

The Fiscal Effects of Aid in Uganda

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October 2004

ESAU Working Paper 9

Overseas Development Institute
London

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ISBN 0 85003 737 9

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Acknowledgments

The authors are grateful for the conceptual guidance, technical support and practical advice received from Oliver Morrissey, whose earlier work on fiscal impact analysis inspired this project, and for the research assistance of Cedrik Schurich in the early stages of the preparation of this document. They are also grateful for the recent valuable insights and guidance provided by Tim Williamson from ODI on the basis of his first-hand acquaintanceship with Uganda's budgetary processes.

Acronyms

CMB	Coffee Marketing Board
DAC	Development Assistance Committee (of the OECD)
EC	Error Correction
ESAF	Enhanced Structural Adjustment Facility
GDP	Gross Domestic Product
GDY	Gross Domestic Income (GDP adjusted for the terms of trade)
GFS	Government Finance Statistics
HIPC	Highly Indebted Poor Country
IBRD	International Bank for Reconstruction and Development (World Bank)
IDA	International Development Association (World Bank)
IFS	International Financial Statistics
IMF	International Monetary Fund
MFPED	Ministry of Finance, Planning and Economic Development
MTEF	Medium-Term Expenditure Framework
M2	Broad Money supply
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
PAF	Poverty Action Fund
PEAP	Poverty Eradication Action Plan
TC	Technical Cooperation
URA	Uganda Revenue Authority
VAR	Vector Autoregression
VEC	Vector Error Correction
WDI	World Development Indicators

Executive Summary

This paper, one of a set of three country case studies, examines the effect of aid and other external financing on Uganda's public expenditure, revenue and domestic borrowing. The underlying purpose is to throw light on how Uganda has been able, since the late 1980s, to absorb considerable inflows of aid productively, and to use it to achieve economic recovery, sustain growth and reduce poverty. The paper uses formal econometric techniques to identify the broad patterns of fiscal response associated with aid, and deploys non-formal descriptive analysis to provide historical context and to offer detail on the use of public expenditures at the sectoral and sub-sectoral levels and on the accompanying economic policies.

The general conclusions, as expected, are that aid has been used to increase public expenditure, and in particular (though not exclusively) through the development budget, and that it has effectively contributed to growth and poverty reduction. This is because it has been associated with effective policies and institutional reforms and has financed the provision of services relevant to the immediate post-conflict needs of the economy and, later, to sustaining longer-term growth.

The period of high and sustained inflow of aid, starting in the late 1980s, has been a time of high development budget expenditure. It was also a time when the government achieved macroeconomic stability through fiscal control, and when it implemented a progressive programme of profound economic reforms to the support of which aid was explicitly devoted. During these years aid has been successfully deployed through the development budget for the rehabilitation and development of the economic infrastructure, the reform of public administration and of the financial sector and, since the mid-1990s, for the accelerated implementation of pro-poor programmes, notably in the social sectors.

High levels of aid disbursement, in both the 1980s and 1990s, have occurred at times when domestic revenues were rising, suggesting that aid has not been allowed to substitute for revenue mobilisation. In the 1990s aid receipts helped the government to stabilise the macroeconomy by putting an end to its (monetised) domestic borrowing, to overcome its (previously fraught) balance-of-payments problems by providing resources with which to cushion the liberalisation of its exchange regime, and to take action to reduce its non-concessional external debt.

The paper distinguishes a succession of phases in the development history of independent Uganda. In the first phase, up to the late 1960s, the management of public finance was prudent: Uganda had a semi-convertible currency within the East Africa Currency Board area, its receipts of aid were low, and it made little use of external borrowing. In the second phase, starting in the years immediately prior to the seizure of power by Idi Amin in 1971, this prudence was cast aside. Fiscal deficits emerged, financed domestically by monetisation and externally by limited non-concessional borrowing, and persisted, though on a diminishing scale until the overthrow of the dictatorship in 1979. The Amin regime caused the contraction of an economy which had previously been in slow expansion, and inflicted serious damage on its export earning capacity and thus on domestic revenues. Public expenditure declined in real terms and as a share of GDP.

The fall of Amin heralded the start of a third phase of nearly a decade of acute economic (as well as political) instability, featuring an episode in the mid-1980s of hyperinflation. This followed the collapse of domestic revenue mobilisation after the overthrow of Amin, the demonetisation of the economy, a steep, post-1981, rise in public expenditure and the printing of money by successive governments. The economic decline persisted until the later 1980s, with a temporary remission under the Obote II regime (1981-6), which, encouraged by agreements with the IMF and the Paris Club and significant commitments of aid, engaged in an imprudent expansion of public expenditure, but achieved no lasting development benefit.

The incoming Museveni regime in 1986 inherited a weakening revenue base and an economy deserted by donors. Its first task was to stabilise the economy by reducing expenditure.

The fourth and final phase began with the implementation of the Museveni government's Economic Recovery Programme in the late 1980s. This consisted of commitment to the initial steps in what was to become a comprehensive structural adjustment and liberalisation of the economy, and of an ambitious programme of infrastructural rehabilitation. It attracted donor support - in programme and project form - on a scale from which Uganda had never previously benefited. ODA receipts, which previously had only exceptionally been as high as 10% of GDP, peaked at 28% of GDP in 1990/91 before settling at 10-15% of GDP in the remainder of the decade.

The paper notes a number of reforms in the 1990s in public expenditure planning and management which have enhanced the effectiveness of public expenditure and set the real economy on a path of recovery and sustained expansion. Revenue buoyancy was restored through reforms of the tax administration and the introduction of VAT in substitution for taxes on exports. On the expenditure side, Uganda, in common with many other countries, introduced cash budgeting to help overcome the destabilising effects of inadequate resource estimating and expenditure control. However, it managed to implement cash budgeting without loss of a sense of allocative priority, and without relapsing into hand-to-mouth allocative practices. This was done by defining a budget-within-a-budget - the Poverty Action Fund - which exempted programmes and sub-programmes deemed important for poverty reduction from *ad hoc* allocation reductions. Medium-term budgeting was also introduced together with consultative, transparent, budget preparation processes to which donors were invited to contribute. The government thus obtained a clearer forward view of resource availability and was better placed to implement its expenditure strategies than would otherwise have been possible.

The analysis of public expenditure shows that the recurrent and development budgets have responded to somewhat different laws of motion. The recurrent budget has tended to rise and fall with the availability of domestic revenue - supplemented by domestic borrowing and on occasion by aid. Shares of recurrent expenditure have been relatively constant, though the shares of defence and general administration have risen when revenues were low, and fallen when revenues have increased, indicating that these services have been treated as having priority claims. Interest charges paid have never been overwhelming as a share of the recurrent budget, and have fallen from a peak of 25% reached in the early 1990s. The recurrent budget's sectoral allocations have not reflected the pro-poor changes in development expenditure priorities that occurred after the mid-1990s.

The development budget, on the other hand, has undergone significant inter-sectoral reprioritisation since the late 1980s. The shares of administration and defence have been steadily reduced to the benefit of education and economic infrastructure within a resource envelope which grew from 3-4% of GDP prior to 1986 to 8-10% of GDP in the 1990s. At the same time, the share of fixed capital formation, formerly close to 80%, fell to less than half as the development budget was increasingly used as a source of intra-governmental transfer payments to sustain recurrent services.

The paper notes that the large and sustained increase in aid inflows that occurred in the late 1990s was predominantly in the form of grants and highly concessional loans, and that in the late 1980s and early 1990s net disbursements were well in excess of receipts recorded in the budget. The difference is only partly explicable by the inclusion in ODA of technical cooperation, debt relief, food aid and emergency flows. It is evident that part of donor activity - probably associated with infrastructure projects with direct payments made by donors to contractors - was not captured in the fiscal records. The purposes of donor assistance have been multifarious: aid has comprised programme, project and sector-wide support, the first of which was devoted to balance-of-payments support and budget support linked to the implementation of reforms, and the second and third to the rehabilitation and expansion of

public services. Evaluation studies show more satisfaction with the performance of policy-related programmes than with that of aid for projects, many of which have experienced delays for administrative reasons, especially in the late 1980s and early 1990s.

The paper uses time series data and a vector error correction model as the econometric technique to test the main observations derived from the development narrative and non-formal interpretation of the statistical evidence. The technique is suitable for the analysis of relationships existing between variables which are endogenous to an economic system and co-determined - such as in a budget - and allows the examination of lagged effects and feedback mechanisms. However, like other time series regression-based tools, it yields results which represent average responses to stimuli over the period examined. These averages are not necessarily representative of the response mechanisms at work at particular moments in time. In the case of Uganda there have been a series of break points - in terms of political order, policy and relationships with external financiers. It has not been possible, with the available data, to test statistically whether these have occasioned changes in the underlying fiscal response model.

The econometric evidence confirms the hypothesis that external financing has increased public expenditure. Grant aid (and arguably also multilateral concessional lending) seems to have exerted a stronger impact over time on the development budget than on the recurrent. Aid - in the form of both grants received and ODA disbursed - may have had a positive long-term effect on revenues, but the evidence is not conclusive. Some of the effect on revenue has doubtless come indirectly through income growth. As expected, given the contrasting levels of fiscal responsibility of successive governments, the average effect of external financing on domestic borrowing has been ambiguous.

Chapter 1: Introduction

This paper is one of a set of four ESAU research papers on the fiscal impact of aid. The set consists of two other country case-study papers – on Malawi (Fagernäs and Schurich, 2004) and Zambia (Fagernäs and Roberts, 2004a) – plus a survey and synthesis paper (Fagernäs and Roberts, 2004b). The survey and synthesis paper sets out the rationale for this programme of enquiry, reviews some of the existing literature on the budget process and the uses and effectiveness of aid, and on assessments of the quantitative impact of aid on fiscal magnitudes, and summarises the findings and generic conclusions of the country studies.

The aid-effectiveness literature has focused on the links between aid and growth, and has devoted less attention to the effect of aid on fiscal policy and the actual channels through which aid affects growth. As most aid is provided to governments, its impact on the domestic economy depends to a considerable extent on fiscal policy and public expenditure. Government expenditure, if well conceived, complements private sector activity in the short term, and builds productive capacity to sustain growth in the longer term. There may, however, be thresholds beyond which the marginal productivity of public expenditure wanes, and welfare benefits are outweighed by the deadweight cost of taxation and/or by the effects of government borrowing on domestic interest rates.

This study looks at the effects of aid on public expenditure and fiscal policy in Uganda since the 1960s. It covers the Idi Amin years of economic mismanagement and decline, the subsequent period of failed recovery, macroeconomic instability and insurgency under Milton Obote, and the years of successful recovery, consistent growth and poverty reduction under the presidency of Yoweri Museveni. Aid inflows were low in the 1960s, declined in the later 1970s when they were supplemented by some commercial and other non-concessional borrowing, rose briefly in the early 1980s in parallel with an IMF programme, but then fell sharply as this programme went off-track with mounting evidence of human rights abuse.

Uganda's performance in the Museveni years, featuring economic reform and a constructive relationship with donors, is considered an exemplary case of post-conflict recovery leading on to sustained long-term growth. During this most recent period, Uganda has benefited from official aid inflows on a much larger scale than previously, which have financed levels of public expenditure considerably higher than was possible in previous times. The increase has been such as to lead the government to express concern recently about its aid dependency and its widening fiscal deficit.

A central purpose of the paper is to ask how aid has been absorbed by the Uganda government and deployed so as to help achieve Uganda's much admired development results. It starts from the presumption that good development results are the joint product of a favourable environment for enterprise – including political and economic security and stability – and of the prudent and resourceful stewardship of public finances such that essential public goods and services are cost-effectively supplied. The paper therefore answers the question of whether and how aid has been effective, in two parts. The first part is descriptive of the evolution of Uganda's economic development and policies, with particular reference to its macroeconomic and fiscal policies and their outcomes. From this analysis hypotheses emerge for examination in the second part, which is a quantitative assessment of time series data – from 1974 to 1999. It identifies the significant relationships between aid inflows and fiscal outcomes to be found in the data, and uses these as evidence to validate the hypotheses.

Previous fiscal impact studies have found a variety of effects of aid on fiscal policy and expenditure (McGillivray and Morrissey, 2001). Aid is seen in some countries to raise either capital or recurrent expenditure, and in others to reduce deficits or taxation. In some cases it may even cause expenditure to rise by more than the aid received, so aggravating fiscal imbalance. This might arise in an environment of imperfect information and weak public expenditure management. Part II of the paper considers quantitatively which of these possibilities have applied in Uganda.

To date, much of the fiscal-response literature has used structural econometric models, which can be difficult to estimate. In order to circumvent this problem, this paper, in common with those on Malawi and Zambia, uses a vector error correction (VEC) framework to analyse the effects of aid on fiscal aggregates. The mechanics of this methodology are outlined briefly in Part II and in more detail in the survey and synthesis paper. It takes into account the interactions between fiscal variables over time and treats the variables as endogenous. It is an atheoretical approach in the sense that it does not test specific theoretical formulations of budgetary planning, which is controversial and could constrain the scope of the analysis.

The paper makes use of data from a number of sources, both national and international. The nature of its enquiry, however, makes heavy reliance on national data sources inevitable. The quality and presentation of Ugandan budgetary data were good in the 1960s, but then deteriorated, only improving again with the restoration of sound economic management in the 1990s. There is thus some discontinuity in the data series. Furthermore, Ugandan budgets have not been fully consolidated, and the share of expenditures of unrecorded receipts rose with the sharp increase in aid in the late 1980s. This places a limitation on the analysis, and on the reliability of the conclusions reached. The quantitative part of the paper considers the effect on recorded revenues, expenditures and borrowing of both recorded external financing and official development assistance (ODA) disbursements by donors.

Part I of the paper starts in Chapter 2 with a brief outline of the fiscal and economic trends in economic policy in Uganda. Chapter 3 discusses the country's budgetary process and institutions. Chapters 4 and 5 present trends in public expenditure, revenue and domestic and external financing in more detail, with reference also to aid and external debt. Chapter 6 formulates hypotheses on the links between fiscal aggregates and aid that are tested using time series analysis in Part II.

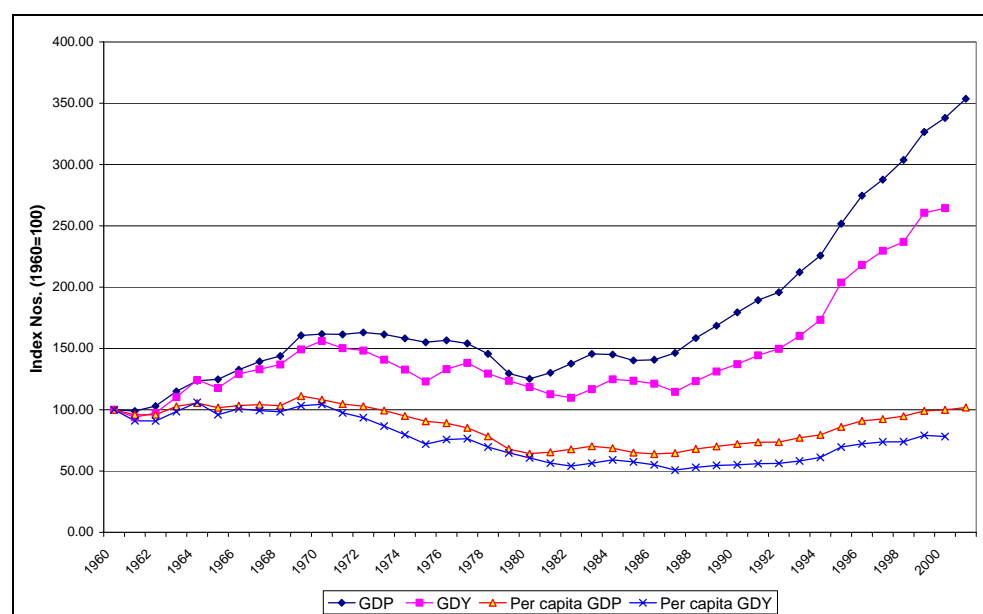
PART I. ECONOMIC BACKGROUND, FISCAL POLICIES AND FINANCING

Chapter 2: Economic Developments and Policy Change 1960-2000

This chapter presents a background sketch of economic developments and policies over the period since 1960 – covering successive phases of relative prosperity (1960-71), mismanagement, conflict and decline (1972-86), and sustained recovery and growth (since 1986).¹ Each phase has distinct characteristics in terms of fiscal policy and external financing.

Fig. 2.1 shows that the 1960-71 period saw GDP growth of 60% but very little increase in disposable per capita income (after adjustment for terms-of-trade changes). In the 1970s GDP declined at an accelerating rate, leading to a 40% fall in per capita disposable income (GDY) – temporarily mitigated in 1977 by the effects of a boom in coffee prices. The economy grew in the early 1980s, but then declined towards the middle of the decade. Since 1986, however, there has been virtually uninterrupted growth at 5-6% p.a., and a steady recovery in per capita GDP and GDY. Per capita GDY in 2000, however, was still some 20% below its 1960 level in real terms.

Fig. 2.1 Real GDP and disposable income 1960-2001



Sources: Bigsten and Kayizzi-Mugerwa (1999b), *World Development Indicators*

2.1 Development phases

1960s

At independence in 1962 Uganda inherited an economy that was largely agricultural and whose prosperity was based on self-sufficiency in food production and the successful

¹ The early part of the chapter relies heavily on Bigsten and Kayizzi-Mugerwa (1999b).

development of smallholder-based agricultural exports – mainly coffee and cotton. Until the late 1960s the economy was stable, benefiting from the discipline of its participation in the East African Currency Board arrangements: rates of domestic revenue mobilisation and public expenditure were restrained (15-20% of GDP), public debt, both internal and external, was low, and the commercial life of the country was relatively free from government involvement; and there was a still small but thriving private enterprise sector engaged in trade, manufacturing and finance in which the Asian community was preponderant. However, after the coup of 1966 which installed former Prime Minister Milton Obote as an authoritarian executive president, expenditure, public employment, public sector wage rates and inflation rose, parastatal enterprises were established and the state imposed controls over agricultural marketing cooperatives and other activities in the private sector. Aid levels were low and recourse to non-concessional external finance was slight.

1970s

The economic decline following the coup in 1971 which installed a military dictatorship under Idi Amin was hastened by the expulsion of the Asian entrepreneurial and professional classes, and the predatory behaviour of ministers and officials installed by the regime to whom the Asian assets and positions of economic power were assigned. Enterprises and infrastructure were allowed to deteriorate. Economic controls and licensing arrangements for internal and external trade ensured the growth of rent-seeking opportunities. Public expenditure fell from over 20% of GDP in 1972 to below 10% by 1979. However, the tax base and tax yields shrank even more rapidly – in part as a response to new distorting taxes on transactions and exports – so that inflationary pressure increased with the monetisation of deficits. The currency became grossly overvalued. Price controls were imposed in an effort to contain inflation. The formal economy imploded, and farmers reverted to subsistence activities as market-oriented production became unrewarding. A 'kibanda' or parallel market flourished, particularly for foreign exchange and imported goods. These problems were aggravated by a decline in the terms of trade in the early 1970s, later reversed in the coffee boom of 1977. Nevertheless, exports as a share of current GDP fell from around 25% in the mid to late 1960s to below 5% in 1978 and 1979 – a fall accentuated by currency over-valuation and wholesale smuggling of exports.

1980-85

The overthrow of Idi Amin in 1979 was followed, after an interval of anarchy and disruption, by a partial and short-lived economic revival, as the IMF and donors committed resources, external official debts were rescheduled by the Paris Club and limited economic reforms were undertaken, including floating the shilling (and later a dual exchange rate) and the removal of some price controls. A donor-financed start was made with rehabilitating the transport infrastructure. However, after an interregnum and flawed elections in 1980, the subsequent governments headed successively by Milton Obote and Tito Okello lacked legitimacy and were challenged by insurgency, which met with savage repression in the Luwero Triangle and such human rights abuses that donors were repelled and put a stop to new commitments. By the mid-1980s the real economy was again contracting. The effect of the contraction on GDY was aggravated and prolonged by a further fall in the terms of trade in 1985-7, which adversely affected resource availability in the first years of the incoming regime headed by Yoweri Museveni which took power in 1986.

Under the 1981 stand-by agreement with the IMF limited progress was made at restoring budget discipline, and the economy entered a highly unstable, inflation-prone, situation with a sharply falling demand for money. The budget deficit widened, and domestic monetary financing increased to 5% of GDP (Fig. 2.2). Inflation soared (to 200%) by the

middle of the decade (Fig. 2.3). The IMF programme was terminated in 1984 (Atingi-Ego and Kasekende, 1999).

The structural faults of the economy created in the 1970s remained unrepaired during these years. The formal private sector experienced no revival, imports were quantitatively controlled, investment and exports stayed at a low ebb, revenue and public expenditure remained low as shares of GDP, and the economy continued demonetised. Per capita GDP in 1986 was approximately 40% lower than in 1971 (Fig. 2.1). The share of subsistence activities had increased from 21% to 36% of production (Collier and Reinikka, 2001).

