

ASSESSING TRANSACTION COSTS IN MICRO AND SMALL ENTERPRISES (MSEs) CREDIT SCHEMES: A CASE STUDY OF SCHEMES IN ARUSHA AND MWANZA DISTRICTS

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Abstract

The majority of Micro and Small Enterprises (MSEs) cannot afford to adequately finance their production activities. In Tanzania, a number of local and externally funded agencies have been involved in financing MSEs activities through projects. However, most of these credit schemes have been characterized by inefficient financial intermediation such that they often impose high transaction costs on either lenders or borrowers or both. This study attempts to investigate transaction costs in Micro and Small Enterprise (MSEs) credit schemes in Mwanza and Arusha districts. Specifically the study aims at; (i) estimating the lender-borrower loan transaction costs in MSEs lending programmes, (ii) assessing how transaction costs vary across different types of lenders and in different areas, (iii) identifying factors that affect the transaction costs incurred by borrowers, and (iv) determining the consequences of the transaction costs on credit demand. Primary data will be obtained using a structured questionnaire administered to 120 Micro and Small Enterprise borrowers randomly selected from the two districts together. A checklist will also be used to interview the lending projects in the study areas. Much of the analysis will be based on descriptive statistics to summarize survey results. However, multiple regression analyses will be carried out to identify the determinants of borrowing transaction costs, together with the consequent effects of the costs on loan demand. This study will recommend measures to be taken at both the organizational and national policy level towards the development of a viable and sustainable financial market for MSEs.

1. Background Information

Micro and Small Enterprises (MSEs) have been an important source of incomes not only to people who could not find employment in the other sectors but also provide an important cushion to falling incomes of employees in the formal sector. In addition they are an important source of off-farm and non-farm employment in the countryside. When looking on the country's on going poverty reduction initiatives as presented in key policy documents, they acknowledge the informal (where most of the MSEs fall) sector's role in poverty alleviation. Vision 2025 addresses broad based growth, which can be achieved through developing private sector enterprises including MSEs. The Poverty Reduction Strategy Paper (PESP) has concentrated its efforts on, reducing income poverty, improving human capabilities, survival and social well being and containing extreme vulnerability among the poor. It has outlined a number of policies and strategies whose target is to enhance economic growth and equity. Policies for economic growth include a set of macroeconomic policies under which the government is expected to create

an enabling environment for the informal sector to operate and create more employment opportunities.

The 1991 (national) informal sector survey estimated 2.4 million people informally employed (excluding small-scale rural agriculture). Out of these, 60% were employed in rural areas; and 40% in urban areas. 50% of the informal sector firms were engaged in trade-related activities, 22% in manufacturing and 10% in urban agriculture and fishing. Using the 1995 informal sector survey of Dar es Salaam we can estimate a trend growth in this sector. In 1991, 316,000 people were informally employed in Dar es Salaam, in 1995 there were 346,000 people employed - implying a growth rate of 2.4% per year. This contrasts with static or falling formal wage employment after adjustment. Thus, promotion and development of the informal sector consisting mostly of Micro and Small Enterprises (MSEs) is seen as accelerating the achievements of wider economic and social objectives including poverty reduction.

Notwithstanding their importance in economic development, MSEs face a number of constraints including lack of access to formal financial institutions. Under the Banking and Financial Institutions Act of 1991, banks must follow prudential guidelines issued by the Bank of Tanzania (BOT) that limit credit extension to MSEs. In particular, a loan is only considered as secured if it is backed by collateral with a market value of 125% of the loan size. Unsecured lending must not exceed 5% of the lending institutions core capital. Other reasons that hinder access to formal banking facilities include high transaction costs when dealing with MSEs, existence of weak credit repayment culture, and lack of experience in micro-finance. However, informal and semi formal financial institutions have attempted to fill the gap in the provision of micro-finance services to MSEs in Tanzania.

There are limitations to the success of informal and semi-formal financial institutions in delivering credit to MSEs. Most credit schemes have been characterized by inefficient financial intermediation such that when they try to implement different versions of lending arrangements, they often impose high transaction costs on either lenders or borrowers or both thus have limited potential for becoming sustainable. Programme viability hinges on the determinants and consequences of transaction costs in such credit schemes, and the ability of economic agents to assess such costs prior to incurring them.

Problem statement and Significance of the Study

The problem of financing micro and small-scale enterprises is not a new one. Indeed providing credit to MSEs has been a major concern both of governments and donors, not only in Sub-Saharan Africa, but also in Asia and elsewhere. The majority of MSEs cannot afford to adequately finance their production activities. In Tanzania, a number of local and externally funded agencies have been involved in micro-finance activities through projects usually targeting at a specific group, such as women, youth or the poor. The number of micro-finance institutions has increased substantially since the beginning of economic reforms. However, over the years, lessons learnt from the different credit schemes has been that

development objectives have often been more important than instilling sustainable financial management mechanisms and most of these schemes have been characterized by inefficient financial intermediation.

For efficient financial intermediation, an understanding of the determinants and consequences of transaction costs in credit demand and repayment is of paramount importance. The amount of transaction costs and the way in which they are shared tells a great deal about how financial markets perform. These costs also reveal how intermediaries react to regulations (Adams and Vogel, 1986). However, previous studies on credit issues in Tanzania, for example Kashuliza and Kydd (1996), Mwachang'a (2000), have taken the conventional view of financing in Least Developed Countries, which gives special importance to the number of loans, the volume of credit disbursed and repayment rates, as key elements of success. Few (if any) recent studies have provided detailed empirical evidence on the nature and implications of loan transaction costs.

A dear understanding of lending and borrowing costs is an indispensable element of credit policies since they impact on the sustainability of lending programmes. This study therefore will aim at determining the extent to which reduced transaction costs can be exploited in Tanzania. In particular it will focus on MSEs credit schemes in Arusha and Mwanza districts. Critical policy questions are what factors affect the transaction costs incurred by borrowers, what are the consequences of transaction costs on credit demand, and how can transaction costs be accounted for in the design of the different lending programmes.

Objectives of the Study

General Objective

The general objective of the study is to assess transaction costs in Micro and Small Enterprises (MSEs) credit schemes.

Specific Objectives Specifically the study seeks: -

- i) To estimate the lender-borrower loan transaction costs in MSEs lending schemes.
- ii) To assess how transaction costs vary across different types of lenders and in different areas.
- iii) To identify factors that affect the transaction costs incurred by borrowers.
- iv) To determine the consequences of borrower transaction costs on credit demand.

Research Questions

The study will be governed by the following research questions.

- i) What are the transaction costs of both lenders and borrowers in the MSEs credit schemes?
- ii) How do transaction costs vary across the different types of lenders?
- iii) What are key factors affecting borrowing transaction costs?
- iv) What is the effect of borrowing transaction costs on demand for credit?
- v) What can be done to reduce transaction costs?

- vi) Can lending to MSEs be viable and sustainable?
- vii) What measures must be taken at both the organizational and national policy level towards the development of a viable and sustainable financial market for MSEs?

