Macroeconomic Challenges of Scaling Up Aid to Africa

A Checklist for Practitioners

Sanjeev Gupta, Robert Powell, and Yongzheng Yang

International Monetary Fund

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Contents

Glossary of Terms and Abbreviations

CPI   Consumer price index
CPIA   Country Policy and Institutional Assessment (World Bank)
DfID   Department for International Development (U.K.)
DSA   Debt sustainability analysis
DTIS   Diagnostic Trade Integration Study
G-8   Group of Eight industrial countries
HIPC   Highly indebted poor country
IF   Integrated Framework
IMF   International Monetary Fund
ITC   International Trade Center
LIC   Low-income country
MCA   Millennium Challenge Account (U.S.)
MDGs   Millennium Development Goals
MIC   Middle-income country
MTEF   Medium-Term Expenditure Framework
NGO   Nongovernmental organization
NPV   Net present value
ODA   Official development assistance
OECD   Organization for Economic Cooperation and Development
PEM   Public expenditure management
PEPFAR   President's Emergency Program for AIDS Relief (U.S.)
PER   Public Expenditure Review (World Bank)
PRSP   Poverty Reduction Strategy Paper
SSA   Sub-Saharan Africa
UN   United Nations
UNCTAD   United Nations Conference on Trade and Development
UNDP   United Nations Development Program
VAT   Value-added tax
WHO   World Health Organization
WTO   World Trade Organization

Preface

In 2005, major donor countries of the Organization for Economic Cooperation and Development indicated their intention to increase significantly the amount of external assistance they provide to developing countries in the next decade. The sharpest increase is likely to be in Africa, where a scaling up of external assistance, including comprehensive debt relief, will aim to support individual countries' efforts to achieve the Millennium Development Goals (MDGs). This handbook was prepared in the Policy Wing of the IMF's African Department as a practical guide for assessing the macroeconomic implications and challenges associated with a significant scaling up of aid to African countries. Its purpose is to provide a resource for policymakers, practicing economists in African countries, and staff of international financial institutions and donor agencies who participate in the preparation of medium-term strategies for individual African countries, including in the context of Poverty Reduction Strategy Papers (PRSPs). A version of this was published in September 2005 as an IMF Working Paper (WP/05/179).

When aid flows increase, a country has to choose how much to absorb and how much to spend. When aid is fully absorbed, a real appreciation of the exchange rate is likely, at least in the short run. In a number of countries, aid surges have been associated with real exchange rate depreciation, suggesting that supply effects have more than offset the impact of higher domestic demand on the nontradable sectors or, alternatively, that the aid has not been fully absorbed. Developing a good understanding of how a country will spend additional aid, as well as the appropriate policy response of the central bank, is therefore critical to projecting the likely macroeconomic impact. This handbook helps policymakers and economists develop various "scaling-up scenarios" to assess such contingencies. Scaling-up scenarios are not forecasts. They are tools to help countries identify important policy issues involved in using higher aid flows effectively and to help both donors and recipients provide a regularly updated vision for strengthening the potential impact of aid on growth, especially through policies that strengthen economic governance. Governments that receive higher aid flows also face the challenge of what to do if and when such aid flows are interrupted or reduced, and hence they need an "exit strategy" as part of the scaling-up scenario.

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The Macroeconomic Effects of
Scaling Up Aid

This handbook provides a checklist of the macroeconomic challenges that low-income countries are likely to face if they begin to receive significantly higher official development assistance (ODA) than in the recent past. The checklist, which is derived from a survey of the economic literature, is a tool for developing illustrative macroeconomic scenarios for individual countries in response to a scaling up of aid flows. For example, one scaling-up scenario might involve a doubling of official resource transfers as a share of a recipient country's GDP, with higher aid flows being sustained for a decade or more.

Scaling-up scenarios may help guide a country's efforts to achieve the MDGs.

1.1. Meeting the Millennium Development Goals

Such scenarios are most likely to be developed in the context of a country's efforts to achieve the Millennium Development Goals (MDGs) with the support of the international donor community.

Estimates of the costs of reaching the MDGs vary widely**.** The 2005 Group of Eight (G-8) Gleneagles communiqué (Group of Eight, 2005) calls for raising annual aid flows to Africa by $25 billion by 2010, while the UN Millennium Project (2005) has argued for $33 billion of additional annual resources to achieve the MDGs in Africa. Consistent with the G-8 proposals, the World Bank and IMF (2005) argue that a conservative estimate of the *additional* ODA that Africa could use effectively in both infrastructure and human development ranges from $14 to $18 billion per year during 2006–08, and rises to $24–$28 billion by 2015. ODA (including debt relief) to sub-Saharan Africa (SSA) averaged about $17 billion per year during 2000–03.

1.2. Tracking Recent Aid Flows to Africa

Data from the World Bank (2005) suggest that net official transfers to individual African countries have varied considerably over the past quarter century (see Appendix Table A.2.1). Of the 44 countries covered by the IMF's African Department, 14 have received net official transfers of 5 percent of GDP or less, on average, between 1980 and 2003. These are generally the wealthier countries in terms of GDP per capita and some are oil producers. Twenty-four countries received between 6 and 16 percent of GDP on average, while a group of six countries, mainly small economies, received and absorbed transfers in excess of 20 percent of GDP on a sustained basis. Many countries have also received large aid inflows following the cessation of conflict.[1]

A few countries in Africa have experienced modest surges of aid in the recent past (Table 1).[2] All five countries listed in the table received debt relief over the period, which, in turn, permitted some of them to clear their external arrears and increase their net aid inflows. In gauging the impact of an aid surge, private inflows (for example, foreign direct investment) need to be considered along with the public inflows. If, for example, a surge in aid is offset by a corresponding fall in private inflows (as for Mozambique), the challenge of macro management is considerably different.

1.3. Using Scaling-Up Scenarios to Identify Appropriate Policies

The goal of preparing medium-term scaling-up scenarios is to identify some of the key measures and policies that can help a country absorb a higher level of aid and ensure that it uses the aid efficiently. Scaling-up scenarios are not meant to be unconditional forecasts of the actual impact of higher aid flows. Instead, they are designed to illustrate the potential impact on a country of a sustained increase in external aid if the country also implements economic policies that allow it to use and absorb the assumed aid flows without damaging or destabilizing the macroeconomic environment. Scaling-up scenarios may help countries avoid the type of absorption problems that may make donors less likely to offer higher aid and may make recipient governments less likely to spend it on a sustained basis—problems such as rising inflation, severe skill shortages or other bottlenecks, or a serious loss of international competitiveness. However, scaling-up scenarios are not meant to

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[1]See Collier and Hoeffler (2004). The ability of postconflict countries to absorb aid is somewhat different from that of countries that have a reform program supported by the World Bank or the IMF. The challenges facing postconflict countries are discussed in Section 5.2.3.

[2]Net aid flows are defined as disbursements of grants and loans plus debt relief, net of amortization, interest payments, and the change in external arrears. This measure captures the actual inflows of foreign exchange and, hence, the scale of the macroeconomic challenge faced by the recipient.

Table 1. Patterns of Aid Inflows in Five African Countries
(In percent of GDP)

	1998	1999	2000	2001	2002	2003
Ethiopia[1]						
Net aid inflows		4.7	6.0	**8.8**	**16.1**	**15.0**
Gross aid inflows		11.7	8.8	**24.3**	**18.1**	**17.5**
Net private inflows		6.6	8.1	**6.8**	5.7	**7.7**
Ghana						
Net aid inflows	3.2	2.8	–0.3	**10.6**	2.6	**7.1**
Gross aid inflows	8.7	7.5	8.8	**14.9**	6.1	**9.5**
of which program aid	1.8	1.9	3.8	**5.6**	2.6	**5.1**
Net private inflows	6.0	6.3	11.2	**13.0**	12.0	**13.7**
Mozambique						
Net aid inflows	11.6	11.4	**20.4**	**15.4**	**16.4**	**15.0**
Gross aid inflows	13.4	13.4	**20.0**	**16.7**	**18.5**	**17.4**
of which program aid	6.3	6.3	5.3	**7.0**	**7.9**	**6.6**
Net private inflows	5.9	15.8	**10.7**	**6.3**	**15.1**	**7.7**
Tanzania[1]						
Net aid inflows	4.6	6.6	7.5	**7.9**	**6.6**	**7.6**
Gross aid inflows	13.3	12.7	12.8	**12.5**	**10.5**	**10.5**
of which program aid	2.0	1.8	2.3	**2.7**	**3.8**	**5.1**
Net private inflows	2.1	2.0	2.2	**4.2**	**3.0**	**2.6**
Uganda[1]						
Net aid inflows		6.5	6.8	**15.5**	**10.5**	**9.9**
Gross aid inflows		10.0	11.1	**16.3**	**14.6**	**12.4**
of which program aid		2.5	3.6	**8.3**	**7.6**	**6.7**
Net private inflows		3.0	3.2	**2.8**	**3.2**	**3.3**

Source: IMF (2005d).
Note: Figures in bold represent periods of aid surges.
[1]In Ethiopia, Tanzania, and Uganda, the fiscal year begins in July. Hence, for example, 1999 data covers July 1998 through July 1999.

identify the point at which an economy will be no longer able to absorb higher aid flows effectively—that is, the point when the challenges will start to outweigh the benefits. That point is difficult to predict.

Medium-term scaling-up scenarios can be dynamic tools, because they can be updated regularly to reflect the changing medium-term visions of both donors and recipient countries (see Section 1.5.7 on monitoring and evaluation).

Scaling-up scenarios can identify some key measures and policies to help ensure that countries absorb a higher level of aid and use it efficiently.

1.4. Tailoring the Scaling-Up Scenario to the Country's Needs

There are three basic approaches to preparing scaling-up scenarios. The precise form of the scenario should reflect the goals of the country and the availability of other information. Some countries may choose to prepare a scaling-up scenario for inclusion in their PRSP.

1.4.1. Costing Non-Income-Related MDGs

This approach assesses the macroeconomic implications of a fiscal scenario that is based on an explicit costing of achieving those MDGs that do not focus on income levels (for example, those related to health, education, and water access). The costing exercise, which is typically carried out with assistance from development partners such as the World Bank and the United Nations (UN), provides a judgment about the resources required in each sector. It also may illustrate some trade-offs among policies, resources, and macroeconomic outcomes, and may identify supply bottlenecks that need to be addressed.

1.4.2. Projecting the Macro Impact of Various Aid Levels

A second approach is to assess the macroeconomic impact of a significant but arbitrary increase of external assistance (for example, a doubling of aid in proportion to GDP). Here, the higher level of resources is assumed, but it is not grounded in an explicit costing of the MDGs. The scaling-up scenario indicates how these resources might be used in a fiscal projection (including possible trade-offs among competing sectors or MDGs) and the potential impact of the higher spending on key macroeconomic indicators. This approach may be appropriate when an explicit MDG costing is not available or when the implied additional resources are judged to be too large for a country to absorb without harmful macroeconomic implications. Even in the absence of a comprehensive costing of the MDGs, preparing broad-brush scaling-up estimates serves to put important issues on the table for discussion among country authorities and donors.

1.4.3. Targeting a Particular Growth Rate

A third approach is to assess the implications of a specific target growth rate in an environment of scaling up. Target growth rates are given with a view to achieving the income-poverty MDG; higher external resources are assumed to be available; and the analysis suggests the kind of improvements in productivity and/or other policies that might be required to meet the macroeconomic goals for a given increase in aid.

1.5. Estimating Additional Aid and Identifying Appropriate Policies

The amount of additional aid and the macroeconomic and sectoral policies required to achieve the MDGs will vary from country to country. To determine the appropriate assumptions for developing the medium-term scaling-up scenario, countries should seek assistance and advice from development partners, particularly the World Bank. For some countries, the World Bank, the UN, or other donors may have already prepared detailed sectoral

assessments of the estimated costs and the associated sectoral policies necessary to achieve individual MDGs.[3]

When such costing analysis is available, it forms an important foundation for the associated macroeconomic projections of scaling up. As noted, however, when a fully articulated MDG costing exercise is not available, it may be necessary to use more broad-brush assumptions as the basis for scaling-up projections. Moreover, if the projected aid requirements are considered too unrealistic, it may be appropriate to prepare a less ambitious scaling-up scenario that assumes more limited external resources and therefore illustrates the potential trade-offs among competing policy goals.