Since 1986

After a hesitant start, when it was still wedded to a controlled, dirigiste, model of economic management, the incoming government became committed to implementing comprehensive and determined policies to stabilise and progressively liberalise the economy. These policies, pursued more or less consistently, have had extensive and continuing donor support, and have been successful in correcting the structural weaknesses introduced into the economy in the 1970s and early 1980s. The formal private sector has revived, and smallholder farmers have returned to production for domestic and export markets. The financial sector has been recapitalised and expanded through private investment. The economy has been partially remonetised – with the ratio of M2 to GDP back from a low of 7% in the mid-1980s to over 15%. Inflation has declined and domestic revenues have increased as a share of GDP (see below). Exports have accordingly risen. Price distortions have been removed through a succession of trade, exchange and domestic price reforms, leading eventually to the removal of quantitative restrictions on imports, full current account liberalisation (1993) and greatly reduced average tariffs. Public expenditures have been expanded purposefully, with an emphasis first on reconstructing and expanding the infrastructure and, since the mid-1990s, with a view to poverty reduction by expanding the capacity of social sector provision.

The first phase of reform occurred with the Economic Recovery Programme of 1987 supported by the IMF and World Bank. Donor support rose rapidly to facilitate reform and rehabilitation. The tax base was small, but expenditure demands were high. Among the programme's objectives were restoring price stability, improving the balance of payments and achieving higher real GDP growth by increasing producer incentives and investment. Exchange reform was initiated with devaluation, and by means of a system of open general licences for imports. Real GDP growth ranged between 4 and 8% in 1986-90. By 1991 inflation had fallen and investment was on the rise. Since 1991 real GDP growth has averaged 6% per year.

A slippage in economic discipline occurred in 1991/92 due to monetisation of the deficit and increased domestic borrowing. Institutional reforms in public finance management were introduced thereafter to prevent recurrence (Chapter 3). Once macroeconomic stability was restored, a three-year ESAF programme was signed with the IMF in 1994 followed by a World Bank programme. The reforms of the 1990s entailed trade liberalisation and tax reform, privatisation, coffee sector liberalisation, enhancing the rights of investors and the establishment of an independent revenue authority (URA) to improve tax collection.

2.2 Fiscal developments and reforms

Public expenditure and taxation have historically been low in Uganda, as a share of GDP. From the incomplete time series data represented in Fig. 2.2 it is apparent that, from independence to 1989, public expenditure was only briefly ever higher than 15% of GDP,

and that domestic revenues were rarely in excess of 10%. Both revenue and expenditure fell catastrophically in 1979-81, at the end of the Amin period and prior to the resumption of power by Milton Obote – to 3% and 5% of GDP respectively. Thereafter they rebounded spectacularly.

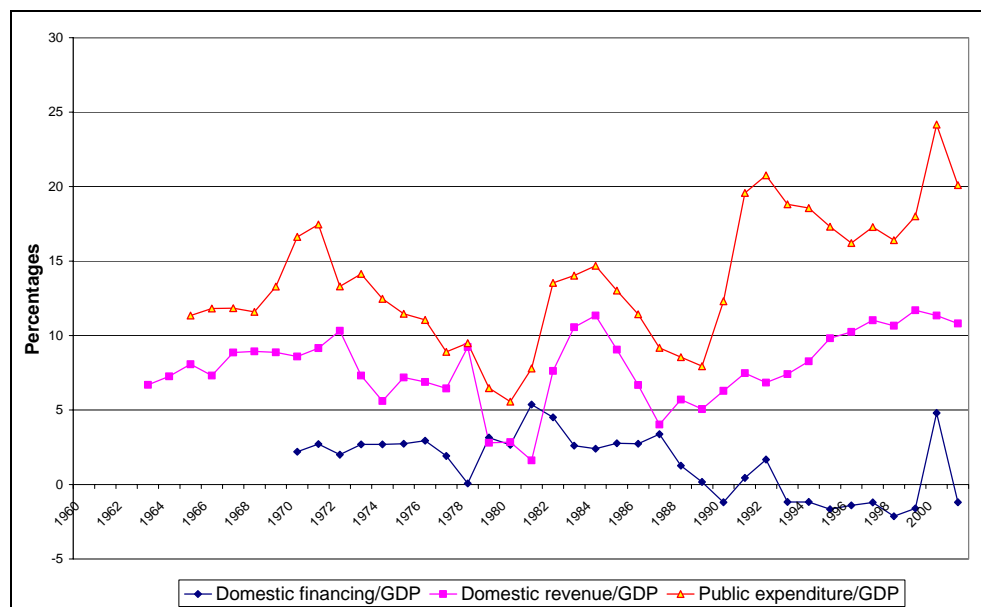
Revenues have been sensitive to the volume of trade and the exchange rate. In the 1960s and 1970s taxes on international trade constituted some 45% of total revenue. By the late 1990s the share of trade taxes had fallen to 10% following fiscal reform, to be replaced by other indirect taxes (VAT and excises) as the main source of revenue (two-thirds of the total). Fiscal buoyancy increased thanks to the reforms in tax administration implemented by the autonomous Uganda Revenue Authority created in 1991 and charged with levying both direct and indirect taxes. The latter half of the 1990s saw a reduction in import tariffs, with the average effective rate of protection was at 15% in 1999.² The decline in the trade/GDP ratio in the 1970s and 1980s critically weakened revenue mobilisation. As is evident from Fig. 2.2, it took years of effort in the late 1980s and 1990s to raise revenues above their previous historic high of 10% of GDP. One sign of improvements in tax administration is that revenue performance in 2002/03 achieved 99% of the approved budget estimates (World Bank, 2002).

There has been debate about how to improve Uganda's modest revenue performance. One obvious and convincing approach is to create strong incentives for the rapid expansion of the formal, tax-paying, sectors of the economy. Collier (1996) has argued that aid should be partly used to lower corporate taxes in order to encourage development of the formal private sector, which would enlarge the future tax base (Kayizzi-Mugerwa, 2002). In view of Uganda's still modest rate of domestic savings mobilisation, the encouragement of inward investment will also play a useful role. After a very slow beginning, the pace of inward investment accelerated towards the end of the 1990s. Nevertheless, it is likely to prove difficult to mobilise a significantly higher share of GDP into revenue (World Bank, 2002).

The fiscal deficit (domestic revenues – expenditure) from the 1970s to the 1980s was typically of the order of 5% of GDP, though it was episodically higher. It was restrained by the government's ability to mobilise domestic and external financing. Domestic financing – largely monetary – was negligible in the 1960s, and on only a modest scale – 3.5% of GDP – in the 1970s and 1980s. However, this was sufficient, with a low M2/GDP ratio, to provoke inflation and, in the mid-1980s, hyperinflation (Fig. 2.3).

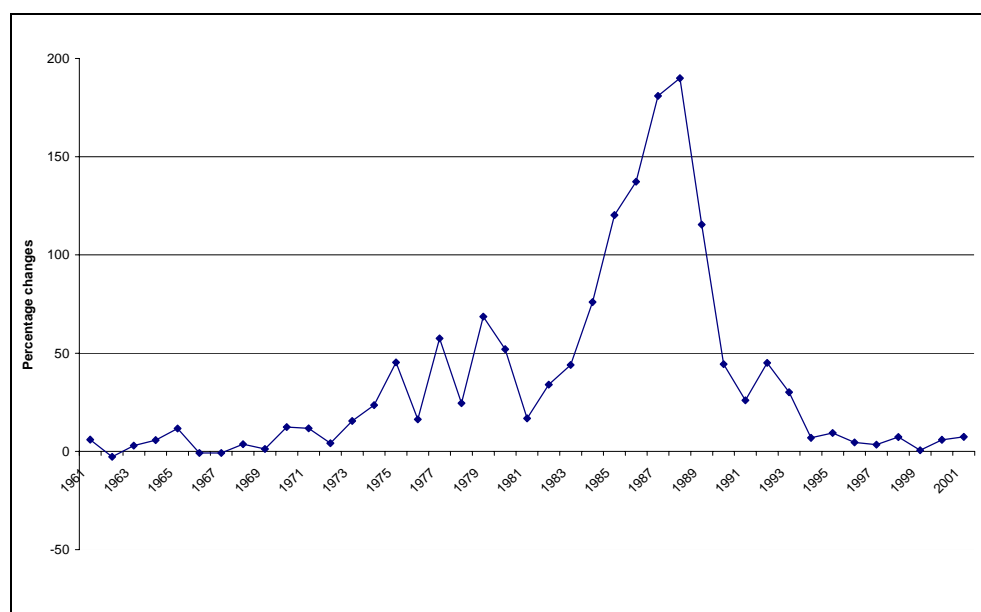
² The shares of revenue drawn from different sources in successive time periods are summarised in the following table:

Year	Export tax	Import tax	Income tax	Sales tax/VAT	Excise taxes
1976-85	37.8	11.8	11.2	35.0	3.4
1981-86	39.3	13.2	8.4	27.3	4.6
1993-94	17.7	24.5	10.8	33.5	8.8
1993-97	2.1	29.7	14.8	29.6	21.9
1998-2001	0.0	11.5	19.3	33.3	35.9

Fig. 2.2 Public expenditure, revenue and domestic financing (shares of GDP)

Sources: Government Finance Statistics (GFS), IMF (1998, 2003), 'Background to the Budget' (various years), International Finance Statistics (IFS) and authors' estimates³

After 1986 three years of fiscal consolidation were needed to overcome the inflationary legacy of the previous period. From 1990, however, with the provision of larger volumes of aid, public expenditure rose sharply as a share of GDP, doubling to over 20% in 1991/92, and remaining high in subsequent years. A wide fiscal deficit opened up - peaking at 25% of GDP in 1991/92 but remaining at around 15% of GDP in later years. In most years this was fully - or more than fully - financed by aid, making recourse to domestic financing the exception.⁴

Fig. 2.3 Inflation: Annual changes in the GDP deflator 1961-2001

Sources: WDI, GFS

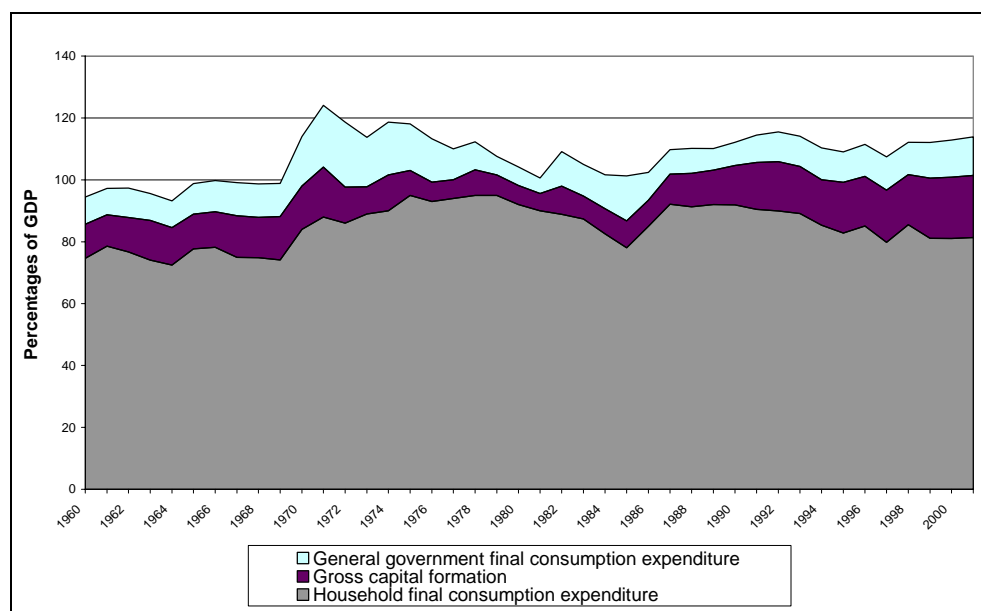
³ Data for public expenditure as a share of GDP in the early 1970s have been constructed from inconsistent primary sources.

⁴ The short-lived rise in domestic financing in 1999/2000 was due to a one-off net lending operation equivalent to 4.5% of GDP to redeem a Treasury note issued to recapitalise the Bank of Uganda.

2.3 Resource gap

Another way of looking at the context of the external financing of Uganda's public expenditure is to consider the economy's 'resource gap', i.e. the gap between GDP and aggregate (consumption and investment) expenditure – or equivalently, the savings-investment gap. On the available evidence, Uganda had no resource gap in the 1960s. In the 1970s, however, the Amin regime rapidly increased expenditure above GDP, thereby incurring foreign liabilities. Expenditure fell, relative to GDP, in the late 1970s, first on account of the effect of a coffee price spike on GDP, and then because of the effect of political turmoil. In the years since 1986 aggregate expenditure has been running at 115–118% of GDP, with the assistance of the concessional aid inflows referred to earlier. A notable feature of these years has been the growing shares in aggregate expenditure of gross capital formation (up from 15% of GDP in 1991 to 20% in 2001) and, to a lesser extent, of government consumption (up from 9% of GDP in 1991 to 12.5% in 2001).

Fig. 2.4 Gross domestic expenditure (by component) as a share of GDP



Note: Standard data sources are incomplete for the 1970s and start of the 1980s, and inconsistent for some other years. Data on public expenditure have been used as a proxy for government consumption data in some years for which the latter are unavailable. The graph is therefore a not wholly reliable, though broadly realistic, representation of developments.

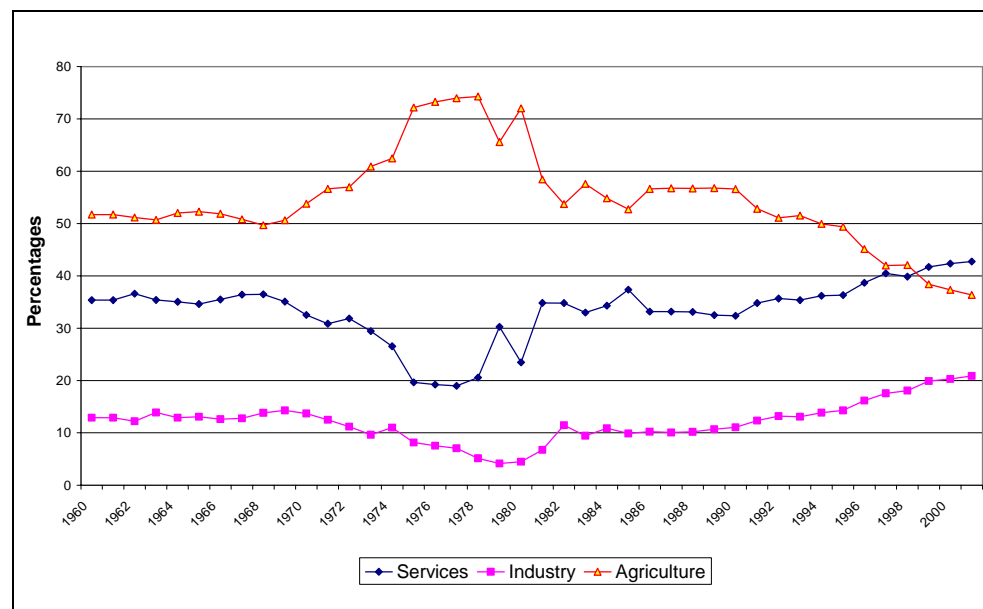
Sources: WDI, IFS and authors' estimates

2.4 Sectoral composition of GDP

Uganda has always been, and remains, a rural and agriculture-based economy. Fig. 2.5 illustrates this point, on the basis of the shares of sector value-added in GDP at current prices since 1960. In the 1960s agriculture contributed on average 60% to GDP at factor cost. This share was bolstered in the 1970s by the decline of the formal, urban, manufacturing and service sectors in these years, and by the favourable terms of external trade. The economic revival, particularly in the formal sector, starting in the 1980s, and continuing strongly in the 1990s, reversed this trend, with the share of the subsistence sector falling from over 40% circa 1980 to 26% in 1995 (Bigsten and Kayizzi-Mugerwa, 1999b). In the 1990s manufacturing contributed on average 15%, services 36% to GDP, and agriculture 40%. The share of 'modern', i.e. commercial, agriculture has remained relatively unchanged, in the range 25–30% of GDP, since the 1960s.

The decline, followed by recovery, of activity in the formal sector of the economy explains much of the decline in the 1970s and rise in the 1990s of the domestic revenue/GDP ratio. The tax base consists largely of the value of transactions and of income in the formal sector, including external trade, other commercial services and manufacturing.

Fig. 2.5 Sector shares in value added at cost



Source: WDI

2.5 Export performance and revenue effects

As a result of its economic travails and the cessation of most copper, tea and cotton production, Uganda's exports became less diversified and more heavily concentrated on coffee. The coffee share, circa 55% in 1970, has fluctuated subsequently with price (63% in 1993, 74% in 1995), but has only recently fallen with the successful development in the later 1990s of fish product exports. In 2001/02 the share of fish was almost as large as that of coffee (World Bank, 2002).

Coffee production has revived with the stimulus of exchange-rate adjustment, import liberalisation and marketing liberalisation.⁵ However, this revival and the growth of non-traditional exports of fish have not been strong enough to give rise to export-led growth. Uganda's balance of payments in the 1990s thus became increasingly dependent on (concessional) external financing. It also received rising inflows of remittances and capital transfers (including from returning Asians). The domestic economy expanded by satisfying the demand created by the domestic expenditure of these inflows. The balance of payments has remained structurally weak, and vulnerable to commodity price fluctuations and confidence factors.

Developments in the coffee sector have had an impact on revenue and on budget management. In the early 1960s export taxes produced 15% of revenue receipts, to which cotton and coffee contributed in equal share. The share of cotton declined to almost nothing, but that of coffee rose, becoming the mainstay of domestic revenues in the 1980s

⁵ Marketing was liberalised by means of removing the monopoly of the regional primary cooperatives and of the apex Coffee Marketing Board (CMB). A number of domestic and foreign private firms were licensed to export coffee. Farmgate prices for producers rose and payments are made more promptly (Collier and Reinikka, 2001).

(66% in 1986) as other revenue sources dried up. Export taxation had a deleterious effect on production, producers' incomes and export earnings. It was largely phased out in the 1990s, after the coffee price spike of 1994 had passed.

The financing of coffee marketing campaigns - by far the largest operation of the financial sector, and formerly the exclusive responsibility of commercial banks - was, in the 1980s, entrusted to the central bank, the Bank of Uganda. This, given financial impropriety among marketing agencies and arrears in debt repayment, adversely affected the Bank's profits, thus aggravating the government's budget deficits. The government was also carrying out barter trade with coffee but, as the machinery was difficult to utilise in practice, deficits piled up (Kayizzi-Mugerwa, 2002). The CMB was converted into a publicly owned corporation in 1991-2 and crop financing was returned to the commercial banks. A significant factor of uncertainty in budget management was thus removed.

2.6 Privatisation

Privatisation was another important element of the reforms. The number of parastatals crept up during the Amin era (Bigsten and Kayizzi-Mugerwa, 1999b). In the late 1980s there were around 150 public enterprises linked to roughly all sectors of the economy, and accounting for more than 25% of employment in firms. These enterprises tended to have low productivity and increasing debts that became a serious fiscal burden. In 1992 around 50% of total domestic revenue was spent on direct and indirect public enterprise subsidies (Collier and Reinikka, 2001). A reform programme was initiated in 1992 (IMF, 1998).

By 1999, 62 previously public firms had been privatised and around 30 liquidated. To date, the total costs of divestiture have exceeded proceeds, but evidence suggests that privatisation has increased output and led to higher tax payments and investment. Direct subsidies have also been sharply reduced from US\$87 billion in 1997 to US\$9 billion in 1998 (Collier and Reinikka, 2001). In 1998 indirect subsidies to public enterprises did, however, double, due to increased loans and tax arrears. The remaining parastatals (e.g. utilities) still constitute a fiscal burden. Detailed data on parastatal subsidies are not easily available.

2.7 Conclusion

The historical sketch in this chapter has shown how Uganda's public finances have been seriously affected over the years by the state of the economy and by political and policy considerations; revenues and expenditures have declined in periods of economic decline, and expanded in phases of expansion. Revenues, however, were structurally impaired by the mismanagement of nationalised enterprises in the 1970s and 1980s, and more so by the fall in the trade/GDP ratio in these years. They were slow to recover in the post-1986 period. Expenditures were constrained by shortages of domestic resources until the 1990s, given the limited access to external financing and a low domestic financing capacity. From 1990, however, massive inflows of aid lifted the resource constraint, and expenditures duly expanded.

Chapter 4 considers in more detail the patterns and composition of public expenditure. To put these in their institutional context, Chapter 3 first briefly describes developments in budget planning and management.

Chapter 3: Budget Management and Institutions

In the early 1960s the Ministry of Finance was in charge of the management of budget processes – revenue forecasting, and planning and allocation of expenditure – in Uganda. Its approach was professional, if traditional. Expenditure – divided into recurrent and non-recurrent chapters – was allocated to spending ministries and organisations, and within these to outlays classified by economic function, with ministries held accountable for their stewardship of the funds thus allocated. By convention, recurrent expenditures were covered by ‘recurrent’ domestic revenues, and non-recurrent expenditures by capital receipts of various kinds, including foreign and domestic borrowing and the reimbursement of government loans.

Uganda’s first development plan was launched in 1961, marking the start of an initially gentle increase in capital expenditure. The government’s approach to its capital account was cautious because, as a member of the East African Currency Board, it had no scope for printing money and was obliged to service all debt from its (limited) revenues and capital receipts. Its contingent liabilities rose in the late 1960s with the creation of parastatals such as the Produce Marketing Board and the more active deployment of statutory powers over marketing cooperatives and the Uganda Development Corporation (Bigsten and Kayizzi-Mugerwa, 1999b: Chap. 2). A Ministry of Planning and Economic Development was created with responsibility for mobilising and allocating development budget resources.