Literature Review

The concept of transaction cost

The notion that the cost of arranging an exchange may reduce or even prevent exchanges from occurring is now widely accepted (Staal *et al*, 1996). Thus, transaction costs broadly refer to the costs involved in exchange. They are costs that prevent markets from operating efficiently or factors that may prevent exchanges from taking place (Gamin, 1994). Transaction costs include; the cost of searching for a partner with whom to exchange, screening potential trading partners to ascertain their trust worthiness, bargaining with potential trading partners to reach an agreement, transferring the product, monitoring the agreement to see that it's conditions are fulfilled, and enforcing (or seeking damages for any violation of) the exchange agreement (Staal *et al*, 1996).

Coase (1991) as cited by Rindfleisch and Heide (1997), proposes that under certain conditions, the cost of conducting economic exchange in a market may exceed the costs of organizing the exchange within the firm. In this context, transaction costs are the "costs of running the system" and include such ex ante costs as drafting and negotiating contracts and such ex post costs as monitoring and enforcing agreements. Over the past decade, Transaction Cost Analysis (TCA) has received an increased amount of attention from a broad range of audiences (Bjuggren, 1985; Pollak, 1985; Rindfleisch and Heide, 1997). Evidence of this attention takes many forms, the most visible being the Nobel award in Economics given to Ronald Coase for his work on transaction costs (Coase, 1991). Although most strongly advocated by economists, TCA has generated considerable interest in other academic disciplines beyond economics, including sociology, political science, organisation theory, contract law, business strategy and marketing (Reinfleisch and Heide, 1997).

Transaction costs in financial intermediation

In recent years, awareness has grown of the costs involved in financial intermediation (Mittendorf, 1986). The cost of lending and borrowing strongly determine whether the financial institutions can engage in finance and whether the population can successfully access the formal capital market (Adams and Vogel, 1986, Adams *et al*, 1984, World Bank, 1990a). Credit or capital markets come into being and evolve as a result of financial innovations that tend to reduce the total risk premium and total transaction costs, to a level that is mutually acceptable to both lenders and borrowers (Bhatt, 1988). To be effective, an innovation should have risk reducing effect much greater than its cost increasing effect.

Lender Transaction Costs

The resources used for transactions by financial market participants are important measures of performance (Adams and Vogel, 1986). Like well-oiled machines, financial markets that perform with little friction create few transaction costs for

participants. Transaction costs for lenders include; expenses of mobilising funds for on-lending, costs of collecting information about potential borrowers, and costs of extending, maintaining and collecting loans (Adams *et al*, 1995). The administration costs of lending to small farmers (not counting the cost of capital) often run between 10 and 30 percent of the loan and sometimes even more (World Bank, 1975), Loan recovery problems, combined with relatively large transaction costs, have sometimes caused lenders to collapse (Adams and Vogel 1986). The need for innovation and new technology to reduce transaction costs is urgent Olomola and Mahawonku (1993), in their study on the role and determinants of transaction costs, found out that lending costs were determined mainly by the borrowers' distance from the loan office and the size of the loan disbursed. The costs were found to be a decreasing function of loan amount and an increasing function of the borrowers' distance from the loan office. Also, total lending transaction costs in the particular study, constituted about 6 percent of the loan disbursed and about 70 percent of the nominal interest rate; with the recovery cost being the highest component followed by monitoring and processing costs respectively.

Sustainability requires that financial institutions and programs be financially viable. The most appropriate quantitative indicator is the subsidy dependency index (Yaron, 1992a). However, because accounting data may be lacking for most of the institutions, other factors may indirectly indicate, to some extent, whether institutions operate in a cost-covering way. These include; subsidisation level, administrative costs which largely entail transaction costs, loan recovery rates, length of operations, growth and diversification of activities, and the source and cost of funds (Yaron, 1992b).

Borrower Transaction Costs

Borrower transaction costs mainly involve various charges imposed by lenders beyond interest payments such as application fees, service fees and travel expenses. Lost time from work is an important part of the transaction costs for most poor borrowers. High transaction costs of borrowing from formal sources discourage small entrepreneurs from availing themselves of formal credit. In this case, the market fails from the demand side (Gamin, 1994). Borrowers of small amounts and individuals, who do not have prior borrowing experience with a prospective lender, may incur relatively large transaction costs to acquire a loan. Adams and Nehrnan (1978), identifies at least three kinds of borrower transaction costs. These include;

- Loan charges collected by the lender beyond interest payments, through such things as application fees, bribes, compensatory balances and closing costs. The lender may also raise the borrowers' transaction costs by deducting interest charges in advance or collecting interest on the entire loan, though the borrower withdraws only part.
- In many low-income countries the poor may be forced to negotiate with someone outside the formal lending agency before a loan application is formally received. This individual may be a local government official or leader, or a co-signer. In some cases a potential borrower must pay

expenses for a technician to visit and inventory borrower's operations. Gifts and bribes may be involved in some of these cases.

In many cases, the largest and most important transaction costs are the borrower's time and travel expenses involved in the loan transaction. Many small and new borrowers are required to visit the formal lender a number of times to negotiate the loan, withdraw portion of the loan, and make repayment. Some of these visits may involve waiting in line for long periods and traveling long distances. Lost work time may be quite important especially when the opportunity costs of the borrower's time are substantial

The borrower loan transaction costs, detailed in a study by Shahjahan and others, in early 1960s in Bangladesh (Adams and Nehman, 1978), included; application fees, form filling fees, costs of "entertaining" people who assisted in getting the loan, and the opportunity cost of the borrower's time used in negotiating the loan. In a 1971 study, Nehman (cited by Adams and Nehman, 1978), analysed borrowing costs by the state of Sao Paulo, in Brazil. The borrowers loan transaction costs included loan registration fees, appraisal costs covered by the potential borrower, and the borrower's time and travel costs involved in negotiating, acquiring and repaying the loan. As in the Bangladesh study, Nehman found out that for most small and new borrowers, the time lost in negotiating loans made up a very large part of total borrower's transaction cost, even when the borrower's time was valued at day labour wages. In a study conducted in Philippines on borrower transaction cost and credit rationing in rural financial markets, Guia-Abiad (1991), found borrower transaction costs to be an important determinant of loan demand, confirming the expected inverse relationship between the two variables. On the other hand, the levels of transaction costs were found to be determined by two factors: distance to the bank and type of bank. The further the bank from the borrower's residence, the higher the transaction costs. Borrowers of rural banks also had higher transaction costs than borrowers from non-rural banks.

The most important conclusion from the above studies is that borrower loan transaction costs above and beyond nominal interest payments may be an important factor discouraging small and new borrowers from using formal loans. These loan transaction costs appear to make up a very large part of borrowing costs for many small and medium sized borrowers. The borrowing transaction costs largely govern the debtors credit demand (Qenicek and Shaba, 1998). In fact, Desai and Mellor (1993) show in their review that the loan demand coefficient is negative but inelastic, regarding the interest rate.

Study Methodology

Conceptual framework Transaction costs in credit delivery can be conceptualized as costs incurred by lenders and borrowers during pre-loan disbursement, loan disbursement and post-loan disbursement activities. For lenders, these may include costs associated with searching for loanable funds, designing credit contracts, engaging in community outreach and screening of borrowers, assessing project feasibility, evaluating loan applications, providing credit training to staff and borrowers, and monitoring and enforcing loan contracts.

