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Pro-Poor Budgeting for PRSP Implementation

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ABSTRACT

The government budget is a key instrument for PRSP implementation. In most PRSP countries fiscal space has been growing in recent years due to increased domestic resource mobilization, external debt reduction and rising ODA inflows. But large financing gaps prevail and clearly show that resource allocation must be made more effective. Empirical and theoretical economic research has largely failed to provide the basis for results oriented allocation decisions which are complicated by many factors including time lags, complementarities and institutional quality. The prevailing approach in budgeting largely relies on prioritizing 'pro-poor' components of public spending. However, since the underlying criteria are simplistic and poorly specified, it is questionable if the prevailing approach actually increases the effectiveness of public spending in terms of reducing poverty. The main purpose of this paper is twofold. First, it develops an analytical framework referred to as *pro-poor budgeting* which guides resource allocation on a more elaborate basis to increase the returns on labour which is the sole asset of the poor. It is based on the key principles that public spending components to be prioritized must target the binding constraints and must be more cost effective than alternatives. Second, it shows how this framework can be implemented in practice given that political considerations dominate the budget process. Examples are based on the case of Tanzania, where the government is trying to introduce a higher degree of rationality into the budget process based on costing and prioritizing programs for achieving PRSP/MDG targets.

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Introduction

A wide range of public services and investments is crucial for the attainment of the PRSP targets which in the second generation PRSPs are commonly related to the MDGs. Therefore, the government budget is a key instrument for PRSP implementation. It is especially at the level of the budget composition that the relationship between budgets and the poverty-related targets is apparent (Adam and Bevan 2005). Yet, there is a missing conceptual link between the stated PRSP targets and interventions to provide public services on the one hand and the allocation of financial resources in the budget as inputs on the other hand. Generally, PRSPs hardly provide guidance on how to allocate public funds, especially in scenarios with limited resources. The medium term expenditure frameworks (MTEF), introduced in several PRSP countries as the link between PRSPs and the budget, are not based on a systematic costing and prioritization of policies to achieve PRSP targets. This gap is increasingly recognized. For instance, the Joint Staff Advisory Note on the Tanzanian PRSP suggests to prepare a "medium-term quantitative framework underlying the MKUKUTA[4] based costing and prioritization of the intervention strategies needed to reach the MKUKUTA targets" (IMF/IDA 2006).

Only recently, initiatives in some countries referred to as PRSP/MDG costings or needs assessments have started to put a price tag on PRSP interventions and to estimate the full financial cost of PRSP implementation (see Box 1). Costings can be seen as the first step to link the budget with the PRSPs. In many cases, they have demonstrated that there are large financing gaps and shortages of other inputs for public service provision (e.g. doctors). As donor funds and local resources remain limited, many interventions cannot be scaled-up to the extent necessary to achieve the targets. Therefore, government spending must be made more effective in order to increase its impact on the targets. In particular, decisions regarding resource allocation across sectors of government activities (inter-sectoral allocation), resource allocation across different interventions (intra-sectoral allocation), resource allocation across time (sequencing) and resource allocation across geographical regions (spatial allocation) must be made on a less arbitrary basis as it is common in the budgetary decision making processes at present.

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[4] MKUKUTA is the acronym of "National Strategy for Growth and the Reduction of Poverty (NSGRP)" in Swahili language

Box 1: Costing the second generation PRSP in Tanzania

Within the framework of the implementation of the Tanzanian National Strategy for Growth and the Reduction of Poverty, the Tanzanian Government conducts costings in several sectors including health, water, agriculture, education, roads and energy. Generally speaking, the costings are supposed to provide an estimate on what it takes in terms of human, institutional and financial resources to meet the PRSP as well the MDG targets by 2010 and 2015, respectively. They estimate the overall resource envelope as well as the specific resource requirements by interventions or public services. This allows the assessment of prospective financing levels. In case of a financing gap, the costings provide guidance about which interventions to prioritize. In addition, non-financial constraints are identified which potentially prevent the attainment of the targets in case additional measures are not taken even if sufficient financial resources are available.

The costing of the water sector showed that there is a financing gap based on current financing levels and that the cost of many interventions greatly differs. For instance, hygiene education requires expenditures of 45 million USD until 2015 whereas the construction of functioning water supply infrastructure requires 2 billion USD for the same period. However, at the same time, from a health perspective, hygiene education is as important as physical access to safe water. Therefore, the costing suggests that in scenarios with limited resources, hygiene education should be fully financed whereas the construction of physical infrastructure should be sequenced according to resource availability.

The health sector costing highlighted a dramatic shortage of trained doctors, specialists and nurses as a critical constraint for scaling-up interventions in the health sector. This non-financial constraint underlines complementarities with other sectors (education, civil service reform, etc.) and suggests that as a precondition to reach the health related PRS/MDG targets, large investments in education as well as governance reforms are necessary.

By estimating the total resource requirements and by providing guidance for resource allocation in resource constrained scenarios, the costings are an essential input for medium- and long-term financial planning and thus for PRSP implementation. However, in Tanzania, an overall framework for budget allocation based on the costings, which mostly provide sector-specific views, is still missing.