The quality and ethos of public administration and public services deteriorated seriously in the 1970s and early 1980s as the purchasing power of public service remuneration fell. In 1989 the salary of a permanent secretary in real terms was only 3% of what it had been in 1975 – though the decline was mitigated by benefits in kind (*ibid.*: Chap. 4). The ineffectiveness of the public service in implementing programmes and controlling projects frustrated donors supporting Uganda’s Economic Recovery Programme in the late 1980s, and was instrumental in the loss of fiscal control that occurred in 1991/92.

3.1 Ministry of Finance, Planning and Economic Development

In 1991 the former Ministries of Finance and Planning were amalgamated into the Ministry of Finance, Planning and Economic Development (MFPED) following the fiscal slippage.⁶ This was considered to represent a victory for the advocates of expenditure restraint, deficit reduction and reform over the partisans of deficit spending (Bigsten and Kayizzi-Mugerwa, 1999b). The amalgamated Ministry established effective control over the budget process, aligning though not integrating the recurrent and development budgets. The MFPED established improved revenue estimation, with much tighter control over spending ministries’ commitments and disbursements than had been exercised previously (Stasavage and Moyo, 1999, and Section 3.2 below).

Thanks to MFPED initiatives, Uganda was among the first countries to introduce an effective medium-term expenditure framework (MTEF) for the annual budget, incorporating expenditure proposals prepared by sector ministry working groups in which the main donors were invited to participate. Starting in 1992/93, the budget has come to be planned within a MTEF – an annually-updated 3-year rolling expenditure budget, formulated in the light of consistent macroeconomic scenarios constructed using financial programming (Henstridge and Kasekende, 2001).⁷ Since 1995, this practice has become part

⁶ The amalgamation was briefly reversed in the mid-1990s, but was reinstated in 1997/98.

⁷ Budget Framework Papers are now routinely prepared by sector spending ministries and also by local government authorities as the basis of their bids for resources.

of a wider set of public expenditure reforms of which the centrepiece is the MTEF. The latter is intended to be comprehensive, setting out sectoral allocations incorporating both recurrent and development expenditure, and reflecting the government's strategic priorities. It includes expected donor project financing, but the quality of this information is still low (Foster and Mijumbi, 2002).

The new practices were formalised in the Budget Act of 2001. The MTEF and annual budget processes are now effectively one and the same. Each year the MFPED lays before Parliament a three-year forward economic plan and, having solicited bids from spending ministries, presents a consolidated Budget Framework Paper to the Cabinet. One effect of these reforms has been to overcome the previous institutional dichotomy between the recurrent and development budgets and to make them more consistent. The consolidated budget is structured by functional/administrative unit, then by programme, and finally by economic classification.

The MFPED has thus driven the introduction - through the MTEF preparation process - of output budgeting. Sector working groups representing spending agencies in each sector prepare budget framework papers in which they state their objectives and targets and give account of their success in achieving them (Williamson, 2003). Prior to these reforms the long-standing practice had been to allocate project and programme aid receipts to the development budget, irrespective of whether their intended purposes were of a capital or recurrent nature.⁸ This 'fiscal dichotomy' has been eroded since 1998 under the combined impact of the growing effectiveness of the MTEF process with its increasing use of forms of programme and output budgeting, of the Poverty Action Fund (PAF) explained below, and of the transfer of an increasing share of donor assistance in the form of budget support. The MFPED established a highly professional macroeconomic analysis and poverty monitoring cadre which has played a valuable role in forging the policies which have sustained growth and liberalised economic institutions within a framework of broad macroeconomic stability.

3.2 Poverty reduction strategy

Features of public expenditure in the five years to 2001/02, have been, first, its rise as a share of GDP (from 17% to 25%), and, second, the increase in the share allocated to pro-poor programmes, both within and between sectors. Since 1995 an effort has been made to re-prioritise public expenditure, giving greater emphasis to poverty eradication and the social sectors, and to pro-poor programmes within them. Two instruments have been effectively deployed to this effect, one strategic - the Poverty Eradication Action Plan - and the other operational - the Poverty Action Fund.

The government prepared a first Poverty Eradication Action Plan (PEAP) in 1997. The PEAP was subsequently recognised as a Poverty Reduction Strategy Paper, and thus enabled Uganda to become the first country to qualify for enhanced debt relief in 2000 under the Heavily Indebted Poor Countries Initiative. The four goals of the first PEAP were the following:

- creating an enabling environment for rapid and sustainable economic growth by ensuring macroeconomic stability, equitable and efficient collection and use of public resources and private sector development.
- fostering good governance and security, for instance by conflict resolution and decentralised governance.

⁸ For example, the meteorology department has been funded from the development budget for some 20 years (Tim Williamson, ODI, - pers. comm.).

- increasing the ability of the poor to raise their income by means of improving market access and rural financial opportunities (such as the Entandikwa micro-credit scheme).
- improving the quality of life by investing in health care and free primary education. The PEAP was to include a medium-term strategy for fiscal consolidation and debt sustainability. Expenditure growth has been rapid and funded by increased aid inflows, but the government now aims to cut spending to reduce the fiscal deficit, the increase of which appears to have induced an exchange-rate appreciation, due to the rising demand for non-tradable goods. The MFPED has argued on many occasions that the budget deficit is too large and that this threatens macroeconomic stability (World Bank, 2002).

The first PEAP proved unaffordable, and was in effect overridden by the fiscal discipline of spending limits defined in the MTEF/budget (Foster and Mijumbi, 2002). In later iterations there has been greater consistency between targeted results and resources available.

The Poverty Action Fund (PAF), established in 1998/99, is a budget-within-the-budget containing priority programmes which are given a high level of assurance of full financing (Williamson and Canagarajah, 2003). PAF expenditures have been substantially, but not exclusively, recurrent, and are financed by a combination of domestic revenues, aid and the counterpart of HIPC debt relief. Donors motivated by poverty reduction have been encouraged by the existence of the PAF to earmark their aid to PAF programmes. Those donors⁹ already used to providing some of their assistance as programme aid have increased the share of budget support in their total disbursements in response to the PAF. Between 1997/98 and 2001/02 the ratio of budget support to total public expenditure rose from 20% to 40% (from 3.4% to 10.1% of GDP) (ibid., 2003).

As a share of public expenditure, PAF programmes rose from 23% in 1998/99 to 38% in 2000/01. Allocations to the education, health, water, roads and agricultural sectors rose from 39% of the overall budget in 1997/98 to 47% in 2001/02; within these sectors the share of PAF programmes rose from 43% to 66%. These changes in volume and emphasis were closely associated with a steep growth in receipts of aid (Williamson, 2003: Chap. 2).

3.4 Cash budgeting

In 1992 the MFPED introduced cash budgeting, whereby ministries' expenditures were limited to cash inflows into the Exchequer on a monthly basis. The purpose of this move was macroeconomic. Monitoring cash disbursements and commitments by line ministries was lax. Cash budgeting successfully curtailed unplanned deficits, bringing about a steep fall in the rate of inflation in the months after its introduction (Bigsten and Kayizzi-Mugerwa, 1999b).

Cash budgeting has potentially deleterious effects on the quality of public expenditure if monthly release decisions are made *ad hoc*, without reference to strategic priorities and annual budget allocations. Its worst effects in respect of Uganda's pro-poor programmes have been overcome by means of the PAF. However, programmes outside the PAF have been exposed to correspondingly greater cuts, aggravated by the 'serial overspending of powerful government institutions' – a problem which has not yet been solved (Williamson and Canagarajah, 2003).

⁹ Notably IDA, the EU, the UK.

3.5 Decentralisation

By the mid-1990s the government felt sufficiently confident about its public expenditure management reforms to begin the process of decentralising the delivery of basic public services to the level of districts and local communities and of entrusting the management of funds for these services to local government authorities at these levels. The decentralisation of public services proceeded in steps between 1993/94 and 1995/96. Initially 13 districts received a vote of their own in the central government's budget (Bigsten and Kayizzi-Mugera, 1999b: Chap. 4). District and sub-district authorities were delegated responsibility to provide primary education, health, road and environmental services, for which they received funds from the central government in the form of block- and performance-based 'conditional' grants. 75% of total grants from the centre are now 'conditional'. Block grants largely fund administration costs and salaries (over which the centre retains discretion), while development activities are funded through conditional grants – mostly within the PAF (Williamson, 2003: Chap. 2).

Decentralisation has required major improvements in institutional capacity - in respect of administration, budgeting and expenditure management at district level – which have been carried out with varying success. Local governments are required to prepare performance-based Budget Framework Papers (as central ministries do) and work plans for activities financed by PAF conditional grants (*ibid.*). Total transfers to districts amounted to one-third of total public expenditure in 2000/01. Some initial results were unsatisfactory, with evidence accumulating of misappropriation of funds. Expenditure tracking was instituted in 1986 and performance-reporting requirements have been tightened (Foster and Mijumbi, 2002).

3.6 Conclusion

The themes of public expenditure institutional development in the 1990s were fiscal discipline, budgeting within a medium-term macro framework, reforms in the direction of programme/output budgeting, pro-poor expenditure re-orientation and decentralisation. The considerable tasks involved remained incomplete, but they were sufficiently engaged to yield effective results in terms of their objectives, and to begin an important change in the ethos of the relationship with aid donors based on local ownership and trust in local processes.

Chapter 4: Trends and Composition of Expenditure

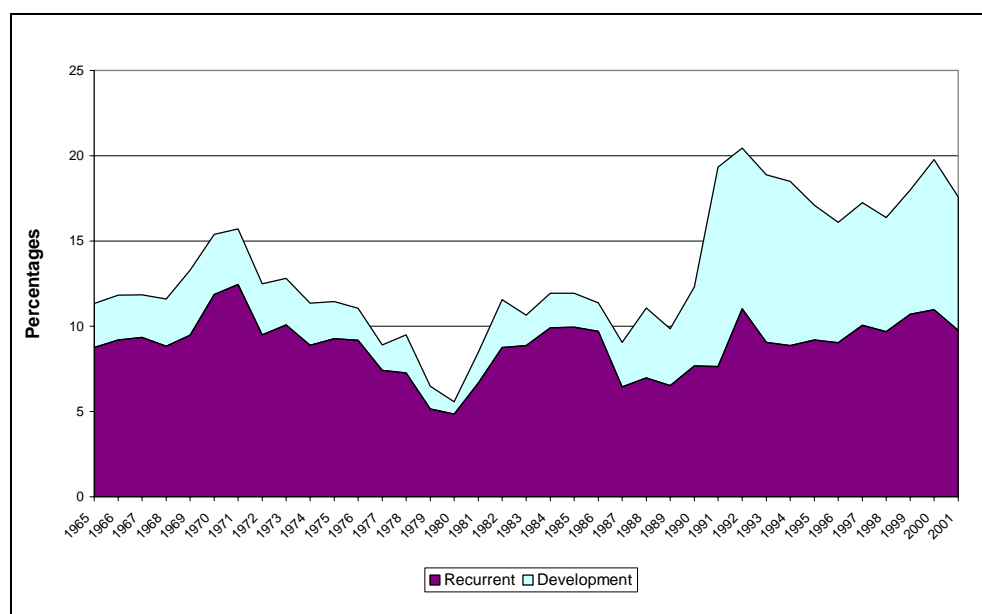
This chapter adds further detail to the outline picture of expenditure trends given in Chapter 2, Fig. 2.2. This showed public expenditure as a share of GDP rising at the start of the 1970s, falling catastrophically at the end of the 1970s and beginning of the 1980s, reviving briefly in the mid-1980s under Obote II, then falling in the early years of Museveni, before rising to a peak in the early 1990s before falling to a high plateau of 15-20% of GDP in the mid-1990s.

The chapter shows that (a) the development budget has greatly expanded its share of public expenditure in the 1990s, (b) trends in recurrent budget expenditure have closely followed domestic revenue trends, (c) development budget expenditures have been closely correlated with the provision of external financing in the budget, and (d) within the much enlarged development budget of the 1990s, transport infrastructure and education have featured very prominently.

4.1 Recurrent expenditures - magnitudes and correlates

Ever since the 1960s, recurrent expenditures have, in normal times, amounted to 8-10% of GDP, as shown in Fig. 4.1. Exceptions to this general rule occurred, as expected, in the late 1970s and early 1980s and in the late 1980s when expenditure was abnormally low for reasons spelt out in Chapter 2.

Fig. 4.1 Shares of recurrent and development expenditure in GDP



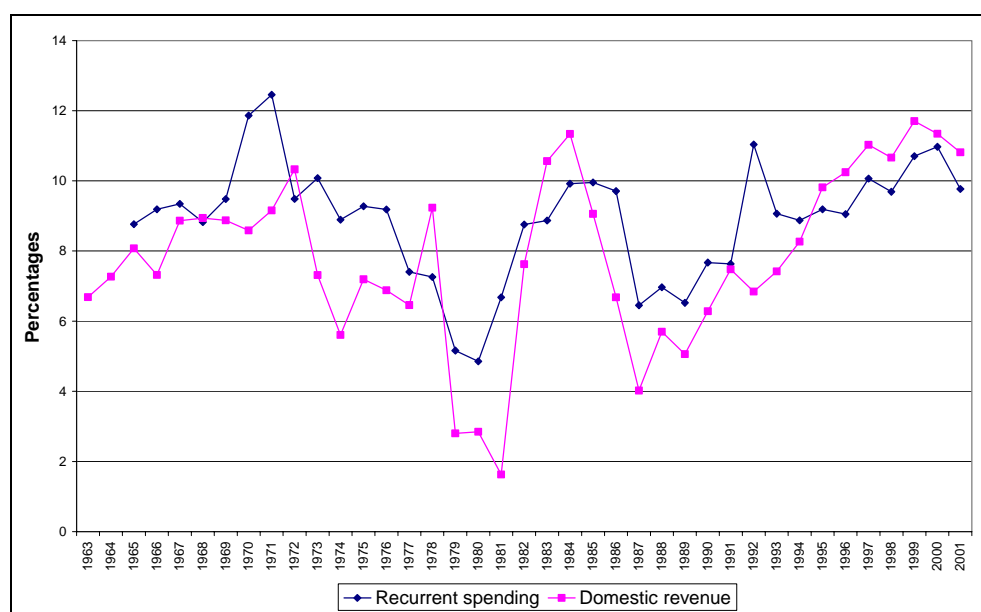
Sources: GFS, IMF (1998, 2003), 'Background to the Budget' (various years) and authors' estimates

The rationale for this fixity of share will be explored further below, but *prima facie* it provides evidence of entitlements which the political turbulence has left largely unshaken. There is also evidence, both institutional and statistical, that recurrent expenditures have been planned incrementally but have been governed overall by the level of domestic revenue mobilisation. As explained in Chapter 3, Uganda has followed the tradition of fiscal dichotomy common in many African countries, whereby the recurrent budget is managed by the Ministry of Finance and is tailored to the volume of revenue resources (plus domestic borrowing), while the development budget is financed by externally provided

resources and other capital receipts. The effects of these institutional practices are shown in Figs. 4.2 and 4.3

Fig. 4.2 shows that recurrent expenditures have tracked revenues over the years since the 1960s, though with rather less breadth of fluctuation. The coefficient of correlation between the two over the period 1965-2001 has been a fairly high 0.72. The periods of recurrent budget deficit when domestic financing (with its inflationary potential) was high stand out clearly, namely, the late 1960s immediately prior to the Amin coup d'état of 1971, the mid-1970s, the 1979-81 period immediately after the overthrow of Amin, the later 1980s, and the years 1991-93 when fiscal control was temporarily lost.

Fig. 4.2 Domestic revenue and recurrent expenditure (shares of GDP)



Sources: GFS, IMF (1998, 2003), 'Background to the Budget' (various years) and authors' estimates

The fall in the 1990s, evident from Fig. 4.1, in the share of recurrent expenditure in total public expenditure - from around 85% in earlier years to approximately 55% - raises a question about the sustainability of recent public expenditure patterns. Has recurrent expenditure been sufficient to operate the enlarged range of physical assets and public services created by a greatly expanded development budget? As will be apparent from the next section, the answer is broadly 'yes' - because the development budget has been used as a source of finance for the operating expenses of many public services, and because, with consistent and fast economic growth and buoyant revenues, domestic fiscal receipts have stayed on a rising trend.

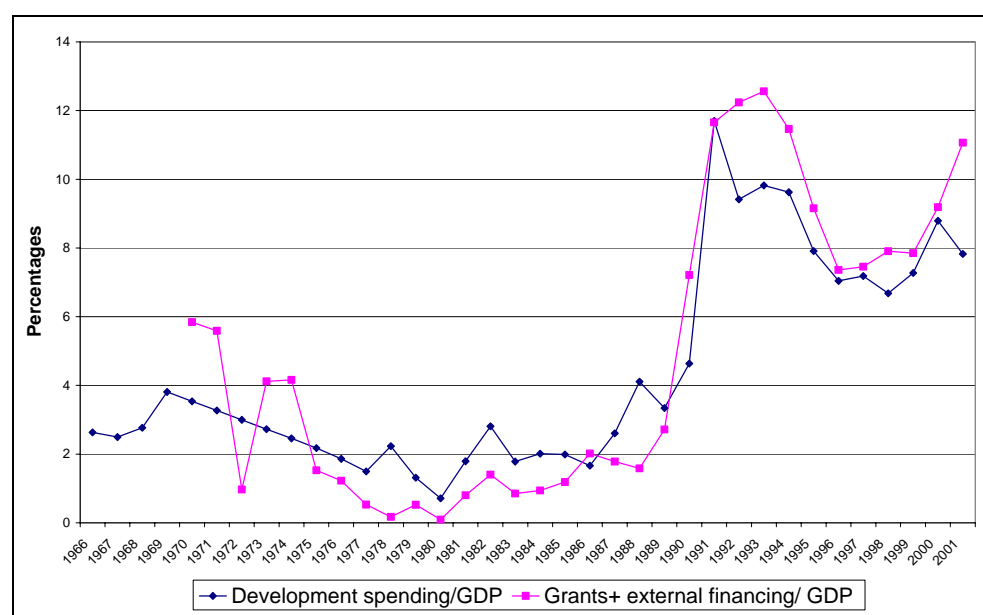
4.2 Development expenditures

The level of development expenditure relative to GDP has been much more variable than that of recurrent expenditure and, until 1990, more modest. In the 1960s it amounted to 2-3% of GDP, from which level it fell to 1-2% of GDP from the late 1970s to the late 1980s, since when it increased spectacularly to an average of 10% of GDP in the years 1990-4, before falling back to 7-8% of GDP thereafter.

It is evident from Fig. 4.3 that the correlation between development expenditure and external financing has been close, and indeed closer than that between recurrent expenditure and revenue. The correlation coefficient between the two time series over the

years 1970-2001 has been a very high 0.95. Both external financing and development outlays as shares of GDP fell from modest levels in the 1970s, remained minimal until the end of the 1980s, and then rose in tandem to the much higher levels characteristic of the 1990s. Interestingly, Fig. 4.3 also reveals that, in the 1990-3 period, a proportion of aid inflows contributed to the financing of recurrent expenditure as well. This was a time when project aid was encountering absorptive capacity problems, and when some bilateral assistance was devoted to debt and debt-service reduction operations.¹⁰

Fig. 4.3 Development budget expenditure and foreign financing (shares of GDP)



Sources: IFS, 'Background to the Budget' (various years) and authors' estimates

Table 4.1 shows the share of development expenditure funded externally in the 1987-2001 period when aid receipts were high, averaging 74%, though the share has varied. It should be noted that development expenditures depicted in Figs. 4.1 and 4.3 and used in calculating the table are an incomplete representation of total development expenditure. They contain only those expenditures recorded in the government's development budget, and exclude significant donor financing of projects for which donors have made direct payment, and which have not therefore passed through the government's accounts. In the later 1990s an attempt was made to improve government information about the magnitude of direct donor funding, and thus to consolidate the fiscal accounts, but this task remain uncompleted.

¹⁰ In response to the slow implementation of their numerous (and poorly coordinated) projects initiated at the end of the 1980s, some donors used substantial sums from their budgets for Uganda for 'fifth-dimension' operations, which converted outstanding IBRD loans to IDA terms. There were also substantial commercial debt buy-backs in 1993. In 1995 the Paris Club agreed to write off 67% of pre-cut-off-date official bilateral commercial debt (Bigsten and Kayizzi-Mugerwa, 1999b). The concessionality implicit in this is recorded as ODA grants by the creditor countries concerned.

Table 4.1 Share of development expenditure funded from foreign sources

Year	Share (%)
1987	56
1988	60
1989	63
1990	56
1991	61
1992	86
1993	92
1994	91
1995	83
1996	87
1997	77
1998	83
1999	77
2000	71
2001	66

Source: 'Background to the Budget' (various years)

4.3 Expenditure composition

Knowing how public expenditure has been allocated between the recurrent and development budgets is of only limited value in understanding its effectiveness in facilitating and promoting growth. It is also important to understand what the composition of the expenditure has been, and what functions it has fulfilled in the economy – namely, how it has been allocated between sectors and economic categories.

