IGC International Growth Centre

Fiscal Policy Issues for Tanzania

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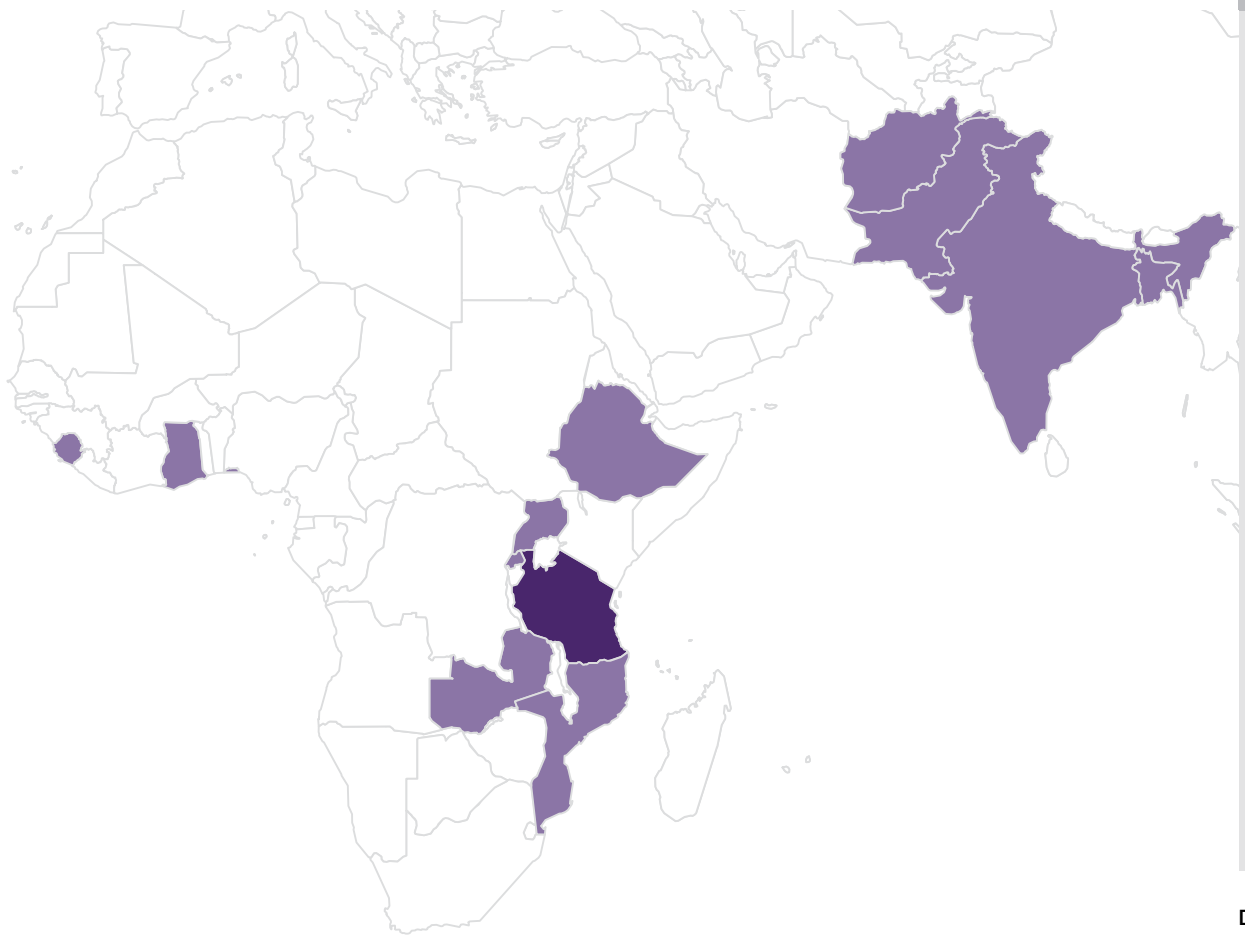
This paper is in two very unequal parts. Part 1 focuses on key fiscal and public spending issues, and reviews policy options facing the authorities. While the immediate concern is with how best to handle the consequences of the global shock, these choices must be made in the context of a much longer perspective. Part 2 seeks more briefly to identify potential elements in the IGC research programme that could analyse these matters in greater depth.



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Executive Summary

Introduction

This paper is in two very unequal parts. Part 1 focuses on key fiscal and public spending issues, and reviews policy options facing the authorities. While the immediate concern is with how best to handle the consequences of the global shock, these choices must be made in the context of a much longer perspective. Part 2 seeks more briefly to identify potential elements in the IGC research programme that could analyse these matters in greater depth. Because so many topics are covered, this summary is longer than is usual.

Background

Tanzania began serious efforts at reform more than twenty years ago, but the payoff to these – in macroeconomic stability, increased revenue and a rising revenue share – only gathered pace in the last decade. It is vital that the impact on these achievements of the global economic and financial crisis be minimized. This impact seems likely to follow three main routes; via sharp reductions in export revenues, including receipts from tourism; via reductions in FDI, remittances, and what had seemed to be the availability of non- or relatively low-concessional finance for infrastructure, with the outlook for ODA being less clear; and via a reduction in government revenues consequent on these changes and the reduction in growth that they have induced. Real growth in GDP is projected to have fallen from 7½ per cent in 2008 to 5 per cent in 2009. It is also believed that Tanzania's recovery from this slowdown is likely to be gradual, as demand for its exports and foreign investment are both expected to lag behind a global recovery.

Part 1: Fiscal Options in the Short Term and the Longer Term

Pro- and Countercyclical Fiscal Policy

Before examining the desirability and feasibility of the Tanzanian authorities responding to the crisis with some form of fiscal stimulus, the paper reviews what is known about the cyclical behaviour of fiscal policy in developing countries more generally. There is a large empirical literature that finds fiscal policy in these countries to be highly procyclical, in contrast to high-income countries where it is usually found to be countercyclical. There are several possible explanations. These include: decision, implementation and behavioural lags which are long relative to the duration of shocks; financial constraints and limited access to capital markets by developing country governments; the political difficulty of setting aside tax revenues in good times, as self insurance; and the much weaker role of automatic stabilizers. One implication is that it is very difficult to design and implement policies that are countercyclical, and all too easy to do the converse.

Fiscal Stimulus – Some General Considerations Relevant to Tanzania

An IMF Staff Position Note of May 2009, which focuses on Sub-Saharan Africa, notes that countries with 'output gaps and sustainable debt and financing options have scope to implement expansionary policies … . The main focus of fiscal stimulus should be on the expenditure side, particularly infrastructure and social spending.' Other countries will simply have to adjust, though additional donor support would reduce the extent of the adjustment. In brief, the argument is 'finance if you can, adjust if you must'. Tanzania clearly falls within the former group. A rather speculative calculation suggests that automatic stabilizers might generate a worsening of the fiscal balance by 0.4 per cent of GDP in 2009. As regards discretionary policy, evidence on the size of fiscal multipliers in developing countries is also weak; one estimate suggests that the cumulative multiplier after two years might be 0.5, or one third of that in comparable estimates for high-income countries. The implication is that, even if developing countries are able to get the direction of discretionary policy right, the associated multipliers are rather small and short-lived, going into reverse in the medium term.

The general conclusion is rather daunting; automatic stabilizers are likely to offer only a modest stimulus; discretionary policy may have a delayed, limited and temporary effect, with no guarantee that the overall impact will be of the right sign, and runs the risk of becoming embedded. In other words, the beneficial impact on the economy may be short-lived, but the fiscal changes that delivered the original stimulus may not.

Fiscal Stimulus – Specifics of the Tanzanian Case to Date

After five years of robust growth, revenues in 2008/09 stagnated (relative to GDP) and fell well short of the budget target, or by 2 per cent of GDP. The revenue shortfall was covered roughly 50:50 by increased domestic borrowing and reduced expenditure. It is very difficult to distinguish between two different descriptions of this recent fiscal evolution. In one description, the global crisis induced a revenue shortfall, and this was partly accommodated by trimming expenditure, and partly by recourse to domestic finance. In the other description, it proved impossible fully to implement an extremely ambitious attempt to increase the scale of government operations. The shortfall was somewhat larger on the revenue side than on the expenditure side, so required increased (domestic) financing. The change in fiscal stance was due neither to discretion nor to automatic stabilizers, but to generalized implementation failures.

In April 2009, the President appointed a Task Force to devise a rescue plan in response to the crisis. A package of measures was announced in the budget speech of June 2009. The underlying assumption is that the shock is temporary and, to the extent possible, the appropriate response is finance, rather than adjustment. This is to be achieved by a combination of external financing (grants and concessional loans) and accommodating monetary policy. The package includes measures to stimulate domestic demand and to provide targeted support for the worst affected sectors, notably agriculture. It implies net domestic financing at 1.6 per cent of GDP.

Growth and Capital Formation

A natural question when looking for the necessary underpinnings to achieve some target growth rate is to ask what investment rate is required. The conventional answer is that a growth target more ambitious than the achieved record will require a substantial improvement in investment rates. While the empirical foundations for this argument are very fragile, most economists find it difficult not to be concerned when growth targets are ambitious but investment rates low. Fortunately, the investment share in Tanzania has increased quite sharply in recent years. Less fortunately, there seems to be some ambiguity as to what the share actually is, and just how sharp the increase has been. It is important to clarify this issue.

Infrastructure

The emergence of very substantial infrastructure deficits in Tanzania is typical of experience across Sub-Saharan Africa. The cost of catching-up has been estimated at an implausible 20 per cent of GDP for the non-fragile low-income countries. This compares to the recent level of public financing of infrastructure in Tanzania of a little over 7 per cent. Another finding, common across Africa and true for Tanzania, is that countries only manage to execute a fraction of the budget allocated to infrastructure (typically two-thirds).

Tanzania occupies a pivotal geographic location, including borders with eight countries of which five are landlocked, and one ‘quasi-landlocked’. The possibility of greatly increasing the exploitation of this favourable position has been widely discussed. A very ambitious set of four development corridors is envisaged. Given the scale and multiplicity of the options, there will be a difficult issue in appraising and sequencing the required investment. One of the challenges of the development corridor approach is that these infrastructure investments have largely to precede the activity they are designed to engender and support. It will require not only a massive increase in infrastructure provision, but a radical improvement in Tanzania’s logistical capabilities more generally. In any event, Tanzania’s ambitions to become a regional hub cannot be pursued in isolation. They will require a degree of cooperation, not only with the landlocked neighbours, but also with the maritime ones.

Debt Sustainability

Due to extensive debt relief, public external debt stood at 20.9 per cent of GDP at end June 2008, compared to 53.4 per cent of GDP at end June 2006. Public domestic debt had increased somewhat over the same period, but fallen slightly as a share of GDP from 14.5 per cent to 14.3 per cent. Hence total public debt was just over 35 per cent of GDP at the end of 2007/08, while its present value was considerably lower, at 25½ per cent of GDP. Debt sustainability analyses find that Tanzania's risk of debt distress is low, and that there appears to be room for an increase in debt, even on non-concessional terms, to finance a stepping up of infrastructure over the medium term. There are real, difficult, issues surrounding infrastructure finance, but debt sustainability is not one of them. The real questions about infrastructure financing are the following. What is the cheapest and lowest-risk (in some combination) form of available finance? What amounts could be raised, and to what extent do they depend on the investment? What are investment returns likely to be, both in social and financial terms? Do they justify raising the finance? Does a gap between the two returns pose a budgetary problem? What are the absorption/implementation issues, and to what extent can financing be raised contingent on execution?