Making public spending more effective is inherently complex. First, targets can be multidimensional. If all targets have the same priority but if at the same time resource constraints prevent the achievement of all targets, trade-offs inevitably arise. Second, the impact of particular interventions on poverty-related outcomes is obscure. While a large range of public interventions likely contribute to poverty reduction, the challenge is rather to choose the most effective ones. Economic research has largely failed to keep pace with the challenges in development policy so that theoretical and empirical literature on public expenditure is of little use for allocation decisions in practice (Paternostro (2005)). Available technical tools provide valuable information for policy makers, but they must be complemented by additional analysis. Third, the budget process is highly influenced by political considerations, and policy

makers are led by subjective or superficial criteria. On the one hand, allocations that are more effective from a technical point of view may conflict with political interests. On the other hand, the consciousness among policy makers that in resource constrained scenarios, every spending decision may potentially entail large opportunity costs in terms of foregone benefits of alternative allocations is only slowly emerging. Allocation decisions are still made based on what is assumed to beneficial, and not based on what is assumed to be *most* beneficial for poverty reduction.

Due to these difficulties, there are hardly mechanisms for strategic medium and long-term planning of public expenditure. The prevailing approach to make public spending more effective is to prioritize particular components of public spending (e.g. spending on primary education) each of which comprising a range of interventions considered as 'pro-poor'. However, criteria used to identify these spending categories are typically based on naïve reasoning which does not take into account the complexities of this challenge[5]. Results-based public expenditure systems introduced in developing countries are essential, but they rely on a poor understanding of the links between inputs and poverty-related outcomes. In addition, the political will among governments and development partners to systematically review budget allocations is often lacking. Development partners often believe that attempts to influence the budget process using economic arguments are futile due to its political nature so that they do not support the development of new analytical tools.

The main purpose of this paper is to present an analytical framework referred to as *pro-poor budgeting*. It assumes that the overall target is poverty reduction through promoting economic development. It is based on the key principle that public spending should aim at increasing the returns on labour, which is the most important asset of the poor, by removing country-specific constraints on private investment[6]. The framework hence serves as a basis for medium- and long-term financial planning needed for PRSP implementation by identifying priorities to increase effectiveness. In contrast to prevailing approaches in development policy, this approach is more holistic and takes into account recent advances in development economics. Second, the paper shows how the framework can be implemented and considered in the budget process in practice given that political considerations dominate the budget process.

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[5] Spending programs for primary education are typically focused on hardware, leading to the construction of a large number of new school buildings, typically neglecting the software and other complementary factors which are necessary to produce the desired education outcomes.
[6] The World Bank plans to link research on public expenditure with ongoing work on the binding constraints to growth (Development Committee 2006).

The remainder of the paper is organized as follows. The second section illuminates the economic background on public expenditure as an instrument for poverty reduction. The third section analyzes the prevailing approach in budgetary decision making to prioritize public spending components. The fourth section introduces a framework which provides guidance about how to make resource allocation more effective. The fifth section indicates how this framework can be implemented in practice. The sixth section concludes.

Economic Background on Public Expenditure

Public expenditure finances a large range of activities including public services and public investments in support of reaching the PRSP targets. In line with one of the tenets of economics, in theory, government should allocate resources among different goods and services so that the marginal utility they provide is identical (Fozzard 2001). Apart from the fact that there is no common utility function, there are also two other obstacles which render the application of this principle impossible in practice.

First, the PRSPs contain a large range of targets. As resources are too limited to achieve all of them, trade-offs inevitably arise and choices have to be made about which targets to achieve first (e.g. improvement of the judiciary system or extension of the rural road network). The decisions in terms of setting priorities among the targets are partially made according to political preferences. However, as the achievement of different targets is often subject to complex interlinkages, as demonstrated below, economic criteria must also be observed when determining priorities.

Second, even when supposing that the most important objective is the reduction of income poverty, a detailed assessment of the impact of particular spending categories is not possible due to informational constraints (Fozzard 2001). There are several factors which obscure the linkage between poverty reduction as an outcome and the allocation of resources as inputs:

> ➢ In some cases, the impact of public spending is subject to time lags of varying lengths (e.g. in case of education) making it difficult to attribute outcomes in the present to public expenditure policy in the past.

➤ Many interventions are typically complementary, both in terms of provision and in terms of consumption. A typical example of a provision complementarity is that secondary and tertiary education to train teachers is required to provide primary education. An example of complementarities both in terms of consumption and production is that in order to provide infrastructure-related services which can be used effectively, infrastructure needs to be both constructed *and* maintained. This implies that the impact of one particular intervention depends on whether public spending finances complementary activities. The complexity as well as the large number of linkages obscures the impact of the components of public expenditure. In addition, complementarities can also show up as preconditions for achieving a particular target implying that the deviation of the optimal (and likely unknown) sequencing of public interventions may inhibit the attainment of desired outcomes.