Estimating the costs of achieving each MDG highlights the potential trade-offs among policy goals.

1.5.1. Quantifying New Aid Flows

Under all three approaches, a number of fundamental assumptions or judgments must be made about the level of increased aid. Key among these are the following:

- the expected level of additional external assistance

- the time period over which the increased aid will be available

- how quickly assistance will fall back to "normal" levels

- the sectors in which additional resources will be spent (for example, health, education, roads, infrastructure)

- how long a country's individual sectoral budgets will be increased

- whether the near-term (for example, three-year) financing assumptions are sufficiently realistic to be incorporated into the country's medium-term expenditure framework (MTEF)

- whether additional assistance will take the form of project finance or budget support, will be provided as grants or loans, or will be tied aid

- the balance between current and capital expenditures, and the share of additional public spending likely to be earmarked for imports

- the recurrent cost implications of public investment spending.

1.5.2. Analyzing Key Policy Questions

The scaling-up scenario must analyze the following key policy questions:

- How will private investment and savings be affected by higher government spending and other policies to be undertaken?

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[3]For example, for Ethiopia, the World Bank prepared scaling-up scenarios in the context of the 2003 Public Expenditure Review (PER). More recently, the Bank has developed a standard (recursive) dynamic general equilibrium model with an additional MDG module that links specific MDG-related interventions to MDG achievement (see Lofgren and Diaz-Bonilla, 2005). For a full description of the IMF's scaling-up scenario for Ethiopia, see IMF (2005b and 2005c) and Andrews, Erasmus, and Powell (2005).

- How will real GDP growth and productivity be affected by higher expenditures (including private investment), and how quickly will these results be seen?

- How relevant is governance for safeguarding public resources and ensuring their efficient use?

- What will be the impact of higher aid on the real exchange rate and trade volumes, and over what time period?

- What are the implications of higher resource flows for monetary policy management?

- How will domestic revenue be affected by higher aid flows? Does the composition of aid (grants or loans) affect revenue performance?

- What will be the impact of higher aid inflows on debt sustainability?

1.5.3. Using a Standard Macroeconomic Framework

Using a scaling-up scenario to assess the macroeconomic impact of increased aid is, in principle, no different from making any other macroeconomic projection. All the basic identities that form the foundation of the IMF's financial programming framework continue to hold:

- The budget deficit must be fully financed from either external or domestic sources.

- Projections for reserve money and broad money growth should be consistent with the output and inflation forecasts and based on realistic assumptions about the velocity of circulation and the money multiplier.

- Real GDP growth and trade projections should be consistent with the assumed path for both public and private investment, the real exchange rate, private credit growth, and expected developments in productivity, including those resulting from scaling up.

- Debt sustainability (both external and domestic) needs to be reassessed and maintained through a prudent debt-management strategy.

The basic identities that form the foundation of the IMF's financial programming framework continue to hold.

- The scaling-up scenario must be accompanied by a set of country-specific policy assumptions that provides some validation for the embodied economic assumptions.

1.5.4. Distinguishing between the Short and Long Term

An important characteristic of the scaling-up scenario is its long time horizon, which contrasts with the shorter period covered by a typical financial programming exercise. The longer time horizon allows for assessment of both the sustainability of debt levels under the various MDG scenarios and the impact of higher spending on growth and on non-income MDGs. It is important to decompose budget expenditures into 1) those that enhance growth in the short to medium term and 2) those that boost growth in the long run.

1.5.5. Assuming a Strengthened Policy Environment

The assumptions made about the policy environment (including governance) are critical to assessing the likely impact of higher aid flows on macroeconomic performance. For example, scenarios that incorporate the adoption of stronger policies illustrate how constraints on the absorption of higher aid flows can be alleviated. Moreover, it is critical to assume the implementation of a policy framework that encourages increased private sector saving, and hence a "crowding in" of private sector investment, along with the assumed higher levels of public investment.

1.5.6. Building Alternative Scenarios

The fragility of many of the assumptions and the long time period under consideration argue that a range of scenarios be analyzed. While discussions of scaling up are likely to focus primarily on a single, best-case scenario, alternative scenarios are helpful to illustrate the implications of a range of possible policy environments and outcomes. For example, alternative scenarios can be used to "accommodate" fundamental differences between the policies and assumptions that donors, the IMF, and other international financial institutions consider plausible and those the country authorities seek to adopt— for example, different aid levels, exchange rate or growth targets, or budget expenditures.

1.5.7. Monitoring and Evaluating the Impact of Aid

Scaling-up scenarios must be regularly updated and revised. In this regard, it is necessary to continuously monitor and evaluate the impact of higher aid flows on important macroeconomic variables, including for example, wages, prices, and export volumes. It is also necessary to ascertain whether the assumptions underlying the scenarios are holding true, and, if not, what alternative policies or assumptions could be considered. For example, if the original assumptions about the effects of aid were unduly pessimistic or optimistic, new scenarios could be developed to accommodate any unexpected outcomes associated with the original scenario.

1.6. The Organization of this Handbook

This handbook offers a checklist for preparing scaling-up scenarios, using a survey of the recent empirical literature to identify the key policy issues to be considered and the primary assumptions and judgments that should underlie such scenarios. Section 2 looks at issues related to the real exchange rate, including the impact of aid on the real exchange rate and the impact of a rising real exchange rate on exports and competitiveness. Section 3 considers issues in monetary management and projecting inflation. Section 4 discusses the potential impact of a scaling up of aid on revenue mobilization, and highlights the importance of maintaining domestic revenue levels throughout

Alternative scenarios can illustrate the implications of a range of policies and results over the longer time horizon involved in a scaling-up scenario.

the scaling-up period. Section 5 examines the overall and the particular effects of higher public expenditure on growth, emphasizing that the impact of aid depends on how it is spent and the policy environment into which it is disbursed. Section 6 considers other fiscal issues, including the importance of ensuring sufficient current spending, containing unproductive expenditures, targeting the poor, and monitoring sectoral bottlenecks. Section 7 stresses the importance of good governance for enhancing growth, improving aid absorption, and building a framework for effective public expenditure management. Section 8 examines issues related to external and fiscal debt sustainability. Section 9 summarizes the five primary guidelines included in this study. Appendix 1 reviews some of the recent literature on which this handbook is based. Appendix 2 summarizes the quantitative relationships involved.

2
Managing the Real Exchange Rate

2.1. Absorbing and Spending Aid Flows

A key issue in assessing the macroeconomic implications of scaling up official resource transfers to Africa is the potential impact on the real exchange rate, exports, and competitiveness. Standard analysis suggests that foreign aid flows augment domestic resources and therefore leave the economy, as a whole, better off. In practice, however, the macroeconomic impact of aid depends both on how a country spends the resources and on its policy response. The interaction of fiscal policy with monetary and exchange rate management is key. To highlight this interaction, IMF (2005d) discusses two related but distinct concepts: absorbing aid and spending aid.

2.1.1. Aid Absorption

Aid absorption is defined as the extent to which a country's nonaid current account deficit widens in response to an increase in aid inflows.[4] This captures the quantity of net imports financed by the increased aid and represents the additional transfer of real resources enabled by the aid. Absorption captures both the direct and the indirect increases in imports financed through aid, that is, the government's direct purchases of imports as well as second-round increases in net imports resulting from aid-driven increases in government or private expenditures. For a given fiscal policy, absorption is controlled by the central bank through two mechanisms: 1) how much of the foreign exchange associated with aid it chooses to sell, and 2) its interest rate policy, which influences the demand for private imports through aggregate

Aid absorption is the extent to which a country's nonaid current account deficit widens in response to increased aid inflows. It reflects the increase in net imports resulting from increased aid.

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[4]This definition of aid absorption in IMF (2005d) differs from that of domestic absorption (the sum of private consumption and investment, and government expenditure). The nonaid current account balance is the *current* account balance excluding official grants and interest on external public debt, whereas the nonaid *capital* account balance is the capital account net of aid-related capital flows, such as loan disbursements and amortization.

Box 1. Absorption of Financing for HIV/AIDS Programs[1]

External grants have been the dominant source of funding for HIV/AIDS–related expenditures in low- and middle-income countries. In several countries, financing needs for HIV/AIDS programs exceed total public health expenditure, and they could rise to up to 10 percent of GDP for some low-income countries. Thus, HIV/AIDS programs can present challenges similar to those associated with the type of significant scaling up of aid discussed in this handbook. Absorption of grants for HIV/AIDS depends on the composition of spending. Much of the HIV/AIDS–related spending finances antiretroviral drugs, which are imported in almost all low- and middle-income countries. In the countries with high HIV/AIDS prevalence rates (and thus disproportionally high treatment costs), much of the external financing is likely to be spent on imports, thus mitigating the macroeconomic implications of high aid inflows. However, other components of HIV/AIDS programs, such as prevention and orphan support, largely take the form of domestic spending on nontraded goods and services.

HIV/AIDS programs also have implications for economic growth and the government's fiscal balance. Programs reduce both the human losses from the disease and the number of new infections. To the extent that productive capacity is preserved, this has a positive effect on government revenues. At the same time, a successful prevention program means that the demand for HIV/AIDS–related services will eventually decline. Masha (2004), for example, estimates that these indirect savings will amount to at least 15 percent of the annual costs of Botswana's National Strategic Program on HIV/AIDS.

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[1]By Markus Haacker and draws on Haacker (2004a, 2005).

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demand. The aid is not absorbed, however, if central bank sales of foreign exchange are matched by private accumulation of foreign assets. Box 1 discusses the absorption of aid for HIV/AID programs.

2.1.2. Aid Spending

Aid spending is defined as the widening in the government fiscal deficit that accompanies an increase in aid. It indicates the extent to which the government uses aid to finance either an increase in expenditures or a reduction in taxation.

Aid spending is defined as the widening in the government fiscal deficit (net of aid) that accompanies an increase in aid.[5] Spending captures the extent to which the government uses aid to finance an increase in expenditures or a reduction in taxation. Even if the aid comes tied to particular expenditures, governments can choose whether or not to increase the overall fiscal deficit as aid increases. Aid-related expenditure increases can be for imports or for domestically produced goods and services.

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[5]The deficit net of aid is equal to total expenditures (G) less domestic revenue (T) and is financed by a combination of net aid and domestic financing: $G - T$ = Nonaid fiscal deficit = Net aid + Domestic financing. A few countries may also supplement their resources with access to nonconcessional borrowing.

2.1.3. Absorption and Spending Policy Options

Absorption and spending are policy choices. If the government spends aid resources directly on imports or if the aid is in kind (for example, grain or drugs), spending and absorption are equivalent, and there is no direct impact on such macroeconomic variables as the exchange rate, the price level, or the interest rate. But if a country receives foreign exchange resources and the government immediately sells them to the central bank, then the government must decide how much of the local currency counterpart to spend domestically, while the central bank must decide how much of the aid-related foreign exchange to sell on the market. In general, therefore, spending is likely to differ from absorption.

Four basic combinations of absorption and spending are possible in response to a scaling up of aid (Table 2). Each one has different macroeconomic implications.

- Aid is absorbed and spent. This is the situation assumed in most scaling-up scenarios. The government spends the aid increment, and the central bank sells the foreign exchange, which is absorbed by the economy through a widening of the current account deficit. The fiscal deficit is larger but is financed through higher aid.

- Aid is neither absorbed nor spent. The authorities could choose to respond to aid inflows by simply building international reserves. This might be an appropriate short-run strategy if aid inflows are volatile or if the country's international reserves are too low. In this scenario, government expenditures are not increased, and taxes are not lowered. Hence, there is no expansionary impact on aggregate demand and no pressure on either the exchange rate or the price level.