Recurrent budget. Functional analysis of the recurrent budget reveals that its expenditures are dominated by mandatory and entitlement outlays, unrelated in the main to the provision of economic and social services. These include large outlays for debt service and for general administration and defence, within which staff remuneration is the main item. The share of recurrent expenditure on health, education, transport, communications, agricultural services and other economic services, which was in the range 30-40% prior to 1986, has subsequently diminished to below 20%.

Expenditure on defence rose sharply over the 1981-5 period in response to the insurgency which threatened and eventually overthrew the Obote II government. It has remained high since the regime change of 1986 because of continuing and episodic insurgency in the north and west of the country and temporary military involvement in the Democratic Republic of Congo. This has been a source of disagreement between donors and the government.

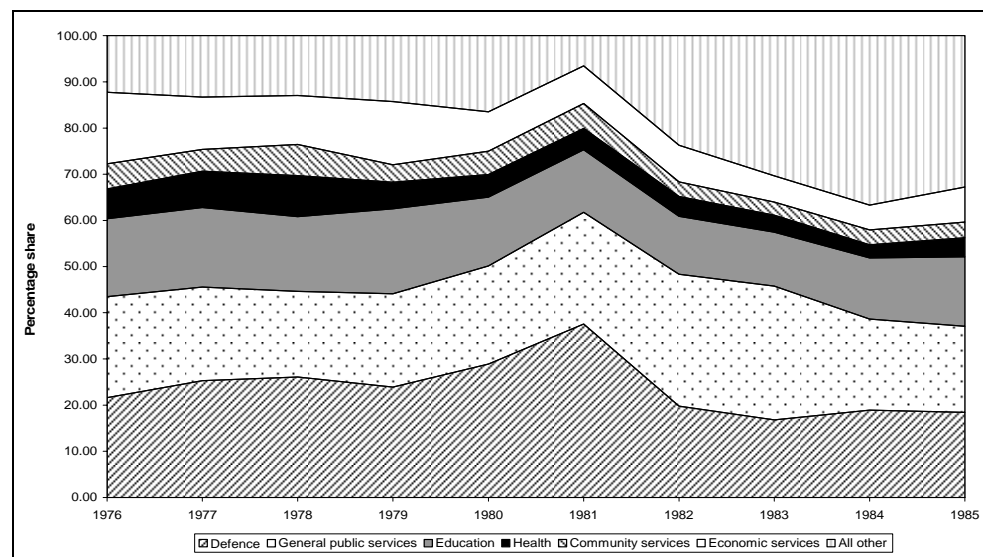
Uganda has spent relatively heavily on public administration. This in part reflects the ability of certain powerful state institutions to exceed their budgets and to gain access to supplementary funding. General administration costs have consumed a consistent 20-25% share of the recurrent budget, notwithstanding the civil service reforms started in 1991. At the beginning of the 1990s there were some 320,000 people employed in the public sector, 40% in general administration, 40% in teaching, and the remainder in the lower tiers of government and the security forces. By March 1995 payrolls had been reduced by 50% to less than 150,000 (Bigsten and Kayizzi-Mugerwa, 1999b). Reductions in personnel numbers have, however, been counterbalanced by increases in remuneration rates. Expenditure on public administration has constantly exceeded plans.

Figs. 4.4 and 4.5 show the functional classification of recurrent expenditure for the two periods 1976-86 and 1987-2001.¹¹ Defence and public administration have been the largest expenditure items in both periods. It is noticeable in the earlier period that their shares have fallen at times when the size of the recurrent budget has risen and vice versa, suggesting that they have had a priority claim on recurrent budget resources. General administration includes interest payments in the former period, but not in the latter. The share of defence and public order fell from circa 25% of the recurrent budget in the 1970s to below 20% in the mid-1980s, but then rose in the 1990s to 35-40% of recurrent outlays. The share of general administration fell from 20-25% in the 1970s to below 20% in the mid-1980s, but rose later in the 1990s to 25-30% of the recurrent budget.

Interest payments have been a modest charge on the budget, except briefly in 1991/92 and 1992/93 when they averaged over 25% of outlays. They have subsequently fallen to around 10% of the recurrent budget with the benefit of the government's fiscal surpluses for domestic financing and of operations for the reduction of external debt and debt-service payments (to be described in more detail in Chapter 5).

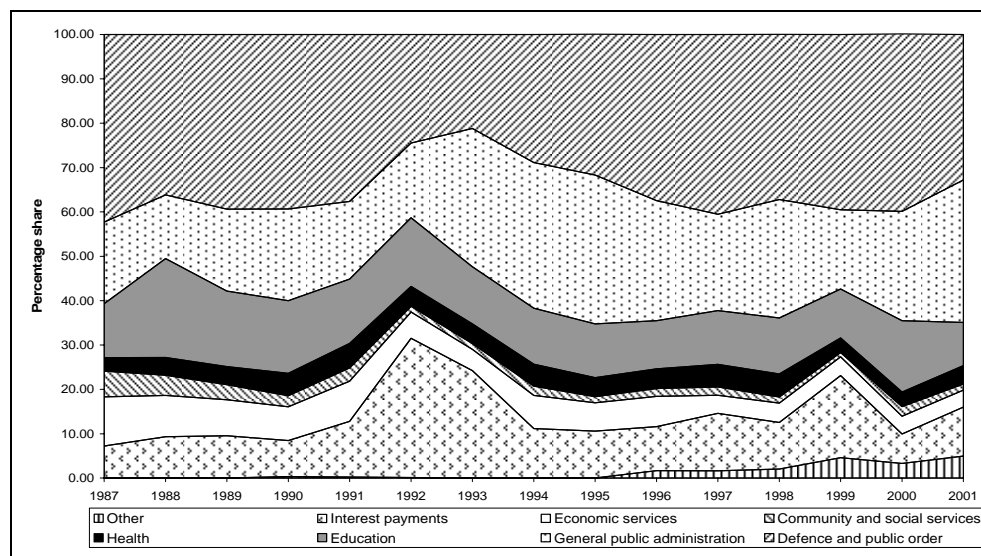
There is no obvious sign, in the classification of recurrent expenditures, of the inter-sectoral shift towards the social and economic services which occurred in the five years to 2001/02 mentioned in Chapter 3. Somewhat surprisingly, taking into account the large increase in primary school enrolments following the abolition of school fees in 1996 and the subsequent recruitment of more teaching and support staff to cope with the intake, the share of education has not risen significantly. However, some of the incremental operating expenditure in the education sector was doubtless charged to the development budget where allocations for education expanded sharply in the later 1990s (see below).

Fig. 4.4 Recurrent budget expenditure: functional classification 1976-86



¹¹ The data have been compiled from various sources. They are presented in two graphs because there may not be complete coherence in the coverage of expenditure between time periods. The data for the latter period come almost entirely from the *Bank of Uganda Annual Report* (various years).

Fig. 4.5 Recurrent budget expenditure: functional classification 1987-2001

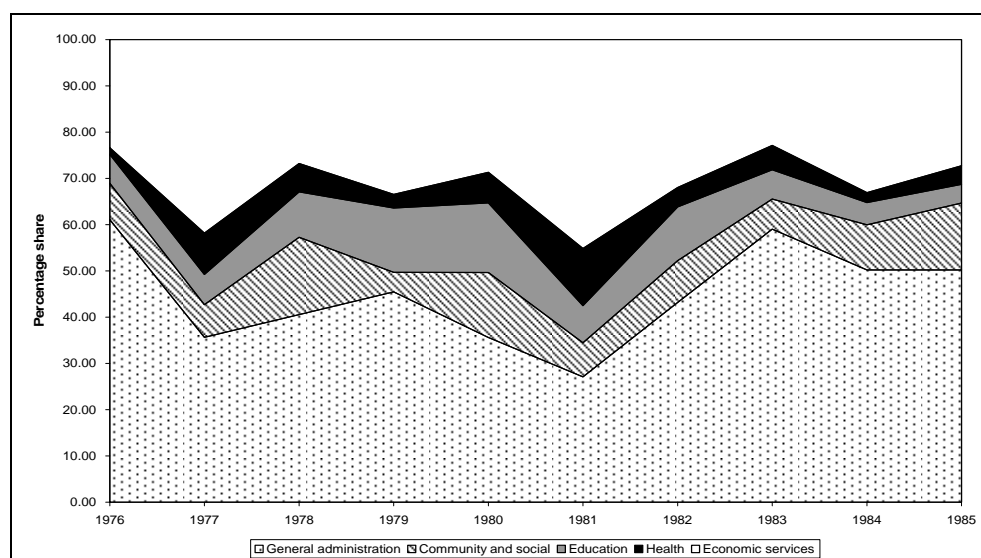


Sources: GFS, Bank of Uganda Annual Report (various years)

Development budget. Functional analysis of the development budget expenditure is inhibited by the fact that, since 1985, the government has published only analyses of the domestically financed part of the budget – averaging 26% of the total in the 1990s (Table 4.1). It cannot be assumed that the allocation of these expenditures between sectors is representative of the functional allocation of donor-financed expenditures. For the years up to 1985 there are estimates of the inter-sectoral allocation of all development expenditure.

In the ten years to 1985 the largest shares of development budget expenditure were devoted to general administration, including the armed forces (45%), and to economic services - transport, communications, power, agriculture (31%) (Fig. 4.6). Expenditure on economic services was boosted temporarily by the financing of rehabilitation programmes by aid in the early 1980s. Community services - local authorities' spending - received a 10% share, and education and health shared the remainder.

Fig. 4.6 Development budget expenditure: functional classification 1976-85



Source: GFS

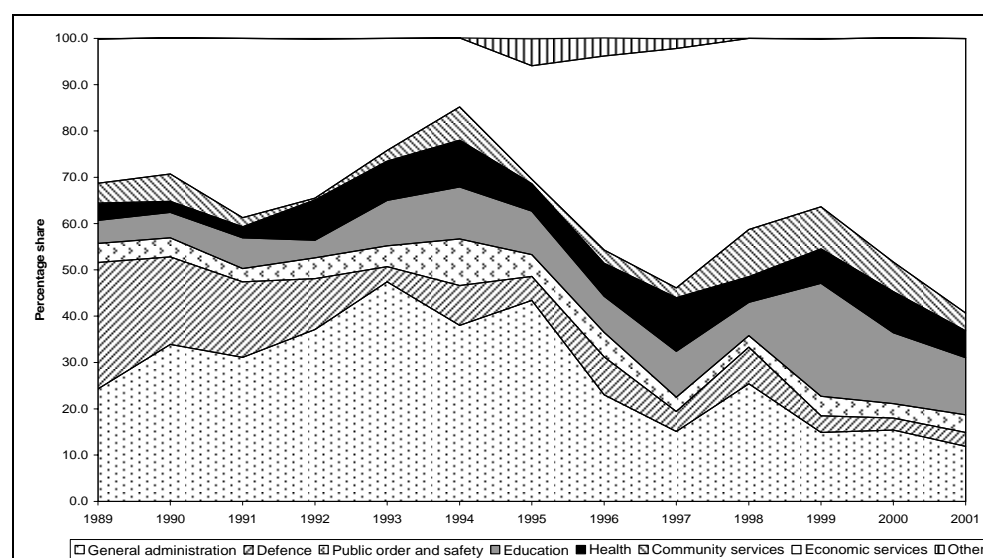
After 1986, within the minority share of development expenditure which was domestically financed, general administration, defence and public order, and economic services have maintained pride of place – with average shares of 41% and 37% respectively (Fig. 4.7). The average shares of education and health (respectively 10% and 7%) were somewhat higher than in the previous period, but of the same order of importance.

The continuing and indeed rising share of economic services is unsurprising, given the enormous backlog of infrastructural rehabilitation which the Museveni regime inherited in 1986, and the need to provide new and higher capacity infrastructural facilities to a steadily growing economy. There has been significant new investment in roads and power generation and distribution, and some also in rural and urban water supply, all of which involve an element of locally financed expenditure.

What is of perhaps greater interest is the declining share of defence (which fell from 27% in 1989 to 3% in 2001) and of general administration (which declined from 35% on average in the period 1990-2 to an average of 14% in 1999-2001). Counterbalancing this has been a rise in the share of education – from an average of 6% of local development expenditure in 1989-91 to 17% on average in 1999-2001 – and a rise in the average share of health spending by a factor of over 2.5 from 2.8% in 1989-91 to 7.4% in 1999-2001. In 1986 the government implemented its earlier pledge to institute universal primary education by abolishing primary school fees. This gave rise to an accelerated school building programme which expanded development spending on education sharply from 1998. Foster and Mijumbi (2002) conclude that in recent years service availability to all, including the poor, has improved. Primary school enrolments have shot up, gender bias has decreased and health services and safe water have become more accessible.

The data reviewed here do not do full justice to the effects of the PAF on expenditure allocations mentioned briefly in Chapter 3. This is because a high proportion of PAF expenditures is externally financed and because, as previously mentioned, the PAF has had a more powerful effect in intra-sectoral than in inter-sectoral expenditure reallocation. Nevertheless, the data summarised in Fig. 4.7 are symptomatic of the deliberate structural shift in spending priorities taking place since the late 1980s, which has been well documented elsewhere. It is also evident from the above that the locus of this structural shift has been in the development budget rather than in the relatively unchanging recurrent budget.

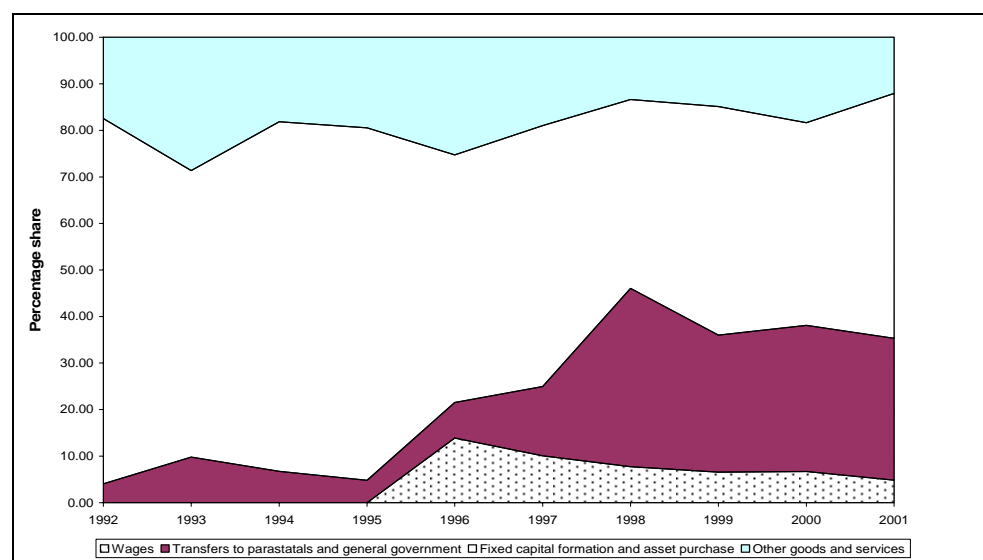
Fig. 4.7 Development budget expenditure (domestically-financed): functional classification 1989-2001



Source: Ministry of Finance

This favourable interpretation of trends in development budget expenditure is reinforced by the picture which emerges from analysis of the same locally financed 1990s development expenditure by economic classification. As can be seen in Fig. 4.8, there has been a sharp fall in the share of outlays devoted to fixed capital formation - from 72% on average in 1992-4 to only 49% in 1999-2001. This has been counterbalanced by a steep rise in the share of transfer payments (amounting to 30% of the total in 1999-2001). These payments have burgeoned since 1998. In their vast majority they comprise the growing transfers to lower tiers of government under the policy of administrative decentralisation,¹² and include the (capital) Schools' Facilities Grants introduced in 1998.

Fig. 4.8 Development budget expenditure (domestically-financed): economic classification 1992-2001



¹² Tim Williamson, ODI - pers. comm.

4.4 Conclusions and implications

The implications of this analysis of trends and patterns in Uganda's public expenditure for the study of the fiscal impact of aid can be stated simply in a few propositions.

First, in spite of the fusion of the Ministries of Finance and Planning in the early 1990s and the subsequent reforms associated with the MTEF, Uganda's recurrent and development budgets still depend in practice on different sources of finance and respond to different policy expectations and imperatives.

Second, the recurrent budget has maintained relatively unchanged expenditure shares (other than for interest payments), reflecting some fixity of relative sectoral entitlements which is consistent with incremental budgeting. It has been largely domestically financed and in size is broadly correlated with the volume of domestic revenues. It seems *prima facie* relatively unaffected by receipts of aid.

Third, the development budget has been highly correlated, at least until the late 1990s, with the external financing of the budget. This is where the principal impact of aid is likely to have lain.

Fourth, incompleteness and inconsistencies in recording the uses to which the development budget has been put preclude close and systematic analysis of these uses. However, it is clear that general administration, defence and public order, on the one hand, and infrastructure and other economic services, on the other, have dominated outlays. They continue to do so, though with the former diminishing its claims in the later 1990s to the benefit of economic and social services. This is consistent with the pro-poor changes in development public expenditure associated with the PAF, the PEAP and the MTEF. Since the institution of the PEAP and the PAF there have been rising shares, in consolidated public expenditure, for outlays on health, agriculture, transport infrastructure and other economic services, and falling shares for public administration and security (Williamson and Canagarajah, 2003).

Fifth, data from the most recent years reflect the effect of decentralisation in public expenditure. This is most evident in the growth since 1998 in transfer payments to local governments. These have been financed in good part from the development budget, but a rising share of recurrent budget programmes, notably those in the PAF, has also started to be channelled through local governments.

Finally, the functional dichotomy between the recurrent and development budgets has been significantly eroded in the 1990s, with the financing of many operating expenditures from development budget resources. In the later 1990s even the institutional distinction between the two became blurred, with the reunification of ministerial responsibility for finance and planning, and the launching of a programme and output approach to budgeting responsive to the PEAP and to the results-oriented structures of planning and accountability created within the MTEF framework. This is likely now to have broken the formerly tight linkage between external financing and the development budget.¹³

¹³ Tim Williamson, ODI – pers. comm.

Chapter 5: Aid and Debt

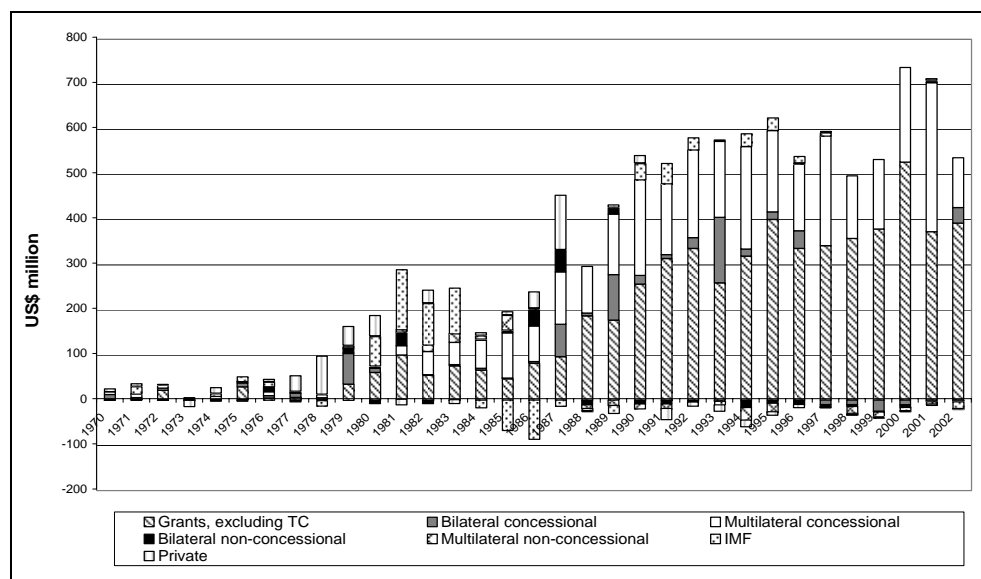
This chapter completes the background picture on the fiscal impact of aid by taking a closer look at the nature of the aid and other external financing received by Uganda and at the uses to which it has been put, including debt and debt-service relief. The essential observations made are that:

- official bilateral and multilateral assistance was minimal before 1980; concerted multilateral and bilateral concessional inflows became significant in the early 1980s, and then, after a pause, grew very rapidly in the final years of the decade, peaking at 30% of GDP;
- in the early 1980s aid had only limited developmental impact, but since 1990 has helped rebuild infrastructure and has supported generally sound macroeconomic, structural and sectoral policies with beneficial effect;
- net disbursements of official development assistance (ODA) have exceeded the external financing recorded in the budget, sometimes by a wide margin;
- the government has taken donors into its confidence to an unusual extent, thus improving coordination and aid effectiveness, despite imperfect practice by donors;
- Uganda received significant private credit financing in the 1970s and 1980s and non concessional official financing in the 1980s; this led to a persistent, though not overwhelming, debt problem; some aid has been devoted to debt and debt-service reduction, accounting for some of the excess of ODA over budgeted external financing, and lessening its immediate impact on fiscal outcomes.