➤ External factors which are often unpredictable or not clearly visible influence the impact of public spending. For instance, as a result of a drought, public support to increase the productivity of farmers might not be as effective in increasing agricultural output as in normal years. Due to the magnitude of external factors, it is difficult to evaluate the effectiveness of public spending.

➤ Institutional quality, defined as the existence of rules and their enforcement, as well as the quality of governance, play an important role in determining the impact of public spending. Resources may be diverted by government officials, or the quality of public service providers may be low (e.g. due to absenteeism). Thus, a weak impact of particular public spending components may be either due to low effectiveness or due to low institutional quality.

➤ The relationship between desired outcomes and public spending categories may likely be non-linear or subject to thresholds. For instance, investments in infrastructure may become effective only after some point (Hermes and Lensik 2005).

➤ Public spending likely has direct and visible effects, but also indirect and less visible effects (Paternostro 2005). For instance, the poor unlikely benefit from

tertiary education directly, but tertiary education may still have significant indirect benefits for poverty reduction if graduates contribute to better public service provision or remit their income for instance to poor households (Mackinnon and Reinikka (2000)).

These factors render the solution of the budget problem, which refers to determining the optimal allocation of resources and which was first recognized by Key in the 1940s, impossible. Economics has traditionally paid little attention to the long-term impact of the composition of public expenditure on economic development including economic growth and poverty reduction. Key's claim that the economic basis for budget allocations is missing still holds today. While the theory of public expenditure dates back long time, in the context of the PRSPs, the criteria for resource allocation developed in the past are not applicable. For instance, since the mid-1980s, new endogenous growth models have proposed a number of channels through which fiscal policy including public spending could affect the growth rate (Gemmell 2005). However, expenditure categories are often too broad, and central features of the budget problem are not included in the theoretical models so that fiscal policy prescriptions cannot be directly drawn.

In addition to the theoretical literature, there is a vast body of empirical literature looking at the impact of public expenditure on economic growth and poverty. Empirical evidence on the impact of public spending is insufficient. The empirical fiscal-growth literature has generally yielded non-robust results and is therefore inconclusive. In addition to methodological problems including non-linear relationships, endogeneity of fiscal policy and the challenge to adequately deal with the government budget constraint (if the government budget constraint is not included, the results can be misinterpreted as explained in Gemmell (2005)), severe data limitations for developing countries prohibit a comprehensive analysis. Therefore, there are hardly any studies analyzing the growth impact of various public spending categories that explicitly focus on developing countries and that do not exhibit methodological weaknesses (Gemmell 2005). There are also microeconometric studies which attempt to model the behaviour of households which may change as a response to public spending. However, they typically only focus on one component of public spending and do not allow comparisons between different components.

There are several tools to guide resource allocation. First, several technical principles have been proposed. For instance, the principle of cost-effectiveness relates expenditures to the achievement of a particular policy output so that alternative interventions can be ranked based on this ratio. However, among other weaknesses, the application of these technical principles suffers from informational constraints, and their application to inter-sectoral resource allocation is always impractical (Fozzard 2001).

Second, benefit incidence analysis can be used to assess the distributional impact of fiscal policy. In particular, it can be used to identify key areas where the benefits of public expenditure are failing to reach the poor. The technique is based on a clear identification of those who benefit and those who do not. The impacts of public spending are typically measured in terms of the increments or reductions of income or consumption of public services they imply. For instance, applying the method to cash transfers requires knowledge about pre-transfer income distribution and the amount of transfers received by each household. This enables a comparison between pre-transfer and post-transfer income distribution to identify the distributional impact of the transfer (McKay 2005). Even though this method has advantages in terms of transparency and data requirements, it has some major limitations. It does not assess the impact on growth which is the precondition for poverty reduction. In addition, it can only be applied to a narrow set of expenditure categories for which the direct beneficiaries can be easily identified (e.g. the recipients of cash transfers).

Third, computable general equilibrium models including the Maquette for the MDGs (MAMs)[7] which takes into account several spending categories including spending on several types of education, health and infrastructure services can be used to support resource allocation. The MAMs can simulate several alternative expenditure policies that differ both in absolute spending and allocation of resources over time. The model allows then an assessment of different spending scenarios based on which MDGs are achieved and to what extent poverty is reduced. The strength of this model is that it illustrates key interactions between achieving the MDGs and the rest of the economy as well as trade-offs between alternative expenditure policies and their short term macroeconomic implications (e.g. in terms of real exchange rate appreciation). It also takes into account complementarities, for instance achieving the education related MDG also depends on health. However, the model is necessarily based on simplistic assumption about the effects of public spending as the impact

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[7] For reference, refer to Lofgren, Hans; Diaz-Bonilla, Carolina. An Ethiopian Strategy for Achieving the Millennium Development Goals: Simulations with the MAMS model. DECPG, World Bank

of particular public spending categories is theoretically as well as empirically not established. In addition, spending categories are broad implying that the model does not provide much guidance for intra-(sub)sectoral allocation.