- Aid is absorbed but not spent. Increased aid inflows can be used to reduce inflation. This might be appropriate if inflation levels are excessively high. The authorities choose to sell the foreign exchange associated with increased aid inflows to sterilize the monetary impact of domestically financed fiscal deficits. The result would typically be slower monetary growth, an appreciated nominal exchange rate, and lower inflation. It may also allow for lower domestic debt and interest rates.

- Aid is spent but not absorbed. A final possibility is that the fiscal deficit, net of aid, increases with the jump in aid, but the authorities do not sell the foreign exchange required to finance additional net imports. The macroeconomic effects of this fiscal expansion are similar to increasing government expenditures in the absence of aid, except that international reserves are higher. The increased deficits inject money into the economy, and inflation increases.

The composition and quality of spending also affect the impact on growth. In assessing the overall macroeconomic impact of aid flows, therefore, it is important to distinguish between different types of aid (project or program), the types of expenditures (capital or current) the aid finances, and

If the government spends aid resources directly on imports or if the aid is in kind, then spending and absorption are equivalent. When a country receives foreign exchange resources, then spending is determined by the government and absorption is determined by the central bank.

Table 2. Possible Combinations of Absorption and Spending in Response to a Scaling Up of Aid

Aid is absorbed and spent.	Aid is neither absorbed nor spent.
The government spends the aid.	Government expenditures are not increased.
The central bank sells the foreign exchange.	Taxes are not lowered.
The current account deficit widens.	International reserves are built up.
Aid is absorbed but not spent.	**Aid is spent but not absorbed.**
Government expenditures are not increased.	The fiscal deficit widens (expenditures are increased).
The central bank sells the foreign exchange.	The central bank does not sell foreign exchange.
Monetary growth is slowed; nominal exchange rates appreciate; inflation is lowered.	International reserves are built up.
	Inflation increases.

the efficiency with which the aid is used. On the other hand, a complete absorption of aid through an equivalent increase in imports is unlikely to boost growth directly in the short term, although it may do so through spillover effects over time. These issues are addressed in Sections 4 and 5.

2.2. Adjusting the Real Exchange Rate

In a donor-financed scaling-up scenario, the assumption is typically that most (though not necessarily all) aid is both absorbed and spent. In this case, some real exchange rate adjustment may be necessary and, indeed, appropriate in response to a sustained higher level of aid because of the effects on the relative demand for imports and for domestically produced tradables and nontradables.

2.2.1. Dutch Disease

"Dutch disease" describes a scenario in which currency appreciation makes tradable goods less competitive and leads to an increase in imports. The result is a shift of resources away from the production of tradable goods and toward nontradables.

Increased aid boosts demand for both imports and domestically produced nontradable goods, including public services such as health care and education. Bevan (2005) notes that the public sector is typically assumed to have a higher propensity to consume domestically produced goods and services than the private sector. Thus, the domestic component of demand will likely be higher if the aid finances higher public expenditures than if it finances tax cuts, transfers to the private sector, or lower domestic borrowing. A country can import goods directly from the world market, but only domestic producers can supply nontradables.

Unless there is considerable excess supply in the economy, the prices of nontradables must become higher than the prices of tradables (that is, the real exchange rate must rise) in order to encourage resources, including labor, to switch from the production of exportables to the production of nontraded goods. As the real exchange rate appreciates, the tradable goods sector contracts compared with the nontradable sector—that is the so-called Dutch disease.

Dutch disease effects are likely to be stronger when trade is more restricted, when production is at full capacity, and when the ability of consumers to switch between domestic and imported goods in response to relative price changes is more limited as a result. Increased trade liberalization can facilitate aid absorption without leading to Dutch disease effects and is therefore one policy option available. Although Nkusu (2004) stresses that a failure to take sufficient account of idle capacity may lead to excessive concern about Dutch disease effects, unemployed capital and labor are relevant only if they can be brought into productive use in response to higher domestic demand. Hence, if critical inputs are in short supply (for example, specialized labor) and cannot be replaced by resources that are in abundant supply, full capacity can coexist with a generalized unemployment of factors. The mechanism for real exchange rate appreciation varies depending on the exchange rate regime. In a pure float, the central bank sells the foreign exchange associated with the aid, causing a nominal (and real) exchange rate appreciation. In a fixed exchange rate, a period of inflation raises the real exchange rate, with the central bank accommodating higher government expenditures. The increase in aggregate demand and the real appreciation cause an increase in net import demand, forcing the central bank to sell foreign exchange to defend the fixed nominal exchange rate.

2.2.2. Supply and Demand Effects

The macroeconomic impact of aid is likely to depend on how the aid is used. If aid is used to boost supply capacity, the macroeconomic consequences will likely be mitigated. On the other hand, if aid finances social sector spending, the macroeconomic consequences will likely be exacerbated. The interaction of demand and supply effects may cause the real exchange rate to "overshoot" its long-run value. This might mean a real appreciation in the short run, followed by a real depreciation in the medium term. The costs of such real exchange rate volatility will be high if domestic firms face high adjustment costs and if domestic financial markets are relatively underdeveloped. In these circumstances, exporting firms may run down their capital, lay off skilled workers, or even close down, even though the sector's long-term prospects are favorable. Aid can directly boost supply capacity. For instance, in the Adam and Bevan (2003, 2004) model, aid is used to enhance the supply response of nontraded goods, moderating the relative price adjustment. Spending aid on infrastructure provides an instrument for improving the supply response in their model because of the range and scale of efficiencies that such spending can bring. Bevan (2005) suggests that there may be a case for giving a higher priority to scaled-up infrastructure investment than to social sector spending because it will yield a better supply response and will offset some of the adverse macroeconomic consequences of scaled-up aid. If the government does give a higher priority to improving social indicators in the near term, it may be more effective to fine-tune existing social spending than to allocate new aid flows to the social sector. This is discussed further in Section 6.

Using aid to boost capacity can mitigate the macroeconomic effects of aid inflows; using aid for social spending can exacerbate them.

2.2.3. The Impact on Exchange Rates and Growth

Once appropriate consideration is taken of the supply-side impact of aid flows, there is no clear presumption as to whether the real exchange rate will appreciate or depreciate over the medium term or whether the tradable sector will expand or contract. This is essentially an empirical issue, on which individual country circumstances are likely to differ. (See Appendix 1 for a survey on the literature about the relationships among aid, exchange rates, and economic growth, and Appendix Table A.2.2 for a summary of attempts to measure the relationship between aid and the real exchange rate in sub-Saharan Africa.)

Real exchange rate appreciation can have a significant effect on export growth in sub-Saharan Africa.

The evidence suggests that real exchange rate effects on export growth can be significant in SSA. Region-specific studies find real exchange rate changes to be a significant determinant of the share of exports in GDP. For example, Rajan and Subramanian (2005a) argue that in countries that receive more aid, export-oriented, labor-intensive industries grow more slowly than other industries, suggesting that aid does create Dutch disease. In cases where such negative effects are evident, it is important to ensure that the benefits of aid to the poor are greater than the costs and that the impact of exchange rate *instability* on exports is also considered. To the extent that higher aid flows alleviate supply bottlenecks, they can offset the effect of an exchange rate appreciation on export growth. Accelerations in economic growth rates are associated with real depreciation, suggesting that a large real appreciation associated with scaling up could have long-term growth costs. Several studies have built on the analysis in Hausmann, Pritchett, and Rodrik (2004) of jumps in countries' medium-term growth trends, which they label growth accelerations and which they find to be strongly correlated with real exchange rate depreciation. This finding has been confirmed for SSA in IMF (2005f), which finds that almost all the sustained growth cases in SSA avoided overvaluation during the growth period. The study also notes the close link between avoidance of exchange rate misalignment and macroeconomic stability, reinforcing the case for aid inflows to be accompanied by prudent macroeconomic management. In particular, overvaluation of the exchange rate dampens growth, while there is no statistically significant relationship between undervaluation and growth (Razin and Collins, 1997). One of the channels through which a temporarily stronger exchange rate may influence the growth rate is the impact on investment. For example, an overvaluation might hurt investment, even though it lowers the price of imported capital goods, because it reduces the returns to investment in the tradables sector and because the resulting current account deficit creates the need for tighter macroeconomic policies (Bleaney and Greenway, 2001).

When aid flows build up public infrastructure and thus augment the productivity of private factors, it is possible to realize significant medium-term welfare gains from aid, even in the presence of some short-run Dutch disease (Adam, 2005). Bevan (2005) has suggested that the best practical approach is often to ignore real exchange rate effects except when there is specific information on their likely magnitudes. This neutral assumption would be more

appropriate in a scenario with a gradual scaling up rather than a very rapid increase in aid inflows, and when the supply payoff (for example, from physical infrastructure) is likely to be more rapid. As an example, IMF (2005a) found no evidence that aid flows to Ethiopia after 1991 (that is, following the overthrow of the Derg regime) caused a real appreciation or harmed noncoffee exports. Instead, foreign aid was found to have a positive impact both on Ethiopia's noncoffee exports and on their share in total exports.

Historical relationships might not be a reliable guide to the future, however, and given that the resource flows required for SSA to achieve the MDGs will be significantly higher than past aid levels, there seems a strong likelihood that such a scaling up of aid will put upward pressure on wage and price levels and cause a real exchange rate appreciation. It would thus be prudent to implement policies to counter such pressures. Building into the scaling-up scenario an assumption that the exchange rate will appreciate may also be warranted if a high proportion of aid is spent on domestic goods (as discussed in Section 5.4). These judgments and assumptions of course must be tailored to the specific country's circumstances.

Scaling up aid to levels sufficient to achieve the MDGs is likely to raise wage and price levels and to lead to real exchange rate appreciation in sub-Saharan Africa.

3
Using Monetary Policy for Sterilization and Inflation Management

3.1. Policy Options for Sterilization

If the monetary authorities are concerned with the liquidity impact of increases in aid-induced spending, they can sterilize the liquidity injection either domestically or through foreign exchange sales.

3.1.1. Domestic Sterilization Measures

There are several ways to domestically sterilize the liquidity impact of aid inflows, although one overall concern with this type of policy is the negative impact on private sector lending and investment. Three such measures are the sale of government securities or sterilization bonds, increased reserve requirements, or a transfer of public sector deposits to the central bank from commercial banks.[6] There are discussed in turn.

Three measures for domestic sterilization of aid inflows are sales of government securities or bonds, increased reserve requirements, or transfer of public sector deposits to the central bank.

- Sales of government securities or central bank sterilization bonds: Monetary authorities often use this type of operation to sterilize the liquidity impact of capital inflows. One drawback, however, is that increasing the outstanding stock of domestic debt may lead to higher domestic interest rates, especially in shallow financial markets. In addition to increasing domestic debt service, sales of such instruments can crowd out loans to the private sector and, ultimately, investment. This policy can make domestic interest rates extremely volatile in the short term, as occurred in Uganda.

- Increased reserve requirements: This can be an effective means of manipulating liquidity conditions, but there are some drawbacks. Some

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[6]Given that international capital mobility is highly limited in SSA countries, monetary policy controls the nominal interest rates because there are no capital inflows that can offset the tightening of the monetary policy stance.

banks may already hold reserve assets in excess of statutory require-
ments, which would reduce the impact of the policy change. The pres-
ence of weak banks may make higher requirements difficult or
dangerous to implement, especially if the remuneration of required
reserves is significantly below market rates. Reserve requirements can-
not be increased to manage short-term liquidity (which may be needed
when aid flows are highly volatile) because frequent changes can under-
mine the efficient management of bank portfolios. Finally, for countries
trying to liberalize their financial markets, changing reserve ratios often
sends the wrong signal and may discourage financial intermediation,
weakening the central bank's monetary control.

• Transfer of public sector deposits from commercial banks to central
  bank accounts: This policy entails fewer fiscal or quasi-fiscal costs than
  open market operations, but there may be limited scope for such opera-
  tions in SSA countries where central government deposits in commercial
  banks amount to about 2 percent of GDP, on average. Such a sterilization
  policy was highly effective in Thailand and Malaysia in the 1990s.
  However, such a transfer should only be a one-time operation because of
  concerns similar to those related to changing reserve requirements: fre-
  quent movements of large amounts of public sector deposits may prevent
  optimal management of commercial bank portfolios.