For borrowers, these may include costs associated with screening potential group members, group formation, agreeing on formal or informal group rules, negotiating with the lender, filling out necessary paperwork, transport to and from the lender, time spent on group activities related to attaining access to credit, and enforcing group rules. Figure 1, details the transaction responsibilities of lenders and borrowers in the three stages of credit delivery.

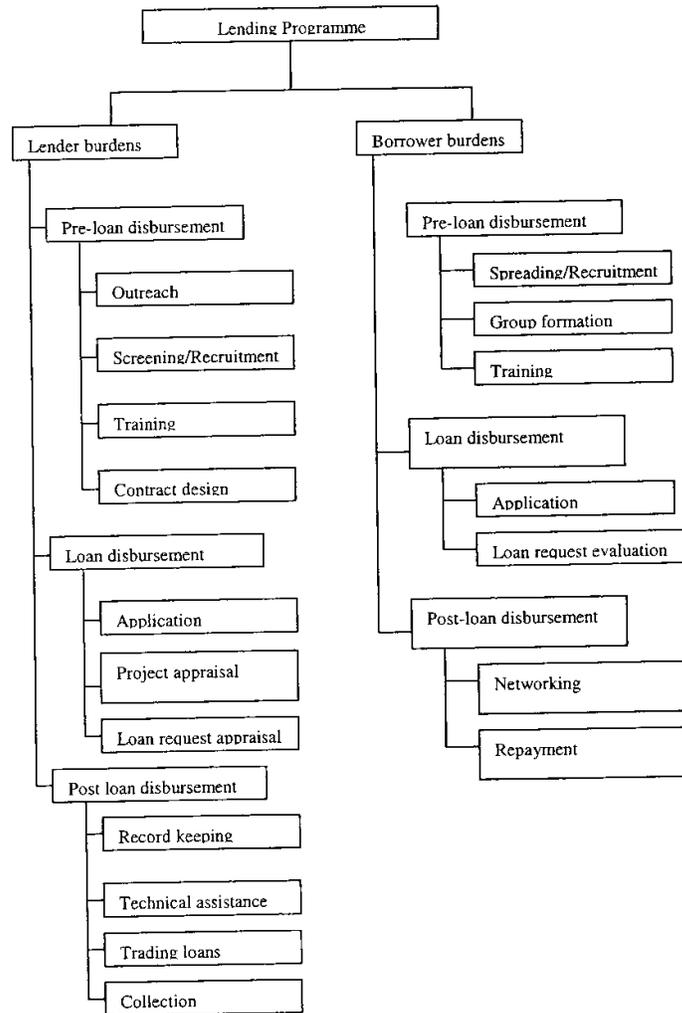


Figure 1: Distribution of transaction cost burdens

Study Area

This research study will be conducted in two districts, which are Mwanza and Arusha.

Sources of data

The data used in this study will be largely cross-sectional, obtained from primary sources (MSEs and credit schemes). Secondary sources from the selected lending institutions and other sources will also be used to provide background information for the study.

The process of data collection from primary sources will involve pre-testing the questionnaire during a preliminary survey to be conducted, sample selection,

interviewing the sampled MSEs and selected financial institutions. Details on the data collection procedures are described in subsequent sections,

- **Borrowers Questionnaire**

The questionnaire is designed to capture both quantitative and qualitative data. The questionnaire will contain seven sections. Section one, designed to capture information on the general characteristics of the respondent. Section two, meant to collect information on credit received by the borrowers from the lending programmes and associated costs (as stipulated in section 6.4.3). Section three for information on assets and loan securities owned by the borrowers, while section four is designed to obtain borrowers' assessment of the benefits obtained from the credit schemes. Section five, designed to collect information on other sources of credit available to MSEs whilst section six is intended to collect information on interest rate and repayment performance of borrower groups. The last section seeks general comments from the respondents on the credit programmes.

- **Check List for Lenders**

A checklist will be used to interview the lending programmes whereby questions leading to estimation of lending transaction costs (as stipulated in 6.4.2) will be asked. Hence data for measuring lending transaction costs will be collected.

- **Pre-survey**

Prior to the main survey, a pre-survey will be conducted. This is essential, as it will enable the researchers to pre-test the questionnaire and to ascertain the feasibility of conducting the major survey in the intended areas of study. Questionnaire pre-testing will be conducted using a small sample of at least 20 MSEs in each district.

- **Sample selection techniques**

The research will cover at least five divisions from each of the two districts (Mwanza and Arusha). From a list of MSEs in the divisions, the researcher will purposefully select a total of 12 MSEs. Sample MSEs will be identified primarily from the credit lending point of view. MSEs, which did not borrow from credit schemes during the calendar year 2001 will be excluded from the sample. In total, the sample size will be 60 MSEs for each district making a total of 120 sample MSEs for the entire study.

- **Questionnaire administration**

The researchers, with the help of enumerators, will administer the questionnaire.

Data Analysis

Data analysis will be conducted using the Statistical Package for Social Sciences (SPSS) program. Much of the analysis will be based on descriptive statistics to summarize survey results. However, econometric models will also be employed to examine socio-economic variables influencing borrowing transaction costs, credit demand and the influence of transaction costs on repayment rate.

Econometric models

In this section, the conceptual framework structured and described, earlier is operationalised by specifying the relationship between (i) borrowing transaction

costs and factors hypothesized to influence mem, (ii) and demand for credit and transaction costs.

- **Factors influencing borrowing transaction costs**

Variations in loan transaction costs could be determined by a number of factors such as the amount of loan obtained, distance to the lending institution, borrower experience, disbursement lag and opportunity cost of labour for work time lost A Cobb-Douglas model will be used to examine the relationship between these factors and borrowing transaction costs and estimated using OLS regression technique.

$$\text{LnBTCOST} = \text{Ln}B_0 - B_1\text{LnLOAN} + B_2\text{LnDISTANCE} + B_3\text{LnDISLAG} - B_4\text{LnBOREX} + B_5\text{LnTIME} + B_6\text{LnGFSIZE} + u$$

Where;

BTCOST	=	Borrowing transaction cost (Tsh)
LOAN	=	Amount of loan obtained by a farmer (Tsh)
DISTANCE	=	Distance of borrower from loan office (Km)
BOREX	=	Borrowing experience, which is a dummy variable with a value of unity for experienced borrowers and zero for first-time borrowers
DISLAG	=	Loan disbursement lag, defined as the time-interval between submission of loan application and collection of the loan (days)
TIME	=	Time spent on loan activities. This reflects the opportunity cost of labour for borrower's lost work time (days)
GFSIZE	=	Number of members for each borrower group
B ₀	=	Constant term
u	=	Error term
B _i (i=1,..., 4)	=	Parameters which when estimated can be interpreted directly as elasticities.

- **Demand for credit**

The demand for credit was hypothesized to be determined by the interest charges, borrower transaction costs as a percentage of loan amount received, number of household members, years of schooling of household head, access to other credit sources, distance to loan office, borrower experience and disbursement lag.