Fourth, public expenditure tracking surveys (PETS) and quantitative service delivery surveys (QSDS) are microeconomic tools to reveal and understand the translation of public spending into services. The insight that public spending data is a poor proxy for service delivery due to leakages and low quality of service providers triggered their development and application. The PETS collects information from different tiers of government and frontline service facilities, whereas in the QSDS, the facility or frontline provider is typically the main unit of analysis. For instance, a public service expenditure tracking survey in Tanzania revealed that 57% of funds for recurrent non-wage expenditures for education transferred by the central government via local authorities to frontline providers were diverted. However, both tools are mainly used for diagnostic purposes and to provide primary data for empirical research (Reinikka and Svensson 2005).

Thus, generally speaking, economic theory, empirical research and economic tools provides little guidance for resource allocation. In general, they have not kept pace with the challenges in development policy. Some of the economic tools presented are useful but must be complemented by additional analysis.

Prevailing Approaches to Make Public Expenditure More Effective in Development Policy

Given the urgency of the task to make public spending more effective, there have been attempts in development policy and research to develop methods and principles to improve resource allocation. Results based expenditure management systems have shifted emphasis from inputs to outcomes of government spending and created a new approach in development policy. However, expenditure management systems require a conceptual basis.

As there is no theoretical and empirical evidence on the exact impact of public spending components and particular interventions, development policy and research rely on prioritization to make public spending more effective. Generally, particular components of public spending which are believed to be more important are simply prioritized. Concepts based on prioritization do not provide a full ranking of different options for resource

allocation. Yet, given the absence of economic evidence, they are pragmatic and, provided their predictions are correct, they give simple guidelines about how to make public spending more effective.

In development policy, prioritizing components of public spending has a long tradition. As soon as 1959, the World Bank economic survey suggested prioritizing expenditures on education, water, roads and bridges (Goergen et al. (2001)). Currently, there are two approaches for prioritization.

A long existing but little advocated approach in development policy is to prioritize sectors of economic activity or geographical regions or zones to promote economic development[8]. It involves fully financing the needs of the chosen regions or industrial sectors, while neglecting the ones that were not chosen (in many cases, there is a considerable overlap between both approaches as a particular industry is predominantly clustered in one region). The strength of the approach is that complementarities of different components of public expenditure are fully taken into account as wide range of public services is provided. It has also proven to be successful as development strategies in several countries. In the Dominican Republic for instance, tailored public service provision ensured that key sectors of the economy including tourism could take off (Hausmann 2005). However, choosing the economic sectors or the geographical regions is often difficult because it is often very difficult to predict which ones will be most competitive and which have the greatest potential. Therefore, choosing the 'right' one may require long trial and error periods. In addition, the political leadership must have enough power to firstly be able to choose a sector or region to be advantaged and to completely cut support for a particular industry as soon as it proves to uncompetitive.

More recently, much emphasis has been put on prioritizing the so called 'pro-poor expenditures'. There is an unusual consensus that social sector spending and spending on certain types of infrastructure provision, such as rural roads and water supply, especially on health and education, is a key to poverty reduction (Adam and Bevan 2005). This approach, which may be intuitively appealing, uses facile reasoning to link inputs (public spending) to outcomes (poverty levels) (Paternostro et al 2005). It especially ignores factors that give rise to the complexity of the budget problem, country-specific characteristics and basic

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[8] This approach is for instance implicitly advocated in Tanzania's Mini Tiger Plan.

mechanisms of poverty reduction. In addition, it does not apply technical principles for resource allocation.

First, this approach is very broad. At most, it prioritizes entire sub-sectors of government activity rather than particular interventions or strategies jeopardizing potential gains in terms of effectiveness. In many sectors, interventions widely differ with respect to their impact, costs and implementability. If a prioritized sub-sector is not fully funded (for instance, if allocated resources are insufficient according to a needs assessment), prioritization of particular interventions is necessary.

Second, indirect effects of public spending on poverty are not taken into account. For instance, whereas spending on primary education is often considered as pro-poor as the poor are direct beneficiaries, spending on energy plants is not as the poor seldom have access to electricity at their homes. However, the poor may still benefit if they are employed in companies which require electricity for production. If electricity supply is disrupted, labour is laid off and poverty levels may increase.

Third, the approach ignores linkages and complementarities in the provision as well as in the consumption between different categories of public spending. In particular, higher spending in a specific sector of government activity is typically only linked to outcomes in the same sector, neglecting that multi-sectoral intervention packages would be needed to achieve PRSP or MDG targets. For example, it is widely assumed that public expenditures for primary education are pro-poor. This view has two shortcomings. First, supposing that this view is correct, spending that actually contributes to primary education should be prioritized. However, in practice, public spending is categorized along administrative and not along functional lines implying that significant expenditure (and aid) increases of the ministries of education are suggested. Therefore, it is neglected that interventions in other sectors (e.g. roads, water, agriculture) or sub-sectors (e.g. secondary education to train primary school teachers) can be critical to achieve the envisaged outcomes in primary education, and that expenditure increases in secondary and tertiary education can be critical for achieving other targets (e.g. for health by solving the human resource crisis in the health system). Secondly, labour with different skills may be complementary in the sense that the production of goods and services requires unskilled labour as well as skilled labour. Especially in an urban context and in labour intensive industries, companies require labour for the manual work as well as

skilled labour for supervisors and managers. If one type of labour is scarce, investments are not made and employment is not created.