3.1.2. Foreign Sterilization

Foreign sterilization involves selling central bank foreign reserves in
order to absorb the increased domestic liquidity. Some countries have used a
mixture of foreign and domestic sterilization. However, the increased supply
of foreign exchange creates pressure for a nominal appreciation of the
exchange rate.[7] Given concerns about competitiveness, authorities are often
reluctant to accept such an appreciation and instead choose domestic steril-
ization.

*Foreign sterilization
involves selling central
bank foreign reserves to
absorb domestic liquidity.*

3.1.3. Domestic Versus Foreign Sterilization

There remains the question of when to use sales of domestic bonds and
when to use foreign reserves to sterilize aid inflows. Atingi-Ego (2005) sug-
gests a rough 50:50 split, but experience in Uganda seems to argue in favor of
sterilizing through foreign exchange sales, because exchange rate apprecia-
tion has not hurt Uganda's nontraditional exports. A similar response is
emerging in Tanzania because of the need to balance the pressure on prices
from increased liquidity against the pressure both on interest rates from
domestic sterilization and on exchange rates from increased foreign

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[7]To mitigate appreciation pressures, the authorities can also relax controls on capital outflows,
such as by easing surrender requirements on foreign exchange earnings or permitting local insti-
tutions to invest abroad.

exchange sales. Finally, IMF (2005d) suggests that countries create sterilization headaches for themselves by not allowing more aid absorption in the first place. It suggests that countries receiving higher aid flows should be more willing to absorb (and, ultimately, spend) aid, selling the foreign exchange over time and letting the exchange rate appreciate. However, the sale of foreign exchange can reduce the share of domestic assets in private banks and may crowd out private sector credit if lending in foreign currency is limited.

3.2. Managing Inflation

Increased aid inflows will inevitably create inflationary pressure.

The scaling-up scenario needs to include the likely effects of increased aid flows on inflation. Some additional inflationary pressure is inevitable as domestic demand increases. Even so, IMF (2005f) argues that although high inflation is clearly harmful to economic growth, the gains from continued moderate inflation on growth are ambiguous.[8] The negative effect on growth of high inflation stems from the associated increase in inflation uncertainty, which clouds price signals and limits both the quantity and the quality of investment. On the other hand, moderate inflation can enhance real wage flexibility. Furthermore, if nominal prices are inflexible, an excessively low inflation target can render an economy more vulnerable to prolonged downturns in case of adverse supply shocks. Therefore, an inflation target below 5 percent may be not be appropriate.

Quantifying the association between inflation and growth requires careful attention to the nonlinearities in the relationship, which appear to be convex. That is, the lower the initial inflation level, the higher the negative effect on growth of a given increase in inflation; but at very low initial rates, increases in inflation may have either no effect or a positive effect on growth. Since Fischer (1993), several authors have tried to identify and locate such a "kink" in the relation between inflation and economic growth, which they associate with a maximum potential growth rate. Empirical studies using panels of countries locate this kink in the inflation-growth nexus at a level of inflation somewhere between 3 percent and 40 percent, with a majority suggesting a level in the 5–10 percent range (see Appendix Table A.2.3). In the Ethiopia scaling-up scenario prepared by the IMF (2005b, 2005c), the inflation target in the base case projection was 3 percent, but was increased to 6 percent in the "doubled aid" scenario.

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[8]The existence of a negative relationship between inflation and growth at higher rates of inflation is empirically well supported. By contrast, identifying the growth effects of moving from, say, 20 percent inflation to 5 percent, has been challenging. According to Bruno and Easterly (1998), significant adverse growth effects can be found only for generally short-lived periods of high inflation, after which growth tends to return to its long-run path. However, several other studies indicate this may understate the adverse growth effects of moderate inflation.

4

Mobilizing Adequate Domestic Revenues

Any scaling-up scenario needs to take into account the possible effects of aid on revenues. The associated policy package should stress the need to maintain or strengthen revenues during the period of higher aid, both to guard against uncertain donor behavior and to prepare for an eventual tapering off of aid flows.

4.1. Preventing Aid Dependency

If policymakers treat external aid resources as substitutes for domestic revenues, a substantial scaling up of aid could dampen a country's domestic revenue mobilization, specifically by weakening the tax collection effort. In some cases, to the extent that a weaker tax effort reduces domestic distortions, it might spur economic activity. In other cases, where weaker revenue collection reflects poor compliance or unnecessary tax exemptions, it would be more likely to breed aid dependency. Furthermore, a weaker tax effort can have an adverse effect on domestic institutions because citizens are less likely to hold the government accountable when they pay lower taxes (Bevan, 2005). An argument can be made that reducing tax rates can be an optimal response to permanently higher aid flows, but this argument has less weight for countries that are currently below their potential for raising tax revenues and for which scaled-up aid inflows will be temporary. This latter group of countries must establish a strategy for coping with an inevitable drop in aid flows.

Aid flows historically have been both volatile and unpredictable, which raises the concern that an increased reliance on external aid resources to finance expenditures can constrain policymakers' ability to undertake medium-term planning. Bulir and Hamann (2005) estimate that, on average, aid flows are between 6 and 40 times more volatile than fiscal revenues and that the relative volatility of aid is the highest for the most aid-dependent countries. In addition to being volatile, aid flows are also unpredictable, especially for the poorest countries. Bulir and Hamann (2005) calculate that, on average, aid delivery falls short of pledges by more than 40 percent.

Aid flows are most volatile to those countries most dependent on them.

Table 3. Mitigating Aid Volatility

Means	Benefits
Debt relief	There is a permanent release of domestic resources. The level of aid is predictable, which facilitates medium-term budget planning.
Reserve buffers	Relatively small reserves can smooth aid flows, including administrative delays, and insure against shocks.
Changes in donor behavior	Long-term aid pledges and more regular disbursement of aid commitments can improve recipient countries' ability to effectively spend aid, including by reducing their need to accumulate reserves.

Aid volatility and unpredictability can be mitigated in various ways, including through debt relief, reserve buffers, and changes in donor behavior (Table 3). From the recipient country's perspective, one clear advantage of debt relief over other forms of aid is that it permanently releases domestic resources. Debt relief thus mitigates the problem identified by Eifert and Gelb (2005): if aid pledges are highly volatile, recipients may slip into a low-level equilibrium as they heavily discount commitments of aid in their medium-term budget plans, while donors, seeing lower funding gaps, may reduce their pledges as a result. However, Eifert and Gelb (2005) also show that relatively small amounts of accumulated reserves (on the order of two to three months of imports) can be enough to manage much of the exogenous volatility of aid, especially that arising from administrative delays.[9] More generally, aid should be absorbed only if it is well spent and generates sufficient gains to compensate for any costs associated with a real exchange rate appreciation. Even when the consequences of Dutch disease are limited, the need to insure against shocks, including future aid shortfalls, justifies some accumulation of reserves when aid flows are considered high. Over time, however, there may be a practical limit to the level of reserves, because donors may reduce aid flows if they observe that aid is not being absorbed by the economy.

4.2. Protecting Revenues

The empirical evidence on how aid flows affect domestic revenue collection is mixed, with the magnitude, sign, and significance of the impact of aid varying by study. With a few notable exceptions, however, the impact of aid is found to be either negative or insignificant. Appendix Table A.2.4 summarizes these empirical findings. The composition of aid (loans or grants), the level of corruption, and the tax treatment of aid are important in assessing the likely pressures on the revenue effort.

An increase in aid can be fully offset by reduced revenues in countries with a high level of corruption or weak institutions.

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[9]In addition, donors are placing increased emphasis on evaluating their own performance in aid management. For the case of Mozambique, this is manifest in an agreed performance assessment framework for the donor community (World Bank, 2005).

4.2.1. Loans Versus Grants

Gupta and others (2004) suggest that the need to repay loans leads policymakers to increase their domestic revenues, or at least to maintain their existing collection levels. Grants are free resources that can substitute for domestic revenues, and hence are more likely to dampen domestic efforts to collect more revenue. Their baseline results indicate that 28 percent of every additional dollar of aid in the form of grants is offset by reduced domestic revenues.[10] Their results suggest that for countries with a high level of corruption, any increase in aid is fully offset by a reduced revenue effort.

4.2.2. Tax Treatment of Foreign Aid

When aid consists of foreign-financed projects, their tax treatment presents an additional complication. If the projects are tax-exempt, then the fiscal component of the scenario must be adjusted accordingly. However, tax exemptions can be difficult to manage when a country's administrative capacity is weak. Some SSA countries have had success in implementing exemptions through vouchers rather than administrative provisions (de Mariz Rozeira, 2005).[11] However, a case can be made, on grounds of both simplicity and fiscal revenue protection, for having donors pay all applicable taxes and duties on foreign aid projects. These decisions have to be examined on a country-by-country basis.

Experience points to a tax ratio of at least 15 percent of GDP as a reasonable target for most low-income countries.[12] At the same time, donors must bear in mind the composition of tax revenues in scaling-up scenarios because on average countries in SSA derive about one-third of their total revenue from trade taxes (Agbeyegbe, Stotsky, and WoldeMariam, 2004). If aid recipients liberalize trade to facilitate aid absorption (as discussed in Section 2.2), revenue from trade taxes would decline unless there were scope for eliminating exemptions and reducing tariffs to revenue-maximizing levels. They would also have to strengthen their indirect tax system, including the value-added tax (VAT), by reducing exemptions and broadening the base. These countries would have to build transitional revenue losses into their scaling-up scenario and would need donor and other assistance to improve domestic tax systems and recoup losses from trade taxes.

Scaling-up scenarios must incorporate the tax implications of aid, including tax treatment of aid-financed projects and effects on trade taxes.

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[10]Their sample includes 107 developing countries from 1970 to 2000. Otim (1996), in his study of three low-income South Asian countries, finds that both grants and loans increase revenue.

[11]Under the voucher system, normal tax and customs procedures apply to projects that receive tax incentives. Instead of payment, the beneficiary presents a voucher or treasury check issued by the ministry of finance to the relevant customs or tax office. The associated paper trail makes monitoring and costing much easier than with a tax exemption.

[12]Adam and Bevan (2004) speak of a consensus that the tax ratio for post-stabilization countries should be on the order of 15–20 percent, and IMF (2005f) suggests a ratio of at least 15 percent as a reasonable target for most low-income countries.

4.2.3. Revenue Assumptions for Scaling-Up Scenarios

Policies to strengthen the revenue effort enable aid-dependent countries to wean themselves off aid.

The most appropriate assumption for scaling-up scenarios is that accompanying policies ensure that the revenue effort is strengthened, possibly through the use of revenue benchmarks, particularly in those countries where the revenue-to-GDP ratio is well below the threshold of 15 percent. A strengthened revenue effort would enable aid-dependent countries to wean themselves gradually from aid. It is also consistent with the recommendation of the UN Millennium Project (2005) that countries mobilize additional domestic resources of 4 percent of GDP through, for example, more vigorous tax collection efforts. In many countries, the tax effort is below potential, in part because of a narrow tax base. Some countries, including Tanzania and Uganda, have emphasized broadening the tax base with the objective of reducing aid dependency over time. McGillivray and Morrissey (2001) note that it is useful to distinguish between the impact of aid on total tax revenue and the impact of aid on revenue from international trade taxes. Appendix Table A.2.5 summarizes recent trends in total tax revenue and import and export duties in different regions.

Scaling-up scenarios should also factor in support to help revenue institutions strengthen their capacity to generate additional revenue on a permanent basis. Addressing weaknesses in revenue administration is high on the reform agendas of Tanzania and Uganda, for example.

