9	36	11	9	11	14	3
2	Ability to target resources	11	11	18	11	27	11	9	5
3	Better school resource information	14	14	16	14	14	23	7	6
4	Improvements in delegated services	11	5	7	16	9	16	36	7
5	More efficient use of resources	11	16	11	27	14	16	5	4
6	More freedom and flexibility in school-level management	34	9	5	11	16	16	9	1
7	To easy way to acquire consumables and perishables in time	9	36	7	9	11	7	20	2

Source: Postal questionnaire survey (2002).

Appendix 6.8c: Advantages of strengthened basic SBRM (Planners' responses)

Ser. No.	Advantages	Responses as a percentage* (n=21)							Priority
		Priority rank (Ser. No.)							
		1	2	3	4	5	6	7	
1	School determines its own priorities	5	10	5	0	67	5	10	5
2	Ability to target resources	5	0	10	10	10	57	10	6
3	Better school resource information	0	0	0	10	10	19	62	7
4	Improvements in delegated services	10	19	10	52	5	5	0	4
5	More efficient use of resources	10	57	5	19	5	5	0	2
6	More freedom and flexibility in school-level management	67	5	14	0	0	5	10	1
7	To easy way to acquire consumables and perishables in time	5	10	57	10	5	5	10	3

Source: Questionnaire survey for planners (2002).

Appendix 6.9: Pilot school principals' responses on the involvement of different agencies in the initiation of the extension of SBRM

No.	Agency	Response as a %* (n=65)
1	World Bank	94 (61)
2	Asian Development Bank (ADB)	2 (1)
3	UNESCO	2 (1)
4	National Education Commission (NEC)	45 (29)
5	Ministry of Education and Higher Education (MEHE)	49 (32)
6	Ministry of Finance and Planning	14 (9)
7	Finance Commission (FC)	77 (50)
8	National Planning Department	8 (5)
9	Provincial Ministry of Education	12 (8)
10	Provincial Department of Education and Zonal Education Office	23 (15)

Source: Postal questionnaire survey (2002).

Appendix 6.10a: Reasons for introduction of the extension of SBRM
(Pilot school principals' responses)

Ser. No.	Reasons	Responses as a %* (n=65)						Priority
		Priority rank (Ser. No.)						
		1	2	3	4	5	6	
1	World Bank influence and intervention.	15	12	23	35	11	3	4
2	To implement the government's policy.	15	5	40	25	12	3	3
3	To establish an efficient school management system.	15	23	20	12	29	0	5
4	To improve the students' performance.	15	45	8	15	17	0	2
5	To give power and authority to the implementation level.	35	15	3	11	29	6	1
6	Unknown reasons.	3	0	6	2	2	88	6

Source: Postal questionnaire survey (2002).

Appendix 6.10b: Reasons for introduction of the extension of SBRM
(Planners' responses)

Ser. No.	Reasons	Responses as a %* (n=14)						Priority
		Priority rank (Ser. No.)						
		1	2	3	4	5	6	
1	World Bank influence and intervention.	0	0	14	29	43	14	5
2	To implement the government's policy.	0	7	29	57	7	0	4
3	To establish an efficient school management system.	21	64	0	7	7	0	2
4	To improve the students' performance.	14	14	43	0	29	0	3
5	To give power and authority to the implementation level.	57	14	14	7	0	7	1
6	Unknown reasons.	7	0	0	0	14	79	6

Source: Questionnaire survey for planners (2002).

Appendix 6.11: Composition of school purchasing committee and school evaluation committee

Each school purchasing committee consists of (i) the principal of the school as the chairman, (ii) the deputy principal/sectional head, and (iii) the senior teacher (appropriate to the subject for which items are to be purchased) (FC & MEHE, 2000).

Each school evaluation committee consists of (i) the deputy/assistant principal as the chairman, (ii) the senior teacher, (iii) a teacher appropriate to the subject considered, and (iv) a senior prefect (pupil) (FC & MEHE, 2000).

Appendix 6.12a: Calculating real per-pupil expenditure for inexpensive capital learning equipment for pilot schools (the extension of SBRM) types and comparative index 2000-2002

Calculation of GDP implicit price deflator (2000=100)

Year	GDP current factor cost price*	GDP 2000 factor cost price*	GDP implicit price deflator
2000	1125259	1125259	1.000
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=3)	1AB (Prov.) (n=3)	1C (n=4)	Type 2 (n=4)	Type 3 (n=4)
2000	75.00	75.00	66.00	85.00	80.00
2001	135.00	134.00	143.00	129.00	126.00
2002	130.00	120.00	147.00	141.00	167.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=3)	1AB (Prov.) (n=3)	1C (n=4)	Type 2 (n=4)	Type 3 (n=4)
2000	75.00	75.00	66.00	85.00	80.00
2001	91.44	90.77	96.86	87.38	85.35
2002	81.34	75.08	91.97	88.22	104.49

Real expenditure per pupil indexed to 100=2000 for each school type (Divided each school's expenditure per pupil by its expenditure in 2000)

Year	Index for per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=3)	1AB (Prov.) (n=3)	1C (n=4)	Type 2 (n=4)	Type 3 (n=4)
2000	100	100	100	100	100
2001	122	121	147	103	107
2002	108	100	139	104	131

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 6.12b: Calculating real per-pupil expenditure for inexpensive capital learning equipment for non-pilot schools (the extension of SBRM) types and comparative index 2000-2002

Calculation of GDP implicit price deflator (2000=100)

Year	GDP current factor cost price*	GDP 2000 factor cost price*	GDP implicit price deflator
2000	1125259	1125259	1.000
2001	1245703	843794	0.677
2002	1401951	877160	0.626

Actual (nominal) per-pupil expenditure (SLRs)