Fourth, this approach does not take into account country-specific constraints or bottlenecks for economic growth and poverty reduction. For instance, focusing on primary education may ignore the fact that the bottleneck for agroprocessing industries located in rural areas and heavily relying on unskilled labour is not a lack of primary education (even though it may be far from sufficient), but rather a shortage of supervisors which are typically people with secondary education and managerial skills.

Thus, even though the previous examples may seem artificially constructed, they nevertheless clearly show that the prevailing approach to prioritize categories of public spending is based on simplistic assumptions. Governments and development partners only slowly start recognizing the necessity to refurbish the analytical toolkit. Prioritizing economic sectors or geographical regions is economically more promising, but politically harder to enforce, disadvantages particular population groups and does therefore not specifically aim at poverty reduction. It is therefore not considered further.

Box 2: Public Expenditure for Poverty Reduction in Tanzania

The Tanzanian PRSP of the first generation finalized in 2000 identifies six priority (sub)sectors including basic education, primary health care, water and sanitation, rural roads, agriculture extension and HIV/AIDS. This social bias in prioritization of public expenditure ignores the complexities of the budget problem as described in the paper. As a share of total expenditure and as a share of GDP, funding for these items increased roughly from 15% to 25% over the period from 1998/99 to 2004/2005. However, this increase seems to be rather small when considering that total expenditure increased by 170% in nominal terms. In other words, the large annual increments were not fully used to fund priority activities even though in times of an expansion of public expenditure, this is politically easier to enforce. This failure may reflect that the announcement to prioritize these sectors was mainly politically motivated and not based on thorough economic analysis. Below the sector and sub-sector level, there is little prioritization. Some authors note that Tanzania is one of the countries where new spending is spread thinly over too many programmes as well as activities and not prioritized on the basis of an assessment of the effectiveness of existing policies and of their impact on poverty reduction (de Renzio and Smith (2005)).
The Tanzanian PRSP of the second generation (NSGRP) is more sophisticated and includes three broad clusters including growth and poverty reduction, social well-being and governance. Narrow priority sectors are no longer defined, and it is recognized that poverty-related outcomes require multi-sectoral intervention packages thereby taking into account complementarities and linkages. However, concepts and tools for aligning public expenditure with the NSGRP and for redefining priorities are missing even though their need is widely

recognized in Tanzania. Scaling-up investments in infrastructure and agricultural productivity without prior analysis as requested in World Bank (2006) would simply lead to a new bias in public expenditure.

A Framework for Pro-Poor Budgeting

Overview

The PRSPs of the second generation typically include three broad objectives including economic growth and reduction of income poverty, social well-being and good governance each containing a range of specific targets. The achievement of each of these broad objectives is not only an end in itself, but also to some extent a means. 'Productive' government services grouped under the first objective (e.g. road construction) to promote economic growth may have to be complemented by 'social' public services grouped under the second objective. The approach presented here shows how public spending can be made more effective in terms of long-term and sustainable reduction of income poverty. However, it takes into account that social well-being and good governance may be essential for poverty-reducing economic growth.

Basically, income poverty is reduced if the poor earn higher returns on their assets. Therefore, the government strategy should be on the one hand to invest in the poors' assets to durably improve their earning capacity without making them dependent on welfare programs (Kappel et al. 2005), and on the other hand, to create an environment in which opportunities exist to put their assets to work. As labour is the poors' major asset and as in developing countries, unemployment is low, but as low wage and low productivity employment is high, increases in labour productivity *and* net job creation or increased self-employment are essential (International Labour Organization 2002).

The key challenge for governments is to promote private investments and entrepreneurship. Higher levels of the latter are essential to create higher levels of sustained economic growth which expands the number of well paid jobs as well as productive self-employment and thereby durably increase the incomes of the poor. At the same time, private investment and entrepreneurship increase labour productivity. First, labour productivity increases because

higher government revenues are generated which are needed to scale up crucial public services including health and education. Second, higher private investments increase the capital per worker or lead to the acquisition of new technologies (for instance through research and development) (OECD 2006).

Entrepreneurs choose to expand their activities and to invest under a good investment climate which is defined as an environment with profitable business opportunities. Public spending should thus promote a good investment climate which likely leads to poverty reduction through increased returns on labour. Fortunately, public spending can more be more easily linked to higher private investments and increased entrepreneurship than directly to poverty reduction.

Promoting higher levels of entrepreneurship and private investments only contributes to durable and sustainable poverty reduction under two conditions. First, the principle of sustainability must be observed. The government must not sacrifice interests of the current generation at the expense of future generations, for instance in the fields of natural resource use and of education of children. Second, the government must promote investment and entrepreneurship in those sectors where a large number of poor likely benefit. It is widely accepted that private investments and entrepreneurship have to be expanded in agriculture, in non-farm rural sectors, in informal sector activities, in labour-intensive sectors and/or in localities with high poverty rates (Kappel 2005).