The loan demand equation is specified as follows;

$$\text{LnLOAN} = c_0 - c_1\text{LnBTCOST} - c_2\text{LnDISTANCE} + c_3\text{LnEDCN} - c_4\text{LnOTHSCS} + c_5\text{LnBOREX} - C_6\text{LnDISLAG} + u$$

Where:

LOAN	=	Loan amount applied for
BTCOST	=	Borrower transaction costs as a percentage of loan amount received
EDCN	=	Years of schooling of household head
OTHSCS	=	Dummy variable for access to other sources of credit with a value of 1 if a borrower has also borrowed from other sources and 0 if otherwise.

BOREX	=	Borrower experience, dummy variable with a value of 1 for experienced borrowers and 0 for first time borrowers
DISLAG	=	Disbursement lag (Days)
DISTANCE	=	Distance (km) between borrowers and loan office
u	=	Error term
$c_{is}(i=1, \dots, 4)$	=	Parameters which when estimated can be interpreted directly as elasticities.

Loan amount applied for is used as a dependent variable, because the amount eligibility depends on the frequency of borrowing, whereby the higher the frequency the higher is the amount one can borrow.

Estimation of lending transaction costs

Lending transaction costs arise from group mobilization, evaluating loan applications, monitoring loan performance of borrowers, collecting loans, managing delinquencies and giving technical assistance to entrepreneurs. There are three major components of lending transaction costs. These are; i) Loan processing costs, which include, the sum of travel expenses, cost of stationery and the value of staff time spent on inspection visits before loan is approved ii) Monitoring costs, which entails the value of staff time spent in visiting a particular borrower after loan disbursement, but before repayment was due, plus travel expenses iii) Loan recovery costs, which comprise of travel expenses associated with loan recovery visits to and from a particular borrower plus value of staff time involved. Value of staff time is obtained as a product of the following variables; Number of visits, hours of visits and number of staff and their salary levels. Costs incurred in executing the above activities include; fuel for programme vehicles, allowances for programme staff, and allowances for other participants in the case of meetings and workshops.

Three alternative measures of average costs will be computed. The first will be cost per borrower, the second, cost as percentage of loan and the third, cost as percentage of nominal interest rate. This will be achieved by dividing the total transaction costs by the number of loans, amount (value) of loans and the nominal rate of interest respectively. The above approach implicitly assumes that loan transaction costs incurred in a particular year occurred as a result of only the loans made in that year; thereby disregarding the influence on cost of previous years loans still in the portfolio. A corollary to this assumption is that the costs of a loan should be charged to the period during which the loan was made.

The bias that may be introduced in these estimates of average costs based on the above assumption becomes less important in this particular case, because the bias tends to be larger the faster the loan portfolio is growing and the larger the share of medium and long term loans in the portfolio. The average cost estimates are, however, important because by comparing the average costs of the two programs with that of other credit programs, one can form a judgment about the efficiency of the two programmes relative to their credit facilities.

Estimation of borrowing transaction costs

Borrower transaction costs will be computed by considering cash outlay incurred and the opportunity cost of time spent by borrowers on activities directly related to acquiring access to loan. The cash outlay consist of the transportation expenses and administration costs which include membership fees, accommodation and meals expenses, incurred in the process of applying, receiving and repaying loans by each borrower. The opportunity cost of labour for work time lost will be valued at a day labour wage at the borrowers' localities.

Like the estimation of lending transaction costs, three alternative measures of average borrowing transaction costs will be computed. The first is cost per borrower, the second, cost as percentage of loan and the third, cost as percentage of nominal interest rate. This will be achieved by dividing total transaction costs by the number of loans, amount (value) of loans and the nominal rate of interest, respectively.

Expected output of the study

This research study will investigate and provide (as output) policy implications on the following issues:

- Key determinants of lending transaction costs.
- Effect of borrowing transaction costs on demand for loans by MSEs and the repayment rates.
- Effect of lending transaction costs on the rationing out of borrowers.

Dissemination of the study findings

- Policy Analysis Reports; Micro finance policy analysis reports will be circulated to policy makers, and other stakeholders.
- Scholarly Publications; Scholarly papers will be submitted for publication in both local and international journals so that the research findings become part of the general knowledge base.

Research Schedule and Work Plan

The study will be conducted in one year starting from the day when funds will be made available. The schedule of activities is as described in Table 1 below.

Table 1: Schedule of Research Activities and Work Plan

		1	2	3	4	5	6	7	8	9	10	11	12
A	Literature Review, Plan and Design	■	■										
B	Pre-Survey			■	■	■							
C	Main Survey			■	■	■	■						
D	Data Processing and Analysis						■	■	■				
E	Report Writing 1 st Draft								■	■	■		
F	Final Report Writing										■	■	■

Budget of the proposed research project

The research project is expected to cost about USD 21,440. The breakdown of the research activities and costs is as indicated in Table 2 below.

Table 2: Research Budget in USD

PERSONNEL FEES				
Researchers	Mandays	Description	Rate /Manday	Total
Mr. Denis Rweyemamu	40	4hours /dayx5 days/weekxi 16 weeks= 320/8 = 40 Mandays	60.00	2,400.00
Mr. Ben Mwakalobo	40	4hours/dayx5days/ weeks 16weeks= 320/8 =40 Mandays	60.00	2,400.00
Mr. James Kajuna	20	4hours/dayx5days/weekx8weeks=60/8=20 Mandays	60.00	1,200.00
Total : Personnel Fees				6,000.00

TRANSPORTATION AND TRAVELLING				
		Travelling Description	Rate/ Ticket	Total
B.1	Travelling to/ front the field			
	2 Return Air ticket to Mwanza	1 Tickets for one researcher for pre-survey & 1 Tickets for one researcher for the main field survey	200.00	400.00
	2 Return Air ticket to Arusha	1 Tickets for one researcher for pre-survey & 1 Tickets for One researcher for the main Field survey	190.00	380.00
B.2	Internal Transport in the field			

		Hiring a vehicle for internal transport in Mwanza for 6 days pre-survey and 25days main field survey including secondary data collection.	30.00	930.00
		Hiring a vehicle for internal transport in Arusha for 6 days pre-survey and 25 days main field survey including secondary data collection.	30.00	930.00
	Total: transportation and travelling			2,640.00

FIELD SUBSISTANCE				
		Per Diem Description	Rate /Night	
Per Diem Researchers		8 nights (including Saturdays & Sundays) for one researcher conducting pre-survey in Mwanza	100,00	800.00
		8 nights (including Saturdays & Sundays) for one researcher conducting pre-survey in Arusha	100.00	800.00
Per Diem Researchers		30 nights (including Saturdays & Sundays) for one researcher conducting main field survey in Mwanza including secondary data collection.	100.00	3,000.00
		30 nights (including Saturdays & Sundays) for one researcher conducting main field survey in Arushaincluding secondary data collection.	100.00	3,000.00
Per Diem Interviewers (Enumerators)		20 days @ for 2 Enumerators in Mwanza	40.00	1600.00
		Total Number of Days = 20x 2 = 40		
Per Diem Interviewers (Enumerators)		20 days @ for 2 Enumerators in Arusha Total Number of Davs = 20x 2 = 40	40.00	1600.00
Total: Field Subsistence				10,800.00

SECRETARIAL SERVICES, DATA CODING, ENTY AND CLEANING (LUMPSUM))			
			1,200.00
SUPPLIES AND EQUIPMENTS (LUMPSUM)			
	Computer papers, photocopying, cartridges, diskettes, files, field notebooks, pens and pencils for interviewers, waterproof bags for interviewers.		500.00
COMUNICACION AND POSTAGES (LUMPSUM)			
	Internet, e-mail, Postage, telephone /fax		300.00
	GRAND TOTAL		21,440.00

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PUBLIC EXPENDITURE AND ECONOMIC GROWTH IN KENYA: 1963-2002.