5.1 Volumes and sources of aid and other external financing

A comprehensive account of gross and net external financing based on creditor and donor reporting is to be found in the World Bank's Global Development Finance database. Data from this source show that the bulk of net external financing has reached Uganda in the form of bilateral grants and multilateral concessional loans – principally from the International Development Association. These flows contributed close to 100% of net receipts in the 1990s, which have been fairly stable, and generally in the range \$550-600 million p.a. at current prices (Fig. 5.1), i.e. between 10% and 20% of GDP (Fig. 5.2). The stability of the flows in current dollar terms bears witness to a generally stable relationship between the government and its principal bilateral and multilateral donors, which has been valuable in permitting the fruitful absorption of assistance into the budget process. Exceptionally high net disbursements in some years (e.g. 1991, 2000, and 2001) have been associated with particular operations such as debt relief.

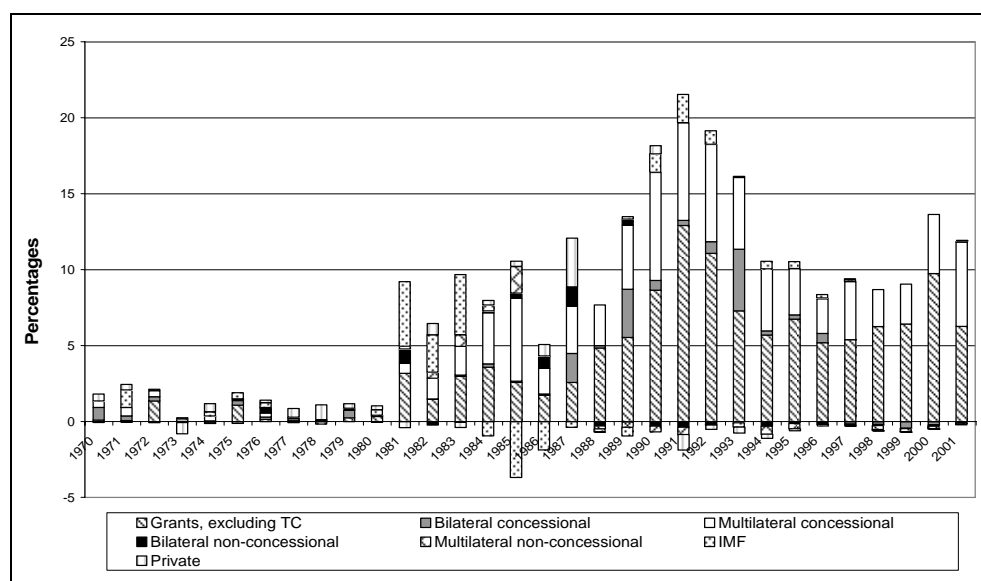
Fig. 5.1 Net flows of external financing 1970-2002



Source: Global Development Finance

In earlier decades net receipts were much lower – as shares of GDP as well as in current US\$ (Fig. 5.2). And there was a much higher percentage of non-concessional financing, namely, 47% in the period 1970-80, and 24% in 1980-9. In the latter period, when Uganda had a record of default on external debt-service payments, and had had its bilateral official debts rescheduled by the Paris Club (see below), a major part of non-concessional borrowing was for military procurement. The sources of non-concessional finance were various, including bilateral official aid, private suppliers and other creditors, and the IMF (whose concessional lending facilities started operations only in the later 1980s). Uganda was repurchasing IMF stand-by credits drawn earlier in the 1986-8 period when the recently installed government led by Yuweri Museveni was attempting to stabilise the economy against a background of falling receipts of net external financing.

Fig. 5.2 Net flows of external financing 1970-2002 (shares of GDP)



Source: Global Development Finance

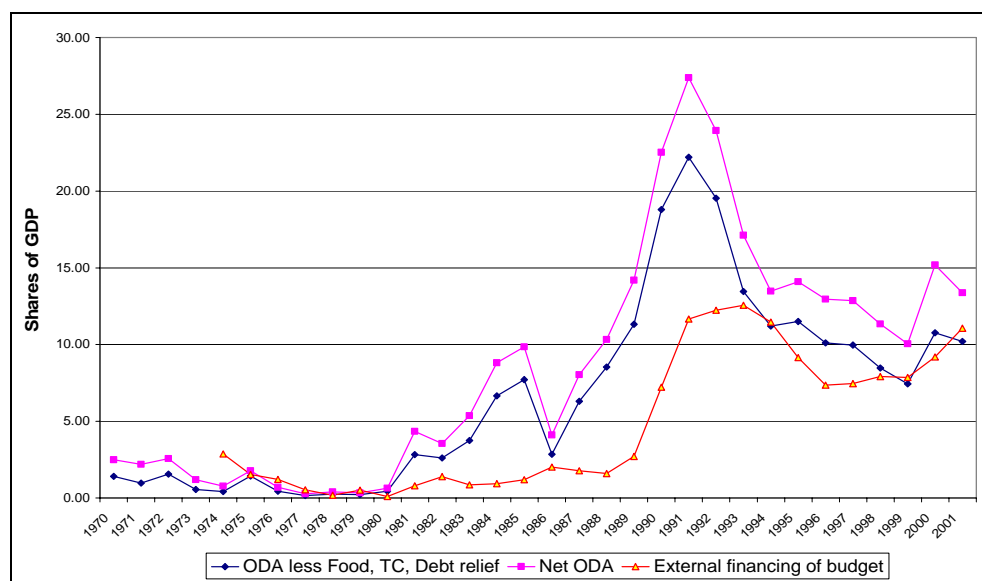
Net flows of external finance as recorded in Global Development Finance omit certain aid flows, such as technical assistance which donors include in their reporting of official

development assistance. The authoritative source for ODA is the OECD-DAC's database of International Development Statistics. These are summarised in Fig. 5.3, showing how ODA fell from an already low level of 2-3% of GDP prior to the Amin dictatorship to virtually nothing at the end of the 1970s, and then grew to 10% of GDP in the mid-1980s under the Obote II government, and reached a peak in 1991 of 28% of GDP before settling in the current range of 10-15% of GDP.

Fig. 5.3 shows that ODA disbursements have been well in excess of the levels of external financing (grants and net loans) recorded in Uganda's budgets. This has been the case even with ODA net of disbursements on technical cooperation, food aid and debt-relief operations,¹⁴ particularly in the late 1980s and early 1990s when the discrepancy exceeded 10% of GDP in some years.

The principal explanation for the discrepancy is that the new Ugandan administration was overwhelmed by the unaccustomed volume of aid receipts in support of its Economic Recovery Programme, and by the relatively uncoordinated implementation of rehabilitation projects by the participating donors, who disbursed funds on projects for which they took the main responsibility, without notifying the government. Disbursements, in particular of non-reimbursable grant assistance, were thus not recorded in the fiscal accounts. Better coordination between government and donors in the 1990s, including the involvement of the main donors in consultations on the preparation of draft Budget Framework Papers, has helped greatly to reduce the discrepancy in recent years.

Fig. 5.3 Net ODA disbursements and external financing of the budget



Sources: OECD International Development Statistics, 'Background to the Budget' (various years)

5.2 Applications and development impact of aid

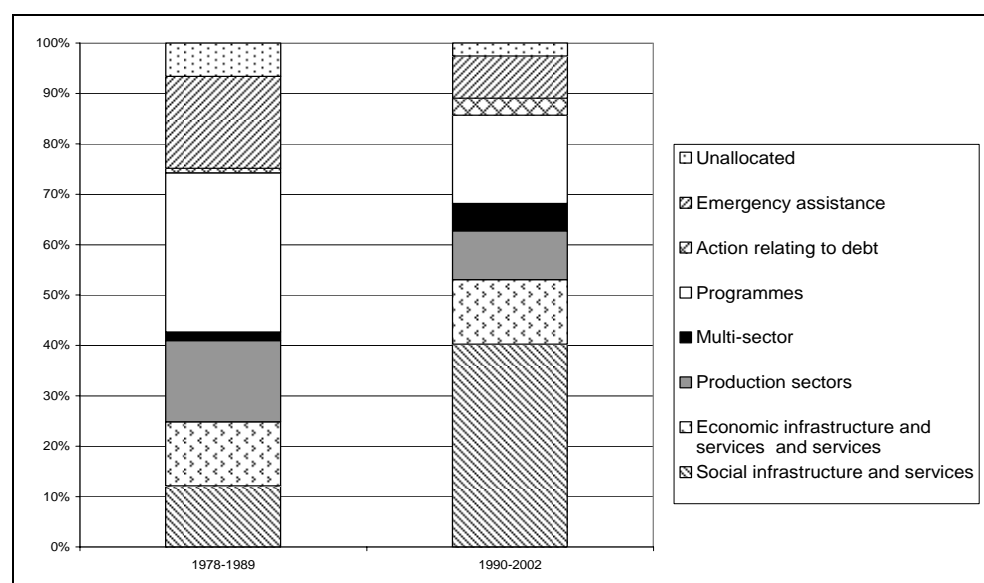
The intentions of the donors when they entered the field in the aftermath of conflict and the breakdown of civil order, first in 1981, and then in 1986, were multiple. Their overriding objective was to bring succour to an impoverished country with a large number of displaced persons, which was suffering from foreign-exchange shortage, whose infrastructure and public services had undergone serious deterioration, and whose public

¹⁴ The conventions in force regarding the recording of debt and debt-service reduction operations as ODA are discussed in Fagernäs and Roberts (2004b) and OECD (2000).

administration was demoralised and ineffective. Relief, rehabilitation of systems and infrastructure, and programme assistance to enhance the availability of imported supplies and of counterpart revenue for the government were high initial priorities.

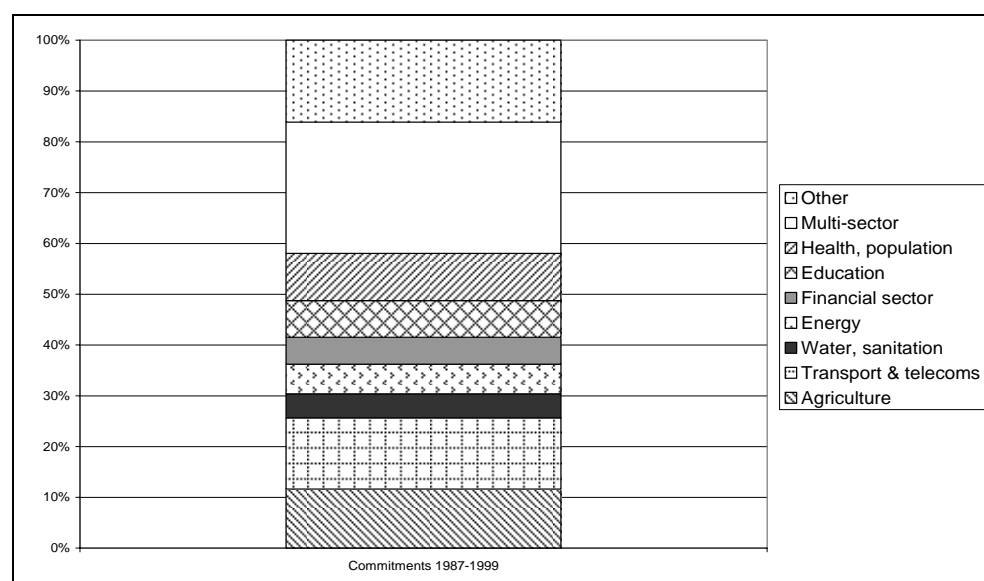
The left-hand column in Fig. 5.4 illustrates the structure of bilateral donors' commitments over the period spanning the abortive Obote II efforts at recovery and reform and the Economic Recovery Programme of the early years of the Museveni government. Relief and programme assistance constituted over 50% of commitments, and some 30% was intended for the initial rehabilitation of agriculture and economic infrastructure, in good part through the supply of imported parts and materials.

Fig. 5.4 Bilateral aid commitments by sector 1980s and 1990s



Source: OECD International Development Statistics

Fig. 5.5 IDA commitments by sector 1987-99



Source: OECD, Datta-Mitra (2001)

In the 1990s the donors' agenda became more wide-ranging and ambitious, as donors became involved in virtually every aspect of the comprehensive reform agenda undertaken

by the government, while continuing to finance infrastructural development and, increasingly, the building of capacity in the social sectors to bring services to poor people. The World Bank, in particular, played a leading role in dialogue with the government on reforms of public administration, the wider public sector, the financial sector, trade and exchange policy and the framework for private sector development. The catholic nature of Bank involvement is reflected in the range of sectors in which commitments were made (Fig. 5.5). The bilateral donors followed suit, though with a stronger emphasis on reform and development in the social sectors, and less on reform of the central institutions of economic policy and management. Over the 12 years to 1999 the Bank's commitments consisted of 40% 'adjustment' credits and 60% 'investment' credits, with the former having explicit policy conditionality.

This investment-cum-adjustment agenda, which was by no means unique to Uganda, was significantly more successful there than in other countries. This was because, after initial hesitation on taking power in 1986, the Museveni regime became convinced of the benefits to the country and to itself of the vigorous pursuit of structural adjustment reforms with the support of donor assistance, and because the vested interests which opposed reforms elsewhere were sufficiently weakened in Uganda to offer little resistance. It is significant that the verdict of the World Bank's country assistance evaluation was that, though the implementation and net benefit of investment projects was 'marginally satisfactory' (with 62% of projects expected to achieve satisfactory outcomes), 'non-lending' activity, i.e. policy dialogue, was an unquestioned success (Datta-Mitra, 2001).

The evaluation recognises that projects, especially for capacity-building and technical assistance, suffered from design flaws and that their implementation was delayed. They have tended to be conceived through direct contact between line ministries and donors, and outside the budget process (Collier and Reinikka, 2001). The government has started to tackle this problem by asking donors to commit funds through sector-wide expenditure programmes.

A new phase of development cooperation began with the reforms of the late 1990 discussed in Chapter 3, comprising the PEAP poverty reduction strategy, the MTEF fiscal framework, the moves towards output and programme budgeting and the pro-poor re-orientation of expenditure through the PAF. As mentioned earlier, a number of donors raised their general budget support commitments, relatively and in absolute amount. In so doing they marked their backing for the thrust of government expenditure policies and their growing confidence in its expenditure-management practices. They also intended to strengthen the hand of the MFPED in the formulation of public expenditure strategy and its implementation, and thus to help it reinforce the coherence and accountability of public programmes.

The fact that the programme overall was successful - in sustainably reviving the economy and the private sector, strengthening public institutions, restoring and extending the outreach of public services and tilting public expenditure decisively towards pro-poor programmes - has been because the government has actively embraced this agenda, has exerted leadership in its pursuit and has engaged the donors in a cooperative relationship. Reference was made in Chapter 3 to its invitation to donors to take part in the formulation of Budget Framework Papers. Downstream in the public expenditure process the donors have also been invited to monitor progress, first in quarterly meetings on the PAF, and more recently through the machinery set up for monitoring the implementation of the PEAP and its intended outcomes.

At the operational level donor projects are approved and monitored by a Development Committee in the MFPED, whose External Aid Coordination Department maintains data on aid receipts and their application (Foster and Mijumbi, 2002). The sectoral allocation and

purpose of aid interventions have been in line with the MFPED's expenditure strategy. However, the monitoring of aid use remains subject to criticism, and there is no regular publication of aid statistics (Atingi-Ego and Kasakende, 1999).

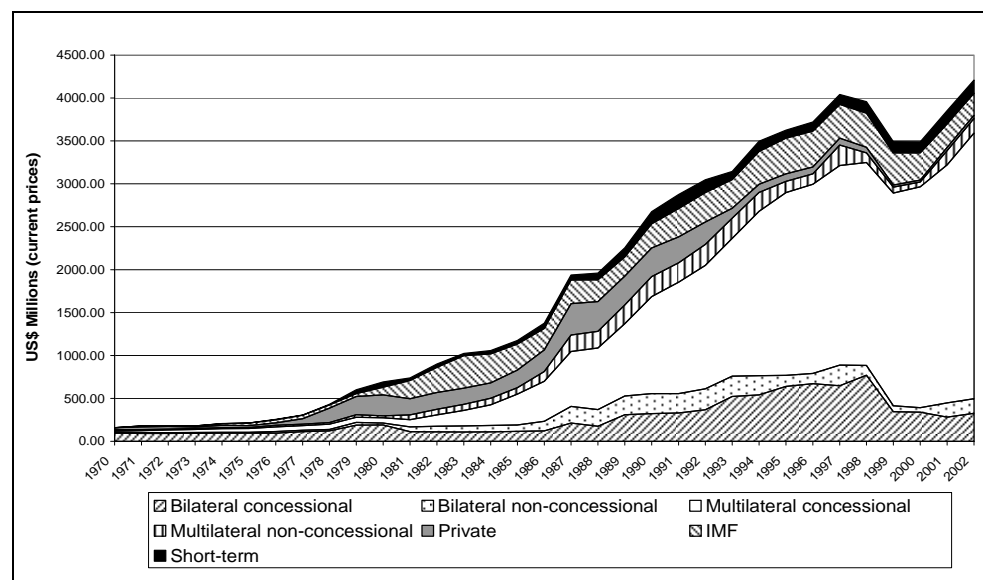
5.3 Debt and debt relief

Uganda has been one of the first beneficiaries of the HIPC debt reduction initiative. This reflects the fact that, in the form of its PEAP, Uganda had, from 1998 onwards, and on its own initiative, a document in being which was recognisable and accepted as a Policy Reduction Strategy Paper.

Uganda incurred an external debt problem largely in the 1970s and towards the end of the 1980s, when, as seen in Figs. 5.1 and 5.2, it borrowed from bilateral sources on non-concessional terms. It has had its bilateral official and officially guaranteed debt rescheduled six times at the Paris Club (see Annex 1). However, its capacity to benefit financially from these restructurings has been limited by the fact that, according to the rules of the Paris Club, no debts have been able to be rescheduled beyond a cut-off date fixed, in the case of Uganda, at 1981 when the first agreement was reached.

The consequences of external debt for Uganda's public finances have been relatively benign. Fig. 5.6 shows that the bulk of the external debt since the start of the 1990s has been on concessional terms - a share rising from 50% at the start of the decade to over 80% by 2000. Interest payments on debt, domestic as well as external, have also been a relatively modest charge on the recurrent budget. Fig. 4.5 shows them rising temporarily to 30% of the recurrent budget in 1992, before declining to 10% at the end of the decade.

Fig. 5.6 Outstanding external debt 1970-2002



Source: Global Development Finance

The use of bilateral aid to reduce debt began on a small scale in the early 1990s when some outstanding non-concessional multilateral debt was converted to concessional (IDA) terms. The Paris Club agreement of 1995 offered Uganda concessional 'Naples' terms - including a one-third write-off - for debt eligible for rescheduling. However, debt-reduction operations made no significant impact on the debt outstanding until Uganda reached its HIPC decision point in 2000. At this time, the early 'cut-off date' limit on Paris Club actions was removed and, by the application of the Naples terms, there was a large write-off of

bilateral debt, the effect of which is evident in Fig. 5.6. The fall in the dollar value of outstanding debt was only temporary, but its composition has changed, with a larger element of obligations to multilateral creditors, and a larger share of concessional debt.

5.4 Conclusions and implications

The material reviewed in this chapter makes it abundantly clear that, since the end of the 1980s, Uganda's external financing has been almost exclusively official and concessional, and that the great bulk of this has been devoted to purposes which have been not only agreed with the government but increasingly subject to government expenditure strategy, and directed by the government through its budgetary processes.

The value of these external resources to the government's expenditure strategy and to the economy has been reasonably high, despite glitches in expenditure programme management, because the resources have been not only abundant but also predictable, and because they have been used to reinforce macroeconomic stability. Their predictability has owed much to trust and to the closeness of the collaborative relationship between the government and the donors. Formerly unprecedented levels of aid inflow have not been used as an excuse for relaxing domestic revenue mobilisation (Chapter 2), nor for raising the ratio of public expenditure to GDP above its historic high point. Instead, they have been used to reduce domestic and external debt and to gain control over monetary policy, as well as to finance expanded social sector and economic infrastructure development programmes.

There is an ironic postscript to this apparently virtuous circle. Since 2002 the government has been taking increasingly vigorous action through the sale of Treasury bills to sterilise some of the impact on the domestic money supply of a rising inflow of external assistance destined to finance local cost expenditure through the budget. Fearful of Dutch Disease consequences from the growth of domestic liquidity, and of the longer-term implications of high fiscal dependence on aid, it has now resolved to stabilise the level of aid inflows and to reinforce its domestic revenue mobilisation (Government of Uganda, 2004).

Chapter 6: Conclusions to Part I

The narrative and descriptive Part I of this paper has shown how Uganda's economy, largely stable and modestly prosperous in the 1960s, descended into almost two decades of impoverishment and instability in the 1970s and 1980s, before, in the 1990s, recovering stability and, by dint of sustained economic growth, returning to the per capita levels in real terms which it had previously achieved.

Public expenditure levels throughout these decades have been conditioned by resource availability. The recurrent budget has risen and fallen in real terms with the flow of domestic revenues, supplemented by limited volumes of domestic financing. Even limited domestic financing has proved highly inflationary. The development budget has been largely financed by externally provided resources, and its ebb and flow has been highly correlated with the external financing of the budget. These observations lead to the hypotheses, for testing in Part II, that development budget expenditure has been highly responsive to external financing, but that the recurrent budget has not.