Prioritizing to remove the binding constraints

Hausmann (2005) develops a strategy for figuring out the policy priorities in developing countries to accelerate economic growth through higher private investments. Even though the approach used in Hausmann (2005) refers to public policy in general, it can be well applied to prioritize public spending. It assumes that the full list of policy options which would be optimal and first best is either unknown or impractical and that second-best interactions across markets cannot be figured out. Second best interactions make it more difficult to predict and analyze the impact of public policy measures. The same applies to public expenditure. Due to scarcity of resources, the government is unable to provide all public services that are desirable. In addition, as previously discussed, the impact of particular components of public expenditure is unclear (albeit not necessarily due to second-best interactions).

The approach advocated in Hausmann (2005) rests on the principle that under these conditions, policies which target the most binding constraint of economic growth should be prioritized because they focus on removing country-specific bottlenecks and have therefore likely the largest impact. Hausmann (2005) proposes three proximate determinants of the levels of private investment and entrepreneurship which in turn determine the pace of economic growth: returns to economic activity, their private appropriability and the cost of financing. The methodology proposed in Hausmann (2005) to identify the binding constraints to private investment and entrepreneurship can be conceptualized as a decision tree (Figure 1). The first stage of the diagnostic analysis aims to uncover which of these three factors pose the greatest impediment to investment as well as to entrepreneurship and thereby to economic growth. The constraint may lie in low returns, in poor appropriability or in high cost of finance. The next stage of the diagnostic analysis is to uncover the specific distortions that lie behind the most severe of these impediments. Using an endogenous growth model, Hausmann (2005) derives a list of distortions which can be easily extended and groups each under one of the three branches. Moving down the branches of the decision tree in Figure 1 automatically discards the candidates of the most binding constraints.

Returns on economic activities

In addition to firm-specific factors which influence returns and profitability (such as managerial decisions), social returns on economic activity can be influenced by government activity. In principle, social returns on economic activity depend on inputs that are available to all firms. Higher social returns increase the returns on economic activity. They are determined by a number of factors. First, the availability of human capital which refers to the ability of the people to be economically productive is critical. Better developed human capital generally increases productivity and therefore overall returns on economic activity. Human capital suffers if people do not have enough skills, if they are sick or injured, or if they are unable to devote their time to productive activities. Therefore, education to promote skills, access to health services and time-saving infrastructure (e.g. close access to water) are critical for human capital. Second, evidently, the level of infrastructure including transportation links, energy and communication networks is crucial to lower costs.

Appropriability of returns

Government failure can lead to poor appropriability of returns. On the one hand, property rights endangered through state action or high crime rates, high levels of corruption and high taxes are microeconomic factors that have adverse impacts on the appropriability of returns. On the other hand, macroeconomic and social instability also threatens appropriability of returns. If the appropriability of returns is uncertain, economic activity is suppressed due to two reasons. First, due to high risks, investments may not be made. Second, investors and entrepreneurs may attempt to insure themselves against possible losses, which drives up costs and which lowers returns on economic activity.

Access to finance

Access to capital through financial institutions is crucial to finance investments. High costs of finance discourage investments. Domestically, the quality of financial intermediaries and the level of savings are crucial. The cost of foreign borrowing may be high if the country has reached its credit ceiling due to risk premia.

Once the binding constraints are known, appropriate interventions including their complements to remove them must be identified possibly resulting in several alternative intervention packages. The intervention package which is chosen must be proven to be effective and must require least financial resources.