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Abstract

This study focuses on the link between the level, the composition, and the financing of public expenditure and Economic Growth. In this analysis, the study will also look at the relationship between public and private expenditure so as to identify those expenditure categories which crowds in/out private investment. The study proposes to use annual data as published in official government publications such as statistical abstract, IMF and World Bank publications, expenditure reviews, and the Analytical Data Compendium of K.IPPRA. These will be analysed to show how Expenditure has affected Growth in the period 1963 to 2002. It is the argument in this paper that there has been mixed impact due to time and policy shifts occasioned by different external shocks and policy influences. The study in order to capture these effects proposes to use a dynamic model and estimate the relevant equations using the OLS method.

Introduction

It is a generally believed notion among economists that government intervention not only redistributes incomes and improves welfare but is a strong stimulant for Economic Growth. A number of empirical work has been done to show how the composition and the levels of public expenditure affects a country's GDP growth especially with reference to developed countries to the exclusion of SSA. This has been in spite of the fact that SSA suffers from serious budget deficits hence issues of optimal allocation of revenue to achieve optimal growth becomes central to policy making.

Kenya is no exception to this. In fact Kenya has been faced with the hard choice when undertaking the policy of fiscal restraint. The choice as to which aspect of her expenditure to reduce or cut altogether. In order to provide a sound analytical base upon which to predicate such policy choices, empirical evidence becomes crucial to the policy makers. Such a choice should be based inter alia on the contribution of each expenditure category to the overall economy and in particular to GDP growth. Related to this is the government size or involvement in the economy and how this involvement impacts on the private sector. The issue here being which of the government expenditures crowds out and which ones crowds in private investment.

Kenya has had a positive trend in GDP growth rate over the 1970-77 period. With her per capita growth being stable over the same period. Consumption growth has however been lower than income growth. The steady growth of the Kenyan economy during this period is explained by: i) relatively high investment rates ii) stable macroeconomic environment. However salient long term features of Kenya's macroeconomic performance do not emerge clearly from this stable growth. Firstly, is the substantial decline in the per capita consumption which

occurred in the period from 1979 to 1985. Over this period, real per capita consumption fell by 23%. Secondly, is that the real per capita consumption in the early 1990's was virtually unchanged from the early 1970's. Finally, there was no indication for the 1990's of any per capita growth in the economy. Per capita incomes and consumption in 1997 were both virtually the same as in the 1990. Investment rates were high but this investment was not efficiently used to stimulate growth, as evidenced by the low rates of economic growth relative to the levels of investment.

The aim of this study is therefore to shed light on these issues by focussing on the relationship between public expenditure and economic growth. The study focuses on growth because: i) even though growth is not the main reason for government intervention, it is useful to understand how different types of government expenditure affects growth as a means of assessing the opportunity cost of pursuing growth as an objective, ii) without growth, there would be no economic prosperity hence other objectives would not be achievable, iii) per capita income is easier to measure and data available compared to other goals.

iv) Government expenditure, affects private sector in that it could compliment or compete with the latter. There are arguments that capital expenditure compliments while current expenditure compete with private expenditure. Thus the issue of crowding in/out private initiative by government expenditure becomes an interesting area of enquiry. The effect of government expenditure on private investment is intricately tied to the financing of government expenditure. Hence government expenditure becomes consequential to the private investments.

Neither economic theories, nor empirical evidence has been able to provide unambiguous answer to these questions especially in the context of SSA, with its special problems of aids, poverty, illiteracy, debts, and social-political upheavals. Economic theories develops a rationale for government intervention mostly to correct market failures. Thus government expenditure reacts to market failures by providing good and services, internalizes externalities, and cover costs when there are significant economies of scale. Sound as these theories are, they do not translate into operational rules especially in SSA, where interventions may not necessarily be to correct market failures but rather to achieve some political objectives especially that of coalition building for political survival, and not necessarily economic growth. The case of government expenditure in SSA thus take an important role in the process of wealth and income distribution for economic development.

One can identify four distinctive patterns of public expenditure in Kenya during the period 1963-2002. At the dawn of independence, total public expenditure as a ratio of GDP was well below 1 %, lower than the rest of SSA- From independence to 1980, a new pattern began to emerge. A pattern characterised by heavy public expenditure with the expenditure standing at 3.1% of GDP in 1980. This was higher than that for SSA. On average, during the 1965-1980 period, public expenditure grew by 10.6% compared to the growth in SSA of 7%. During this period, it was observed that current expenditure took the lions' share of the total expenditure in Kenya, while savings were negative for the larger part of this

period (World Bank 1991). A third pattern emerged in the period 1981-1998. In this period there was a drastic reduction in public expenditure to an annual growth of 3.4%. This was however still above the SSA average which stood at 0.9% (Hill, Kletzer & Shah 1996). This drastic decline was attributed to the end of the coffee boom of 1978, the oil shock of 1979, the recession in the industrialised nations, and the spiralling debt burden. The decline in public expenditure was accompanied by an increase in interest payment which rose from 10.6% to 19% in 1981 and 1986 respectively with this reduction in total expenditure, the capital expenditure suffered the most. A fourth pattern in public expenditure is seen in the period following 1987. However it's genesis can be traced back to 1985 when the government began experimenting with the structural adjustment policies. In this the government undertook a comprehensive reforms of her tax and expenditure regimes as advised by the IMF/World Bank. This saw an increase in capital expenditure and a decline in current expenditure with overall expenditure remaining high. Even though the capital expenditure increased and the current expenditure declined, current expenditure was still higher. Between 1986 and 1987 alone, capital expenditure rose from 24.3% of GDP to 27.9% of GDP (Hill, Kletzer & Shah 1996). The fourth pattern can be generalised as characterised by a shift of expenditure from current to capital with the overall expenditure increasing.

Public expenditure in Kenya though high by both regional and international standards, has actually declined over time. To support this high level of expenditure, the government has resorted to higher and higher tax rates. The Kenyan taxation of 25.6 %of GDP is above the regions average of 22.8% (ROK 2003). Revenues like expenditures, have also shown a declining trend with external grants providing only a small proportion of the total at less than 1% of GDP. This scenario has given rise to an ever growing fiscal deficit. With a fiscal deficit of 1.8% of the GDP in 2002 and declining external funding, the stock of domestic debt has shown a marked upswing, from 19.4% of GDP in 2001 to an estimated 23% of GDP in 2002 or kshs. 226 billion. The stock of external debt though high has been declining having come down from 53.7% in 1998 to 37.4% of GDP in 2002 as a result of reduced donor financing.