Domestic Financing

It has been argued that domestic public debt is potentially problematic when it exceeds 15 per cent of GDP. Tanzania is already close to this value, so should not look to raise this ratio. However, provided the targets for inflation and real growth are achieved, maintaining the existing ratio would permit additional nominal debt equal to 1.8 per cent of GDP to be issued. Allowing perhaps an additional 0.5 per cent – 0.7 per cent of GDP for seigniorage, this means that a domestic deficit of between 2¼ per cent and 2½ per cent of GDP could be financed in a non-inflationary way, with a stationary domestic debt ratio that did not breach the 15 per cent limit. This range for a permissible domestic deficit is more than sufficient to cover the recourse to domestic financing that occurred in 2008/09 and is envisaged for 2009/10. Events in these two years have been seen as a temporary response to the shock. However, since the range is based on a sustainable calculation, it would be open to the government to continue in this fashion into the long-term, if that enhanced the prospects of delivering the growth and structural change it desires. However, this strategy would require careful monitoring of the impact on domestic interest rates. Tanzania has achieved a dramatic increase in financial deepening over the last decade, but from a very low level, and the process is very far from complete. It is vital not to interrupt this deepening process, and the growth of private activity which it supports.

Constraints on Short-Term Expenditure Choices

As previously argued, any short-term fiscal stimulus is better applied on the expenditure side than the revenue side of the budget. The paper discusses the relative merits of attempting a reversible expenditure increase within capital and current spending categories respectively. The only two categories of spending that are likely to be fruitful in a countercyclical context are existing pipelines of freestanding ready-to-go capital and public works projects on the one hand, and existing conditional cash transfer programmes on the other. In neither case would it be effective to attempt to create these as a response to the crisis. In consequence, the government's short-term expenditure choices are highly constrained.

Fiscal Process Issues

In some respects, systems of fiscal planning appear to have weakened since the promising days of 1998-2002. The MTEF no longer plays a key coordinating role between annual budget setting, financial programming and medium term MKUKUTA objectives. While the adoption of a cash budgeting system in 1995/96 was important in instilling necessary budget discipline against a history where that was lacking, it has proved – as elsewhere – difficult to float off this rather problematic system and its associated mindset. Hence the incentive to take a careful, systematic, and coordinated look at the future is seriously weakened. This cannot be a good way for a government to plan for the country's future. Of particular concern is the extent to which the government's aspirations for growth and the associated planned investment will actually be translated into capital expenditures.

This is not to denigrate the major achievements of the Tanzanian authorities in achieving what appears to be pretty reliable fiscal discipline and the macroeconomic stability that in part flows from that. However, having done so, it is important to move on to the next stage, of exercising effective choice within the fiscal space that has been created. Particular questions arise in connection with the investment programme, as regards project identification, evaluation, and implementation.

Contingent Liabilities

Contingent liabilities have been estimated at around 1.2 per cent of GDP, mainly reflecting the guaranteed debt of the government-owned electricity company, TANESCO. However, this is a complex area, where information is very incomplete, and more work needs to be done. A least four different categories have been suggested, each with different macroeconomic implications; traditional contingent liabilities, such as compensation claims against government; explicit loan guarantee schemes; various forms of off-budget financing; and future PFI contracts against infrastructure projects with government providing guarantees to concessionaries.

Part 2: Potential Future Research in this Area by the IGC

This part of the paper is brief and speculative. It first discusses the apparent lack of existing local counterparts, and the possibility of developing these. It then goes on to consider a number of areas in the fiscal domain, broadly conceived, that seem important in Tanzania, that pose researchable problems, and that the IGC might choose to pursue. Possible topics to be addressed include the following.

- The desirable/feasible size of government and the associated revenue effort
- Estimating the marginal cost of public funds in Tanzania
- Economic geography, agglomeration dynamics, and the development of Tanzania as a regional hub
- Joint analysis of infrastructure investment and debt policy
- Sensitivity of domestic interest rates to government domestic borrowing
- Institutional reforms, political economy, and infrastructure investment

Fiscal Policy Issues for Tanzania

Background

Trends

Tanzania began serious efforts at reform more than twenty years ago, starting with the 1986 Economic Recovery Plan, but for much of the following decade the payoff was very tenuous. It was only in the mid 1990s that the reforms really began to yield sustained improvements in economic performance. Growth in GDP averaged only 1.8 per cent pa during 1991-95, rising to 4.0 per cent during 1996-2000 and 7.1 per cent during 2001-2008.[1] Revenue performance also lagged behind the initial reform efforts; revenue as a share of GDP had grown from a very low level between 1986 and 1992, but then had fallen irregularly between 1992 and 2000, and only began a sustained and accelerating rise thereafter. Even so, the ratio of tax revenue to GDP only passed 10 per cent in 2004/05. Since then the rise has been dramatic, with the revenue to GDP ratio rising from 11.8 per cent in 2004/05, through 12.5 per cent in 2005/06, and 14.1 per cent in 2006/07, to 15.9 per cent in 2007/08. This rise of four percentage points over three years reflects both the continued efforts to improve tax administration in Tanzania, and the growth of the economy into more taxable sectors. (Growth has been driven by expansion in mining, manufacturing, construction, and services, with agriculture lagging.)[2] Despite an ambitious projection for a further rise in the revenue share to 18 per cent in 2008/09, the share actually stabilized at close to the 2007/08 level in that year.

To what extent this reflects the consequences for revenue of the global crisis, and to what extent it reflects a deceleration in what is achievable, is discussed further below. One point to note is that this rapid improvement in revenue performance has only brought Tanzania's 2008 performance more or less exactly into line with the average performance of non-fragile low-income countries in Africa in that year.[3] The rate of revenue enhancement achieved by this group on average is nearer 0.25 percentage points per annum than Tanzania's 1.3 percentage points.

This raises two serious questions as to the likely and desirable future revenue performance in Tanzania. The first is whether Tanzania has been playing a desirable game of catch-up from an undesirably low level, and will now converge to this norm, or whether it has special features of institutional capability or economic structure that will enable it to overtake its comparators and forge ahead to markedly higher revenue performance than they can achieve.

The second question concerns the desirable level of revenue effort in Tanzania's situation. It is now commonly accepted that the private sector must be the main engine of growth in the economy, and that the government has heavy responsibilities both to provide an enabling environment via the provision of infrastructure and other public goods, including institutional ones, and also not to place too many inhibitions in the way of entrepreneurs. This implies a delicate balance over the desirable size of the public sector and its associated financing.[4] We return to these questions in Part 2.

1 See IMF2009f, which provides an excellent survey of this 'remarkable turnaround', and the policies that contributed to it.
2 It should however be noted that Tanzania has a tax regime that is extremely generous to mineral companies, so that the rapid growth in this sector has not led to comparable revenue increases.
3 IMF 2009f, Figure 12, page 30.
4 Economists have done much work on the marginal cost of public funds from various sources, and have also worked on the benefits attaching to specific projects. They have done less to attempt to estimate the more diffuse benefits of larger public activities in general. Hence it is possible in principle, though often difficult in practice, to undertake cost benefit analysis of applying general government resources to specific expenditures, but much more difficult to do so in respect of more general expenditures.

Recent Events

Both the origins of the current global economic and financial crisis and the determinants of its (uncertain) future evolution lie outside the low-income countries themselves. To a degree, these countries are also insulated from the immediate mechanisms involved and the need to respond directly to these. However, they are likely to be seriously affected both by the crisis itself, and by the policies adopted by other countries in responding to it. Hence the fiscal implications of the crisis for these countries depend on the way the crisis unfolds; on external policy actions, notably those of the OECD countries, China and India; on the likely effectiveness of their own fiscal policy; and on their own fiscal constraints. In these countries, notably in SSA, GDP is not projected to fall, but growth is set to weaken considerably as exports, remittances and FDI decline. The fiscal effects are likely to be large and to occur mainly through revenue losses, with commodity-related revenues being particularly affected. The upshot is that government budgets will come under severe pressure, with future aid flows possibly reduced, and with the recovery in the external environment following a very uncertain path.

The transmission of the global crisis onto the Tanzanian economy seems likely to be very much in line with that on other non-oil exporting, non-fragile, low-income countries in SSA[5]. It takes three main forms. The first is via sharp reductions in export revenues, including receipts from tourism. The second is via reductions in FDI, remittances, and what had seemed to be the availability of non- or relatively low-concessional finance for infrastructure, with the outlook for ODA being less clear. The third is via a reduction in government revenues consequent on these changes and the reduction in growth that they have induced. In IMF 2009g real growth in GDP is projected to have fallen from 7½ per cent in 2008 to 5 per cent in 2009. It is also argued there that Tanzania's recovery from this slowdown is likely to be gradual, as demand for its exports and foreign investment are both expected to lag behind a global recovery.

This Paper

This paper is in two very unequal parts. Part 1 focuses on key fiscal and public spending issues, and reviews policy options facing the authorities.[6] While the immediate concern is with how best to handle the consequences of the global shock, these choices must be made in the context of a much longer perspective. Part 2 seeks much more briefly to identify potential elements in the IGC research programme that could analyse these matters in greater depth.

5 The size of the negative impact, however, seems to be substantially less than for SSA more generally. See IMF 2009h.

6 Throughout the paper, fiscal magnitudes are presented in percent of GDP. There has been some dispute as to the accuracy of National Accounts Statistics. These claims are being investigated, and are not considered further here, but evidently the paper's inferences may be affected by any revision.

PART 1: Fiscal Options in the Short Term and the Longer Term

1.1 Introduction

This introduction seeks to clarify two aspects of the approach taken in this paper. The first relates to the time scale of the analysis. It might seem tempting to set out to analyse Tanzania's short-term fiscal options, faced with the consequences of the global crisis, in isolation from longer-term issues. However, this would be a mistake. Tanzania has in any case been undergoing very rapid fiscal and economic change, and it will certainly continue to do so in future. This change does not simply involve rapid growth, but structural and geographical change, and change in the scale and composition of government activities. Hence the short-term fiscal and economic shocks, and responses to them, need to be seen in this rapidly evolving wider context. The analysis of shocks is simply not the same if they occur in an already dynamic and disequilibrium system as it would be if they occurred in a stationary one, or one that was following some balanced path.

The second aspect to be highlighted here is that Tanzania's position and characteristics need to be considered in a wider context. This is not simply because it is part of a whole set of wider systems, and the shocks it suffers, its options and its opportunities will inevitably reflect the behaviour of these wider systems. It is also because we cannot know enough about the relevant mechanisms that mediate these shocks and opportunities from the study of a single country. If we wish to get a quantitative handle on the size of fiscal multipliers, for example, we are forced to examine the data for a wide number of countries. Of course it is true, in the popular adage, that 'one size doesn't fit all', but it is necessary to have some means of assessing what the relevant size might be. Hence the approach in this paper is to attempt to set each specifically-Tanzanian conundrum in an appropriate wider context, rather than focusing exclusively on Tanzanian specifics.