5

Projecting the Impact of Increased Aid on Economic Growth

5.1. The Relationship between Aid and Growth

The debate about the effectiveness of aid in stimulating growth goes back many years, yet there remains considerable uncertainty about the aid-growth relationship. Some researchers suggest that there is either no effect or a negative one; others suggest a positive effect, but with diminishing returns. Still others argue that aid works to promote growth in some circumstances (when a country has good policies), but not in others.

Early skepticism about the role of aid in promoting economic growth focused on the potential disincentive effects of aid on investment and private sector development (Bauer, 1972). Some of the ensuing empirical research did in fact find little or no relation between aid and growth (Mosley, 1980; Singh, 1985). Similarly, Easterly (2001) questions the channels through which the "financing gap" model purportedly promotes growth, specifically whether aid flows lead to higher investment levels and hence to growth.[13] There is evidence to indicate that, although aid can ease the liquidity and foreign exchange constraints to investment, it may actually worsen the incentive to invest, and hence be more likely to finance consumption.[14]

A related but distinct strand of the literature examines the impact of aid flows on the tradable goods sector. Rajan and Subramanian (2005a) find that aid flows do have adverse effects on growth, wages, and unemployment in labor-intensive and export sectors. However, their model does not allow for inferences regarding the overall growth rate.

There remains great uncertainty about the relationship between aid and economic growth.

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[13]The "financing gap" or alternatively the "two-gap" model by Chenery and Strout (1966) identifies the gaps between savings and investment requirements and between foreign exchange earnings and import requirements as the major constraints to growth in developing countries.

[14]Empirical support for this idea can be found in Boone (1996).

The effectiveness of aid can be affected by the policy environment in the recipient country (Burnside and Dollar, 2000) and by the quality of governance (Radelet, 2004). Other studies have examined whether the impact of aid is conditional on other factors.[15]

5.1.1. The Impact of Different Types of Aid

Different types of aid are likely to have different relationships with growth, and not all aid is targeted at stimulating growth (Clemens, Radelet, and Bhavnani, 2004). A distinction can be drawn between three types of aid:

- Aid provided in the context of disasters, emergencies, and humanitarian relief (for example, food aid), which may actually have a negative correlation with observed growth rates because it is often provided when a country is hit by a negative shock.

- Aid that might affect growth but, if so, only indirectly and over a long time: Included in this group is aid to halt environmental degradation or to support democratic or judicial reform, and some aid to support health and education, which all may have an effect on labor productivity only over many years (Clemens, Radelet, and Bhavnani, 2004).

- Aid that might reasonably be expected to affect growth within a fairly short time (for example, four years), including aid to build infrastructure such as roads, irrigation, ports, and electricity.

5.1.2. The Growth Effects of Scaling Up

To project the impact of scaling up on real growth rates, therefore, one might start with how the aid will be spent and the policy environment into which it will be disbursed. It is important to categorize the projected aid inflows and the associated higher budget expenditures into 1) those that can reasonably be expected to enhance growth in the short to medium term, 2) those directed at longer-run growth, and 3) those that support activities unlikely to be related to growth.

Cross-country econometric studies, which often use five- or ten-year averages of growth rates, may not provide sufficient guidance on the short-run impact of higher public spending on output in individual countries. Moreover, most empirical work on the impact of spending on growth provides estimates of the average impact of small changes in spending as a share of GDP, which may not directly translate into the impact of a substantial scaling

Aid inflows should be categorized according to whether 1) they can reasonably be expected to enhance growth in the short to medium term, 2) they are directed at longer-run growth, and 3) they support activities unlikely to be related to growth.

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[15]These include the effects of large export price shocks (Collier and Dehn, 2001), climatic shocks and trends in or the volatility of terms of trade (Guillaumont and Chauvet, 2001; Chauvet and Guillaumont, 2002), and the presence of totalitarian regimes (Islam, 2003).

up of aid, in which diminishing returns and other supply bottlenecks must figure more prominently.

5.2. Accounting for Diminishing Returns and Limits to Absorptive Capacity

The link between spending and growth reflects intermediate outputs that are subject to diminishing returns, supply constraints, or other bottlenecks.

Projecting the total response of output to scaled-up public expenditure requires accounting for diminishing returns to spending, the pace of convergence of output to its new steady state, and supply constraints and bottlenecks. An underlying notion is that the link between spending and growth reflects intermediate outputs (such as education or health capital or public infrastructure), the production of which can face constraints. Assessing these potential constraints in individual sectors is key to preparing a realistic assessment of the impact of scaling up.

Information on the extent of diminishing returns and the rate of convergence is subject to considerable uncertainty. Guidance is available on the initial response coefficient, but there are few estimated production functions for government spending or aggregate output in low-income countries that could inform the selection of the diminishing returns and convergence parameters.

5.2.1. Convergence Parameters

Existing estimates of convergence parameters are averages from cross-country studies and would have to be adjusted on a country-by-country basis to take account of local conditions and policy assumptions. Other things being equal, low-income countries have more scope to catch up with richer countries and should therefore be able to maintain a growth rate higher than the steady state for a long time. However, studies that control for other causes of growth (for example, strength of institutions) suggest that many low-income countries may be close to their steady state already. Therefore, convergence in response to a policy change may be more rapid, and the long-run impact of aid on growth may be correspondingly muted. Hence, measures that raise the steady-state level of income, such as strengthening governance and building up institutions, are important for ensuring that increased spending leads to sustained growth.

5.2.2. Diminishing Returns to Aid

The aid saturation point—when the positive impact of aid falls to zero—is higher in countries with a good policy environment.

The aid saturation point is the point at which the positive impact of aid falls to zero. This varies widely in different studies. The diminishing returns to aid are often captured in the empirical literature through the inclusion in an aid impact regression of a quadratic aid share variable along with the standard linear term. Clemens and Radelet (2003) summarize eight such studies relating the share of aid to per capita growth. All find a negative coefficient on the quadratic aid term, which, when combined with a positive coefficient on the level of aid, implies that the marginal return on aid is initially positive

but then declines.[16] The growth effects of most social sector expenditures, which have a long-term impact on growth, are more difficult to estimate. In addition, all existing saturation point estimates are derived from historical data, and saturation points in the future may be at significantly higher levels, particularly if aid absorption is accompanied by improvements in the policy environment and governance.

There is evidence that countries' aid saturation points and absorption capacities are higher in good policy environments.[17]

5.2.3. Postconflict Situations

The basic challenges of a scaling up of aid are relevant to postconflict countries, after the initial rebuilding is complete.

The sequencing and composition of aid require special attention in post-conflict countries. These countries face more severe constraints than the typical recipient of increased aid: basic institutions have to be rebuilt before attention can turn to achieving the MDGs. If rebuilding is successful, growth in these countries can rebound rapidly with restoration of law and order and the return of dislocated people. Aid is effective in these circumstances, but to be optimal, should change in composition over time (Chauvet and Collier, 2004). Furthermore, donors tend not to time aid properly—aid tapers off after three to five years, just when a country's opportunity to build capacity and achieve sustained poverty reduction is best (Collier and Hoeffler, 2004). The amount of aid recommended for postconflict countries is quite similar to the level of a scaling-up program. This suggests that, after the first stage of rebuilding is complete, the guidelines in this paper are directly relevant for postconflict countries.

5.3. Safeguarding Private Savings and Investment

Public investment can crowd in private investment in SSA countries. Crowding in likely reflects the complementarity of private investment with

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[16]While considerable caution needs to be exercised in using these results because they are tentative, Hansen and Tarp (2001) show aid share saturation points between 14 and 27 percent of national income. Other studies find that saturation occurs at about 40 percent, well above the level of current aid inflows for most countries. For their short-impact aid component, Clemens, Radelet, and Bhavnani (2004) find the marginal impact of aid reaches zero at about 8–9 percent of GDP. But since short-impact aid is about half of total aid, the corresponding point for total aid occurs at about 16–18 percent of GDP, a range currently exceeded in only a small number of countries. Aid saturation points will be lower for postconflict countries, especially in the initial stages of reconstruction, but these aid flows will themselves help raise absorptive capacity over the medium term (as discussed in Section 5.2.3).

[17]Several of the studies surveyed in Clemens and Radelet (2003) allow the impact of aid on growth to depend on an indicator of the quality of the country's institutions and policy stance. Collier and Dollar (2002) model a link between aid impact and the World Bank's Country Policy and Institutional Assessment index, which ranges from 1 (lower quality) to 6 (higher quality). For a country with a score of 2, the saturation point is about 19 percent of GDP. With a score of 4.5, the saturation point occurs at 43 percent of GDP. This result is consistent with other evidence that the effectiveness of public expenditure depends on the quality of institutions (Baldacci and others, 2004). More recent evidence in Rajan and Subramanian (2005b) is more cautious about the existence of such a link.

some components of public investment, especially infrastructure (Odedokun, 1997). Evidence on crowding in has been found across a variety of datasets and methodologies.[18] Appendix Table A.2.6 summarizes some of the relevant studies.

Strengthening the investment climate and the financial sector are important elements of any scaling-up scenario. In recent years, many low-income countries have prepared Diagnostic Trade Integration Studies (DTISs) as a means of integrating trade and investment issues into their development strategies.[19] For example, the 2004 DTIS for Ethiopia recommended improvements in trade policies, the legal and regulatory environment, institutions, and trade-facilitation services, in order to encourage greater integration into the world economy and increased foreign direct investment.

More generally, measures should be included in every scaling-up scenario to strengthen financial sector institutions in order to raise private sector savings and investment over the medium term and to facilitate the country's eventual graduation from relying on official sources of finance to relying on private sources. These measures should include instituting international standards for bank supervision, a competitive environment, and well-functioning financial markets, as well as taking steps to enhance the microfinance sector and to improve access to credit.

Raising private sector savings and investment over the medium term will facilitate a country's eventual graduation from relying on official sources of finance.

5.4. Raising Spending as a Share of GDP

Econometric evidence on the initial impact of public spending on growth is sensitive to the data and the methodology used. The link is clearest when public spending can be related to the stocks of the factors of production, such as physical capital, which are augmented by public investment. Many studies confirm a productive role for various types of infrastructure in low-income countries. Appendix Table A.2.7 summarizes studies that use either the production function or growth regressions and draw on data from Africa.[20] Output responds positively to infrastructure, and there are also strong complementarities between different components of capital spending (Canning and Bennathan, 2000). The implication is that rates of return decline very quickly for an increase in any one component of capital. For low-income countries, electricity projects may yield the highest returns (Canning and

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[18]Greene and Villanueva (1991) note this effect for a small sample of developing countries in SSA, Asia, and Latin America, using a pooled approach. Hadjimichael and Ghura (1995) find it in a panel regression for a large SSA sample, while Ghura and Goodwin (2000), also using panel methods, find that the effect is present only for SSA, while crowding out was observed for Asia and Latin America. Belloc and Vertova (2004) investigate the effect at the country level and confirm crowding in for four of the five SSA countries they examine (the exception being Malawi).

[19]The Integrated Framework (IF) which sponsors the DTIS, was established in 1997 by six multilateral institutions (IMF, ITC, UNCTAD, UNDP, World Bank, and WTO) in order to facilitate the coordination of trade-related technical assistance to low-income countries.

[20]Of the individual developing country studies reported in Briceño-Garmendia, Estache, and Shafik (2004), all find that infrastructure has a positive effect on output, although none covers Africa specifically.

Public spending has a greater impact on growth when it is directed toward the factors of production, such as physical capital, which are augmented by public investment.

Bennathan, 2000). There may also be large gains in growth from closing infrastructure gaps between average countries and regional leaders (Calderon and Serven, 2004).