In order to understand and analyse the composition of public expenditure, one can use economic classification from which we identify the following categories; i) public sector wages which by far takes the lions' share of total public expenditure, ii) operations and maintenance expenditure, iii) transfers and subsidies to organizations outside the civil services, iv) interest payments, v) development expenditure. The overall picture that emerges from the composition in terms of allocation is a rather worrying one. It shows a growing under funding of development activities at the expense of the ever increasing allocation to recurrent expenditure. In 1997/8 alone, of the 31.1% of GDP allocated to public expenditure, 25.6% went to recurrent expenditure with development expenditure taking a paltry 5.5%. This picture did not change significantly over the next six years with the periods' average at 26.5of GDP allocated to public expenditure and recurrent expenditure taking 22.7% (ROK 2003).

Another way to look at Kenya's public expenditure is to classify it functionally. This give rise to the following functional heads; i) general public administration, which comprises general administration, external affairs, and public order, ii) social services including, education, health, housing, and social welfare, iii) economic services including agriculture, general administration, mining and construction, energy, water, roads, and communication, iv) defence, v) other services. This kind of classification though indicative, may result in overstatement or understatement due to the duplication of functions eg. Health expenditure falls in the ministry of health while the AIDS council falls in the office of the president, general administration falls in general public services and in economic services. For this paper we shall concentrate to a large extent on the economic classification.

Government expenditure can be looked at as either consumption or investment recurrent or development and net lending. . Hence consumption expenditure according to the data are; labour cost, militaryconstruction and equipment, operating and maintenance and current transfers. The recurrent expenditures are; wage and salaries, operation and maintenance, subsidies and transfers, interest payments both foreign and domestic. There is also the category of government investments, the capital transfers, loans, equity, and the paid-up previous years' liabilities which according to the data began appearing from 1973/4 (Ryan 2002).

Problem Statement

The relationship between public expenditure, GDP growth and the private sector activities are central questions upon which fiscal policies need to be predicated. However, little empirical evidence exists on these important issues hence overtime expenditure has been ad hoc and at times based on political expediency. .Monitoring and critiques have been less than adequate because of lack of empirical evidence upon which such can be based. It is thus possible that by a mere reallocation of expenditure, economic growth can greatly be enhanced. This will be possible if one is clear about the relationship between growth and the different components of expenditure. This study therefore hopes to elucidate some of these issues through its' findings. In doing this, the study hopes to identify the critical expenditure components necessary for maximising growth without adverse effect on private initiative. It is important to note that such policies have been implemented in an environment of extreme needs and very scarce resources with heavy pressures both on revenue generation and spending. What appears to have happened is a government increasingly caught in the crossroad between pure economic rationalization of expenditure and political survival. The latter behaviour was quite evident beginning the 1990. It is thus important not only to look at the compositional effect but also how the changes in this composition has been over time and across regime shifts. It must also be noted that Kenya being a democracy holds elections every five years and parliament has such committees as the public accounts, and investments committees charged with the responsibility of scrutinizing expenditure. The reports of these committees have over time been bolder in pointing out litanies of mismanagement of public resources. Even though this has been highlighted continuously, yet the same adverse reports keeps coming, of same wasteful expenditure and neglect of key areas. In fact in the latter

periods the degree and levels of waste seemed to have intensified yet policy makers seems unable to arrest the waste and continue overburdening Kenyans, present and future with the consequences of waste and plunder of public funds. The amazing observation hi this regard, is the lack of a systematic analysis of the impact of this trend in expenditure on long term economic growth. Thus the problem of reducing the debt burden through prudent expenditure management seemed to have been given little attention both hi the literature and in policy and increased taxation given prominence. Yet it is conventional wisdom that expenditure management is a very important component of overall economic management and fiscal policy.

Research Questions

The study hopes to address the issue of public expenditure and economic growth by providing empirical evidence on the relationship between public expenditure (consumption and investment) and economic growth. More specifically the study will address the following questions:

- What are the effects of different types of government expenditures on economic growth?
- How does the different sources of financing public expenditure affect economic performance?
- What is the effect of public expenditure on private investment?

Testable Hypothesis

The broad hypothesis of the study is that capital expenditure is positively and significantly related to Economic growth and that it crowds in private investment. The second hypothesis is that tax financing of public expenditure has a negative and significant effect on economic growth.

Objectives of the Study

The main objective of this study is to provide empirical evidence of the relationship between different components of government expenditure and how they affect economic growth. In order to do this, the study's specific objectives shall be to:

- i) Analyse how the different categories of government expenditures (consumption and investment) have affected economic performance in Kenya between 1963-2002.
- ii) Examine the effects of different sources of financing public expenditure and how they affect economic performance. Such sources as taxes, external and treasury bonds/bills.,
- iii) Study the relationship between public expenditure and private investment expenditure with a view of determining which category of public expenditure crowds in /out private investment expenditure and how these affect economic Performance,
- iv) Recommend appropriate policy interventions to enhance the effectiveness of government expenditure.

Justification of the Study

Significant issues in the relationship between public expenditure and growth have been addressed only as far as developed countries are concerned. Given the importance of public expenditure to economic growth, and in view of the structural adjustment policies of the Bank and the Fund whose main theme is

expenditure rationalization, it becomes imperative to have a clear empirical base upon which to predicate expenditure management policies. At a general level, the structural adjustments policy framework seems to contradict the common wisdom which argues that a large government is good for growth, in that the SAPS call for reduced government expenditure and hence government size. However from the literature, a large government need not necessarily be growth enhancing. In order to clearly appreciate and hence be able to meaningfully implement the SAPS to maximize growth, the government needs empirical Kenyan evidence as to the relative contribution of government expenditure by categories, levels, across time and by extension their financing, to economic growth . It is this lacuna which the current study hopes to fill by making its contribution and thus aid in sound policy implementation.

Literature Review

In the traditional public finance literature, the role of the government in influencing growth is considered limited. In these literatures, the government is usually required to determine the rate at which capital is taxed, and the distribution of the resulting revenue between productive expenditure on public investment and unproductive expenditure on government consumption or lump sum transfer payments. For a given tax rate, economic growth is adversely affected by an increase in redistribution through public transfers (Osoro1997).

The effect of government expenditure on economic growth has been the subject of extensive debate. A large body of empirical research focussing primarily on developed countries have devoted attention to the understanding of the mechanism, magnitude and sensitivity of public expenditure on economic growth. A major draw back of these studies have been their cross sectional, cross country and developed country bias thus leaving out important country effects which determines expenditure and growth especially in SSA.

It has been argued that a large government has a positive influence on growth; where size is in relation to expenditure. Though the existing literature is not definitive, there are those who argue that a large government has positive effects on growth and those who argue on the contrary. With regard to the former, we have studies by Scully (1989), Ram (1986), Rubinson (1977), Grossman (1988). On the other hand, with regard to the latter we have studies by Landau (1983), Fielding (1998), Tsangarides (2001), and Devarajan Swaroop and Zou (1996). The conclusion of the latter group of studies conform to the supply side theorists who argue that higher government expenditure creates expectations of future tax liabilities and thus distort incentives and lowers growth.