It has also been noted that ODA flows have exceeded external financing as recorded in Ugandan budgetary sources, particularly at times when ODA disbursements were rising fast. Partial reconciliation between the two is achievable by removing from ODA flows disbursements on technical assistance, debt and debt-service reduction, food aid and emergency aid. There remains, however, a variable proportion of (probably) project assistance whose receipt has not been recorded in the fiscal accounts. These accounts have thus understated to a variable extent the true magnitude of development expenditure. The evidence, nevertheless, points to the likelihood of a causal relationship between ODA disbursements and recorded development expenditure.

Non-aid, i.e. non-concessional, external financing should not disturb these expectations. When these flows were significant – in the 1970s and at times in the 1980s – they were largely used for project or capital goods financing, including arms. These transactions, including military procurement, have been recorded in the development expenditure accounts.

As regards the effect of aid on domestic borrowing by the government, the analysis in Part I leads to the expectation that no clearly defined relationship will emerge from the econometric assessment, though substitution seems to have occurred on occasion. There was some substitution of domestic financing for diminishing inflows of external resources in the 1970s and early 1980s, but domestic borrowing continued thereafter when aid inflows were rising rapidly. Domestic and external financing then declined simultaneously in the 1985-7 period. The government made effective use of the very substantial inflows of the 1990s, *inter alia* to run fiscal surpluses for domestic financing, and thus to pay off domestic debt.

The analysis in Part I offers two important answers to the question of how aid has contributed to growth in Uganda, neither of which lends itself to easy econometric verification. First, it has been seen that high levels of aid inflow in the 1990s have served to help stabilise the economy by enabling the government to pursue conservative fiscal and monetary policies. These policies have reflexively helped to stabilise aid inflows and make them more predictable, because aid donors had no macroeconomic management motive or excuse for delaying commitments or suspending disbursements. Second, it has been shown that Uganda's economic revival, and the revival of its public services, have benefited hugely from the cooperative and trusting relationship established by the government with their donors, and by the government's willingness and ability not only to carry out policy and institutional reforms but also to take the lead in proposing and implementing them,

associating the donors with their initiatives within frameworks of dialogue of which the government was the architect.

PART II. ECONOMETRIC ANALYSIS

Chapter 7: Econometric Analysis of the Fiscal Impact of Aid

7.1 Data and hypotheses

Some observations for econometric verification have been formulated in Chapter 6. This chapter presents the results of the econometric analysis. The effects of aid on fiscal variables are estimated with vector error correction (VEC) models. Section 7.2 provides an introduction to this technique.

All variables are used in 1985 constant prices and the period covered is 1974-99, as this is the period for which a consistent set of data is available.¹⁵ The years 2000 and 2001 have been omitted due to a spike in domestic borrowing and total expenditure (spike in net lending) in 2000 that disrupts the analysis. Figs. 7.1 and 7.2 drawn from budgetary data sources repeat information presented earlier in the paper, but this time in the constant price format which is used in the econometric analysis. On-budget external financing distinguishes between (bilateral official) grants and net external borrowing which, as shown in Chapter 5, has been heterogeneous in source and financial terms, though latterly overwhelmingly multilateral and concessional.

Fig. 7.1 shows movements in total, recurrent and development expenditure, and in grants and foreign loans in constant prices for the period 1974-99. It has already been argued that, whereas grants and foreign loans have largely financed development expenditure, tax revenue and domestic borrowing have been the principal sources of finance for recurrent expenditure, although some external financing has contributed towards it. Movements in total expenditure and both types of foreign financing appear similar and there is a high positive correlation between them.¹⁶ There is also some similarity between the movements in recurrent and development expenditures.

Fig. 7.2 shows the movements in all financing variables measured in constant prices. The relationship between domestic revenue and grants or foreign loans is not very strong, but external financing does not appear to have discouraged domestic revenue mobilisation. Increases in domestic revenue in the reform period are probably explained largely by tax reform and economic growth. Domestic revenue and domestic borrowing appear to move in opposite directions.

The correlation between domestic borrowing and either type of external financing is negative for the entire period. However, the correlation coefficients for the fifteen years 1974-89 are insignificant between grants and domestic borrowing, but positive between domestic borrowing and foreign loans. Similarly, recurrent expenditure and grants, and domestic revenue and either type of external financing are uncorrelated over the first fifteen years, but positively correlated for the entire period. This suggests that there may be turning points in the relationships between aid and fiscal aggregates, especially the financing variables, which can lead to instability in estimated coefficients. Certain intervention dummies that cater for shifts in trend or level might be included, but this is not

¹⁵ Data were available for some, but not all, variables for earlier years. Prior to 1974 there were also gaps in the series for which data were available.

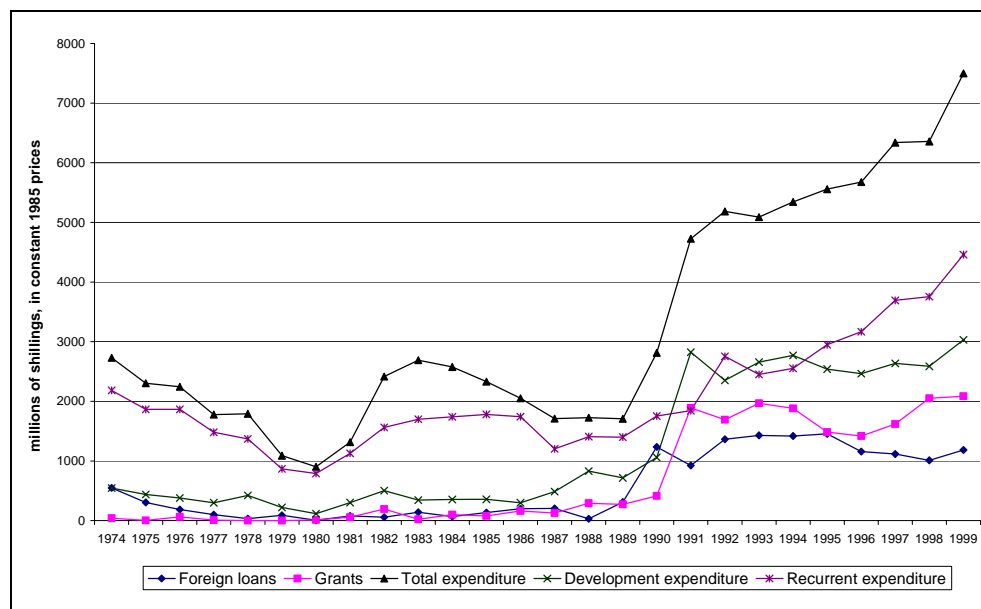
¹⁶ Total expenditure also includes net lending, not captured in recurrent or development expenditure. For most years this is small, except for 2000.

straightforward in a VEC model as, depending on the nature of change, dummies may need to be included in different forms (differenced, levels) and may also need to enter the cointegrating relationship. Secondly, dummies may be an insufficient means to control for deeper parameter instability, and results may alter significantly as a consequence of adding a dummy. One should therefore have a clear justification for the way in which the intervention dummy is introduced to the model. In practice, one should estimate two models: one for the period up to late 1980s and one for the latter period. However, this would be possible only with more frequent data, which are not available for budget variables. The time series analysis can therefore only estimate average relationships between the variables over the entire 1974-99 period.¹⁷

A related issue is the change in the nature of foreign loans over the time period in question. A significant part of foreign lending was non-concessional up to the mid-1980s, but since then has been mainly concessional (Chapter 5). This means that foreign loans may have been used for different types of expenditure in different proportions throughout the period.

There is a strong positive correlation between foreign loans and grants (0.89) for the entire period, but, prior to the 1990s, the two were virtually uncorrelated. This may be explained by the changing nature of foreign loans. When the correlation was low, foreign loans are likely to have had different effects from grants. There is a high coefficient of correlation (0.86) between disbursements, as recorded in data drawn from donor sources, of bilateral grants and net multilateral concessional loans. Uganda's external borrowing after 1989 was almost exclusively on concessional terms (Chapter 5), and largely multilateral. In these years, therefore, grant receipts recorded in the budget may be considered as a proxy also for net inflows of multilateral loans.

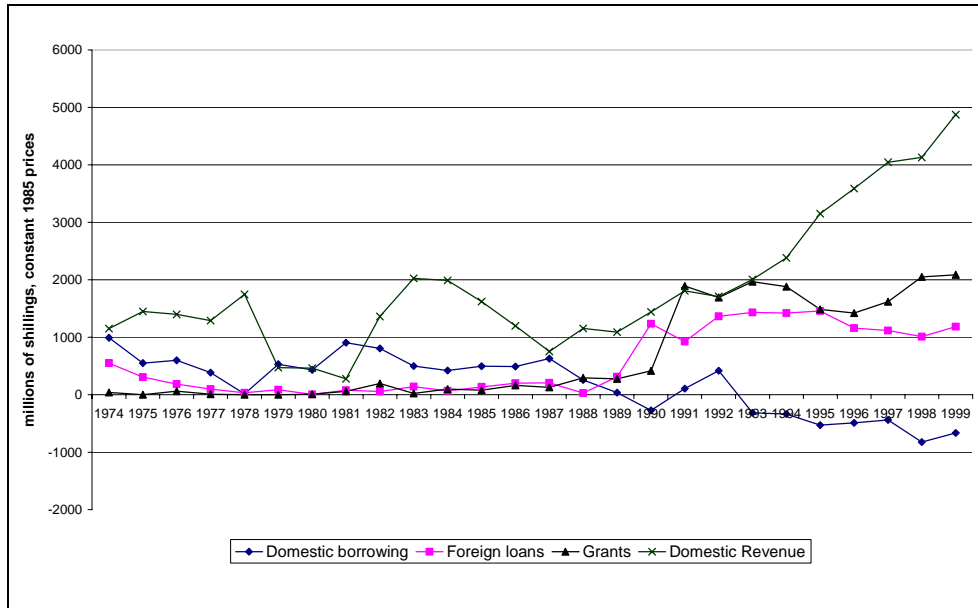
Fig. 7.1 Expenditure and foreign financing



Sources: GFS, IMF, 'Background to the Budget' (various years), *Bank of Uganda Annual Report* (various years)

¹⁷ A few models were run with an intervention dummy taking the value 0 up to 1989 and 1 afterwards. The results for the two most robust models (1 and 2) were not sensitive to the inclusion of the dummy, but those of the others were.

Fig. 7.2 Sources of finance



Sources: Ibid.

On the basis of the analysis the following general hypotheses can be made for the period 1974-99:

- aid inflows have been associated with increases in the development budget and to some extent the recurrent budget;
- aid inflows have induced large increases in expenditure. Whether these increases have been over-proportional and thus an indication of some form of 'aid illusion' depends on the effects on other sources of finance;
- aid inflows have not discouraged domestic revenue mobilisation;
- aid inflows may have been associated with decreases in domestic borrowing, but the impact is unlikely to be strong. This would suggest that increases in expenditure have not been over-proportional, unless there has been an increase in domestic revenue.

The aid inflows above refer to both grants and foreign loans, despite the different nature of the latter up to the mid-1980s. The econometric analysis will test the relationship between the fiscal aggregates and grants and loans as well as the direction of causality between the variables. The latter is based on lagged effects.

7.2 Methodology

An introduction to vector autoregression (VAR) and vector error correction (VEC) models can be found in the synthesis paper for the three country case studies (Fagernäs and Roberts, 2004b), but a brief description is provided below. A VAR model is a system of equations, where all variables are treated as endogenous, in the sense that each variable is allowed to affect the dependent variable with a number of lags. Such a representation corresponds to the reduced form, which for two variables can be written as

$$(7.1) \quad y_t = a_{10} + \sum_{i=1}^n \alpha_{1i} y_{t-i} + \sum_{i=1}^n \alpha_{2i} z_{t-i} + e_{y_t},$$

$$z_t = a_{20} + \sum_{i=1}^n \alpha_{3i} y_{t-i} + \sum_{i=1}^n \alpha_{4i} z_{t-i} + e_{z_t},$$

where i refers to the number of lags ($i = 1, \dots, n$) and t to the time period. The structural form for a VAR that reveals the contemporaneous effects can be identified by restricting the number of contemporaneous effects (by making a so-called ‘Cholesky decomposition’) (Enders, 1995).

The idea of fiscal response models and the VAR/VEC approach is that fiscal variables are jointly determined by the government, and budget outcomes are therefore the result of fiscal behaviour. The benefit of the VAR/VEC approach is that it treats the fiscal variables as determined within the same system, without any prior assumptions about the nature of the inter-relationships. Budgetary decisions are generally made within a budget year, but past levels of fiscal variables can guide future decisions. Such effects will be captured by a VAR/VEC model with lagged impacts. It is also possible that the country does not have full knowledge of the donors’ disbursement decisions when budgets are formulated, and decision makers therefore need to rely on past aid levels when making expenditure plans. Aid may induce changes in fiscal behaviour due, for instance, to conditionality requirements or adaptive expectations. As the approach concentrates on government behaviour, the estimation should use data that are known to the government. However, aid distributed outside the budget can also affect government spending decisions, for instance by lessening expenditure on items funded by non-budgeted aid inflows.

Despite the advantages, VAR models can easily become over-parameterised, as each variable is allowed to affect each other variable at a number of lags. The results can also be sensitive to the chosen lag length, although there are significance tests that can be used to determine the appropriate number of lags to be chosen.

If the variables to be included in a VAR are non-stationary, integrated of the same order and cointegrated, they can be represented by a VEC model. A variable is non-stationary when its mean and/or variance are time-dependent and there is no long-run mean to which the variable converges. The assumptions of a classical regression model require that variables are stationary. If non-stationary, variables are rendered stationary by differencing. Since models with differenced variables do not cater for existing long-run relationships, the differenced variables must be modelled in a VEC framework. A VEC model for cointegrated variables takes into account both the short-run relationships between variables and deviations from the long-run equilibrium relationship, and the reduced form for two variables y and z can be written as

$$(7.2) \quad \Delta y_t = a_{10} + \alpha_y(z_{t-1} - \beta y_{t-1}) + \sum_{i=1}^n \alpha_{1i} \Delta y_{t-i} + \sum_{i=1}^n \alpha_{2i} \Delta z_{t-i} + e_{y_t},$$

$$\Delta z_t = a_{20} - \alpha_z(z_{t-1} - \beta y_{t-1}) + \sum_{i=1}^n \alpha_{3i} \Delta y_{t-i} + \sum_{i=1}^n \alpha_{4i} \Delta z_{t-i} + e_{z_t},$$

where $z_{t-1} - \beta y_{t-1}$ is the error correction term, i refers to the number of lags ($i = 1, \dots, n$), t to the time period and Δ indicates the change in the variable from one period to the next. The error correction term represents the stationary linear combination of the cointegrated variables. The coefficient on the error correction term represents the speed of adjustment. The larger the coefficient is, the greater the adjustment of the dependent variable to the deviation from a long-run equilibrium in the previous period.

The coefficients of the VAR models only reveal the direct, *ceteris paribus* effects. They do not take account of the fact that lagged explanatory variables in each equation are interlinked, and therefore do not reflect the full impact of one variable on the other. For this reason, the analysis relies a great deal on impulse response functions to estimate the total short- and

long-run impacts of an increase in aid (see Fagernäs and Roberts, 2004b for more details). Impulse response functions represent the time profile of the effect of a shock to one variable on the contemporaneous and future values of all endogenous variables. They capture both the direct and indirect or feedback effects caused by endogeneity. The estimation of these functions requires the infinite moving average representation of equation 7.2. This study uses generalised impulse response functions, and in each case the shock to aid is a one standard error shock. The response functions estimated in this study are those of Pesaran and Shin (1998), where the initial shock occurs to a residual in one equation (in our models the aid equation). In a VEC model, a shock or impulse to aid will have a persistent impact on the levels of other variables, as the shock itself is permanent in nature. However, the impulse responses are eventually expected to converge to a level that is consistent with the estimated long-run, cointegrating relationship. In our analysis this condition means that the difference between expenditure and finance cannot increase permanently.

One issue that needs to be taken into account with generalised impulse response functions is that the error terms in equation 7.2 are correlated, which affects the impulse responses. Although the original shock occurs to one variable, correlation (or more precisely covariance) between errors results in a shock to other variables as well. Unless the correlations are high, this is not of great concern, but does mean that a shock to aid will also result in a contemporaneous shock to other fiscal variables, which in turn affect future impulse responses. Although impulse responses which appear to exceed the initial shock to one variable can be well justified, high correlations between residuals can contribute to such responses.

One problem with impulse response analysis for VECs is the absence of confidence intervals. There does not yet appear to be a consensus method for estimating these for VECs, and the software used (Eviews 5) does not generate them, which means that the estimated effects may not always be statistically significant. Standard errors of the impulse response functions may be large with small samples of data and may increase with the number of periods for which the responses are estimated. Therefore, the impulse responses are only to be taken as indicative and in reality the actual impact lies within a range of the estimated. It may therefore be advisable to pay more attention to large rather than small effects. The facts that standard errors may increase with time, and that impulses are estimates, may lead to expenditure and finance impulses that do not correspond precisely to the estimated long-run relationship.

7.3 Model estimation

The following variables and abbreviations are used in the models:

DEV	= development expenditure
REC	= recurrent expenditure
EXP	= total expenditure
REV	= domestic revenue
D	= domestic borrowing
G	= grants
F	= foreign loans
ODA	= official development assistance (<i>source</i> : DAC)

Before model estimation, the first step is to establish whether the variables are stationary or non-stationary. For this purpose both the Dickey-Fuller and Phillips-Perron tests are used. The results for the Dickey-Fuller test are shown in Table 7.1 including a column describing the type of regression used, the value of the test statistic and the critical values for rejecting

the null hypothesis of a unit root. The results indicate that all variables are non-stationary and integrated of order 1.¹⁸ The Phillips-Perron test confirmed this result. It is therefore advisable to estimate models that include variables in differenced form.

Table 7.1 Results of the Dickey-Fuller tests for unit roots

Variable	No. of lags, constant (C), trend (T)	Value for test statistic	Critical value (95% level)	Stationarity
DEV	0,C,T	-2.22	-3.60	I(1)
REC	0,C,T	-1.22	-3.60	I(1)
EXP	1,C,T	-1.91	-3.61	I(1)
REV	0,C,T	-0.82	-3.60	I(1)
D	0,C,T	-2.84	-3.60	I(1)
G	0,C,T	-2.17	-3.60	I(1)
F	0,C,T	-2.52	-3.60	I(1)
ODA	1,C,T	-2.15	-3.61	I(1)

I(1) = integrated of order 1

Altogether, five different VEC models are estimated. As the time series is fairly short, efficiency is increased if the model includes only the essential variables: the two forms of external financing, total expenditure, domestic borrowing and domestic revenue. Standard diagnostic tests (autocorrelation, heteroskedasticity and normality) as well as a stability test are performed for each model.¹⁹

To begin with, two models (1) and (2) are estimated: one with grants, excluding foreign loans and the other vice versa. This saves degrees of freedom in comparison with a model that would include both types of external financing. The other reason for performing separate regressions for foreign loans and grants is to avoid estimating an identity. As the models are in the form of a vector error correction model, including both variables in addition to all the others would also render the error correction term meaningless. There would be no other disequilibrium to adjust, except that arising due to data discrepancies.²⁰ For this reason, one of the components of the budget identity is omitted in each model. The choice in this case was either one of the external financing variables. For each dependent variable, the adjustment coefficient on the error term measures the response of the variable to an imbalance in the budget.

In addition, two separate models (3) and (4) are estimated, where total expenditure is divided into recurrent and development expenditure. The results of these models are not entirely robust to specification, and due to the shortness of the time series, the models are probably over-parameterised. The results are nevertheless described to provide some indication of the impacts of aid on the two types of expenditure. Finally, a model that includes ODA (5) instead of either one of the two external financing components is estimated.

¹⁸ There are small structural breaks in some of the series in 1991. Adding a dummy variable (both in levels and differenced form), that takes a value of 1 since 1990 and 0 before, to the Dickey-Fuller regressions does not change the results on stationary for others than foreign loans, which then appear stationary. As the other variables are clearly non-stationary, the decision was made to treat all variables as non-stationary.

¹⁹ The autocorrelation test used in this study is a Lagrange multiplier test (LM), that for normality is the Urzua (1997) LM-test, and that for heteroskedasticity the White test (no cross terms, test statistic is χ^2). The test statistic shown for the last two corresponds to the joint test.

²⁰ Or in some years due to a large amount of net lending.

Due to the fact that a variable of the budgetary identity is omitted in models 1-4, and that standard errors can be large, expenditure and financing impulses do not balance. However, in each case they converge to levels that are consistent with the estimated long-run relationship, which implies that in the long run the difference between expenditure and revenue as a result of an aid shock will not increase permanently. More generally, as there is a rather strong correlation between grants and foreign loans (at least from the mid-1980s onwards), the impacts of the omitted form of external financing may also be reflected partly in those of the other due to omitted variable bias. This, in addition to residual correlation, may partly explain larger than expected rises in expenditure in response to an increase in aid. For these reasons, one must be very careful in giving an interpretation to over-proportional increases in expenditure.