1.2 Pro- and Countercyclical Fiscal Policy

Before examining the desirability and feasibility of the Tanzanian authorities responding to the crisis with some form of fiscal stimulus, it is useful briefly to review what is known about the cyclical behaviour of fiscal policy in developing countries more generally.[7] There is a large empirical literature that finds fiscal policy in these countries to be procyclical, in contrast to high-income countries where it is usually found to be countercyclical.[8] There is much less work specific to low-income countries, but one paper addresses experience in 37 Sub-Saharan countries since 1960.[9] It finds that government consumption is procyclical in 36 of the 37, highly so in 18 of them (in the sense that government spending responds more than proportionately to output fluctuations). It also finds that procyclicality is more marked amongst countries that are more reliant on aid inflows. Though the paper's country-specific findings might be taken with a pinch of salt, it is worth noting that, on the basis of data from 1960 to 2003, Tanzania comes third from the top of the procyclicality list. The implication is that, far from it being straightforward to implement a countercyclical response, the authorities might have their work cut out to reduce an innate tendency in the other direction.

Conventional theory, whether Neo-classical or Keynesian, suggests that fiscal policy should normally be designed to be countercyclical. In high-income countries, the existence of so-called built-in or automatic stabilizers permits this without recourse to potentially risky discretionary interventions.[10] Examples of automatic stabilizers include progressivity in the personal tax system

7 The term 'cycle' reflects long-standing preoccupations with the business cycle in advanced economies, and appears to presuppose some regularity in deviations above and below the trend of potential output. The experience of low-income countries typically does not exhibit such regularity, and reflects more random patterns of shocks. While the term may therefore be less appropriate, the underlying question as to whether policy amplifies or dampens the shocks remains of central importance.

8 For a recent example, see Ilzetzki and Vegh 2008, who take more care than most to control for endogeneity. They also find, having done so, that government consumption has a significant expansionary effect on output, implying that fiscal policy exacerbates the cycle.

9 Thornton 2008.

10 These are sometimes a by-product of other features of the fiscal structure, sometimes themselves a consequence of deliberate design.

and unemployment benefits. Of course, in the current unusual crisis, these countries have also opted for a massive discretionary stimulus. The structure of revenues and expenditures in low-income countries does not yield much in the way of automatic stabilizers, but the problem is not to explain the lack of countercyclicality, rather the prevalence of pro-cyclicality.

There are three main types of explanation, and it is worth considering what their likely relevance is in the case of Tanzania. The first type reflects the practical difficulty of identifying the extent and duration of a shock, designing and implementing a discretionary response, coupled with the time required for the intervention to generate real effects. The latter depends primarily on private sector behaviour. The sum of these decision, implementation and behavioural lags can mean that by the time it materializes, the policy impact is in the wrong direction, because the shock has already reversed itself. Even absent lags, it is also possible that the private behavioural response will not be in the desired direction.[11] Even when the direction and timing of response is broadly right in the first instance, there may be issues of how to judge and how to implement its reduction or removal as the shock unwinds.

The second type of explanation, specific to recessions, relates to financial constraints and limited access to capital markets by developing country governments. If domestic financial markets are thin, especially if domestic government debt is substantial, there may be little opportunity for domestic financing of an increased deficit. Concessional external borrowing is always rationed, and the scope for increasing it when faced with a negative shock is not within the discretion of the recipient government, though of course development partners may choose to respond by increasing what is offered. External borrowing on commercial terms may either be prohibited by cost considerations or by the terms on which concessional finance is made available.

The third type of explanation invokes political economy considerations. There are many different arguments, but the most important here stresses the political difficulty of setting aside tax revenues in good times, as self insurance, when the country has both many needy sectors and a number of interest groups which, though not needy, are powerful. It is therefore difficult to run a budget surplus or reduced deficit during a positive shock, even when policy makers as well as technical staff see the merit of doing so. An important related feature is the existence of a differential ratchet effect as the government budget constraint shifts between soft and hard. Current expenditure can be raised quickly (increased recruitment, wage rises, higher spending on consumables), but is correspondingly difficult to reverse. Capital expenditure is difficult to increase quickly, unless there is a well-developed project pipeline, but relatively easy to reduce (projects are aborted or stalled). Hence cyclicality is likely to induce either or both upward shifts in the level of spending and compositional shifts in favour of current spending.

All three explanations contribute to our understanding of the prevalence of pro-cyclicality, and all three have some relevance to the feasibility and desirability of Tanzania attempting some fiscal stimulus in current circumstances. This is considered further in the next two sections.

11 For example, there has been much discussion of so-called expansionary contractions in OECD countries, where fiscal retrenchment so improves private agents' expectations of future burdens that private spending expands.

1.3 Fiscal Stimulus – Some General Considerations Relevant to Tanzania

The global crisis has induced much work on what policy responses are appropriate. Of particular relevance is the IMF Staff Position Note of May 2009, which focuses on Sub-Saharan Africa.[12] It notes that

- growth will weaken markedly as export prices and volumes, remittances, tourism, and capital flows decline
- the fiscal effects are likely to be large and to operate mainly via revenue losses

Countries with 'output gaps and sustainable debt and financing options have scope to implement expansionary policies … . The main focus of fiscal stimulus should be on the expenditure side, particularly infrastructure and social spending .. '.[13] Other countries will simply have to adjust, though additional donor support would reduce the extent of the adjustment. For both groups, the importance of expanded social safety nets is stressed.

In brief, the argument is 'finance if you can, adjust if you must'. The basic analysis seems sound, with Tanzania being fairly typical of non-oil-exporting SSA countries in respect of the nature if not the scale of the impact it faces. Tanzania clearly qualifies in the first group of countries with an output gap (growth has slowed) and sustainable financing options, so is one of the countries viewed by the IMF as having 'scope to implement expansionary policies'. There are two types of expansionary impulse to consider, the operation of automatic stabilizers, and the impact of discretionary policy.

Automatic Stabilizers

IMF (2009b) has a stab at estimating the size of automatic stabilizers for non-oil exporting SSA countries. It uses a budgetary elasticity with respect to the output gap (the gap between actual and potential output) of 0.2, and the April 2009 WEO growth projections to estimate the average output gap at around 2 percentage points. This would imply that automatic stabilizers in these countries would worsen the fiscal balance by 0.4 per cent of GDP in 2009 (compared to three times that in the G-20 countries). However, the basis for this estimate is very shaky. While there are direct estimates of the underlying elasticities for a number of advanced countries, this is not the case here. Instead, it is simply assumed that the revenue elasticity with respect to the output gap is 1 (revenue is assumed proportional to actual output) and that the comparable expenditure elasticity is 0 (expenditure is invariant, whatever the gap). Assuming also that there is no significant change in government size, year-on-year, this implies that the contribution of automatic stabilizers is the product of the share of government spending in GDP and the change in the output gap.[14] Hence a spending share of 20 per cent, coupled with an increase in the gap of 2 percentage points would indeed yield this average estimate of 0.4. As it happens, the IMF 2009b estimate for Tanzania is rather lower than this. However, IMF 2009d expects a shortfall of nearly 2 per cent of GDP in Tanzania for 2008/09, and total government expenditure for 2007/08 was 22.8 per cent of GDP; given this methodology, these numbers would yield something very close to the average of 0.4 per cent.

12 IMF 2009b.
13 Executive Summary, IMF 2009b.
14 A handy summary of this type of calculation is provided in IMF 2009a, pages 51-52.

However, the methodology effectively presumes the result. If revenue is proportional to output, any automatic stabilization must necessarily operate via expenditure. If expenditure is also proportional to output, then so would be the fiscal deficit, and there would be no automatic stabilization. Assuming a zero elasticity of expenditure is an intermediate position. Expenditures are ring fenced against pressures arising from falling revenues and a rising deficit; however, there are no components of expenditure – such as payments from formulaic safety nets – which automatically rise. Alternatively, the zero elasticity assumption could imply that these two forces roughly offset each other. Demonstrating whether or not it is appropriate to make these elasticity assumptions in the case of Tanzania would require detailed analysis of the behaviour of the budget and its main components. On balance, it seems more likely that downward pressures on expenditure would predominate in low-income countries, so the estimate of 0.4 might be considered an upper bound.

Discretionary Policy

There is no consensus as to the form a discretionary expansionary policy should take, the size and duration of its likely impact, and the extent to which the impact depends on the form of policy. There has been much theorizing as well as a large number of empirical studies of these issues.[15] However, most of this work relates to high-income economies, much less to emerging economies, and very little to low-income countries. This uneven coverage is primarily a reflection of differential data quality and it is unlikely to be corrected even within an extended horizon. Hence reliable inferences for low-income countries cannot be made. For what it is worth, the evidence suggests that impacts are potentially larger and longer lasting in high-income countries.

For example, one paper enables estimates to be made of fiscal multipliers (for an increase in government current expenditure) one, two and three years after the stimulus.[16] For a sample of high-income countries, these multipliers were 0.7, 0.9, and 0.8 respectively. The cumulative multiplier after two years was 1.5. For a sample of developing countries, the corresponding multipliers were 0.4, 0.1, and -0.1. The cumulative multiplier after two years was 0.5, or one third of that in the high-income sample. The implication is that, even if developing countries are able to get the direction of discretionary policy right, the associated multipliers are rather small and short-lived, going into reverse in the medium term.

Other evidence for high-income countries is that fiscal multipliers vary according to the size of country, the type of fiscal stimulus, whether monetary policy is accommodating, and a host of other circumstances. For example, IMF 2009c, after surveying a battery of estimates, offers 'a rule of thumb', given accommodative monetary policy, of spending multipliers at 1-1.5 for large countries, 0.5-1 for medium sized countries, and 0.5 or less for small open countries. They suggest that multipliers for revenue and transfers should be about half these values, and that for capital spending somewhat higher ones would be appropriate. They also warn that negative multipliers are possible, especially if the fiscal stimulus is perceived to weaken fiscal sustainability.

There are two other important distinctions between automatic stabilizers and discretionary policy. The first is that automatic stabilizers kick in very quickly when an adverse shock triggers them, while discretionary policy operates with a much more substantial lag, which may indeed, as noted, render it countercyclical. The second is that the automatic stabilizers can be relied on to reverse themselves when the adverse shock dissipates, while there is no such guarantee in the discretionary case. In practice, the stimulus measures, though initially flagged as temporary, were frequently permanent. This has also been true in the advanced economies, despite the presumption of superior fiscal governance in these countries.[17]

15 For a useful summary, see IMF 2008a.
16 The paper is Ilzetski and Vegh, 2008. The multiplier calculations were derived from their results in IMF 2009c.
17 See for example Box 5.5 in IMF 2008 for a discussion of tax cuts in the USA where only 20% were intended to be permanent, but 40% became so.

The general conclusion of this summary discussion, as it may apply in the case of Tanzania, is rather daunting; it runs as follows. Automatic stabilizers are likely to offer only a modest stimulus. Further, discretionary policy may have a delayed, limited and temporary effect, with no guarantee that the overall impact will be of the right sign, and runs the risk of becoming embedded. In other words, the beneficial impact on the economy may be short-lived, but the fiscal changes that delivered the original stimulus may not be. One thing that does appear to be very commonly agreed is that what scope there may be for a temporary fiscal stimulus in low-income countries should be implemented on the expenditure side, not the revenue side. This consensus reflects perceptions of longer lead times, less reversibility, poorer targeting, and lower multipliers for tax reductions.