On the effects of different components and levels of government expenditure on growth, the literature argues that capital expenditure has a positive effect on growth .In support of this position are the studies by Diamond (1989), Khan and Reinhardt (1990), Blejer and Khan (1994), Gupta et al (2001), Gallagher (1994), Brutton and Hill (1996), Easterly and Rebelo (1993), and Aschauer (1989a). They argue that infra structural expenditure enhances growth by creating an enabling environment for private investment. While current expenditure reduces growth through distortionary effects. An interesting departure from the above

conventional wisdom is the findings of Deverajan and Swaroop (1996,) and Osoro (1997). They argued that current expenditure has a positive and significant effect on growth while capital expenditure has a negative effect. Their studies were based on developing countries unlike the other studies. Their results changed significantly and conformed to conventional wisdom when they ran the regression for developed countries. The explanation therefore seems to lie on the way they treated the data on investment. While they did not include public sector investment in the aggregate, other studies did. They further argued that in developing countries, expenditure distortions are such that the level of public good is smaller. Hence additional expenditure may in fact be unproductive. They controlled for the level effect and only studied the component effect which was not what the bulk of the studies did, hence further explaining their findings.

High government expenditure imposes heavy financing burden, this could be financed through increased taxation, increased borrowing both internally and externally. Barro (1989), Barro and Sala-i-Martin (1990), Sala-i-Martin (1995), argued that taxes through their distortory effect on savings reduces growth. However as long as tax financing raises private sectors productivity, it's impact on growth will be positive. According to Easterly (1993), the high tax burden, by placing high premiums on lax evasion reduces revenue and lowers growth. Barro (1990), Gupta et al (2002), Tail and Heller (1982),Diamond (1990), Aschaur (1989b), Sundararajan and Thakur (1980), Erenburg (1993), Feehan and Matsumoto (2002) are some of the studies which argues that tax financing promotes growth up to an optimal point beyond which tax financing reduces growth. They also argue that domestic financing of a large government, have a negative effect on growth through the crowding out effect or the excessive costs, while external financing promotes growth as it does not directly increase the investment cost to the private investors.

The bulk of the literature reviewed are largely based on developed countries and on a comparison of developing and developed countries .They are also cross sectional, thus leaving out country specific variables that affect growth or expenditure, hi terms of data they use aggregate current or capital expenditure data or sectoral data. The current study thus becomes significant in that it will look at a specific country, look at the effects of financing and issues of crowding in /out in order to explain growth. In terms of data, we shall use dis-aggregated government expenditure and not aggregated sectoral expenditure data .The period covered spans different regime and policy shifts, the reason being to bring out the country's effects.

The relationship between public and private expenditure raises the issue of complimentarity and competitiveness of such expenditures. According to Easterly, and Klaus Schmidt (1994), it is those public expenditures which competes with private expenditure that crowds out the latter thus reducing growth. Those which complement private investment crowds in, thus promoting growth. Such public expenditures as construction, manufacturing Agriculture excluding agricultural extensions, government bond issuance ,tax financing, crowds out private expenditure, while those that crowd in are infrastructure, transport,

communication, power generation and distribution , security, education, health, and public capital stock.

Theoretical Framework

The recent explosion of works on endogenous growth has generated a number of models linking spending with the economy's long term growth rate. These have been a clear departure from the pioneering models of the 1970's of Arrow and Kurz (1970), where they assumed that all government expenditure was productive. In this neoclassical model, public spending only affected the economy's transitional growth rate, with the steady-state growth rate remaining unaltered. The work of Barro (1990) is a simple version of the endogenous growth models, in which he assumed government expenditure to be complimentary to the private production and that all government expenditure is productive. This theoretical position differs from the empirical findings as examined above. The resulting model for this study does make a priori assumption as to which component of government expenditure is productive and which are not. It does not however make an ex-ante assumption as to which component of expenditure crowds out/in private production. These are part of the investigations the study hopes to undertake. In the proposed production function, we will have three basic variables, Private capital stock, productive and unproductive government expenditures.

In the neoclassical production function we can conceive the relationship

$$y=f(k_p, e_p, e_u) \quad (1)$$

where y is the output of an economy, k_p is private capital stock, e_p is the productive government expenditure, e_u is the unproductive government expenditure. Assuming a Cobb-Douglas production function, the above function can be rewritten as;

$$y = k_p^\alpha + e_p^\beta + e_u^\gamma \quad (2)$$

where $\alpha \geq 0$, $\beta \geq 0$, $\gamma \geq 0$, $\alpha + \beta + \gamma = 1$.

Assuming a flat rate income tax levied by the government to finance her expenditure, then it follows that;

$$\tau y = k_p + e_p + e_u \quad (3)$$

Where τ = the tax rate, k_p is private capital stock, e_p is productive government expenditure, e_u is unproductive government expenditure. For a shift in the composition to increase the growth rate, depends not just on relative elasticities of the expenditure components β , and γ respectively, but also on their initial share. Thus if the initial share of a certain type of expenditure is too high, a shift in composition in its favour may not raise growth. Thus the general equation may be written as:

$$Iny = \alpha lnk_p + \beta lne_p + \gamma lne_u \quad (4)$$

Economic growth in the current period is affected by productive expenditure in the past and those in the current period. This hysteresis effect of government expenditure is important if one is to fully understand the mechanism through which expenditure affects growth. Thus if y_t =growth in period t, e_{pt-1} = productive government expenditure in the immediate past period, and ep_t is productive government expenditure in the current period, we can argue that

$$y_t = f\left(e_{pt-1} + e_{ut-1} + \sum_{r=1}^n x + \mu_i\right) \quad (5)$$

Where $\sum_{i=1}^n x$ = all other factors affecting growth which are non expenditure in nature. It is important to note that current expenditure is influenced by previous expenditure commitments which were carried over. In Kenya these are quite substantial (pending bills). This creates a problem in expenditure financing and budgeting. The five year is chosen as a fair representation of the long range planning thus;

$$e_{pt} = e_{pt-1} + e_{pt-2} + e_{pt-3} + e_{pt-4} + e_{pt-5} \quad (6)$$

$$e_{ut} = e_{ut-1} + e_{ut-2} + e_{ut-3} + e_{ut-4} + e_{ut-5} \quad (7)$$

This scenario of carry over bills is compounded by revenue shortfall hence the huge unplanned budget deficits. Growth in itself is cumulative, hence growth in period t is influenced by previous levels of growth.

$$y_t = y_{t-1} + y_{t-2} + \dots + y_{t-n} \quad \text{where } n = 5 \quad (8)$$

This aspect is however best captured in the five year moving average.

One can argue that whereas growth in the current period builds upon previous levels, expenditures in the current period though affected by previous expenditures are not necessarily cumulative. Given the revenue shortfalls, current expenditure may well be a reduction on the previous levels. In this framework, we are assuming a rational government whose expenditure decisions are motivated by efficiency, productivity and effectiveness, thus there is expenditure rationalisation or reviews on a periodic basis.