Year	Per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=2)	1AB (Prov.) (n=3)	1C (n=4)	Type 2 (n=3)	Type 3 (n=4)
2000	50.00	50.00	40.00	30.00	30.00
2001	55.00	60.00	55.00	45.00	40.00
2002	60.00	60.00	65.00	40.00	40.00

Real per-pupil expenditure (Multiply each per-pupil nominal expenditure by price deflator for its year)

Year	1AB (Nat.) (n=2)	1AB (Prov.) (n=3)	1C (n=4)	Type 2 (n=3)	Type 3 (n=4)
2000	50.00	50.00	40.00	30.00	30.00
2001	37.26	40.64	37.26	30.48	27.09
2002	37.54	37.54	40.67	25.03	25.03

Real expenditure per pupil indexed to 100=2000 for each school type (Divided each school's expenditure per pupil by its expenditure in 2000)

Year	Index for per-pupil expenditure* mean value by type of school				
	1AB (Nat.) (n=2)	1AB (Prov.) (n=3)	1C (n=4)	Type 2 (n=3)	Type 3 (n=4)
2000	100	100	100	100	100
2001	75	81	93	102	90
2002	75	75	102	83	83

Note: *SLRs

Source: basic data: In-depth study survey (2002); CBSL (2002b).

Appendix 6.13a: Advantages of the extension of SBRM (Principals' responses)

Ser. No.	Advantages	Responses as a %* (n=65)						Priority
		Priority rank (Ser. No.)						
		1	2	3	4	5	6	
1	School determines its own priorities	55	17	20	5	2	2	1
2	Ability to target resources	3	9	25	31	28	5	4
3	Better school financial information	3	17	8	23	26	23	5
4	Improvements in delegated services	0	3	14	15	23	45	6
5	More efficient use of resources	18	18	29	14	12	8	3
6	More freedom and flexibility in school-level management	20	35	5	12	9	18	2

Source: Postal questionnaire survey (2002).

Appendix 6.13b: Advantages of the extension of SBRM (Planners' responses)

Ser. No.	Advantages	Responses as a %* (n=14)						Priority
		Priority rank (Ser. No.)						
		1	2	3	4	5	6	
1	School determines its own priorities	57	21	7	7	7	0	1
2	Ability to target resources	7	0	21	21	14	36	6
3	Better school financial information	0	0	0	57	21	21	4
4	Improvements in delegated services	0	7	21	7	36	29	5
5	More efficient use of resources	14	7	43	0	21	14	3
6	More freedom and flexibility in school-level management	21	64	7	7	0	0	2

Source: Questionnaire survey for planners (2002).

Appendix 6.14: Disadvantages of the extension of SBRM (Pilot school principals' responses)

Ser. No.	Disadvantages	Responses as a %* (n=65)					Priority
		Priority rank (Ser. No.)					
		1	2	3	4	5	
1	More time spent on administrative work	57	20	11	3	9	1
2	Greater number of demands on my time	12	57	11	12	8	2
3	Less time allocated for teaching-learning issues	8	8	45	28	12	3
4	Insufficient funding	11	3	26	31	29	4
5	Increased stress for principals and teachers	12	12	8	26	42	5

Source: Postal questionnaire survey (2002).

Appendix 7.1: Guidelines for further improvement of NBUCRAM

School budget for learning resources: denoted as SB

$$\sum_{i=1}^n SB_{ij} = \sum_{i=1}^n BA_{ij} + \sum_{i=1}^n CA_{ij} + \sum_{i=1}^n IA_{ij} + \sum_{i=1}^n SA_{ij}$$

- **Basic student allocation** denoted as 'BA':

$$\sum_{i=1}^n BA_{ij} = \sum_{i=1}^n PPA_{ij} + \sum_{i=1}^n GLA_{ij}$$

- **Curriculum allocation** denoted as 'CA':

$$\sum_{i=1}^n CA_{ij} = \sum_{i=1}^n P_{ij} + \sum_{i=1}^n S_{ij} + \sum_{i=1}^n C_{ij}$$

$$\text{where } \sum_{i=1}^n C_{ij} = \sum_{i=1}^n ACom_{ij} + \sum_{i=1}^n SC_{ij}$$

- **School incentive allocation** denoted as 'IA':

$$\sum_{i=1}^n IA_{ij} = \sum_{i=1}^n DS_{ij} + \sum_{i=1}^n SEN_{ij}$$

$$\text{where } \sum_{i=1}^n DS_{ij} = \sum_{i=1}^n SIO_{ij} + \sum_{i=1}^n PLA_{ij}$$

$$\text{where } \sum_{i=1}^n SEN_{ij} = \sum_{i=1}^n RURAL_{ij} + \sum_{i=1}^n SLUM_{ij} + \sum_{i=1}^n WAR_{ij}$$

- **School site needs allocation** denoted as 'SA':

$$\sum_{i=1}^n SA_{ij} = \sum_{i=1}^n LOC_{ij} + \sum_{i=1}^n RUN_{ij}$$

Where:

- j denotes a particular school in the sample, i represents student 1, student 2,.....student n and n varies with the number of students per school,
- PPA denotes a per-pupil allocation,
- GLA denotes a grade level allocation,

- P denotes the primary level,
- S denotes the secondary level,
- C denotes the collegiate level,
- Acom denotes the arts/commerce stream,
- SC denotes the science stream,
- DS denotes a disadvantaged school,
- SEN denotes a pupil with SEN,
- SIO denotes a rural socio-economic disadvantaged area,
- PLN denotes a school in the plantation sector,
- RURAL denotes a rural area,
- SLUM denotes a slum area,
- WAR denotes a war-affected area,
- LOC denotes location of schools,
- RUN denotes a schools' running cost.

Appendix 7.2: Proposed structure for resourcing schools