There is another major difficulty in designing a fiscal stimulus in face of what is primarily a reduction in export demand. Ideally, such a stimulus would have some appropriate mixture of two properties. To the extent that the fall in export demand was mediated by price effects, the issue would not be idle resources but reduced incomes. The desirable response would then involve income support of some kind to individuals who remain economically active. In low-income countries, the mechanism for delivering this is unclear. Alternatively, the fall in export demand may present itself as a reduction in volume, so that it does indeed create idle resources. The problem then is how to focus the stimulus so that the temporarily unemployed resources find alternative temporary employment. Simply pumping more aggregate demand into the economy will not serve – it could induce overheating while still not addressing the problems faced by the victims of the change.

All this calls for caution. However, it should be noted that there is a much more gung ho tradition than the one outlined here. For example, Weeks, 2009a and 2009b advocates aggressive countercyclical fiscal policy through increased current spending, monetization of the resulting deficit, and controlled depreciation of the currency to prevent any widening of the trade deficit while mitigating the inflationary impact.[18] We examine the prospects of some expenditure increases in the Tanzanian case below, considering both current and capital expenditures.

1.4 Fiscal Stimulus – Specifics of the Tanzanian Case to Date

Fiscal Year 2008/2009

In its staff report of May 15, 2009, (IMF 2009d), the Fund noted that the economic slowdown had led to slippages in government revenues. It stated (paragraph 7): 'After five years of robust growth, revenues have stagnated (relative to GDP) and are falling well short of the budget target. For 2008/09, the shortfall is expected to reach nearly 2 percent of GDP.' It went on to note (paragraph 11): 'The Tanzanian authorities have taken immediate actions to minimize the adverse effects of the current economic slowdown, beginning with a moderate fiscal stimulus. For 2008/2009, the government will aim to execute spending largely as budgeted, despite the projected revenue shortfall. As a result, government's NDF is expected to reach 1.2 percent of GDP in the current year, compared with the original budget target of zero NDF.' A further fiscal easing was projected for 2009/10, with initiation of a medium term plan to scale up infrastructure. In view of the current difficulty in accessing external finance, the government would again have to resort to NDF of about 1.6 per cent of GDP. Taking the two years together, the total fiscal stimulus was projected to reach 4 per cent of GDP, about 2 percentage points more than previously planned.

18 In his study of Sierra Leone, Weeks (2009a) advocates a fiscal expansion equal to 1.9% of GDP, in the form of labour intensive capital works. This would involve increasing two existing employment generation programmes, with an additional 80,000 full-time jobs.

Several comments may be offered on this analysis. First, one popular measure of fiscal impulse would regards the fiscal stance as neutral if revenue moves in line with actual output, but expenditure is smoothed over the cycle.[19] These assumptions characterize the above description of the projected 2008/09 Tanzanian budget outturn, and are equivalent to those made by the IMF in the low-income country automatic stabilizer computations noted above. Put differently, the implication is that this projected 2008/09 outturn would have reflected automatic stabilizers only, with no discretionary component. It is not clear, however, that this adequately captures what has been happening.[20]

The original 2008/09 budget had extremely ambitious revenue projections. As previously noted, Tanzania has achieved a rapid rise in the revenue share over recent years, but the budgeted increase between 2007/08 and 2008/09 was even larger, from a share in GDP of 15.9 per cent to one of 18.0 per cent. The preliminary outturn for the year (contained in IMF 2009g Table 3) has been reduced to 15.9 per cent, or by 2.1 percentage points. It is open to question whether part of this reduction reflects an overambitious original target, as opposed to the impact of the global crisis.

The other main adjustments between the original budget and the preliminary outturns involve:

- A reduction in the share of total expenditure of 1.7 percentage points (27.2% down to 25.5%);
- A fall in grants from 0.6 percentage points (5.5% down to 4.9%);[21]
- And an increase in the share of net domestic financing of 1.0 percentage points (up from 0% to 1.0%).[22] Projected foreign net financing in the table is nearly stationary, down 0.1 percentage points at 3.5% of GDP.

The picture that emerges is of a roughly 2 per cent revenue shortfall, covered roughly 50:50 by increased domestic borrowing and reduced expenditure.[23] This is rather different from the gloss quoted earlier. The role of expenditure reduction might imply a substantial discretionary component in the fiscal response. Alternatively, as with the revenue shortfall, it might reflect difficulties in implementing a substantial budgeted increase. The original budget had projected an increase in recurrent expenditure of 2.8 percentage points (up from 14.9% to 17.7%); the increase achieved was 0.4 percentage points short of this. The budgeted increase in development expenditure was 1.5 percentage points (up from 8.0% to 9.5%); the increase achieved was 1.3 percentage points short of this, a shortfall 0.7 percent over and above the shortfall associated with reduced grants.

19 See, for example, Chand (1993). Fiscal impulse was measured in the WEO as FI = ($\Delta G - g_0 \Delta YP$) – ($\Delta T - t_0 \Delta Y$) where Y and YP are actual and potential output respectively, G and T are government expenditure and revenue respectively, g_0 and t_0 are the base year ratios of expenditure to potential GDP and revenue to actual GDP respectively. If revenue is proportional to actual GDP, and expenditure invariant to the output gap, FI = 0.

20 While the following discussion utilizes more recent numbers (from IMF 2009g) than the discussion in IMF 2009d just quoted, the general tenor of the argument is unaffected. The main change between the June projections and the December preliminary outturn is a fall in project grants and a matching fall in development expenditure, equivalent to 0.5-0.6 percent of GDP.

21 This fall is wholly accounted for by project grants, presumably reflecting implementation difficulties.

22 Where the line item 'adjustment to cash' (0.2%) has been aggregated with identified 'net domestic financing' (0.8%).

23 This is to regard the fall in project grants and the matching part of the fall in development spending as a separate issue, being self-liquidating, and reflecting specific project implementation issues, rather than being part of the overall fiscal response.

In consequence, it is very difficult to distinguish between two different descriptions of this recent fiscal evolution. In one description, the global crisis induced a revenue shortfall, and this was partly accommodated by trimming expenditure, and partly by recourse to domestic finance. There was an exercise of discretion, rather than a reliance on automatic stabilization. However, this discretion was actually to reduce the stimulus that automatic stabilizers would have achieved, at least on the basis used by the IMF to calculate this. In the other description, it proved impossible fully to implement an extremely ambitious attempt to increase the scale of government operations. The shortfall was somewhat larger on the revenue side than on the expenditure side, so required increased (domestic) financing. The change in fiscal stance was due neither to discretion nor to automatic stabilizers, but to generalized implementation failures. While the bottom line is (necessarily) the same, the interpretation is different, and so are the implications. In particular, the second interpretation makes it even more difficult to contemplate finely tuned fiscal responses to current events.

The Tanzanian Rescue Plan and the Budget for 2009/2010

In April 2009, the President appointed a Task Force to devise a 'rescue plan' in response to the crisis. A package of measures was subsequently announced in the budget speech of June 2009. The underlying assumption is that the shock is temporary and, to the extent possible, the appropriate response is to finance it, rather than to adjust to it. This is to be achieved by a combination of external financing (grants and concessional loans) and accommodating monetary policy. The package includes measures to stimulate domestic demand and to provide targeted support for the worst affected sectors, notably agriculture. In recognition of the difficulties associated with discretionary policy, discussed above, some attempt has been made to include measures that are time-limited or one-off.

IMF (2009g) summarizes the key components of the package as:

- A cut in the VAT rate from 20 per cent to 18 per cent;
- An exemption from royalty payments for diamond and tanzanite miners, for two years;
- An expanded agricultural input subsidy programme;
- Clearance of losses incurred by agricultural cooperatives and private companies in traditional cash crop exports, principally coffee and cotton;
- Price support in the cotton sector;
- Partial government guarantees (70 per cent) for restructuring of commercial loans to affected sectors – manufacturing, tourism, and agriculture;
- A capital injection for existing credit guarantee schemes for exporters and SMEs;
- A capital injection to the Tanzania Investment Bank to finance agriculture;
- Expanded infrastructure investment, including roads and energy sectors.

In terms of budgetary impact, the most important measure on the revenue side is the reduction of the VAT rate.[24] Even this change is difficult to interpret, however. It seems more plausible to see it as intended to bring Tanzania more closely into line with its EAC partners, and so a long-term change, than as a reversible response to the growth slow-down.

The other largest component of the positive fiscal stimulus in 2009/2010 is the intention to embark on a scaling up of infrastructure investment. As always with public investment, planning an increase does not necessarily lead to an increase, or at least not one-for-one with the plan. Developing the capability to implement the plan is the key. However, it is not even clear that the 2009/10 budget really provides for this intended scaling up. See the discussion in section 1.9 below.

24 The budget also reduced the corporate income tax on companies with a Dar es Salaam listing from 30% to 25%. However, the revenue implications of this are an order of magnitude less than the VAT change. See United Republic of Tanzania, 2009.

The key assumptions in the budget are for revenue to increase by nearly 1 per cent to 16.8 per cent of GDP, while total expenditure is budgeted to jump by 3 percent to 28.5 per cent, two thirds of the increase being in recurrent expenditure. The financing envisaged includes an increase in grants, but also increased recourse to net domestic financing equivalent to 1.6 percent of GDP. Early indications are that the revenue target may be hard to achieve, but that supplemental foreign financing will bridge the gap.The following two years project further growth in revenues, but at a relatively more modest pace (to 17.0% in 2010/11 and 17.3% in 2011/12). This is coupled with some projected contraction in spending (a sharp projected fall in the share in GDP of recurrent spending more than compensating for a continued rise in the share of development spending).[25] Despite some projected fall in the shares of grants and net foreign financing, this trajectory would permit net domestic financing to be reduced to 1.0 per cent in 2010/11 and held at that level the following year.

1.5 Growth and Physical Capital Formation

A natural question when looking for the necessary underpinnings to achieve some target growth rate is to ask what investment rate is required.[26] A typical calculation starts from the 'stylized fact' that – where data on capital stocks exist – capital output ratios often seem to be pretty constant. Then achieving some sustained (constant) rate of growth of GDP requires the capital stock to grow at the same rate, and this in turn requires a steady share of gross investment in GDP equal to the sum of this growth rate and the depreciation rate, all multiplied by the capital output ratio. For example, a target growth rate of 7 per cent, coupled with a depreciation rate of 8 per cent and a capital output ratio of 2 would require an investment share equal to 30 per cent of GDP. With Tanzania's still more ambitious goal of 8 per cent, and with the same (fairly typical) parameter values, the investment share would have to reach 32 per cent. On the other hand, if a country achieved a share of only 24 per cent, growth would be constrained to 4 per cent.

This type of calculation – which underpins the conventional wisdom – is quite seductive, since it seems both compelling and simple. It is often used to drive home the argument that a growth target more ambitious than the achieved record will require a substantial improvement in investment rates. However, its empirical foundations are very fragile. While there are well known instances of high growth being associated with a high investment share, these are relatively isolated, and, for large samples of countries, the correlation between growth and investment is typically very low.[27] Investment rates also tend to be more stable than growth rates. For example, the investment share of OECD countries averaged 23 per cent both during the high growth period 1960-75 when their per capita growth averaged 3.4 per cent per annum, and after the slowdown, during 1975-2000, when growth averaged only 1.8 per cent. A similar invariance in the average investment share was true of non-OECD countries (a little over 13% in both periods), even though the slowdown was even more marked (2.5% falling to 0.9%).[28]

A low correlation between investment and growth was certainly characteristic of Tanzania during much of its history. 'A striking feature of the Tanzanian growth experience before the 1990s is that when the growth trend is juxtaposed with the investment rate, periods of high investment spikes and growth hardly correlate. The period of the steepest deceleration of growth (1976-83) happens to coincide with that of the historically highest investment rates.'[29] The investment share averaged 23 per cent in this period, while growth decelerated from 6.6 per cent to -2.4 per cent.