Growth regressions find that the average impact on per capita growth of an increase of 1 percent of GDP in social sector or public investment spending is in the range of 0.5 to 1.0 percent over a five-year period. These studies are summarized in Appendix Tables A.2.7 and A.2.8.[21]

5.5. Confirming the Positive Impact of Aid

Case studies show that aid has a positive impact on growth, although it is difficult to precisely correlate the causes and effects given the variations among countries' circumstances and their use of aid inflows. The multidonor Pro-Poor Growth study (Agence Française de Développement and others, 2005) finds that aid inflows fostered higher growth in the 1990s for the African case study countries. The underlying studies focus both on the impact of aid on growth and the ability of the poor to participate in growth. Aid impact on growth was strongest in Uganda, operating through reconstruction, improved economic management, social sector programs, and improvements in public administration. Aid also played an important role in relaxing constraints on growth due to debt burdens. Similarly, the Ghana case study finds that aid played the twin roles of supporting macroeconomic stabilization and boosting social sector programs that might otherwise have been cut due to scarce resources. The other case studies (Zambia, Burkina Faso, and Senegal) explore the impact of aid in less detail, but all note the importance of aid for financing health and education programs and thus supporting the human capital component of the growth process.

Aid can protect social sector programs and public investment in times of scarce resources or policy slippage.

The strength of public expenditure management (PEM) systems is also an important determinant of the growth impact of aid inflows. Studies of the fiscal impact of aid in Uganda, Zambia, and Malawi by the Overseas Development Institute (Fagernäs and Roberts, 2004) find the strongest discernible growth impact of aid in Uganda. For the other countries, the main benefit was the ability to protect some critical social sector and public investment programs at a time of overall fiscal stringency and policy slippage. One clear difference among the three countries was in the performance of the aid allocation mechanisms. Uganda comes much closer to a single integrated

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[21]The methodological debate associated with these studies has confirmed the need to control for reverse causality from output growth to public investment. Of particular relevance to SSA is the study by Gupta, Clements, Baldacci, and Mulas-Granado (2004) which covers 39 IMF program countries, of which 24 are in SSA. It finds a 0.7 percent effect on the growth rate of a 1 percent of GDP increase in capital outlays over a five-year period. In a larger sample of 120 countries, Baldacci and others (2004) simulate the increment to long-run growth from increases of 1 percent of GDP in education and health spending. For education, per capita GDP growth is, on average, 0.9 percent higher, and, for health outlays, it is 0.4 percent higher. These estimates are derived from the experiences of countries in which the elasticity of imports is less than one, and, hence, there is less than full leakage of higher aid flows to imports.

budget framework for all funding sources, allowing aid to be directed to its most productive use and accentuating the growth impact. In Malawi and Zambia, however, there persists a traditional assignment of aid inflows to specific development programs, even when these did not offer the highest growth impact.

Countries' experiences with resource windfalls provide additional lessons for scaling-up countries, specifically by pointing to the need for effective expenditure management and for targeting of aid inflows. The analogy of aid inflows to natural resource inflows is imperfect, but both inflows generate similar policy challenges, including the risks of Dutch disease, misappropriation, and institutional deterioration resulting from diminished revenue mobilization incentives (Hausmann and Rigobon, 2003).[22] Resource windfalls in developing countries can lead to a dissipation of resource wealth and even negative growth. This reinforces the importance of aid being delivered within a policy framework supportive of the efficient use of the additional resources.

Aid is most effective when it is delivered within a policy framework that supports efficient use of the additional resources.

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[22]The analogy of aid inflows and natural resource booms is imperfect because aid is normally provided by donors after agreement on appropriate policy conditions. Moreover, if it becomes clear that aid inflows are not being fully absorbed, they are likely to diminish.

6

Meeting Other Fiscal Challenges

Fiscal policy can become more complicated in a high-aid environment (Heller, 2005), and this section considers a number of fiscal issues that may need to be considered in a scaling-up scenario.

6.1. Developing an Exit Strategy

When a government scales up its expenditure program, it generally hires more workers, delivers additional services to the public, and has new infrastructure to maintain. The government then faces the challenge of what to do if, or most likely when, donors do not sustain aid at the higher level. If it becomes difficult to reduce expenditures in response to a gap or reduction in aid financing, the pressure may increase significantly to domestically finance the deficit.

The exit strategy is the macroeconomic path the country will follow after scaled-up aid flows fall back to more normal levels.

This underlines the importance of preparing an "exit strategy," that is, the macroeconomic path the country will follow after scaled-up aid flows fall back to more normal levels or, perhaps to lower-than-normal levels, if aid flows have been front-loaded. If a government chooses to smooth the impact of aid volatility, for example, it might plan to accumulate a certain amount of reserves (or use some of its existing reserves), and this will affect monetary management strategies (as described in Section 3).

6.1.1. The Scaling Down of Aid

Planning for an end to increased aid inflows is a critical element of any scaling-up scenario. The scenario assumes a temporary spike in aid inflows, for example, over a 10-year period, followed by a corresponding "scaling-down" period, for example, the subsequent 10 years, during which aid flows return to historical levels. It is important to illustrate the potential impact of the scaling-down period on the macroeconomic projections, even though these outer-year projections will be highly uncertain.

The temporary increase in aid allows the government to increase current and capital spending as a share of GDP, but policies during the scaling-up

period must be consistent with a smooth transition during the scaling-down period to accommodate a lower aid environment. As noted, if the government finds it difficult to reduce expenditures from previously aid-financed levels during the scaling-down period, there may be significant pressure for higher domestic financing of the deficit.

6.1.2. Private Economic Activity

Private sources of finance must eventually substitute for official aid flows in stimulating economic activity. The temporary nature of the exceptional aid flows underlines the need to maintain or enhance the domestic revenue effort (see Section 4), and to encourage, over time, higher private sector savings and investment, including policies to stimulate foreign direct investment. A strong private sector response (and hence a real expansion of the tax base) will lessen the fiscal adjustment required when external aid is reduced. It will also reduce any negative effects of scaling down on growth.

Policies during the scaling-up period must be consistent with a smooth transition during the scaling-down period.

6.1.3. Real Spending Levels

In preparing the exit strategy, it is likely that public current and capital spending will be assumed to fall as a share of GDP. However, it is important that this scaling down of aid is sufficiently gradual to allow current spending to be maintained in real terms, if possible. Building up a higher level of reserves during the scaling-up period may also allow for a more gradual reduction of public expenditures during the scaling-down years.

6.2. Properly Estimating Current Spending

Countries should incorporate into their MTEFs adequate current expenditures to support the projected increases in investment over the medium term. A scaled-up public investment program is likely to encounter high marginal recurrent costs even if average current costs are low.[23] A scaling-up scenario should include generous estimates for current expenditures on new facilities, particularly when current expenditure is already inadequate to properly operate and maintain existing facilities and is not part of the MTEF. The factors contributing to the tendency to neglect current expenditure are well known and include donors' past preference for capital projects, the perception that political advantage attaches to new projects, and the lack of immediate negative consequences from postponed maintenance.

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[23] Hood, Husband, and Yu (2002) calculate average proportions of annual recurrent costs to investment expenditure for World Bank and Asian Development Bank projects across a range of sectors. The proportions were up to 7 percent in health, 5 percent in transport and energy, and 33 percent in education, but there was also enormous variation even for similar types of projects. Certain types of variation were straightforward to explain; for instance, upgrading existing facilities imposes lower current costs than building new facilities because the recurrent obligations of the former were in place before the project began.

Governments have found it challenging to mobilize domestic resources for operations and maintenance (for example, through user charges), especially when the service may be considered essential. On the other hand, the existence of underused facilities offers the prospect of fairly quick returns to additional current spending, as long as these facilities can be rehabilitated for less than the cost of constructing new facilities. Over the longer term, governments must strengthen their budgeting systems to incorporate reliable estimates of current spending requirements.

6.3. Targeting the Poor

Social sector spending in sub-Saharan Africa has not been well targeted toward the poor.

Sub-Saharan African countries have raised social sector spending in recent years, but this spending is not always well targeted toward poor households. A recent review of the experience of 56 countries from 1960 to 2000 finds that the targeting of social sector spending toward the poor in SSA was very ineffective, although there was some improvement in the 1990s (Davoodi, Tiongson, and Asawanuchit, 2003). This is particularly noticeable for spending on education. It is fairly well known that spending on secondary and tertiary education tends to benefit richer households, but SSA does not compare well with other regions even in targeting spending on public primary education, of which only 18 percent goes to the lowest quintile of the population. Similarly, there is a wide gap in the benefits to the poorest and the richest households for public health spending in SSA, especially for hospital spending, of which the poorest quintile receives 12 percent of the benefits and the richest receives 31 percent.

6.4. Containing Unproductive Spending

Unproductive spending is the difference between actual spending on a program and the reduced spending that would yield the same social benefit with maximum cost-effectiveness.

There is a positive association between health and education outcomes, governance, and targeting effectiveness, suggesting that equity and efficiency complement each other and improve the overall impact of public spending (Davoodi, Tiongson, and Asawanuchit, 2003). This underscores the importance of putting in place policies to appropriately target spending at poverty outcomes and to improve effectiveness and efficiency—that is, to reduce unproductive spending. "Unproductive spending" is defined as the difference between actual spending on a program and the reduced spending that would yield the same social benefit with maximum cost-effectiveness (see Chu and others, 1995).

6.5. Balancing Poverty Reduction and Growth

There may be a trade-off between poverty reduction or sector-specific growth and overall growth rates. Aid may have the highest return and promote the highest growth rate when it is used to enhance the supply response of the nontraded sector (Adam and Bevan, 2003). However, such a policy may not be "pro poor" if the incomes of the poor are not closely linked to the targeted sector.

Higher aid also can lead to wage pressures, which can have a negative impact on the poor who do not benefit from the wage increases. Specifically, social sector wages may rise when they are financed by aid, putting upward pressure on formal sector wages elsewhere in the economy, including manufacturing. To the extent that most poor people are dependent on agriculture and the informal sector, such wage increases do not directly raise their income. In addition, even though some poor people may benefit from increased formal sector wages, they often have strong links to the export sector (Rajan and Subramanian, 2005a). Thus, social sector spending that is intended to reduce poverty may not be the optimal growth strategy or a pro-poor strategy, especially if increased social spending is not well targeted to the poor.

Higher aid flows can lead to wage pressures, which can have a negative impact on the poor.

6.6. Minimizing Bottlenecks and Improving Coordination

Sectoral bottlenecks are difficult to anticipate and are best identified through frequent monitoring of aid impact indicators. Ideally, aid allocation is guided by an in-depth diagnostic assessment of sectoral capacity, with the goal of avoiding excessive adjustment pressure in any one sector. A sectoral investment plan prepared by the World Bank and other donor partners can provide guidance on, for example, projected employment needs in education or health to meet the MDGs for these sectors. For instance, the World Bank's MAMS model suggests that Ethiopia can achieve MDGs for universal primary education, but that doing so would require 52,000 more teachers (a 66 percent increase) even at the current student-teacher ratio of about 75 to 1. To raise the quality of education by reducing the ratio to 40 to 1 would require 160,000 more teachers—a doubling of the current total. Such a large relative expansion in the number of teachers could trigger a substantial increase in wages or a decline in average skills.

6.6.1. Bringing NGO Activities into the Budget

Special challenges can arise when donors channel aid through nongovernmental organizations (NGOs). Relying on NGOs can be useful if capacity within the public sector to absorb scaled-up aid is impaired. However, shifting allocations to NGOs does not in itself avert macroeconomic absorption constraints, which relate to *aggregate* supply responses in the traded and nontraded goods sectors. Furthermore, it is important to ensure that NGO spending plans are coordinated with those of the government budget to prevent duplication.

Shifting aid allocations to NGOs does not in itself avert macroeconomic absorption constraints.

Channeling aid through NGOs also carries the risk of detracting from efforts to build capacity for social sector delivery within the public sector.[24] If

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[24]For example, the United States established the President's Emergency Program for AIDS Relief (PEPFAR), which will allocate $15 billion over five years (beginning in 2004) with spending increasing as implementation capacity improves. The World Health Organization (WHO) is supporting the global "3 by 5" initiative which aims to supply antiretroviral drugs to 3 million additional HIV-positive persons by the end of 2005. A significant proportion of the funds from both programs will flow through NGOs.

poor countries are unable to absorb aid anywhere in their domestic economies in the short term, donors can divert part of the aid to financing global public goods (for example, malaria research) outside the recipient country. This would prevent the macroeconomy of the country receiving aid from experiencing adverse effects.