Figure 1
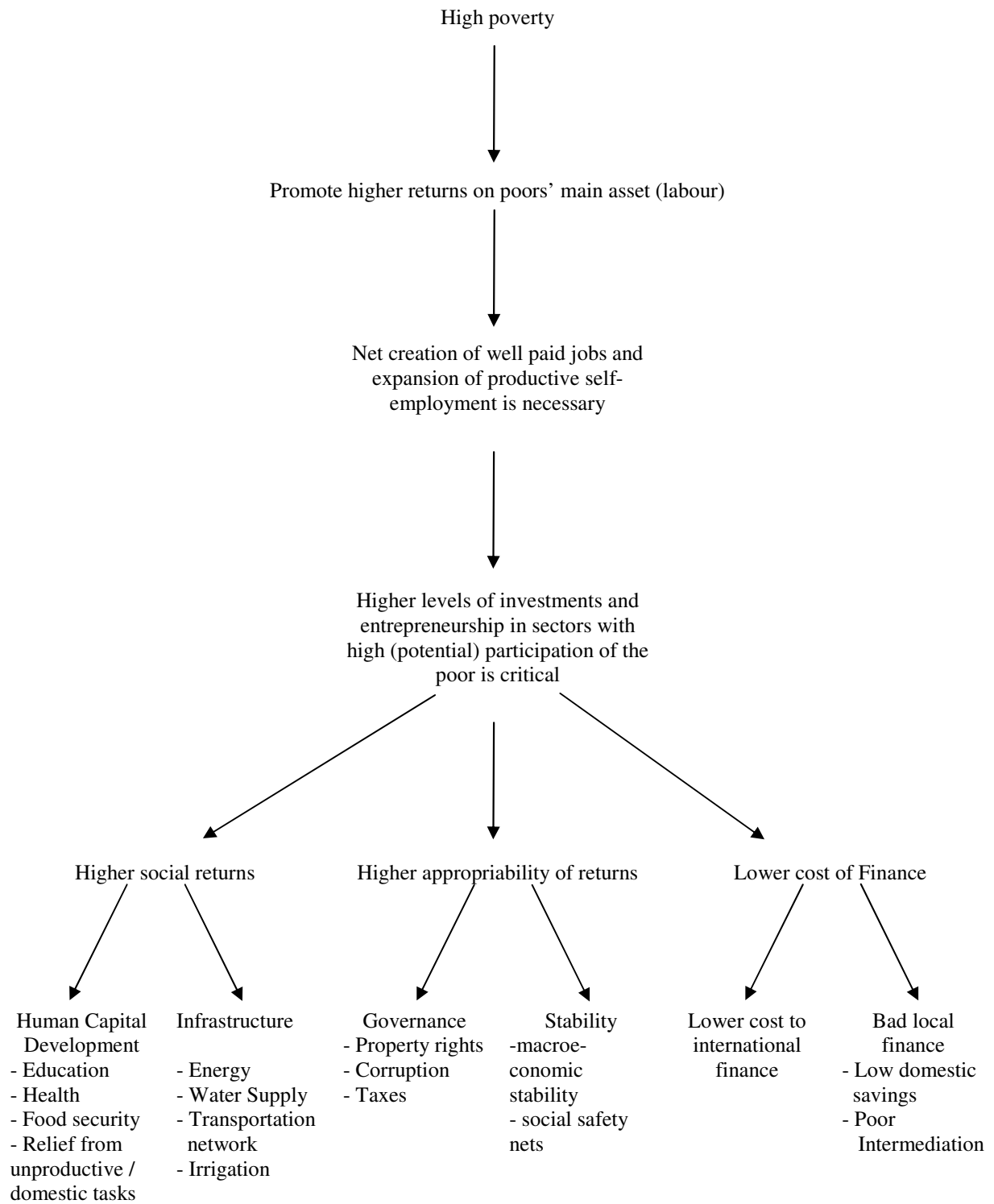
Source: adapted from Hausmann (2005)

Prioritizing Public Expenditure Categories in Practice

Implementing pro-poor budgeting requires several steps. However, there is no blueprint for implementation since countries differ not only in terms of their constraints but also in terms of available data sources, country-specific surveys as well as in terms of political support.

First, the binding constraint must be identified. Several options exist. Investment climate surveys or survey among companies often contain responses of companies in terms of the most severe constraints they perceive. Additionally, private sector representatives (e.g. chambers of commerce, sector associations, NGOs working with informal micro enterprises, managers of companies etc.) can be interviewed. For exporting companies in small countries, comparison of the cost structure of domestic with foreign competitors provides useful information. Other data sources, also in comparison to other countries, including household survey and macro data may give additional hints about the binding constraints. However, efforts have to be made in order to also identify the constraints of marginalized groups including the poorest in rural areas and of potential investors which are not yet in the market. Ideally, several sources of information are combined to obtain a richer picture.

Contrary to what Hausmann (2005) implicitly suggests it is unlikely that the entire economy faces identical binding constraints. Therefore, as a second step, the distinctive features of groups of firms or entrepreneurs facing common binding constraints have to be identified. In particular, firms or entrepreneurs of common size, of common economic sector and of common selling market likely perceive identical constraints. For instance, an exporting manufacturer located in proximity of a major port likely faces different constraints compared to a subsistence farmer in rural areas.

If the number of constraints faced by different firms or entrepreneurs is large, further selection becomes necessary. Otherwise, prioritization becomes meaningless if too many interventions are prioritized. Thus, as a third step, among the binding constraints, the ones to be addressed have to be selected. Constraints can be selected in two different ways. First, the constraints of only some groups of firms or entrepreneurs can be targeted. Groups of firms and entrepreneurs or economic sectors can be selected based on

> ➢ their size or their share in GDP (implying that larger sectors should be favoured)

> - employed labour (implying that sectors employing a large share of the labour force are preferred)
> - potential development (implying that sectors with high potential to expand and high potential for job creation could be preferred).

For instance, it is sometimes argued that in Tanzania, agriculture (employing a large share of the workforce including the poor) and tourism (labour intensive economic sector with high growth rates in the past and high potential for job creation) should be especially promoted. In this context, this would imply that the constraints of these sectors are targeted by interventions. However, choosing a sector with a high development potential (e.g. with strong international competitiveness) is challenging as discussed above.

Alternatively, instead of removing constraints on a national level, binding constraints could be identified and targeted on a regional level. It is likely that in many regions, economic activity concentrates in certain sectors implying that on a regional level, there are less constraints. However, some constraints can only be addressed on a national level (e.g. macroeconomic instability), and substantive regional-level information or data is necessary.