25 Recurrent spending is projected to follow the path 19.4%, 17.9%, and 17.3% over the three years; development spending, the path 9.1%, 9.4%, and 9.5%.
26 Similar issues, and a similar lack of evidence, apply also to human capital.
27 The correlation between investment and income *levels, by contrast, is much higher.*
28 Estimates in Klenow and Rodriguez-Clare 2005.
29 World Bank and Government of Tanzania 2001, page 25, paragraph 2.

Nevertheless, most economists find it difficult not to be concerned when growth targets are ambitious but investment rates low. Fortunately, the investment share in Tanzania has increased quite sharply in recent years. Less fortunately, there seems to be some ambiguity as to what the share actually is, and just how sharp the increase has been. Table 1 gives two series for the share over the last six years.

Table 1: Gross Investment as a share of GDP (per cent)

	2003	2004	2005	2006	2007	2008
IMF[1]	19.2	22.6	25.1	27.6	29.6	31.8
World Bank[2]	22.7	22.5	23.8	25.0	26.0	27.0

IMF 2009e, Table SA7, page 71.
World Bank 2009, Appendix Table 1, page 95.

It will be important to clarify the source of this discrepancy, and whether one series or the other provides the more informative picture. According to the somewhat fragile conventional wisdom noted above, maintenance of an investment share at the level achieved in the IMF version of events is consistent with growth in GDP at the rate targeted by the Tanzanian authorities, while that implied in the World Bank version is not. Of course, the issue is not simply one of quantity, but also of composition and quality.

1.6 Infrastructure

The emergence of very substantial infrastructure deficits in Tanzania is typical of experience across Sub-Saharan Africa, despite the emphasis laid on the importance of infrastructure in the pronouncements of policy makers. With the partial exception of telecommunications, this concern was not shared until relatively recently either by donors or in the academic literature. During the last decade, this position has changed by steps, with water and sanitation becoming a focus of the MDGs, then increased attention being paid to energy, and belatedly, transport.[30] While the existence of a deficit has been very clear for many years, there has been a dearth of detailed information about it. In particular, an accurate inventory of existing assets, and estimates of the quantitative size of the deficit, of the costs to growth it imposes, and of the financial requirements to close it have all been lacking.

In recent years there has been a major response to these difficulties in the Africa Infrastructure Country Diagnostic (AICD), which is implemented by the World Bank on behalf of the African Union, NEPAD, the ADB, and others, including major infrastructure donors. Its first phase has focused on 24 countries, including Tanzania. Its principal findings, if qualitatively unsurprising, are nonetheless quantitatively striking. On virtually every measure, SSA countries lag behind similar countries in other parts of the world. In some cases, the gap is startling – generation capacity is only 11 per cent as high, paved road density only 23 per cent as high. Only in respect of ICT is the gap relatively narrow. Another finding is that deficient infrastructure emerges as a major constraint on doing business, depressing firm productivity by around 40 per cent (Escribano et al 2008). Inadequacies in power generation and in port functioning and associated customs clearance are particularly damaging.

The cost of catching up is estimated at US$38 billion of investment per year, with a further US$37 billion required for operations and maintenance, ie, an overall cost of US$75 billion.[31] This is about twice the estimates in the Commission for Africa report. Across the continent, it translates into 12 per cent of GDP; however, the burden is very unevenly spread – less than 10 per cent for MICs and oil exporters, an implausible 20 per cent for the non-fragile low-income countries, and an inconceivable 40 per cent for fragile states.[32] These costs are also very unevenly distributed by sectors. Power accounts for 56 per cent of the total, and transport for 27 per cent, with the remaining sectors accounting for only 17 per cent together.

30 Estache, 2006
31 Foster, 2008. A more recent estimate from AICD is higher, at US$93 billion pa. Foster and Briceno-Garmedia 2009.
32 Foster, 2008

It is beyond the scope of this paper to examine detailed costings of infrastructure requirements in Tanzania.[33] Nor does the paper examine financing options, except as these arise in the more general discussion of fiscal choices. This area has in any case been covered in some detail in Ter-Minassian et al 2008.[34] That paper examines the opportunities for and implications of (i) direct private investment and PPPs, (ii) expenditure reprioritization and efficiency, (iii) domestic revenue mobilization, (iv) external grants and concessional financing, and (v) borrowing on domestic or international credit markets. It urges the government to exhaust other options before contemplating a sovereign bond issue, but world events have in any case at least temporarily sidelined this possibility.

Current infrastructure spending in Africa is higher than previously thought, at US$35 billion from taxpayers and users, plus US$13 billion from various external sources (ODA, Non-OECD financiers, and PPI in roughly equal amounts). It is important to note that, while PPI has been very beneficial in the ICT sector, experience in other infrastructure sectors has been more problematic, and in some (such as roads) its relevance may in any case be limited.[35] Public finance remains the dominant source of finance for water, energy, and transport, with investment largely tax-financed while O&M expenditure is largely financed from user charges. Recent levels of public finance are substantial relative to GDP in the low-income countries, running at around 6-8 per cent over 2001-2005. Tanzania is typical, with a figure a little over 7 per cent for that period. Another finding, common across Africa and true for Tanzania also, is that countries only manage to execute a fraction of the budget allocated to infrastructure (typically only about two-thirds). Finally, Africa's infrastructure services are twice as expensive as elsewhere, reflecting both diseconomies of small scale in production and a lack of competition.

Infrastructure and Growth

One key issue is the extent to which poor infrastructure has inhibited growth, and, by extension, how much improvements in the stock may lead to accelerated growth. There is a very extensive literature that attempts to address this daunting task, recently surveyed by Straub 2008. The part of this survey devoted to empirical work reviews 140 specifications utilized in 64 papers with 63 per cent of the specifications yielding a positive and significant relation between infrastructure and growth. Much early work used public capital as a rather poor proxy for infrastructure, with more recent work making increased use of physical indicators.[36] This later work is more likely to detect a positive relationship (over 70% of cases for electricity and for telecoms, over 80 per cent for roads). A positive relationship is also somewhat more likely to be detected in developing countries. This is what we would expect, given the greater likelihood of relatively inadequate infrastructure in these countries.

A related issue, on which this literature throws little light, concerns how much spending should be allocated to infrastructure at different stages of development.[37] What is clear is that different countries exhibit radically different patterns of behaviour. In recent years, major Latin American countries have invested less than 3 per cent of GDP on infrastructure (Fay and Morrison, 2007), while China and Vietnam have been investing around 10 per cent (Straub et al, 2007).

33 All sorts of numbers are offered in the various master plans, but these are indicative and uncoordinated, and a detailed and costed aggregate programme still seems some way off.
34 See also the more general discussion in World Bank 2009d.
35 Foster, 2008.
36 The reason for distrusting public investment data is that, particularly in developing countries, the official costs of investments are often disconnected from their effective value. On the other hand, there are also problems with physical indicators. They also may be poor proxies of infrastructure services, missing the crucial quality dimension. In both cases, this will tend to make a positive relation harder to detect.
37 Nor is the theoretical literature much help.

A recent paper that has attracted much attention in the African context is Calderon 2008, which applies panel data econometrics to a sample of 136 countries over 1960-2005. It looks at the impact on per capita growth of faster accumulation of infrastructure stocks and of enhancement in the quality of infrastructure services for 39 African countries in three key sectors: telecommunications, electricity, and roads. The findings, which are subject to the usual caveats attaching to this type of exercise, are nonetheless pretty striking. Across Africa, the author finds that infrastructure contributed 99 basis points to per capita economic growth over the period 1990 to 2005, compared with only 68 basis points for other structural policies.[38] That contribution is almost entirely attributable to advances in the penetration of telecommunication services. The deterioration in the quantity and quality of power services over the same period has significantly retarded growth. Calderon's simulations suggest that if the average African country were to catch up with the infrastructure situation in Mauritius, its per capita growth would increase by over 2 per cent.[39]

Infrastructure in Tanzania

The AICD assessment for Tanzania suggests that infrastructure's contribution to growth has been higher than on average in SSA.[40] Between 1991-5 and 2001-5, it estimates that this contribution was worth an extra 1.3 percentage points on the annual per capita growth of GDP (compared to maybe half that rate in Kenya). More than half of this is attributable to telecommunications, and most of the rest to electricity. Even so, Tanzania can still benefit greatly from improving its infrastructure. The increased per capita growth from catching up with Mauritius is estimated at 3.4 per cent.[41]

Interestingly, the AICD's benchmarking exercise (for 2006) shows Tanzania in quite a favourable light relative to other non-fragile low-income countries in SSA and to its East African neighbours in particular.[42] Here we confine attention to the transport and power sectors.

As regards the road network, while paved density is low and revenue collection a major issue, AICD notes a number of achievements: Tanzania has been a good performer on road sector institutional reform; both paved and unpaved road quality are well above the benchmarks; the network length is adequate; the fuel levy is set at the right level; and maintenance and rehabilitation spending needs are well covered.[43]

The story for air transport is somewhat similar. Tanzania is an advanced institutional reformer, with an independent regulatory body; it is the only country in SSA, apart from South Africa, to allow competition, with more than one provider on all 17 routes; and it has the fourth largest domestic market in SSA. However, regularly scheduled commercial services still fly from unpaved runways, and, despite Dar es Salaam being one of the top 15 SSA airports, the international market is small, and the intercontinental market very small.

38 'Structural policies' are taken to include policies directed at human capital, financial deepening, governance, and institutional quality.

39 However, it is difficult to assess quite what is happening in the Calderon paper, so the numbers quoted here and elsewhere need to be taken with care. For example, the enhanced growth rate associated with achieving Mauritius' levels of infrastructure does not seem to be a function of time. It is *being at that level that generates the increased growth, rather than achieving that level over some time horizon.*

40 The estimates refer to the subset of infrastructure that comprises telecommunications, electricity, and roads.

41 But see the previous footnote but one.

42 World Bank 2009c. Most of the information in the following several paragraphs is taken from this source.

43 Levels of road sector spending in East Africa are varied, with Malawi spending a little under 4% of GDP, and Kenya around 1%. Tanzania comes in the middle at 1.8%.

Dar es Salaam (together with Mombasa) is one of the two main players in container operations in East Africa, and has a container terminal concession. It is one of seven SSA ports developing a national port master plan. However, it faces major challenges. Severe capacity constraints (capacity is currently at only 70 per cent of demand) have led to a declining role in transhipment, and there has been a marked deterioration in both efficiency and institutional reform from the high levels achieved in 2006.[44] Container dwell time has increased from 7 days to 23 days; this deterioration is from a level close to the performance of Mombasa or the South African ports to that of Maputo. An emergency action plan has been put in place to try to decongest the port.[45]

The rail sector has two distinct services, the Tanzanian Railway company (TRC) which is the Tanzanian component of the old East African Railway, and the TAZARA line that was built by the Chinese in the 1970s to link Tanzania with Zambia. The TRC is on metre gauge, and the TAZARA on cape gauge (1067mm). There have been proposals to unify the gauge to either meter or cape, or possibly to standard gauge, and also proposals to convert to electrification. CPCS 2009 concludes that neither innovation would be justified, given plausible levels of traffic growth over the next couple of decades. The TRC was concessioned in 2007 for 25 years, but this change has yet to yield improvements. AICD notes reasonable efficiency in use of freight cars and coaches on both systems, and high locomotive availability in TRC but not TAZARA. A major problem is the slow speed at which trains travel; this is a joint consequence of deteriorated track infrastructure and inadequate passing places, as well as being a more permanent consequence of narrow gauge and low radius bends.