6.6.2. Government at Lower Levels

Strengthening the capacity of subnational governmental institutions is essential in countries where a substantial proportion of social sector spending is devolved to lower levels of government. For example, Uganda has devolved the provision of most social services to the local governments. For this purpose, about 40 percent of the central government budget is transferred to the highest local government tiers. However, the central government's ability to monitor the use of these resources remains weak. Therefore, scaling-up scenarios need to assess the ability of the subnational governments to execute and report social sector spending and the capacity-building needs at different levels that can be supported by donors.

6.6.3. Existing Private Sector Capacity

The poor are often heavy users of private sector services in health and education.

When the public sector's capacity to expand service delivery is limited, it can be useful to build on existing private sector resources. In many cases, the private sector can expand more rapidly than the public sector to meet a scaled-up demand for services, further ameliorating sectoral capacity constraints. Transfer schemes such as vouchers may be used to ensure that the poor have access to basic services as private delivery expands.

However, the poor are often heavy users of private services in health and education because of failures in public service delivery to poor areas. For instance, the World Bank (2004) shows that private expenditures on health in SSA are as large as public expenditures and that the richest households in the region had higher proportions of attended births and respiratory disease treatment in public facilities than poorer households. The public-private mix in health differs by type of service, with public facilities generally more important for preventive care like vaccinations and private facilities more important for treatment. The private sector also plays a significant role in education in SSA, but less so in utilities and infrastructure.

7

Strengthening Governance

There is a growing consensus that good governance is essential if higher aid flows are to be effective in promoting growth and reducing poverty.[25] Major donors have made this point, most recently at the July 2005 summit of the Group of Eight countries in Gleneagles, Scotland (Group of Eight, 2005). Strengthening governance therefore will likely increase the probability that donors will actually disburse the higher aid flows promised in the new scaling-up programs.[26]

7.1. Reducing Corruption

Rent-seeking behavior, which is found in all countries, is more pervasive in some than in others. Pervasive corruption tends to be associated with poorly enforced property rights, a weak rule of law, and weak incentives for productive investment, all of which are damaging to economic growth on their own.

A considerable amount of research in recent years has focused on the negative correlation between the level of corruption in a country and its social and economic performance. Corruption has received particular attention because the availability of corruption measures helps to "quantify" its extent and allows for international comparisons. Many studies rely on corruption indices developed by Business International, International Country Risk Guide, and Transparency International. But two sets of World Bank indicators have gained prominence in recent years: the Country Policy and Institutional Assessment

Reducing corruption can enhance growth and improve aid absorption.

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[25]See, for example, Commission for Africa (2005).

[26]The link between aid and governance is a central feature of the U.S. Millennium Challenge Account (MCA), which channels aid directly to specific country priorities. Country eligibility for aid is determined by a set of indicators, including one for corruption. For 2005, seven SSA countries are eligible: Benin, Ghana, Lesotho, Madagascar, Mali, Mozambique, and Senegal. Seven additional SSA countries have "threshold" status, meaning that they are close to meeting the eligibility criteria and can access some aid flows to make additional progress. These countries are Burkina Faso, Kenya, Malawi, São Tomé and Príncipe, Tanzania, Uganda, and Zambia. See *http://www.mca.gov/.*

(CIPA) scores (which became public information beginning in 2005), and the World Bank Institute's indicators on six components of governance (which cover nearly all countries and have been available biannually since 1996).

7.1.1. The Impact of Corruption on Economic Performance

Empirical research highlights the negative impact of corruption on growth, public finances, poverty, income inequality, and the provision of social services. Appendix Table A.2.9 summarizes some of the results.[27] Corruption is shown to lower growth by reducing private investment, attracting talented individuals into unproductive activities, and encouraging poor management of natural resources. Experience in the former Soviet Union and Eastern Europe suggests that structural reforms designed to rationalize the role of the state, increase reliance on market-based pricing, and create a sound regulatory environment contribute to growth directly and indirectly by lowering the incidence of corruption (Abed and Davoodi, 2002).

Corruption also distorts the composition of public expenditures in favor of sectors in which bribes are easier to collect. Corruption typically shifts spending away from routine maintenance and repair, education, and health to excessive and inefficient public investments and higher military spending.[28] Human capital and investment are similarly impeded by poor governance, which limits the growth impact of social sector spending. Corruption in the form of abuse of public funds not only results in weak social indicators, but also weakens revenues because it contributes to tax evasion, improper tax exemptions, and weak tax administration (Ghura, 2002).

7.1.2. Successful Anticorruption Strategies

Successful anticorruption strategies depend on the presence of a credible deterrent to the abuse of public offices.

In a country with weak governance, effective anticorruption measures should strengthen the growth impact of a scaling up of aid. Successful anticorruption strategies are typically predicated on the presence of a real and effective deterrent to curb individuals' instincts to abuse their public office for personal gain. Public officials need to believe that if they abuse their offices, they run a substantial risk of being caught, convicted, and punished.

Moreover, prosecuting serious high-profile corrupt actors is "an essential element of an anticorruption strategy so that a cynical citizenry believes that an anticorruption drive is more than just words" (Klitgaard, Maclean-Abaroa, and Parris, 1999). Independent anticorruption bodies may have a role to play

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[27]A number of studies explicitly examine the negative impact of corruption on economic growth. Mauro (1995) finds that increasing corruption by one unit (on a scale of 1 to 10) lowers real per capita GDP growth by 0.3 to 1.8 percentage points; Leite and Weidman (2002) and Abed and Davoodi (2002) report a somewhat narrower range centered on about 1 percent.

[28]Gupta, Davoodi, and Tiongson (2002) find that higher corruption has adverse consequences for social indicators such as child mortality rates and student dropout rates. Baldacci and others (2004) identify a key role for governance in influencing the effectiveness of education and health interventions. In particular, they find that health spending has no impact on social indicators in countries suffering from poor governance.

in this context. Their work should be supplemented by an ongoing public information program to educate the public about the negative effects of corruption and by a system that allows the public to report acts of corruption without fear of retaliation.

It is also critically important to liberalize and reform institutions and practices to reduce the opportunities for rent-seeking and corruption and to strengthen public audit functions. These reforms also strengthen domestic revenue mobilization by signaling the ability and commitment of the government to account for how revenue is spent.

7.1.3. Breaking the Cycle of Poor Governance

Beyond the negative impact on growth, there is a self-reinforcing cycle of poor governance. Citizens demand less and less from their government as their demands go unmet and their expectations diminish. Breaking this cycle is an important element of the scaling-up agenda, although its contribution to improved governance is difficult to quantify.

7.2. Improving Public Expenditure Management Systems

Well-functioning PEM systems are essential if higher aid flows are to be absorbed effectively. They provide assurance to donors that their resources are being used for the intended purposes, while reducing the transaction costs of meeting donor-specified reporting requirements. They also improve governance by making public expenditures more efficient and transparent (including to citizens). Finally, they help governments implement the scaling-up scenarios by tilting expenditures toward priority areas.

Most African countries' PEM systems need considerable upgrading, and donors have identified this as a priority. The World Bank and IMF assessed the PEM systems in Highly Indebted Poor Countries (HIPCs) and found that the systems in 16 African countries required substantial upgrading, those in 4 countries required some upgrading, and only 2 required little upgrading. This suggests that scaling-up scenarios will have to include resources for strengthening PEM systems.

Instituting well-functioning PEM systems is only one part of the larger effort to consolidate fiscal institutions.

Over 50 donor agencies, in addition to the World Bank and IMF, are active in this area and could be called upon for assistance. Instituting well-functioning PEM systems is only one part of the larger effort to consolidate fiscal institutions that many donors are promoting. Policies to introduce greater transparency, strengthen rules governing budget procedures and reporting, and prepare MTEFs are all part of this effort and can provide additional assurance to donors that scaled-up aid will be used effectively (Diamond, 2006). For example, in the Republic of Congo, the recent publication of fiscal data, audited reports on oil activities, and reports on external verification of government revenues, oil contracts, and data has been a strong signal to the country's development partners that a concerted change in the policy regime is under way (World Bank and IMF, 2005).

8
Maintaining Debt Sustainability

An updated debt sustainability analysis (DSA) can be an essential part of the scaling-up scenario.

All scaling-up scenarios must be consistent with maintaining public and external debt sustainability. Increased aid can have a significant impact on macroeconomic developments that are fundamental to debt dynamics in the recipient country. Higher aid levels will probably affect the country's GDP growth rate, fiscal position, interest rates, and balance of payments.

Even if *all* the additional financing included in the scaling-up scenario is assumed to be in the form of external grants, the debt burden will not necessarily improve over time compared with the underlying baseline scenario. And if part of the scaling up involves higher levels of concessional loan financing or higher domestic borrowing, an updated debt sustainability analysis (DSA), covering both external and total public debt, becomes an absolutely essential part of the scaling-up scenario.[29]

The updated DSA should cover a long time horizon, such as 20 years from the base year. This long time frame is necessary because the maturity (and, hence, the debt-servicing implications) of new loans may be long, and principal repayments against the new loans could raise debt-service obligations precisely when the aid inflows are being scaled down to more normal levels.

8.1. Assessing External Debt Dynamics

The most difficult part of conducting a DSA is evaluating the impact of scaling up on various macroeconomic variables that affect a country's debt dynamics. Figure 1 depicts the impact of scaling up on external debt. As dis-

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[29]A DSA paper is prepared by the IMF and World Bank staffs and the country authorities. DSAs include a comprehensive analysis of the external debt situation of the country concerned and a simulation of the impact of the full use of traditional debt relief mechanisms. DSAs replace HIPC documents for countries that have met the requirements to reach a decision point under the HIPC Initiative but which do not require assistance under the Initiative because they have a sustainable external debt after full use of traditional debt relief mechanisms.

Figure 1. Impact of Scaling Up on External Debt
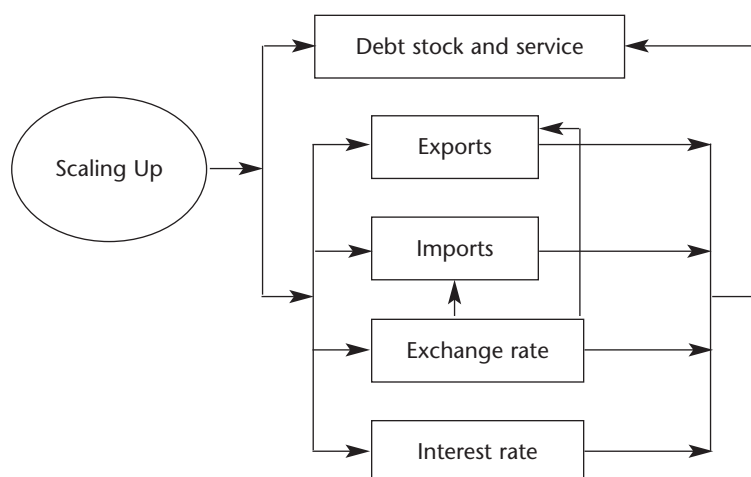
cussed in other sections of this handbook, scaling up will almost certainly increase the country's imports as aid-financed spending increases. It is also likely to change the country's exports, depending on how aid inflows are used and how they affect the exchange rate (see Section 2.2). If aid is used to enhance domestic supply capacity and reduce transport costs, for example, it may increase exports. But if aid leads to appreciation of the real exchange rate, then it could reduce the country's export prospects compared with the baseline scenario. This means that, although a real exchange rate appreciation will directly reduce both the country's foreign debt stock and its debt-service obligations measured in domestic currency, it may also reduce the availability of foreign exchange to service debt. On the other hand, a real exchange rate depreciation—for example, as a result of a tapering off of aid or a sudden decline of aid inflows—will increase the burden of foreign debt in domestic currency, although it may boost exports over time.