Taking y = growth rate of real per capita GDP, as an indicator of economic performance over time and assuming that there is a level of growth Ct , which is independent of the explanatory variables, we can thus reformulate equation 3 above as;

$$y = a_0 + \sum_{i=1}^n \alpha_1 e_{pt-i} + \sum_{i=1}^n \alpha_2 e_{ut-i} + \sum_{i=1}^n \beta x + Dm + u_i \quad (9)$$

Where Din = dummy to capture regime shifts and other domestics shocks and policy variables, and X = other factors influencing growth such as previous levels of GDP per capita, investment ratios, and terms of trade.

During the period under study, expenditure has been motivated by different factors at different points in time such as, efficiency, productivity and in the latter years by political expediency. This then makes it interesting to analyse their effects over a long period of time in order to adequately capture the time, regime and policy shifts. Here regime shift is not necessarily a regime change, but the changing political behaviour occasioned by changes in the political environment. Such shifts have impacts on the expenditure composition, magnitude and timing. The theoretical issue, is the argument that for capital to be productive, timing, magnitude, and complimentary expenditures are important. Hence the empirical question is, did the shift in expenditure composition, improve the productivity of capital as seen through increased GDP growth?

The relationship between public expenditure and growth can be analyzed by identifying the different components of public expenditure, their interaction,

financing and how the public expenditure levels affects economic activities. By regressing five-year forward moving average of per capita GDP growth as the dependent variable and a vector of independent variables we can study these relationships.

Theoretical models have generally incorporated the government budget constraint, which implies that a change in revenue or spending of a given magnitude has to be coupled with off-setting changes elsewhere. This has not been the approach in many of the empirical literature. Many of the studies estimate the effect of selected expenditure items and revenues on growth. This implicitly assumes that those expenditure and revenue items excluded have neutral effect on growth. This study follows the same by including certain expenditure and revenue sources based on the argument in the literature as to the effects of these omitted sources. The study however, controls for shocks and other domestic policies variables which affect growth and are not part of expenditure, recognizing that growth is not a function of expenditure alone. This we do by introducing a dummy variable (Dm).

Government competes with private investors in both the intermediate and final goods market. This is particularly interesting from the perspective of the current study as capital being scarce and much needed in the productive processes of both the government and the private investors, it becomes a point of convergence. Government does not only consume capital, but can influence its availability through policy changes. It is this therefore that creates a situation where by government expenditure can crowd in/out private investment activities. Thus private sectors activity levels depends to a large extent on the governments' fiscal activities and policies. This study thus hopes to capture this interaction by estimating the relationship between private investment and government expenditure as given below;

$$I_{pr} = f(e_p, e_u, s) \quad (10)$$

Where s = other factors affecting private investment such as interest rates, and lending to the public sector Thus the investment equation can be estimated as;

$$I_{pr} = \beta_0 + \sum_{i=1}^n \beta_1 e_{pt-i} + \sum_{i=1}^n \beta_2 e_{ut-i} + \sum_{i=1}^n \varphi s + u_i \quad (11)$$

Public expenditure should be complimentary to private investment as it reduces transaction cost. Thus enhancing private sector's profitability (Geda andNdungu 2001). This will however depend on the crowding out/ in effect between the two sectors. Thus public expenditure can stimulate investment in the private sector if it crowds in the latter. This will have the effect of stimulating growth. If public expenditure crowds out private investment, growth is reduced. The impact of government expenditure may influence growth in the manner in which it affects the overall investment and economic activities in the private sector. The mode of financing (taxation versus borrowing) have a direct effect on the economic environment, hence the mode of financing government expenditure becomes important in this analysis. We can argue that at the theoretical level expenditure financed by non distortionary sources stimulate growth. The non distortionary sources will be certain categories of taxes, external borrowing and any other sources that encourages savings domestically (Freehan and Matsumoto 2002).

Growth equation

Therefore the overall growth equation can be written as;

$$y_{t+1,6+5} = \alpha + \beta_1 e_p + \beta_2 e_u + \beta_3 p_r + \beta_4 G + \beta_5 T + \beta_6 TX + \beta_7 NTX + \beta_8 GR + \beta_9 Dm + \mu_i$$

Where

$y_{t+f (+s)}$ = five years forward moving average of real per capita GDP growth

InG= initial GDP per capita in 1963, p_r = private investment to GDP, e_p = productive government expenditure e_u = unproductive government expenditure, T = terms of trade (ratio of foreign exchange reserves to imports), TX= tax revenues, NTX= non tax revenue, GR= grants, Dm= dummy variable to take care of non fiscal factors affecting growth.

The forward lag is chosen for the following reasons;

- i. To tide over the problems of data points.
- ii. Reflect the fact that public expenditure often takes time before their effect on output growth can be registered.
- iii. Eliminate short-term fluctuations induced by shift in public expenditure
- iv. Eliminate the problem of joint endogeneity of the two variables and the possibility of reverse causality.

Therefore expenditure in period t is modeled as affecting growth in period $t + 1$ through $t + 5$. However, if growth rate has a distributed lag structure, then the joint endogeneity problem may not be significantly reduced. The problem of serial correlation introduced by constructing dependent variable as a five-year forward moving average per capita GDP growth can be corrected by using Hansen and Hodricks (1980) time series technique. The study will also use other standard diagnostic tests such as Durbin-Watson for auto-correlation, Jarque and Bera (1980) for normality, Chow's first test for the stability of the regression coefficients, Ramsey's RESET test for nonlinearity (Patterson 2000).

Data

The data for the study will be from government publications such as statistical abstract, Economic survey, central Bank Monthly, and Quarterly surveys, the Kippra/Treasury analytical data compadium, IMF and World Bank social and Economic data base, World debt tables, African Development indicators and international financial statistics. From these sources, we intend to extract data pertaining to total annual government expenditure and the components of these expenditures as distributed in interest payments, labour cost, military construction and equipment operating and maintenance, current transfers, capital transfers, loans, equity, government gross fixed capital formation, government's consumption expenditures. Sectoral distribution of expenditure in health and education and data on the levels of government budgetary balances, and how it is financed. The GDP data, private capital stock, real private gross fixed capital formation, tax incomes, data on current and capita) expenditure. Data is a real

problem, more so quality and complete data is even more problematic. The Kippra/Treasury source (Ryan 2002) is comprehensive and from it one can further compute other data components, the study hopes to use it as the prime data source. Mixing data sources can be a source of error and these mixed sources will be used with a lot of caution. Where one data base is complete, we will only confine ourselves to it. These will be time series data from 1963-2002.

Policy Relevance

Empirical analysis of the relationship between government expenditure, composition of this expenditure and financing on long run economic growth is important for Kenya. It becomes even more relevant in view of resource constraints and the conditionalities of the donor world, some of which call for expenditure cuts. The policy issue thus looks at where to effect what level of cuts. Given the magnitude of borrowing, financing and the fact that there are distortionary effects of certain taxes, what would be the policy stand on financing the ever increasing public expenditure needs? It has been generally observed that faced with expenditure cuts, benevolent democracies tend to go for the softer options. That is, cut capital expenditure. However, this may be at the expense of nature growth. How much and what type of capital expenditure can be reduced without seriously compromising future growth and prosperity? Or differently stated, what is the future cost of current expenditure. These are policy issues which require empirical facts to argue them out. It is in this respect that this study makes relevant contributions.

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