Model 1

The first model includes grants and three other variables: domestic revenue, domestic borrowing and total expenditure. Because all the variables are integrated of order one, they may be cointegrated. This is tested with the Johansen cointegration test. The results are shown in Annex 2, Table A1. The values for the test statistic for both the trace test and the maximum Eigenvalue test are used to determine the number of cointegrating vectors.²¹

The trace test indicates that there would be two cointegrating vectors, but the Eigenvalue test implies that there are none. The decision was made to opt for one cointegrating relationship. The relationship takes the form (*t*-statistics in parentheses):

$$(7.3) \quad G + 0.65D + 0.38REV - 0.46EXP + 23.1 = 0$$

(6.73) (5.9) (-14.07)

The relationship is normalised on grants, but could be normalised on any of the other variables as well, without changing the VEC model results. The cointegrating relationship (equation 7.3) implies that in the long run grants are negatively related with domestic borrowing (*D*) and domestic revenue (*R*), and are therefore substitutes. Grants (*G*) are positively related with total expenditure (*EXP*). Because a cointegrating relationship is found, the variables can be represented by a VEC model. The estimated coefficients for the error correction term will reveal which of the variables adjust to correct an imbalance in the budget.

Table 7.2 shows the error correction model 1. The 90% significance level is used to determine whether the coefficients are significant. The VAR stability condition holds (inverse roots lie within the unit circle), which implies that impulse responses will converge to a relationship in accordance with equation 7.3, and the model passes all diagnostic tests.

The lagged error correction term *EC*(-1) is significant for grants, domestic borrowing and domestic revenue. For the first two, the coefficient has the correct sign (in accordance with equation 7.3), but for domestic revenue the sign is incorrect or unexpected.²² Therefore only the first two adjust to correct imbalances in the budget according to equation 7.2. This

²¹ In each case, the test VAR includes an unrestricted constant. The critical values for the test statistics are asymptotic and therefore not the actual ones for the rather short time series used here. Corrections for small sample size generally increase the critical values.

²² Because the cointegrating vector that enters the VEC model is normalised on grants, the adjustment coefficient on grants, domestic borrowing and revenue should be negative and that for recurrent spending positive for these variables to adjust to imbalances from the long run. The coefficient on domestic revenue is significant, but has an unexpected sign. However, as already mentioned, the model is nevertheless stable, as stability conditions hold and impulse responses converge (this will be shown later on).

suggests that grants are affected by past imbalances in the budget. The fact that the coefficients on $EC(-1)$ are significant implies that the long-run relation in equation 7.3 holds.

Table 7.2 Model 1

	Dependent Variables				
		D(G)	D(EXP)	D(D)	D(REV)
Explanatory Variables	EC(-1)	-1.44***	1.01	-1.22*	2.80**
	D(G(-1))	-0.12	-1.55	0.67	-2.24**
	D(G(-2))	0.25	-0.50	-0.50	-0.71
	D(EXP(-1))	0.79***	2.19**	-0.41	1.61*
	D(EXP(-2))	-0.28	-0.42	0.57	-0.24
	D(D(-1))	-0.56**	-1.20*	0.33	-1.23
	D(D(-2))	0.62**	0.44	-0.63	0.28
	D(REV(-1))	-0.82***	-1.87**	0.33	-1.20
	D(REV(-2))	0.29	0.49	-0.76*	0.51
	Constant	50.53	147.11	-61.31	173.65
	R²	0.89	0.44	0.57	0.32
	Diagnostic tests				
	autocorrelation (lags)	test statistic			
	1	16.80			
	2	25.80			
	heteroskedasticity, joint	190.00			
	normality, joint	40.10			

*** = significant at 99% level; ** = significant at 95% level; * = significant at 90% level

The coefficients in Table 7.2 reveal the short-run, direct or *ceteris paribus* impacts without taking into account the inter-relationships between the variables. The coefficients suggest that domestic revenue has a significantly negative lagged effect on grants, which suggests that the two are substitutes. Lagged changes in expenditure, on the other hand, have had a significantly positive effect on grants. Therefore, grants react to changes in past fiscal aggregates. Somewhat surprisingly, domestic revenue and borrowing have a significantly negative lagged effect on expenditure. As speculated, domestic borrowing is significantly negatively affected by lagged revenue. Revenue, on the other hand, is affected negatively by grants and positively by expenditure. The only direct lagged impact of grants has been to lower revenue.

The coefficients do not reveal anything about possible contemporaneous effects. Correlations between residuals are shown in Table 7.3. These are not particularly large for grants, but imply that the impulse response functions to an increase in grants will reveal a positive contemporaneous impact on expenditure and revenue and a negative impact on domestic borrowing.

Table 7.3 Correlations between residuals, model 1

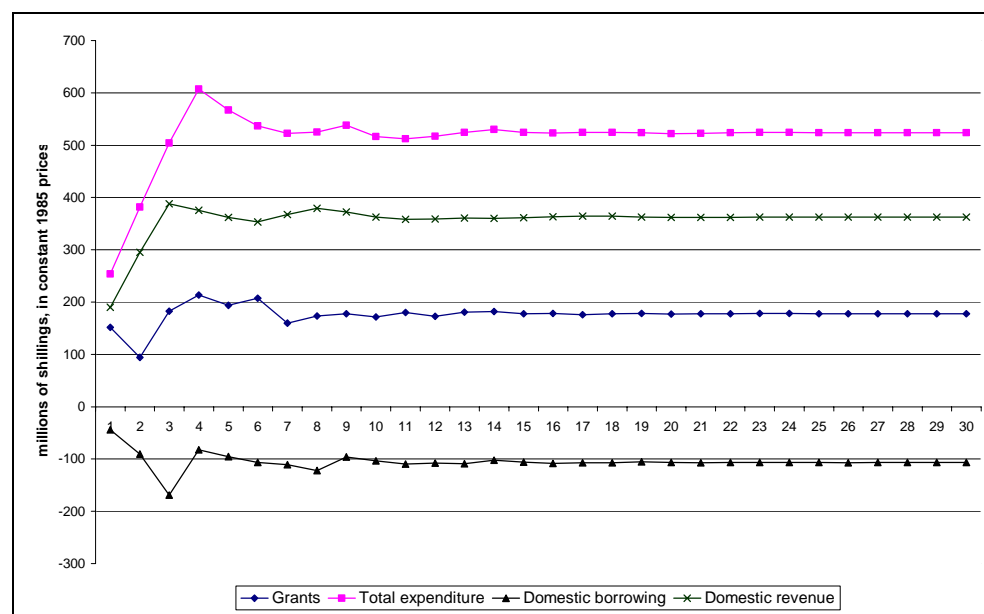
	G	EXP	D	REV
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G	1.00			
EXP	0.43	1.00		
D	-0.17	0.09	1.00	
REV	0.35	0.80	-0.36	1.00

The total impact of an increase in aid is assessed with the use of impulse response functions that capture both direct and indirect effects and those attributed to the error correction mechanism. In order to understand the total and long-term effects, generalised impulse response functions to a permanent increase in grants are formulated. The impulse response functions show the increment or change in each variable arising due to an increase in the level of grants. The initial shock to grants is of the magnitude of Ush. 152 million. As grants are affected by lagged movements in other fiscal variables, the increase eventually stabilises at Ush. 177 million. The impulse responses are shown in Fig. 7.3.

The increase in grants leads to a large increase in total expenditure, which complies with the evidence on large expenditure increases associated with increases in aid inflows due to the need for reconstruction, reform and increased social sector spending. Although the expenditure and finance impulses do not balance precisely, the increase in expenditure is clearly over-proportional to that in grants. Even though there is a small fall in domestic borrowing, possibly explained by donor requirements, the increase in grants is also associated with a large increase in domestic revenue. As already explained, increases in aid inflows have been associated with tax reform and reconstruction that have helped to increase tax effort. The coefficients in Table 7.2 show that domestic revenue has a negative lagged effect on domestic borrowing. This implies that the two may be substitutes. The contemporaneous effect on domestic borrowing is very small and the effect of an increase in aid may therefore be indirect.

Fig. 7.3 Impulse response to a permanent increase in grants (model 1)



Model 2

Next the model estimation was repeated using foreign loans (F) instead of grants. Again, one cointegrating relationship (see Annex 2, Table A2) was found of the form (normalised on F, *t*-statistics in parentheses):

$$(7.4) \quad F + 0.35D + 0.63REV - 0.53EXP - 29.1 = 0.$$

(3.6) (9.9) (-16.1)

The signs for the coefficients in equation 7.4 are similar to those in equation 7.3. The financing variables are substitutes and are positively related with expenditure in the long run.

Table 7.4 shows the error correction model 2. The model includes only a few highly significant variables. It passes the VAR stability test and the diagnostic tests. The fairly low R^2 and lack of significant coefficients suggest that the model could be improved, however. Two additional models (3) and (4) with some more variation (expenditure separated into recurrent and development) are performed in the next section, although these models also have some weaknesses.

In model 2 only domestic revenue responds to correct imbalances in the budget according to equation 7.4, as the lagged error correction term $EC(-1)$ is significant and correctly signed only for the $D(REV)$ equation. The coefficient on $EC(-1)$ for domestic borrowing is significant at the 90% level but incorrectly signed, and would imply that, in contrast to equation 7.3, domestic borrowing would react positively to foreign loans in the long run. In contrast to grants, foreign loans appear almost exogenous, as they are affected significantly only by lagged domestic borrowing at the 90% level. The only direct lagged impact of foreign loans is to increase revenue. Again nothing can be inferred about the contemporaneous effects. Table 7.5 reveals the correlations between residuals. These are also not very high for the foreign loans equation, which suggests that the contemporaneous impulse responses might not be very large.

Table 7.4 Model 2

	Dependent Variables				
		D(F)	D(EXP)	D(D)	D(REV)
Explanatory Variables	EC(-1)	-0.88	-1.00	1.24*	-2.79**
	D(F(-1))	-0.13	1.57	-0.67	2.24**
	D(F(-2))	-0.46	0.52	0.51	0.71
	D(EXP(-1))	0.34	0.62	0.26	-0.64
	D(EXP(-2))	-0.02	-0.93	0.08	-0.95
	D(D(-1))	-0.66*	-0.42	-0.34	1.02
	D(D(-2))	-0.28	0.95	-0.14	1.01
	D(REV(-1))	-0.32	-0.31	-0.33	1.04
	D(REV(-2))	-0.01	1.00	-0.27	1.24
	Constant	-15.57	147.83	-60.83	173.49
	R²	0.42	0.44	0.58	0.32
	Diagnostic tests				
	autocorrelation (lags)	test statistic			
	1	17.10			
	2	25.60			
	heteroskedasticity, joint	197.00			
	normality, joint	40.10			

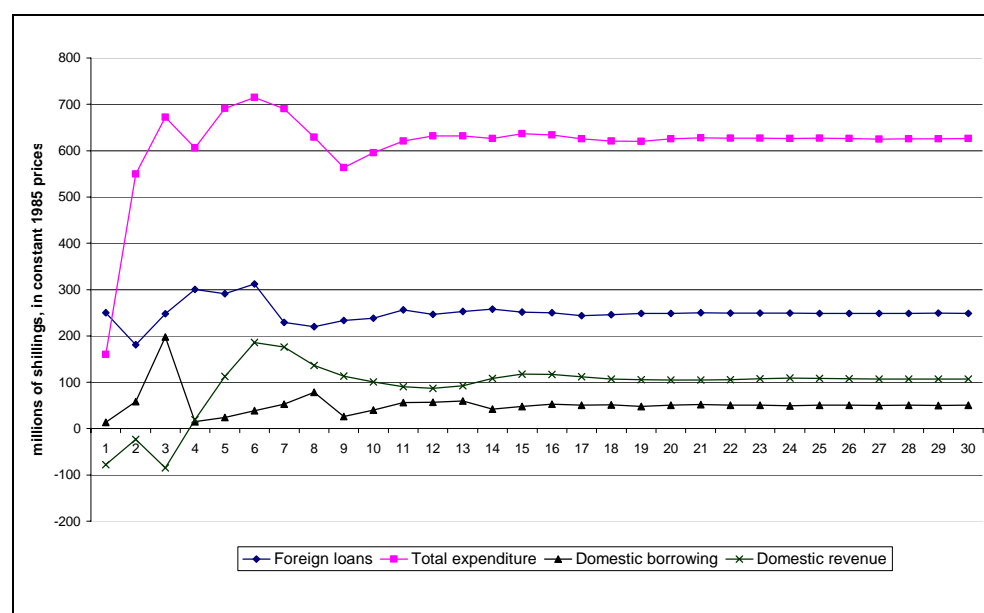
*** = significant at 99% level; ** = significant at 95% level; * = significant at 90% level

Table 7.5 Correlations between residuals, model 2

	F	EXP	D	REV
F	1.00			
EXP	0.27	1.00		
D	0.05	0.08	1.00	
REV	-0.14	0.80	-0.36	1.00

The impulse responses to a permanent increase in foreign loans, initially of the size of Ush. 250 million, are shown in Fig. 7.4. In the first period, there is a fall in domestic revenue, but a rise in total expenditure. The impact on domestic borrowing is negligible. In the longer run, there is a positive, but small, impact on both domestic borrowing and domestic revenue, and an over-proportional increase in total expenditure. The last effect is similar to that of an increase in grants in model 1, whereas the effect on domestic borrowing is in contrast to the negative effect on domestic borrowing observed in model 1. Taking into account the uncertainty about standard errors, in the long run, the effect on domestic borrowing is small enough to be negligible. But some increase in borrowing is required to meet the large increases in expenditure. The impact on expenditure may be over-estimated, because a component of the budgetary identity is missing and therefore the finance and expenditure impulses do not balance. However, the actual impact is still likely to be over-proportional.

Fig. 7.4 Impulse responses to a permanent increase in foreign loans (model 2)



Models 3 and 4

The next two models are replications of models 1 and 2, but total expenditure is divided into recurrent and development expenditure. Model 3 includes grants and model 4 foreign loans. The results can be somewhat unreliable, as including five variables reduces degrees of freedom to the minimum. The models do pass the tests for normality and

autocorrelation, as well as the VAR stability condition. However, due to a lack of observations, the test for heteroskedasticity cannot be performed. The discussion of this analysis is kept brief, its main purpose being to illustrate the possible impacts of external financing on recurrent and development expenditure. Due to the small number of observations, the analysis is bound to have its limitations.

There is evidence of more than one cointegrating relationship in both cases (see Tables A3 and A4 in Annex 2), in fact three or four, which may also be somewhat questionable. Including more than one error correction term in the models increases the number of variables used and reduces the degrees of freedom. Secondly, models with more than one error correction term were associated with more problems with diagnostic tests or the impulse responses were not stable. For these reasons, only one error correction term, that identifies a cointegrating relation between all five variables, was used in both models. The results are, however, somewhat sensitive to the number of error correction terms included, which implies that they are not entirely robust. For this reason, models 1 and 2 could be considered more reliable.

The following cointegrating relationship was found for model 3 (normalised on G, *t*-statistics in parentheses):

$$(7.5) \quad G - 0.81D - 0.98DEV + 0.35REC - 0.38REV + 628 = 0$$

$$(-11.9) \quad (-27.7) \quad (4.6) \quad (-42.9)$$

and for model 4 (normalised on F, *t*-statistics in parentheses):

$$(7.6) \quad F + 1.91D + 0.19DEV - 0.61REC + 1.06REV - 1802 = 0.$$

$$(8.5) \quad (1.6) \quad (-2.5) \quad (-7.0)$$

Equation 7.5 indicates that in the long run grants and development expenditure are positively related, whereas grants and recurrent expenditure are negatively related. Secondly, grants, domestic borrowing and revenue are positively related, rather than substitutes. This is in conflict with the results of model 1. In equation 7.6 foreign loans have a positive relationship with recurrent expenditure and a negative relationship with development expenditure. They are also negatively related with both domestic revenue and borrowing, which implies that the different forms of finance are substitutes.

Table 7.6 shows the error correction model 3. In this case domestic revenue is the item that balances the budget in the long run (the only coefficient for the error correction term with both a correct and a significant sign), but grants no longer do so. In fact, grants appear to be almost entirely unaffected by lagged movements in other fiscal variables. The same holds for development expenditure and domestic borrowing. As already mentioned, the model is likely to be rather over-parameterised. Grants appear to have no direct lagged effects on the other variables. Domestic borrowing has a positive lagged effect on both revenue and recurrent expenditure. The correlations between residuals are shown in Table 7.7. There is a very high positive correlation between the residuals for variables DEV and G, which implies that the contemporaneous impulse response to an increase in grants will be positive. Correlation between G and all the other equations is low.

Table 7.6 Model 3

	Dependent Variables					
		D(G)	D(REC)	D(DEV)	D(D)	D(REV)
Explanatory Variables	EC(-1)	0.91	1.75*	1.73	1.14	2.82**
	D(G(-1))	-1.33	-0.45	-1.59	-0.06	-1.90
	D(G(-2))	0.43	-0.42	0.45	-0.35	0.21
	D(REC(-1))	0.91*	-0.58	0.70	-0.13	-0.60
	D(REC(-2))	-0.35	0.05	-0.09	-0.49	0.39
	D(DEV(-1))	1.47	0.73	1.52	0.42	1.40
	D(DEV(-2))	-0.72	0.23	-0.61	-0.14	-0.18
	D(D(-1))	-0.23	1.48***	0.06	0.39	2.35***
	D(D(-2))	0.68	0.46	0.51	0.42	0.73
	D(REV(-1))	-0.54	0.85**	-0.29	0.30	1.12*
	D(REV(-2))	0.61	0.42	0.47	0.37	0.58
	Constant	67.69	101.13	98.90	-41.12	191.89
	R²	0.46	0.57	0.53	0.54	0.52
	Diagnostic tests					
	autocorrelation (lags)	test statistic				
	1	26.90				
	2	31.70				
	normality, joint	66.50				

*** = significant at 99% level; ** = significant at 95% level; * = significant at 90% level

Table 7.7 Correlation between residuals, model 3

	G	REC	DEV	D	REV
G	1.00				
REC	-0.09	1.00			
DEV	0.93	0.01	1.00		
D	0.10	-0.18	0.05	1.00	
REV	-0.11	0.51	0.09	-0.86	1.00

The impulse responses to a permanent increase in grants of a magnitude of Ush. 360 million are shown in Fig. 7.5. Grants and development expenditure follow a rather similar path and, as expected, the contemporaneous effect is large and positive. The contemporaneous effects on the other variables are rather negligible. The long-run effect on recurrent expenditure is positive, but lower than the effect on development expenditure. The positive effect may be triggered indirectly by the short-term increase in domestic borrowing, as Table 7.6 reveals that domestic borrowing has a significantly positive lagged effect on recurrent expenditure. In the long run, the effect on domestic borrowing is negligible. The increase in grants is clearly oriented towards the development budget, and there is once again an over-proportional increase in total expenditure. However, even though the long-run impulses are in accordance with the cointegrating relationship, the

over-proportional effects on total expenditure are not met with increases in domestic borrowing or tax revenue. In contrast to model 1, the short-run impact on domestic revenue is negative and that on domestic borrowing positive, but in the long run both effects are negligible.

Fig. 7.5 Impulse responses to a permanent increase in grants (model 3)

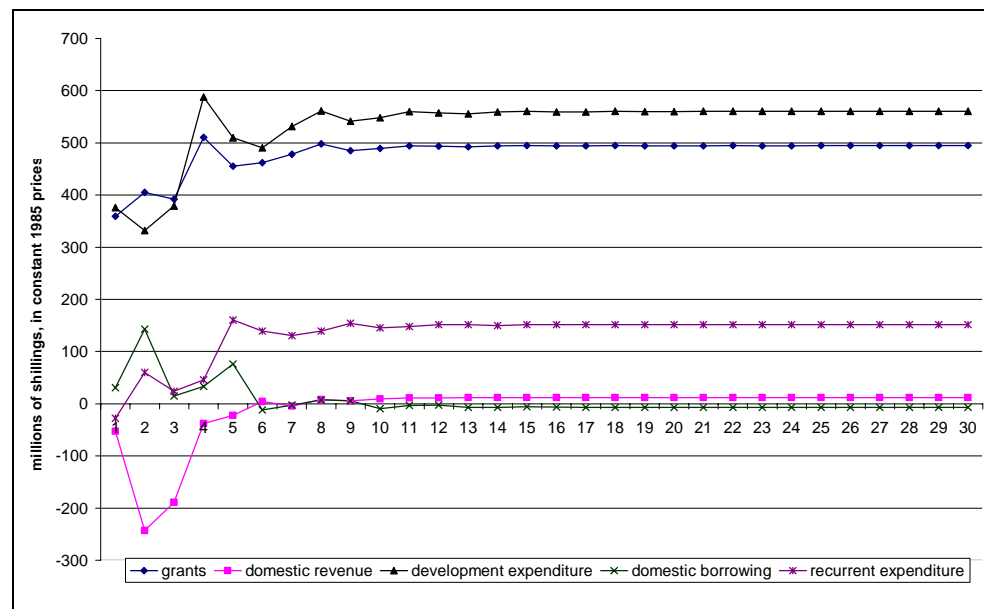


Table 7.8 shows the error correction model 4. There are a few more significant coefficients than in model 2 and also some clear differences. In model 4 foreign loans are affected by lagged movements in other fiscal variables, and they adjust to a budgetary imbalance (the coefficient on $EC(-1)$ is significant and has the correct sign). The direct effect of foreign loans is to increase domestic borrowing and contribute positively to development expenditure with a lag. Foreign borrowing falls (significantly) in response to earlier increases in revenue and domestic borrowing, and rises in response to earlier increases in recurrent and development expenditure. This implies that foreign borrowing has been affected by prior fiscal policy and outturns. The correlations between residuals are shown in Table 7.9. This time the correlation between residuals for DEV and F is low and negative, in contrast to the high positive correlation between DEV and G residuals in model 3.