The power sector faces serious challenges. Access, usage, and cost recovery are all low, and reliability is poor, which imposes high hidden costs on the economy. Tanzania's installed generation capacity per capita is similar to the bench mark low-income countries, at less than 3 per cent of the levels achieved by middle income countries. Power consumption is less than half that in the low-income countries , and barely 1 per cent of that in the MICs. Only 10 per cent of the population has access to electricity (fewer than 40 per cent of the urban population and fewer than 2 per cent of the rural population). This access is increasing, but at less than 1 per cent of the population per year. Power outages occur on more than 60 days per year, inducing extensive emergency generation at a cost that AICD estimates at nearly 1 per cent of GDP.

The AICD's overall summary is that the road sector is a success story, though it still faces challenges, while other transport sectors have not yet made major investments. The power sector is in a low level equilibrium, and needs to bring tariffs closer to costs.

Tanzania as a Regional Trade Hub

Tanzania occupies a pivotal geographic location, including borders with eight countries of which five are landlocked, and one 'quasi-landlocked'.[46] Apart from its own long coastline, it also borders three major lakes. There has been much discussion about the possibility of greatly increasing the exploitation of this favourable position. The Government has produced a document spelling out the first phase of a Transport Sector Investment Programme (TSIP) for the ten years 2007/2008 to 2016/17.[47] This emphasises the need for an integrated transport system to be able to service the transit trade with Tanzania's inland neighbours as well as the country's own development needs. The main road and rail connections are east-west, linking this hinterland with the ports, especially Dar es Salaam. Much attention is devoted to the concept of development corridors, and a very ambitious set of four corridors is envisaged.

44 Some 70% of Rwanda trade has recently been moving via Mombasa whereas its natural route would be via Dar es Salaam, and would probably revert when service improved. However, this displacement has reflected problems with the rail system as well as the port. See CPCS 2009.

45 World Bank, 2008. Apart from a lack of space, the need for dredging, and the need for improved coordination with other transport links and players, there is a lack of incentives to shift empty containers.

46 The maritime states – and hence competitors for the role of regional hub – are Kenya and Mozambique. The landlocked ones are Uganda, Rwanda, Burundi, Zambia and Malawi. The quasi-landlocked country is DRC, which has its own short coastline on the Atlantic coast but which has the bulk of its economic activity very remote from that location, much of it nearer the Indian Ocean via Tanzania.

47 Ministry of Infrastructure Development, 2008.

Working from North to South, the first is the Tanga corridor, serving the Lake Victoria regions as well as Uganda, Burundi, and Rwanda. A new deep water port is envisaged at Tanga, as well as extension of the rail line from Arusha to Musoma on Lake Victoria. Upgrading and extending the road network would also be required. The rationale for improvements to this corridor is the existence of substantial mineral deposits, tourist attractions, and high agricultural potential in Northern Tanzania as well as the transit opportunities.

Two of the envisaged corridors terminate at Dar es Salaam. In both cases, major improvements to that port are required, both in its capacity to handle large ships, and in its quality of service. The more northerly is the central development corridor, following the central line rail route and extending to eastern DRC, Burundi via Kigoma on Lake Tanganyika, and Uganda via Mwanza on Lake Victoria. These lines need extensive rehabilitation and upgrading: comparable improvements will be required to the trunk road system. It is also envisaged that a new rail line be constructed between Isaka and Kigali in Rwanda. Complementary improvements would be required to infrastructure in DRC and Rwanda.

The more southerly is the TAZARA corridor, which connects Dar es Salaam with the Southern and Eastern highlands through the TAZARA railway and the Dar es Salaam – Tunduma highway. This corridor passes through areas of high agricultural potential as well as growing industrial activities. It also provides access to the coast from Zambia, Malawi and the DRC, though it faces stiff competition from ports in Mozambique and South Africa. Major rehabilitation of the TAZARA line is needed.

Finally, the Mtwara corridor is intended to permit exploitation of mineral resources and tourism in Tanzania as well as enabling transit and other trade with the northerly parts of Malawi, Mozambique, and Zambia. Given current lack of capacity at Mtwara port, and the lack of either a trunk road or rail network linking the port to the hinterland, this would require major investments in road, rail and port operations.

Given the scale and multiplicity of these options, there will be a difficult issue in appraising and sequencing the required investment. One of the challenges of the development corridor approach is that these infrastructure investments have largely to precede the activity they are designed to engender and support. Known mineral deposits are something of an exception to this, and if they are sufficiently valuable, may justify investments that then go on to trigger further economic activity and enhanced returns. More generally, implementing the approach necessarily has a large speculative element in it. The laudable intention of the Tanzanian authorities to push for high growth and a relatively early transition from low-income to middle-income status will in any case necessitate a degree of boldness.

However, it is evident that this will require not only a massive increase in infrastructure provision, but a radical improvement in Tanzania's logistical capabilities more generally. The scale of this latter challenge cannot be overestimated.

The World Bank's (2007b) Logistics Perception Index is based on detailed information from logistics professionals world-wide, and was designed to provide a comprehensive picture of supply chain performance. The index is a summary measure of this information. Out of 150 individual country rankings, Tanzania is ranked very low at 137, while its potential competitors in providing a regional hub scored better or much better; Kenya was ranked at 76, Mozambique at 110, and South Africa at 24.

On the other hand, other information presents a less clear picture. For example, Table 2 provides data from the World Bank's 2009 'Doing Business' report for a number of SSA countries in the region, and for Mauritius as a benchmark.

Table 2: Comparative Export/Import Costs

	Time to export (days)	Cost to export (US$ per 20 foot container)	Time to import (days)	Cost to import (US$ per 20 foot container)
Kenya	27	2055	25	2190
Mauritius	14	737	14	687
Mozambique	23	1100	30	1475
Rwanda	38	3275	35	5070
South Africa	30	1531	35	1807
Tanzania	**24**	**1262**	**31**	**1475**
Uganda	37	3190	34	3390
SSA	34	1942	39	2365

Source: World Bank 2009b

There are three implications of these data. The first is that the performance of SSA in general, and each of the countries listed, is substantially inferior to the convenient and relevant benchmark of Mauritius, so there is a great deal of scope for improved performance.[48] The second is the substantial penalty paid by the landlocked examples in the sample; clearly, any marked improvement in the performance of one of the maritime countries would not only benefit a landlocked country in lowering its transit costs, but would be a powerful incentive to re-route its transit trade. Third, amongst the rival maritime countries, Tanzania's performance does not seem particularly poor. Indeed its dollar costs per container compare favourably with those of Kenya.[49]

In any event, Tanzania's ambitions to become a regional hub cannot be pursued in isolation. They will require a degree of cooperation, not only with the landlocked neighbours, but also with the maritime ones. They also have very substantial financing implications.

1.7 Debt Sustainability and Domestic Financing

Debt Sustainability

As in other low-income countries, debt sustainability analyses (DSAs) have become a familiar part of the Tanzanian scenery. The joint World Bank/IMF exercise for Tanzania of May 2009 (World Bank/IMF 2009) noted that, due to extensive debt relief, public external debt stood at 20.9 per cent of GDP at end June 2008, compared to 53.4 per cent of GDP at end June 2006. Public domestic debt had increased somewhat over the same period, but fallen slightly as a share of GDP from 14.5 per cent to 14.3 per cent. This DSA takes into account the projected recourse to domestic financing, noted above, of 1.2 per cent of GDP in 2008/09 and 1.6 per cent in 2009/10, and also additional borrowing needs of 2 per cent of GDP in 2010/11 to 2014/15, evenly split between domestic and foreign financing.

It finds that Tanzania's risk of debt distress is low, and that there appears to be room for an increase in debt, even on non-concessional terms, to finance a stepping up of infrastructure over the medium term. Amongst the assumptions it makes are the following on the investment profile; development spending rises from 8.8 per cent of GDP in 2008/09, increasing to 10.9 pe cnt in 2010/11, and averages 10.5 per cent over 2011/12-2014/15, before falling back to a steady 9.0 per cent in 2015/16 through 2028/29. Annual maintenance costs are assumed to be 5 per cent of the total value of the accumulated infrastructure spending, and these reach about 0.2 per cent of GDP in 2014/15, in addition to recurrent costs.

48 'Among developed countries, trade logistics costs are typically 10 percent of GDP. For less developed economies, these costs frequently exceed 30 percent.' World Bank 2007a.

49 Other comparisons are much less favourable. The World Bank Investment Climate Assessments, for example, find that the time to clear customs (both for imports and exports) are substantially longer in Tanzania than in Kenya and other neighbouring countries.

However, as is common in these analyses, the emphasis is overwhelmingly on the external debt component, and very little attention is paid to the domestic component. In particular, it is assumed, without analysis, that only very mild and temporary increases in the domestic debt ratio are to be contemplated.

A more detailed integration of domestic and external components is contained in an earlier DSA conducted by the government (URT 2008) which sets out to examine the implications of raising US$ 500 million for infrastructure investment, either by means of a 10-year international sovereign bond issued in 2009/10; or by means of 7 year domestic bonds, issued in 2009/10 and 2010/11; or some combination of the two. There is analysis of the relative costs and risks of these alternatives. What becomes clear from the analysis, however, is that the impact on the debt sustainability calculations is relatively minor; what is not minor is the impact on the domestic financial market (in the case of the domestic bond) and on the budget.[50] Another way of looking at this is to conclude that there are real, difficult issues surrounding infrastructure finance, but that debt sustainability is not one of them.

A more adventurous discussion than that in World Bank/IMF 2009 is contained in Box 2 of IMF 2009d, which is drawn from an IMF working paper.[51] The box discusses the possible components of a medium-term fiscal framework for Tanzania, which would consist of a fiscal anchor and three complementary benchmarks. The anchor would be the present value of public debt, probably to be held below 40 per cent of GDP. This compares to a June 2008 present value equal to 25.6 per cent of GDP.[52] The benchmarks would be (i) a limit on net domestic financing in a single year, for example set at 2.5 per cent of GDP, (ii) a limit on non-concessional borrowing, also set at 2.5 per cent of GDP, and (iii) a limit on the change in the ratio of spending to GDP of, for example, 3 per cent of GDP.

This seems to offer a substantially more open set of alternatives than normally contemplated by the IMF, within an expanded but still sensible (supportable) definition of prudential behaviour. It is to be hoped that it, and variants of it, will be explored both by the Tanzanian authorities in their own internal discussions, and in any dialogues they have with the international community in general and the IMF in particular.

Another way of making the same point is to look at the threshold indicators suggested in the World Bank/Fund's current Debt Sustainability Framework (DSF). These indicators take the form of ratios which it would be unwise to exceed; there are three indicators referring to the present value (PV) of the external debt stock, and two referring to external debt service. Tanzania is regarded as a strong performer in terms of the World Bank's Country Policy and Institutional Assessment (CPIA) Index, so these threshold indicators are as follows. The stock thresholds are: PV of debt to be less than 50 per cent of GDP, less than 200 per cent of exports, and less than 300 per cent of budget revenue. The flow thresholds are debt service to be less than 25 per cent of exports and less than 35 per cent of revenue. As it happens, for Tanzania's current circumstances, the three stock thresholds would begin to bind at roughly equivalent debt levels, and the two flow thresholds at roughly equivalent debt service levels. The current and likely short-term ratios in Tanzania mean that the debt stock is only around one third of the (relatively common) threshold value, while debt service is at less than one sixth of its (relatively common) threshold value.