Box 3: Binding Constraints in Tanzania

In Tanzania, key representatives from the private sector are currently interviewed in order to identify the binding constraints for private investments as part of the implementation of the second generation PRSP. Even though results from interviews may be biased in the sense that they reflect personal opinions, or that managers may blame 'unfair' foreign competition for their own, homemade, poor performance, they nevertheless provide important preliminary insights, especially when complemented by additional analysis. In general, low returns on investment, poor appropriability of returns and insufficient access to finance are perceived as equally binding by many companies. However, the underlying causes of these constraints differ by economic sector and by the size of the company as expected.

Contrary to conventional wisdom, the quality and the extent of the road network is mostly not seen as the major cause of low returns. An exception is the tourism sector which requires that destinations are easily reachable by tourists. In the manufacturing sector, unreliable access to energy is seen as a major source of low returns. Returns on private investments are generally affected by the lack of labour with technical, specialized and entrepreneurial skills. Basic primary or secondary education seems to be sufficient according to the interviewees.

The major causes of low appropriability of returns differ as well. The business activities of the small and informal enterprises are depressed due to unsecured premises. Medium-size companies consider that the appropriability of their profits is adversely affected by unpredictable taxes and high social contributions to state-run social funds.

Access to finance is limited for small and medium companies through high interests rates, high collaterals required and the short maturity of the loans.

The fourth step consists of generating a list of possible interventions which aim at removing the constraints. The poverty reduction strategies usually contain a long and comprehensive list of interventions which are adapted to the country in question and which are proved to be effective. In addition, complementary interventions have to be found. Possibilities include to analyze the inputs for the provision of a particular service (e.g. medical personnel which would require as a complement spending on education), or to analyze the factors that are necessary for its use (e.g. roads leading to a health facility so that potential users can consume health services). Step four results in several alternative intervention packages.

As a fifth step, the intervention package to be prioritized is chosen. Provided that the intervention packages identified can be assumed to be relatively identical in terms of their impact, the one which requires least financial resources and which is therefore most cost effective is chosen. Resource requirements can be derived from costings or needs assessments of PRSPs provided that they estimate the financial cost of every PRSP intervention. If local cost estimates are not available of all interventions, costings of other countries may be used.

If the binding constraint to be removed is related to human capital, as an alternative to the procedure presented, vouchers could be distributed. Instead of determining which interventions are most appropriate or which particular element of human capital is the binding constraint, the people themselves could choose. Vouchers could be distributed which entitle their holders to purchase a certain social service or good (e.g. a malaria bed net, or education). Supposing that the people themselves know best which constraint is binding, they could acquire the most appropriate remedy. However, while this concept is theoretically appealing, it has severe limitations in practice. Many different public services would have to be offered everywhere. Especially in rural areas, this is not the case. In addition, collective choices may have to be made first (e.g. to build a school or a road) before the individual can choose which one to use.

As a last step, the prioritization has to be considered in the budget. Even though political considerations dominate the budget process, the result of the pro-poor budgeting framework are likely considered due to several reasons. First, due to little research on the optimal composition of public expenditure, there exists no clear and transparent benchmark to evaluate allocation decisions. If this gap is filled, political consideration may become less

important. Second, development partners have a vital interest in the productive use of their resources, especially when they grant budget support implying that there is external pressure. Third, effective public spending is absolutely critical to reach the MDGs and related targets. As governments in many developing countries are determined to reach them, they recognize the need to make public spending more effective. Finally, the pro-poor budgeting approach does not advocate large-scale reallocation of government resources which could shift the binding constraints and which would then require further reallocations. For instance, if a lack of skills is the bottleneck for poverty reduction, even in the absence of complementarities, it would not make sense to only finance education. This would automatically create other bottlenecks (for instance, isufficient and badly maintained infrastructure). Therefore, a more gradual and only a partial shift of expenditure towards priorities is more suitable. In particular, instead of equally distributing annual increments among all sectors of government activity, it could solely be spent on prioritized items. This approach minimizes political opposition as there are only winning departments or ministries, but no losing ones.

Conclusions

The analytical framework presented provides a pragmatic and easy-to-implement approach for pro-poor budgeting to make public spending more effective. In contrast to prevailing approaches in development policy and existing technical principles for resource allocation, it is theoretically more appealing because it is more holistic and because it suggests to prioritize interventions including their complements to target the binding constraint to poverty reduction. It can also accommodate the results of economic tools presented above. For instance, if public expenditure tracking surveys show that institutional quality is a major bottleneck for public service provision, and if the binding constraint for poverty reduction is insufficient human capital, the analytical framework presented would suggest investing in improving service delivery. However, the framework does not provide a complete solution to the budget problem; in particular, it does not provide the perfect resource allocation along interventions, regions and time. In addition, a careful analysis of country-specific conditions is necessary so that depending on the context, modifications have likely to be made. The most important shortcoming is that constraints can shift as a result of public spending. Therefore, it is unclear to what extent reallocation to target the current binding constraints is desirable without creating new ones.

There is much scope for further research. First, this analytical framework should be more closely connected to economic theory. Second, its empirical basis must be improved. Finally, experiences from implementation should be used to review the design.

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