Table 7.8 Model 4

	Dependent Variables					
		D(F)	D(REC)	D(DEV)	D(D)	D(REV)
Explanatory Variables	EC(-1)	-0.53***	-0.24	-0.01	-0.16	-0.12
	D(F(-1))	-0.78***	-0.53	1.35***	-0.17	0.11
	D(F(-2))	-0.29	0.49	0.12	1.29***	-0.36
	D(REC(-1))	0.52**	0.37	0.27	0.52	0.04
	D(REC(-2))	0.89***	0.81	-0.01	-0.38	1.52***
	D(DEV(-1))	0.16	-0.15	0.01	-0.34	-0.45
	D(DEV(-2))	0.50***	0.07	-0.34	-0.39**	0.17
	D(D(-1))	-0.11	0.46	-0.22	-0.22	1.02
	D(D(-2))	-0.72***	-0.63	0.12	0.05	-1.03
	D(REV(-1))	0.03	0.24	-0.21	-0.15	0.60
	D(REV(-2))	-0.32**	-0.32	0.03	0.18	-0.85
	constant	-99.90***	42.56	93.01	-48.46	114.65
	R²	0.86	0.47	0.75	0.63	0.33
	Diagnostic tests					
	autocorrelation (lags)	test statistic				
	1	25.70				
	2	23.80				
	normality, joint	66.00				

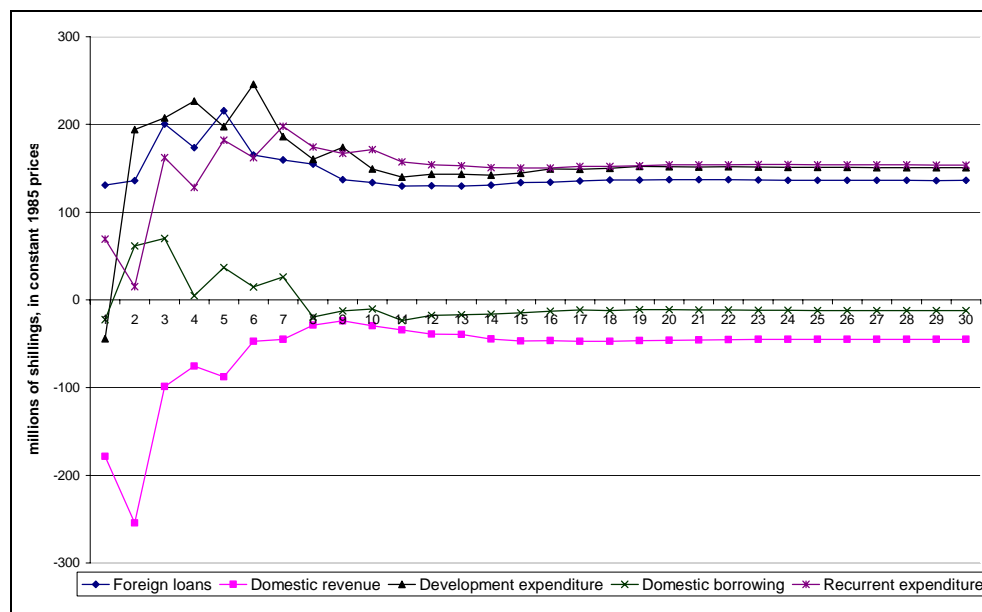
*** = significant at 99% level; ** = significant at 95% level; * = significant at 90% level

Table 7.9 Correlation between residuals, model 4

	F	REC	DEV	D	REV
F	1.00				
REC	0.19	1.00			
DEV	-0.15	0.53	1.00		
D	-0.09	0.01	0.10	1.00	
REV	-0.30	0.66	0.43	-0.53	1.00

The impulse responses to a permanent increase in foreign loans of a magnitude of Ush. 131 million are shown in Fig. 7.6. There is a strong positive long-run impact on development as well as recurrent expenditure. The contemporaneous effect on development expenditure is very small, which implies that the effect of foreign loans is likely to be lagged, as implied by the significant positive coefficient of D(F) on D(DEV) in Table 7.8. This suggests that some expenditure plans or projects are realised only the following year. Whereas an increase in grants (model 3) boosted development expenditure significantly more than recurrent, the long-run impact of an increase in foreign loans is similar in magnitude for both. The long-run effects on domestic revenue and borrowing are small, but negative, which is in contrast to the positive impacts in model 2.

Fig. 7.6 Impulse responses to a permanent increase in foreign loans (model 4)



As already explained, the results of models 3 and 4 can be somewhat unreliable. It may be more advisable to ascertain the general effects of aid or external financing from models 1 and 2, but models 3 and 4 do give some indication of the effects on the types of expenditure.

In all cases, increases in external financing have given rise to proportionately larger increases in total expenditure. According to the impulse response functions, grants appear to have been oriented more towards development than recurrent expenditure, whereas foreign loans increase both in rather similar proportions. The impacts on domestic borrowing and domestic revenue are more ambiguous, and the effects in models 1 and 2 are different from those in models 3 and 4 respectively. This may be attributed partly to more variance in the model as well as quite radical changes in residual correlations. The long-run effect on domestic borrowing is in all cases relatively small, which implies that it could almost be considered insignificant. The same holds for domestic revenue, although models 1 and 2 do suggest that there is a positive effect. Judging by the large increases in expenditure, a positive effect would be justified. There is some evidence that both grants and foreign loans are affected by past fiscal policy.

Model 5

In order to approximate the joint impact of both types of external financing, the last model (5) includes ODA, which can be used as an instrument for the sum of foreign loans and grants. The model may also reveal something about the effects of extra-budgetary aid on the budget. In addition to ODA, the three standard variables, domestic borrowing, total expenditure and domestic revenue, are included.

One cointegrating relation is found between the four variables: ODA, EXP, REV and D (see Table A5 in Annex 2 for the test results). It takes the following form (normalised on ODA, t -statistics in parentheses):

$$(7.7) \quad ODA + 3.19REV - 3.16EXP - 0.37D + 1843 = 0.$$

(9.4) (-13.0) (-0.67)

Equation 7.7 implies that there is a positive long-run relationship between ODA and total expenditure as well as ODA and domestic borrowing, although the t -statistic for the

coefficient on domestic borrowing does imply that the variable may not be a significant component of the relationship. Domestic revenue and ODA would be negatively related.

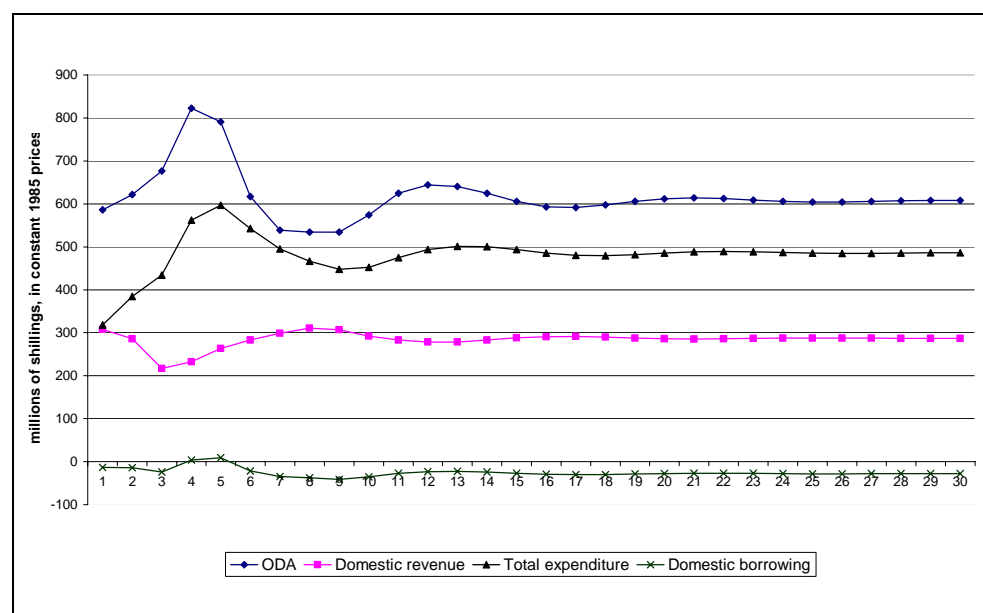
The error correction model is shown in Table 7.10. There are rather few significant coefficients and the model does not pass the diagnostic test for autocorrelation. More lags, which might correct for autocorrelation, cannot be added due to an insufficient number of observations. The results are not entirely reliable and should be taken as indicative.

Table 7.10 Model 5

	Dependent Variables				
		D(ODA)	D(EXP)	D(D)	D(REV)
Explanatory Variables	EC(-1)	0.72 ^{***}	0.08	0.14	-0.25
	D(ODA(-1))	-1.14 ^{***}	-0.11	-0.30	0.24
	D(ODA(-2))	-0.37	-0.24	-0.02	-0.12
	D(EXP(-1))	2.12 ^{***}	1.47 ^{***}	0.50	0.27
	D(EXP(-2))	0.20	-0.30	0.00	-0.33
	D(D(-1))	0.05	-1.22	0.00	-0.63
	D(D(-2))	-0.81	0.81	-0.32	0.76
	D(REV(-1))	-1.25 ^{**}	-1.29 [*]	-0.20	-0.36
	D(REV(-2))	-0.53	0.47	-0.25	0.54
	constant	215.96	152.04	-52.95	126.21
	R²	0.73	0.36	0.41	0.30
	Diagnostic tests				
	autocorrelation (lags)	test statistic			
	1	15.90			
	2	33.71 ^{***}			
	heteroskedasticity, joint	193.30			
	normality, joint	68.00			

*** = significant at 99% level; ** = significant at 95% level; * = significant at 90% level

The only variable with a significant coefficient on the error correction term is ODA, but the coefficient has the wrong sign. We can therefore conclude that none of the variables adjust to a long-run equilibrium according to equation 7.7 and the estimated cointegrating relationship does not seem to be very strong. The coefficients in Table 7.10 again reveal short-run direct impacts. Table 7.10 shows that ODA is affected significantly positively by lagged expenditure and negatively by revenue. Domestic revenue and borrowing appear unaffected by past movements in other fiscal variables, but domestic revenue has a significantly negative lagged impact on expenditure, which is somewhat peculiar.

Fig. 7.7 Impulse responses to a permanent increase in ODA (model 5)

The impulse responses to a Ush. 586 million permanent rise in ODA are shown in Fig. 7.7. There is a large positive, but no longer over-proportional, effect on total expenditure. The impact on domestic revenue is positive and that on domestic borrowing entirely negligible. In contrast to the earlier cases, the effect on expenditure appears to be under-estimated. The values for the financing impulses clearly exceed those of the expenditure impulse. This is not implausible, considering the amount of aid that is unbudgeted. On the other hand, in models 1-4 the effect on expenditure appeared to be over-estimated, due to omitted variable bias.

7.4 Conclusions

On the basis of the analysis the following conclusions can be drawn about the effects of external financing, which refers to both grants and foreign loans:

- As expected, increases in external financing have induced large positive increases in total expenditure, intended to meet the demands of post-1986 reconstruction and reform.
- There is some evidence of a positive long-run effect on domestic revenue, but the long-run effect on domestic borrowing overall appears negligible. In combination, this evidence could explain the observation that increases in total expenditure, associated with increases in both foreign loans and grants, have exceeded the magnitude of these inflows.
- Grants seem to have had a stronger positive impact on development than on recurrent expenditure, which is also in line with our hypotheses. Foreign loans have affected both types of expenditure positively in equal proportions.
- The provision of foreign grants or loans may have been influenced by prior fiscal developments, with disbursements rising in response to past increases in expenditure and falling in response to past increases in domestic revenue and borrowing.

The results for models 1 and 2 appear to be the most robust. The accuracy of the results would probably have improved, if a consistent set of data had been available for a longer time period.

Chapter 8: General Conclusions

This paper has been an enquiry into aid and growth, and the role of fiscal processes and public expenditure as transmission belts therein, using Uganda as a case study. The particular interest in the Uganda case lies in the fact that, since the late 1980s, this country has achieved a much admired, sustained recovery from economic collapse and impoverishment caused by mismanagement and conflict, and that this recovery has been accompanied by a large inflow of aid. A central question is what have been the specific differences marking out Uganda from other countries which have received equivalent volumes of aid – such as Malawi and Zambia, the other two cases in the three-country study of which this paper forms part – and which have performed less creditably, and whether these differences concern fiscal performance.

The answer in essence is that the key to Uganda's success in sustaining GDP growth does not lie crudely in the way its fiscal aggregates have responded to injections of external resources. The response patterns, though not identical, nevertheless bear a strong family resemblance to the main responses found in Malawi and Zambia, namely, the absorption of the bulk of aid through development budget expenditures. Uganda, like Malawi, has not used aid to reduce domestic revenue mobilisation, whereas this effect is detectable in Zambia.

Neither is there a significant difference in the technical quality of the implementation of aid-supported projects and programmes in Uganda. For a number of years after the assumption of power by the Museveni regime, the quality of projects and their implementation was mediocre, reflecting the loss of personnel and institutional capacity for administration and technical management experienced during the previous years of conflict and decline.

This paper's main answer to the question of what caused the aid success lies in a combination of complementary policy initiatives which were incrementally but persistently pursued during the years of recovery, which had the effect of encouraging both an uninterrupted and predictable flow of aid and a chain reaction of supply-side responses in all sectors of the economy. These policies directed aid receipts to the provision of services – such as infrastructure and education – necessary to provide the bases for private sector development. They placed revenue mobilisation on a firmer, more buoyant and less distorting footing. They (eventually) achieved macroeconomic stabilisation. They reformed the public administration, removing some of the burden of poor governance. And they liberalised economic institutions and management, eliminating institutionalised scarcity and its accompanying rent-seeking, and re-opening the door to enterprise and investment.

Success was due not only to the policies themselves – which came from the same stable as those also pursued by the governments of Malawi and Zambia – but to the perseverance, transparency and imagination with which the government pursued them. The Uganda government was fortunate in the quality of its technocratic elite, and in a polity which allowed this leadership to pursue reforms with little opposition from vested interests, and thus with few confidence-damaging policy reversals and ambiguities.

In comparison with the growth-inducing effects of policy, the fiscal behaviour patterns promoted by aid inflows are seen to have had as their main beneficial characteristic that they were, at least after 1990/91, reasonably disciplined and, with the introduction of the MTEF, PEAP and administrative decentralisation, subject to medium-term planning and results-oriented. Public expenditure financed the removal of major infrastructural and human capacity bottlenecks, thus complementing the market-oriented productive incentives created by the reforms. There remained, however, a large share of directly

unproductive expenditure in the budget, particularly as regards persistently high allocations for administration and defence in the recurrent budget. The growing share of non-capital expenditure in the largely aid-financed development budget made it easier for the traditional non-development claims on recurrent resources to continue to be satisfied.

The econometric analysis of Ugandan time series data has been complicated by breaks and inconsistencies in data series, including GDP, and by the violent ebb and flow of Uganda's economic and fiscal fortunes. Changes in the fiscal behaviour pattern (e.g. between serial deficit financing and domestic surpluses) and in data composition (e.g. in net external lending) occurring between one regime and the next, are blurred by a methodology which expects homogeneity in the data and which looks for regularity and persistence in the responses to stimuli. The analysis confirms the powerful impression derived from non-formal inspection of the data, that external resources entering the budget and ODA disbursements have driven up public expenditure, and in particular the development budget. It also confirms the intuition that aid has not been deliberately used to reduce tax rates. Beyond this, however, it offers few insights into the growth process and how it was stimulated by the expenditure of aid.

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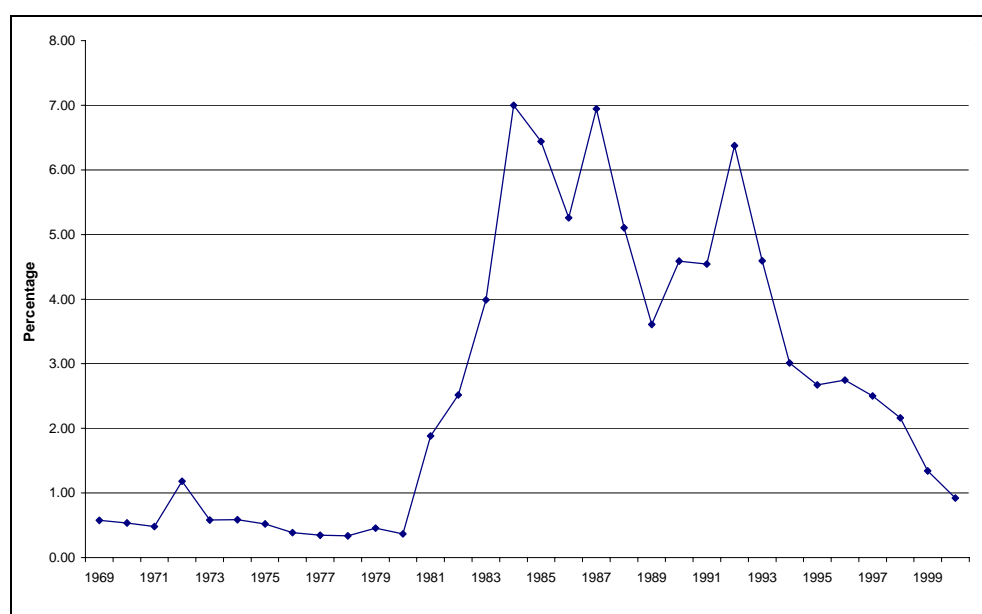
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Annex 1: Debt Relief for Uganda

Between 1980 and 1997 bilateral creditor governments in the Paris Club granted debt rescheduling to Uganda six times, in 1981, 1982, 1987, 1989, 1992 and 1995. Rescheduling under the Naples terms in 1995 resulted in a reduction of the eligible debt of 67% in net present value terms. Some of the debt outstanding to non-Paris Club members has also been rescheduled. Uganda was the first country to be part of the HIPC Initiative in 1998. The same year, the initiative provided relief of about US\$650 million on external debt. Before the HIPC initiative, repayment of multilateral debt was facilitated by a number of bilateral donors via the Multilateral Debt Fund. In 1993 Uganda signed an agreement with the IDA Debt Reduction Facility to buy back a large amount of eligible principal debt owed to commercial banks. This amounted to about 75% of the commercial debt being forgiven (Atingi and Mbire, 1997; Atingi-Ego and Kasekende, 1999). Fig. A1 shows how debt-service payments have fallen dramatically since the early 1990s.

Fig. A1 Total debt service paid on external debt as a share of GDP



Source: Global Development Finance

Annex 2: Cointegration Test Results

Table A1 Results of cointegration test, model 1

Number of cointegrating vectors	Trace Statistic	95% Critical Value	Eigenvalue Statistic	95% Critical Value
None	56.4**	47.2	26.2	27.1
At most 1	30.3*	29.7	20.1	20.9
At most 2	10.2	15.4	7.6	14.1
At most 3	2.6	3.8	2.6	3.8

** = rejection of null hypothesis at 99% level; * = rejection of null hypothesis at 95% level

Table A2 Results of cointegration test, model 2

Number of cointegrating vectors	Trace Statistic	95% Critical Value	Eigenvalue Statistic	95% Critical Value
None	56.3**	47.2	26.3	27.1
At most 1	30.1*	29.7	20.1	20.9
At most 2	9.9	15.4	7.4	14.1
At most 3	2.6	3.8	2.6	3.8

** = rejection of null hypothesis at 99% level; * = rejection of null hypothesis at 95% level

Table A3 Results of cointegration test, model 3

Number of cointegrating vectors	Trace Statistic	95% Critical Value	Eigenvalue Statistic	95% Critical Value
None	152.9**	68.5	57.3**	33.5
At most 1	95.6**	47.2	56.0**	27.1
At most 2	39.6**	29.7	31.1**	21.0
At most 3	8.6	15.4	8.5	14.1
At most 4	0.1	3.8	0.1	3.8

** = rejection of null hypothesis at 99% level; * = rejection of null hypothesis at 95% level

Table A4 Results of cointegration test, model 4

Number of cointegrating vectors	Trace Statistic	95% Critical Value	Eigenvalue Statistic	95% Critical Value
None	154.5**	68.5	70.2**	33.5
At most 1	84.1**	47.2	40.9**	27.1
At most 2	43.2**	29.9	26.2**	21.0
At most 3	17.0*	15.4	16.9*	14.1
At most 4	0.1	3.8	0.01	3.8

** = rejection of null hypothesis at 99% level; * = rejection of null hypothesis at 95% level

Table A5 Results of cointegration test, model 5

Number of cointegrating vectors	Trace Statistic	95% Critical Value	Eigenvalue Statistic	95% Critical Value
None	59.7**	47.2	30.4*	27.1
At most 1	29.3	29.7	14.5	21.0
At most 2	14.8	15.4	11.9	14.1
At most 3	2.91	3.8	2.9	3.8

** = rejection of null hypothesis at 99% level; * = rejection of null hypothesis at 95% level