50 Tanzania is one of a handful of low-income countries that have successfully extended their domestic debt portfolios by issuing longer term Treasury bonds. However, typically, only TZS 60 billion per annum is raised via 10 year bonds, so raising TZS 624 billion (US$500 at the 2008 exchange rate) over two years would require a fivefold increase.

51 IMF WP 09/244.

52 This is for total public debt, not simply the external component of it.

All this discussion may be summarized as follows. While it is a good idea to conduct regular sustainability exercises, the evidence that emerges is that sustainability is not the interesting constraint on government choices. The real questions about infrastructure financing, for example, are such as the following. What is the cheapest and lowest-risk (in some combination) form of available finance? What amounts could be raised, and to what extent do they depend on the investment? What are investment returns likely to be, both in social and financial terms? Do they justify raising the finance? Does a gap between the two returns pose a budgetary problem? What are the absorption/implementation issues, and to what extent can financing be raised contingent on execution?

Domestic Financing

Compared to the feverish attention accorded to external debt, domestic debt has until recently been a neglected topic, with poor data and less analysis. This has recently begun to change, but there are still no internationally agreed indicators or benchmarks for assessing domestic debt and total debt sustainability. However, there are a number of regional ratios and more informal views. Most relevant here, the IMF describes the domestic debt burden as significant when the ratio of nominal domestic debt stock to GDP ratio is above 15% – 20% and it recommends that IMF staff thoroughly review the risks in such cases when carrying out DSAs in low-income countries (IMF 2008b).[53] The empirical or analytical basis for this band is obscure, but taking its lower end as the beginning of a potentially problematic situation, countries might wish to stay below 15 per cent.

Tanzania is already close to this value. The implication, lacking a more detailed, country-specific analysis, is that increases in domestic debt should on average be no more than in line with the growth in GDP. For example, if real GDP were growing at 7 per cent, and inflation were running at 5 per cent (close to medium-term targets in both cases), then maintaining a 15 per cent ratio would permit additional nominal debt equal to 1.8 per cent of GDP to be issued.[54] Allowing perhaps an additional 0.5 per 0.7 per cent of GDP for seigniorage, this means that a domestic deficit of between 2¼ per cent and 2½ per cent of GDP could be financed in a non-inflationary way, with a stationary domestic debt ratio that did not breach the IMF's suggested limit. This range for a permissible domestic deficit is more than sufficient to cover the recourse to domestic financing that occurred in 2008/09 and is envisaged for 2009/10. Events in these two years have been seen as a temporary response to the shock. However, since the range is based on a sustainable calculation, it would be open to the government to continue in this fashion into the long-term, if that enhanced the prospects of delivering the growth and structural change it desires.

53 It also stipulates that an annual increase of 5% – 7% in the PV/GDP ratio of public external or total debt should act as a 'caution flag' that countries are more likely to suffer debt distress.

54 0.15 x (112 – 100) = 1.8

Even when sustainability is not an issue, domestic financing of a fiscal deficit may still be problematic. One key concern is the impact it may have on domestic interest rates, and this has been the subject of a large empirical literature which has demonstrated very heterogeneous results.[55] As so often, the overwhelming bulk of the econometric evidence refers to advanced economies, and there appear to be no studies for any group of low-income countries. One study that is of particular interest here examines a 1970-2006 panel containing both (20) advanced and (41) emerging economies.[56] This study finds that there may indeed be a highly significant positive effect of budget deficits on interest rates, but only under certain conditions. For the sample as a whole the effect was for a 1 percentage point increase in the budget deficit to raise the domestic interest rate by a quarter of 1 percentage point. However, the size and significance of this effect depends on interaction terms. For domestic deficits and debt levels at Tanzanian levels, the effect becomes insignificant. However, low financial depth is found to raise the effect to as much as 2 percentage points.[57]

Evidently, a rise on that scale would be very problematic. Tanzania has achieved a dramatic increase in financial deepening over the last decade, but from a very low level, and the process is very far from complete. For example, bank credit to the private sector, as a share of GDP, has risen from 3.5 per cent in 1997, through 6.7 per cent in 2003, to 13.4 per cent in 2008. However, that compares to 2008 figures for Kenya of 29.7 per cent and South Africa of 71.4 per cent.[58] It is vital not to interrupt this deepening process, and the growth of private activity which it supports. There is a balance to be struck between using deficit financing to reduce the adverse impact of demand deficiency or to permit increased levels of public investment and the risk of a consequential and possibly substantial rise in the interest rate.

Unfortunately, Tanzania-specific data are lacking, and striking this balance will at present require a difficult exercise in judgement. It would be well worth exploring this issue more systematically, and this is one of the areas listed below as being of potential research interest to IGC.[59]

Getting a better handle on how the domestic financial market works will be particularly important if, at some future date, the authorities wish to examine the possibility of a more substantial use of domestic debt than at present envisaged. At present, debt sustainability analysis is carried out on the basis of the current low level of debt coupled with very small or short-lived domestic deficits, so that the unsurprising conclusion emerges that the risk of debt distress is low. It seems desirable to be able to explore more radical alternatives, and this requires a better understanding than is currently available.

1.8 Constraints on Short-Term Expenditure Choices

As previously argued, any short-term fiscal stimulus is better applied on the expenditure side than the revenue side of the budget. The first question is what are the relative merits of attempting a reversible expenditure increase within capital and current spending categories respectively? The second question, reflecting the general concern to provide some social protection against adverse shocks, is how much of any current expenditure component should take the form of enhanced social protection?

The general difficulties of reversibility and of targeting have already been discussed and that will not be repeated here.

55 For example, of about 60 studies of the USA, half found robustly positive effects of budget deficits on interest rates, while half did not. See Gale and Orszag, 2003.

56 Aisen and Hauner, 2008. It does not seem too far-fetched to suppose that where there are systematic differences between advanced and emerging economies, there may often be a spectrum running from high- to low-income economies. Some speculative assessment of the position in these countries may then be inferred from a sort of qualitative extrapolation.

57 The authors state that they find this 'implausibly high', while noting that the explanation may lie in an exacerbated risk premium or crowding out of the private sector.

58 IMF 2009f, Table 3, page 43.

59 The IGC research programme already includes other studies that complement this suggested study.

Capital Expenditures

One seductive attraction of using capital expenditure to deliver a temporary fiscal impulse during a recession is the idea that resources that have been made idle can be utilized to increase future incomes. Short-term harm is translated into long-term benefit.[60] There are two difficulties with this picture. The first is that it may be impossible or extremely inefficient to bring capital expenditures forward from their original timeline. It requires large lead times, and ferocious coordination if it is to be successfully implemented. It may be even more costly to terminate early. The second difficulty is that it may be very difficult to redirect resources made idle in the recession to support increased investment expenditures, because of considerations of either skill or geography. Idle providers of tourist services in the north of the country may not be easily reassigned to power station construction in the south. Hence capital expenditure does not readily lend itself as a countercyclical tool.

There are two main exceptions to this. The first is where there exists a fully designed and justified set of relatively independent projects, which have been queued because of limited financial resources, but which are otherwise ready to go. In Tanzania, the obvious sector with these characteristics is the road sector; it also has the advantage of being geographically diffuse. What is more, completing a road project early simply means that that road is improved earlier than originally planned – the activity does not have to be 'unwound.'

The second exception, which may overlap with the first, is the possible use of what the ILO calls 'labour-intensive public works'.[61] These include digging sanitation ditches, repair of public buildings, environmental improvement through erosion reduction, clearing of rural footpaths, and the like. These are also potentially geographically mobile, so can be targeted both to the poor and to hard-hit parts of the country. However, as with roads, it is necessary to have an inventory of projects stockpiled in advance, with accounting procedures in place to reduce the likelihood of misuse of funds. The also need to be capable of being quickly initiated and quickly terminated, and there needs to be the administrative capacity to do this.

Social Protection

These labour-intensive public works are also a possible component in a social protection programme, though it has to be noted that they are capable of abuse, with wealthy individuals effectively controlling labour gangs.

Apart from these, and emergency support following disasters, the other major device for delivering social protection in developing countries, absent a well-developed social security system, has been a system of conditional cash transfers. These have become well established and apparently successful in a number of Latin American countries, such as Brazil, Chile, and Mexico, where they appear to have played a role in sheltering the most vulnerable from the worst consequences of the crisis. In most such programmes in Africa, the conditionalities have been much less strict than in most Latin American countries, and community targeting and monitoring has been widely used. It can be costly in terms of time and funds to establish targeting and monitoring mechanisms, and they can be slow to set up. Hence, when they already exist, and function satisfactorily, they may be helpful in protecting the vulnerable, but it is unlikely to be effective to try to establish them as a response to the crisis.

60 There is also an appealing symmetry. Capital expenditures are often most severely cut when fiscal tightening is needed, because it is easy to do so; hence favouring them during an expansion restores the balance.

61 The discussion here closely follows Weeks, 2009a.

Other Current Expenditures

Much of other current spending is devoted to MKUKUTA categories such as health, education, sanitation and water. It is difficult and probably unwise to attempt to use these as a countercyclical fiscal device. Indeed, it is often a government priority to shield this type of expenditure from undue volatility. This is partly to try to maintain a stable level of service provision through the cycle, partly a recognition that short-term 'gluts' of funds are likely to induce inefficiency, and partly a recognition of the fact that expenditures dominated by wages are very difficult to reduce once they have been allowed to increase. The experience of ratchet effects in current expenditure is extremely widespread and these prove extremely durable. The fact that several of the expenditure components of the rescue package are concerned with one-off financial injections, assistance with loan restructuring, and some loss clearance reflects a desire to ensure that these responses are time-limited as well as targeted.

Summary

The only two categories of spending that are likely to be fruitful in a countercyclical context are existing pipelines of freestanding ready-to-go capital and public works projects on the one hand, and existing conditional cash transfer programmes on the other. In neither case would it be effective to attempt to create these as a response to the crisis. In consequence, the government's short-term expenditure choices are highly constrained.

1.9 Fiscal Process Issues

In some respects, systems of fiscal planning appear to have weakened since the promising days of 1998-2002 The MTEF no longer plays a key coordinating role between annual budget setting, financial programming and medium term MKUKUTA objectives. While the adoption of a cash budgeting system in 1995/96 was important in instilling necessary budget discipline against a history where that was lacking, it has proved – as elsewhere – difficult to float off this rather problematic system and its associated mindset. Under a strict cash budget approach, the only forward planning that is required is the revenue projection (and associated projections of ODA). Whatever expenditure projections are made will subsequently be reconfigured on the Procrustean bed of the revenue outturn. Even the importance of the revenue projection is diminished, since the distinction between poor forecasting and adverse shocks is of secondary importance to whatever rationing scheme is operated.

Hence the incentive to take a careful, systematic, and coordinated look at the future is seriously weakened. This cannot be a good way for a government to plan for the country's future. It is not even a matter of optimizing the fiscal programme – it would be enough to achieve a 'good enough' programme. This is not to denigrate the major achievements of the Tanzanian authorities in achieving what appears to be pretty reliable fiscal discipline and the macroeconomic stability that in part flows from that. However, having done so, it is important to move on to the next stage, of exercising effective choice within the fiscal space that has been created. Only if it is believed that any attempt to explore this space will fatally weaken the underlying discipline does it make sense to remain in a 'cash-budget culture'. The recent IMF working paper on how a rule based medium term fiscal framework might be constructed for Tanzania makes a welcome and constructive contribution in this context.

Particular questions arise in connection with the investment programme, as regards project identification, evaluation, and implementation. In all, there is a very substantial lack of capacity. As to the first two, a step change in capability will be required, given the ambitious and challenging transformation of the economy that is envisaged. A serious investment in this is required, and will necessitate sustained donor input in resources and in Technical Assistance. As to the third, Tanzania is in the majority of low-income countries in finding it difficult to execute an investment programme to time and scale, but it is very important to try to rectify these shortcomings. Improvement in all these areas is critical in a context where a substantial increase in public investment is both desirable and intended.

There are also serious concerns about some aspects of expenditure composition, and the extent to which this reflects strategic policy intentions. As in other developing countries, the practice of splitting the expenditure budget between development and recurrent categories can obscure the split between the economic classification of interest, between capital and current spending, appearing to exaggerate the importance of the former. World Bank 2009e, Table 15, calculates that while the share of development in both the outturn for 2007/08 and the preliminary outturn for 2008/09 was 34 per cent, the share of capital was only 25 per cent in each year. Of greater concern, the 2009/2010 budget has a reduction in the development share to 30 per cent, but a much more severe reduction in the capital share to 15 per cent. 'This decline in capital spending is inconsistent with the GoT intention of boosting economic growth for poverty reduction over the medium term and in the long run'.[62] It also sits very uncomfortably with the express intention behind the rescue plan. The World Bank has also expressed concerns about changes in the government's wage bill.[63]

The World Bank has made substantial ongoing attempts to assist GoT to improve these fiscal process issues, stretching back to 1997/98. Recent extended discussions with detailed analysis and recommendations are World Bank 2009a and 2009e, and it is beyond the scope of this paper to do other than note these concerns.

1.10 Contingent Liabilities

World Bank/IMF 2009 suggests, on the basis of incomplete information, that contingent liabilities might be estimated at around 1.2 per cent of GDP, mainly reflecting the guaranteed debt of the government-owned electricity company, TANESCO. However, this is a complex area, where information is very incomplete. A least four different categories have been suggested, each with different macroeconomic implications.

Traditional contingent liabilities. These include possible compensation claims against government, and are held on a Treasury Registrar list. They do not have obvious macroeconomic implications, but it would be useful to identify their extent. Another set of liabilities arises from changes to the public pension schemes. Again, the extent of these liabilities needs to be quantified.

Explicit loan guarantee schemes, administered through the Bank of Tanzania. The major components are export credit guarantee schemes and small and medium enterprise schemes. These are implemented jointly with commercial banks with BoT offering guarantees to lenders. There are issues concerning how to charge for these guarantees, as well as the likely exposure associated with existing arrangements.

Off-budget financing. This is currently being used to finance capital projects not funded by donors, such as the University of Dodoma and the Police Barracks. Domestic pension funds provide capital against a bond predicated on guaranteed rental income. The implication is that government is not facing a traditional contingent liability but is simply accumulating off-budget debt. A calculation needs to be made as to the scale of these future budgetary commitments.

PFI contracts against infrastructure projects with government providing guarantees to concessionaries. There are none currently in place as far as we can tell but if introduced, they may pose significant implementation risks, and these need to be explicitly evaluated.

The whole area of contingent liabilities is undergoing very active scrutiny at present. See for example Cebotari 2008.

62 World Bank 2009e paragraph 48.
63 World Bank, 2009a, paragraphs 2.22-2.24, and World Bank 2009e, paragraph 46.

1.11 Summary

Tanzania has been very successful during much of the last decade in achieving macroeconomic stability, rapid growth and a substantial increase in the share of revenue in GDP. It has benefited from substantial debt relief, and is classified as a strong reformer. It is being adversely affected by the global crisis, but there is limited scope for government to respond to this in the short-term. It has a large infrastructure deficit, and has significant ambitions in respect of future growth, structural transformation, and its role as a regional hub. All this implies a substantial increase in infrastructure spending. Earlier plans to finance this via sovereign bonds have been compromised by the crisis, but there is scope for not only bridging but continuing domestic finance, if the more appealing route of external concessional finance is insufficient. However, the design of this public investment programme will enquire care. In addition, current projections of continued revenue growth could prove inimical to growth, and also need further examination.

PART 2: Potential Future Research in this Area by the IGC

This part is brief and speculative. It first discusses the apparent lack of existing local counterparts, and the possibility of developing these. It then goes on to consider a number of areas in the fiscal domain, broadly conceived, that seem important in Tanzania, that pose researchable problems, and that the IGC might choose to pursue. It does not, at this early stage, identify possible international researchers for these potential tasks.

2.1 Local Input

Economic expertise in Tanzania in the areas covered by this note seems to be pretty limited. There are individuals in the Ministry of Finance, the Bank of Tanzania, and the University of Dar es Salaam who have worked at one time or another on the intersection between macroeconomics and public finance, but there does not seem to be any individual or group who maintain a research focus in this area. In consequence, local partners may be difficult to identify, unless a very major exercise in capacity-building is envisaged. In brief, it will not be possible for IGC to tap into ongoing groups and activities in this area. In particular, it will not be effective to shape any research agenda of the IGC around perceived existing local capacity.

There seem instead to be two options. The first is to identify areas of work in which international consultants could have some useful input into questions of fiscal importance in Tanzania, without attempting to involve local counterparts.

The second option is similar, but adds a focused attempt to identify and attach local counterparts to the work of these international consultants. Given the perceived lack of senior persons in Tanzania who have both the expertise and the availability to engage in this form of collaboration, this would probably involve identification of a more junior cadre, for example doctoral or immediately-post-doctoral students. This would have a two-fold appeal. First, it would be an efficient means of building domestic capacity in the fiscal arena. Second, the research focus of young academics in SSA is often driven by what can be financed, and this sends a signal both as to what is (externally) regarded as important and interesting, and as to what is a feasible research area for the academic. If we believe work in this area is worth doing, and do not want this always to be done by outsiders, signalling this may be important. Otherwise, as has been the case in many SSA low-income countries, young academics will be induced to see microeconomic studies as the only viable professional activity for them.

2.2 Possible Topics

2.2.1 The Desirable/Feasible Size of Government and the Associated Revenue Effort

In recent years, the government has been focused on trying, and eventually succeeding, in engineering a recovery from the very low levels to which revenue collections had fallen. These have now reached a share of GDP which is not out of line with other low-income countries. It is also clear that it is harder to achieve high revenues in low-income countries because of the large relative size of the difficult-to-tax informal sector. Attempting too ambitious a revenue target can have a double adverse impact on the functioning of this type of economy. First, it tends to raise the marginal effective tax rate of enterprises or individuals in the formal sector to excessive and incentive-sapping levels.[64] Second, and in consequence, it may retard the shift from informal to formal activities as the economy grows, retarding productivity growth, and inhibiting the whole growth process generally.[65] There is clearly a balance to be struck between these risks and those of inadequate public good provision, which may also inhibit growth and reduce welfare. There should be scope for research devoted to these issues. Two research areas complementary to this are discussed next, the first being concerned with assessment of costs, and the second with assessment of benefits.

64 A recent report on the Tanzanian tax system (FIAS 2006) concluded that marginal effective tax rates were not out of line with those in comparable countries, and were not excessive, except for those on non-VAT registered medium and small scale enterprises, for which they could exceed 50%. That does seem a cause for concern, however.

65 For a rather startling deconstruction of the conventional wisdom on tax design when the informal sector is important, see Gordon and Li 2009. The argument revolves around the differential capability of firms to avoid using the formal financial sector.

2.2.2 Estimating the Marginal Cost of Public Funds in Tanzania

Economists have carried out a great deal of work in assessing the marginal cost of public funds from various sources, both in developing appropriate methodologies, and in carrying out detailed estimations.[66] There is, however, considerable scope for more detailed work using this methodology in the Tanzanian context. This would feed into decision-making in general, particularly in the context of increased public investment. It also might have implications for the level and structure of taxation, and for the government's borrowing strategy.

2.2.3 Economic Geography, Agglomeration Dynamics, and the Development of Tanzania as a Regional Hub

As noted earlier, the government has ambitions for Tanzania to become a regional hub, presumably having a part competitive and part complementary relationship with another regional hub in Kenya. The means envisaged for implementing these ambitions are a number of development corridors. The design and prioritization of the required infrastructure investments goes beyond a simple application of cost-benefit analysis, or an identification of specific bottlenecks, because of the complex agglomeration dynamics that will be involved.[67] Assessing the benefits of different strategies will be difficult. There should be scope for applications from the fields of new economic geography and of regional and urban economics.

2.2.4 Joint Analysis of Infrastructure Investment and Debt Policy

It has become a commonplace in the public finance literature that focusing on debt and deficits is potentially very misleading and can distort fiscal decision making.[68] Indeed the 2001 revision of the IMF's Government Finance Statistics sets out to recast government accounting explicitly on a net worth basis. However, implementing this system of accounts is extremely demanding and it will be a very long time before this is fully achieved in countries like Tanzania. In any event, what is required most urgently is to adjust forward thinking to a similar conceptual basis. While a full accounting of a government's actual net worth is a daunting task, the more limited objective of trying to estimate incremental changes to it arising from public investment and the issue of public debt should be more quickly achievable. There is scope for some research input as to how best to proceed methodologically, preferably using Tanzanian specifics while doing so.

2.2.5 Sensitivity of Domestic Interest Rates to Government Domestic Borrowing

It is clear that Tanzania is not at any immediate risk of debt distress, but has a very large infrastructure deficit. In the absence of sufficient concessional borrowing, financing this will involve some calculation as to the costs of domestic and external non-concessional finance. A better understanding of interest rate determination in the domestic economy would be very valuable. This will be particularly important if, at some future date, the authorities wish to examine the possibility of a more substantial use of domestic debt than at present envisaged. At present, debt sustainability analysis is carried out on the basis of the current low level of debt coupled with very small or short-lived domestic deficits, so that the unsurprising conclusion emerges that the risk of debt distress is low. It seems desirable to be able to explore more radical alternatives, and this requires a better understanding than is currently available.

66 A good recent summary of (and contribution to) the theory is Dahlby 2008. Estimates in the African context are provided by Warlters and Auriol, 2005.

67 This is not to deny the need for much more cost-benefit analysis of a more conventional type as well. The lack of capacity for economic project evaluation is a concern, given the intention greatly to expand public investment generally.

68 See for example Easterly et al 2008.

2.2.6 Institutional Reforms, Political Economy, and Infrastructure Investment

It has become commonplace that institutional factors are of central importance in determining a country's economic performance, and that institutional reforms are key to successful growth. Tanzania's position is interesting. It has been undertaking concerted reforms for nearly a quarter of a century, with a delayed but substantial pay-off in macroeconomic stability and growth. The AICD verdict on its record of institutional reform is very varied with some sectors impressive, such as roads, others slow to get started, and others going into reverse. There appears to be scope for valuable research on the reasons behind this differential performance, with a view to establish how the more successful exercises may be replicated.

This list is intended to be suggestive, not exhaustive, and to provide a partial agenda for future consideration by IGC.

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