8.2. Gauging Fiscal Debt Sustainability

Scaling up is also likely to have significant implications for total fiscal (external and domestic) debt through its impact on key macroeconomic variables (Figure 2). More specifically, scaling up should accelerate GDP growth and, hence, generate more government revenue. Scaling up may or may not change revenue buoyancy (the responsiveness of tax revenue to changes in income), depending on whether additional policy measures are implemented. Increased aid may also allow countries whose domestic debt is considered excessive to reduce their domestic debt ratios. A change in the domestic interest rate as a result of the need to sterilize increased aid inflows would also raise the cost of servicing domestic debt.

Figure 2. Impact of Scaling Up on Fiscal Debt
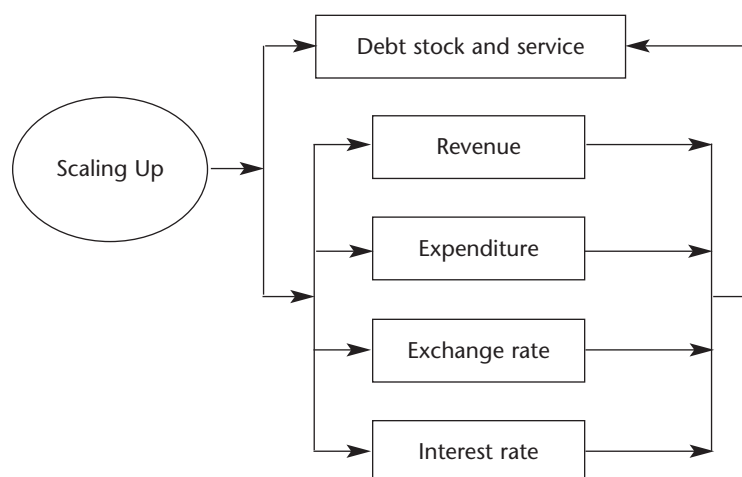
8.3. Ensuring Debt Sustainability

A sustainable debt strategy for scaling-up countries involves maximizing the concessionality of external financing.

If initial projections suggest that a country's debt will become unsustainable when its aid is scaled up, it may seek debt sustainability through a combination of adjusting the policy framework and, if possible, changing the composition of aid (using grants instead of loans, or increasing the grant element of new borrowing). The type of adjustment required will clearly vary from country to country, depending on existing constraints on domestic policies and the flexibility of donor resources. The goal, however, is to provide an appropriate borrowing (and lending) strategy that is consistent with the requirements of scaling up, limits the risk of debt stress, and is supported by a sound macroeconomic framework and debt-management institutions.[30] A sustainable debt strategy for scaling-up countries is to maximize the concessionality of external financing.

The IMF and the World Bank have agreed on a standard framework for conducting a fiscal DSA for scaling up. [31] The key feature of this framework is its policy-dependent, indicative debt-burden thresholds, beyond which debt is considered excessive. Countries that have strong domestic policies and institutions are deemed better able to carry external debt than those with weaker policies and institutions.[32]

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[30]See Daseking and Joshi (2005) for a discussion of the appropriate mix of grants and loans for low-income countries.

[31]See IMF and World Bank (2004). A DSA using the new framework was carried out for Ethiopia, though not in the context of scaling up (IMF, 2005a).

[32]The classification of countries by the quality of their policies and institutions is based on the World Bank's Country Policy and Institutional Assessment (CPIA) index. A strong performer (CPIA ≥ 3.75) is considered able to sustain a net present value (NPV) of debt-to-exports ratio of 200 percent and an NPV of debt-to-GDP ratio of 50 percent. A poor performer (CPIA ≤ 3.25) is limited to an NPV of debt-to-export ratio of 100 percent and an NPV of debt-to-GDP ratio of 30 percent.

The external DSA should use multiple indicators. As suggested by the IMF–World Bank framework, these indicators should include three net present value (NPV) ratios for external debt (relative to GDP, exports, and revenues) and two debt-service ratios (relative to exports and revenues). The NPV debt ratios indicate the future debt obligations a country has taken on, and the debt-service ratios point to possible liquidity constraints over time.

It may turn out that a country's domestic debt is not sustainable even when its external debt is below the sustainability thresholds. Reiterations of both the external and fiscal DSAs may therefore be required to identify the appropriate adjustments to the policy framework and aid composition. Here again, the standard template can be used to facilitate the DSA after the projections have been completed. The following issues should also be considered:

- Public enterprise debt: All public enterprise debt that arises from quasi-fiscal activities and imposes a contingent liability on the government should be included in the analysis, data permitting. In practice, this excludes the debt of commercially run public enterprises.[33]

- Net versus gross domestic debt: It is important to look not only at the debt a government owes but also at the assets a government has to help repay its debt. If, however, government assets are illiquid for the purpose of debt repayment, the DSA should be conducted on gross debt.

- Risk of debt distress: The fiscal DSA should use multiple indicators to show both the government's capacity to pay its debt obligations and possible liquidity problems. Such indicators may include NPV of debt-to-GDP and debt-to-revenue ratios, foreign-currency-denominated public debt as a share of GDP, and the debt-service-to-revenue ratio. The appropriate mix of these indicators depends on which aspects of the domestic debt carry the greatest risk for debt distress.

8.4. Strengthening the Debt-Management System

Institutions of debt management must not be allowed to weaken when aid is scaled up.

Strengthening debt-management institutions helps reduce the possibility that scaled-up lending will cause a country to build up excessive debt. In a scaling-up scenario focused on grants, there may be a temptation to allow the institutions associated with debt management to weaken. Debt-management institutions differ from country to country, but their activities generally focus on 1) formulating and communicating debt-management policies and strategies, 2) providing the projections and analysis to support policymaking, and 3) undertaking operations to implement terms of loan agreements and maintaining comprehensive and up-to-date loan records (Bangura, Kitabire, and Powell, 2000).

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[33]See IMF (2005e).

There are several components of an effective debt-management system:

• All public and publicly guaranteed debt must be contracted under rules that are both clearly understood by all public agencies and monitored centrally.

• The law should clearly state who is able to contract new borrowing on behalf of the state and for what purposes. Preferably, all public borrowing should be approved by the minister of finance.

• Although private nonguaranteed debt is typically not high in low-income countries, it should be monitored by the central government if possible because the servicing of obligations on such debt may have significant macroeconomic implications. In countries with no exchange controls in place, data on private debt will need to be obtained through commercial bank records or surveys of private companies.

9

Summary: Five Primary Guidelines

Scaling-up scenarios can be used to illustrate the potential impact on a country of a large increase in external aid and can help identify key measures and policies that will allow the country to absorb and spend increased aid inflows without destabilizing the macroeconomic environment. This handbook stresses that preparing a scaling-up scenario requires a detailed understanding of the likely uses of additional aid flows. Ideally, assumptions about the uses of aid are based on a detailed assessment by the country authorities—done in cooperation with the World Bank, the UN, or other donors—of the sectoral needs required to reach the MDGs and the likely pace at which each sector can absorb such funds without encountering major supply bottlenecks.

This handbook identifies five fundamental guidelines for preparing a scaling-up scenario to guide a country's efforts to achieve the MDGs.

9.1. Minimize the Risks of Dutch Disease

When aid flows increase, a country must choose how much aid to absorb and how much to spend. A country may use the opportunity afforded by higher aid levels to build up its foreign exchange reserves and reduce its domestic debt burden, but the typical assumption in scaling-up scenarios is that the country will both absorb and spend most of the aid. Doing this raises the possibility that the real exchange rate will appreciate, as higher domestic demand raises the price of nontradables in relation to tradables, and that productive resources will be diverted away from the exporting sectors.

It is unclear how high the risks of such Dutch disease effects are for Africa. The evidence is mixed. In a number of countries, aid surges have been associated with real exchange rate depreciation, suggesting that supply effects more than offset the impact of higher domestic demand on nontradable sectors or that aid was not absorbed. When aid is fully absorbed, a real appreciation is likely, at least in the short run.

A sound understanding of how a country will spend additional aid, as well as the likely policy response of the central bank, is therefore critical to projecting the likely macroeconomic impact of a scaling up of aid. Full absorption will put upward pressure on real exchange rates, but there are several ways to mitigate against Dutch disease, including: ensuring that there is a high import content in additional public spending; focusing spending on infrastructure, which may have a faster impact on productivity; and liberalizing trade.

9.2. Seek to Enhance Growth in the Short to Medium Term

Governments should aim to implement policies that strengthen the potential impact of aid on growth. Aid does not automatically increase growth, and the impact increasingly seems to depend on the type of aid. Not all aid is directed at activities that will boost growth (for example, emergency assistance, humanitarian aid, or disaster relief), and some categories of spending only improve growth with long lags (for example, aid for environmental programs, democratic or judicial reform, and some health and education programs). Aid that might reasonably be expected to affect growth in the short to medium term includes aid to build infrastructure such as roads, irrigation, ports, and electricity. Hence, there is no simple method to estimate the likely growth impact of higher government spending.

There may also be a trade-off between directing aid toward enhancing growth (for example, spending on infrastructure) and focusing aid on relieving poverty (for example, aid to rural sectors).

The returns to aid will diminish more quickly in sectors with serious supply bottlenecks, but these are often difficult to identify in advance. It is important, therefore, for governments to focus on developing policies that will allow them to effectively absorb higher aid levels and to remain alert to emerging supply pressures in different sectors. A gradual increase in aid is likely to be absorbed more easily than a sharp increase.

9.3. Promote Good Governance and Reduce Corruption

Good governance improves the effectiveness of aid in promoting growth. Strengthening institutions for public expenditure management and public auditing and reducing corruption therefore are likely to increase the benefits of aid, allowing more funds to be effectively channeled to productive uses and reassuring aid donors that their money is being well spent. Promoting good governance also supports the development bargain emphasized by the Commission for Africa (2005), namely, that country-led reforms should be backed by increased aid.

9.4. Prepare an Exit Strategy

Governments receiving higher aid flows also face the challenge of what to do if and when the scaled-up aid is not sustained by donors. It may be difficult to reduce expenditures that have been financed by aid, and the pressure for higher domestic financing of the deficit may increase significantly. This underlines the importance of developing an exit strategy as part of the scaling-up scenario, to map the macroeconomic path the country will follow after scaled-up aid flows fall back to more normal levels or, perhaps to lower-than-normal levels, if aid flows have been front-loaded.

Policies during the scaling-up period must be consistent with a smooth transition during the scaling-down period. The country must maintain its revenue efforts and strengthen its tax systems. The government may choose to smooth the impact of aid volatility by projecting some accumulation reserves (or decumulation), with associated effects on monetary management. Sufficient current spending must be allowed to ensure that capital investment can be operated and maintained.

In a scaling-up scenario that includes significant new loans, it is critical to regularly monitor debt sustainability and to create government institutions that can develop and administer a clear and widely understood public debt strategy. This is important for all low-income countries, whether or not they have been granted comprehensive debt relief.

9.5. Regularly Reassess the Appropriate Policy Mix

Scaling-up scenarios are not forecasts. Their precision is conditional on both sustained higher aid flows and countries' implementation of policies that allow them to absorb the additional aid flows without destabilizing the macroeconomy such as through increased inflation, loss of competitiveness, or a rise of debt to unsustainable levels. Because the scenarios are highly uncertain, projecting the point at which the returns on aid fall to zero is highly imprecise. Scenarios should therefore be considered as tools to help countries identify the important policy issues they face in using higher aid flows effectively. Countries and donors should use the scenarios to regularly update their vision for the future.

Appendix 1. The Relationship between Aid Flows and Exchange Rates in Sub-Saharan Africa

Aid Flows and the Real Exchange Rate

Attempts to measure the relationship between aid flows and the real exchange rate in SSA date back to the early 1980s (Appendix Table A.2.2).

- A number of studies have found a tendency for aid inflows to be associated with an appreciation of the real exchange rate, but this evidence is not overwhelmingly significant. See Younger (1992) for Ghana, and Kasekende and Atingi-Ego (1999) for Uganda, as well as cross-country analysis by Adenauer and Vagassky (1998).

- Econometric estimates often show the impact of aid on the exchange rate to be small and statistically insignificant. Bulir and Lane (2002) call these "traces" of aid-induced real exchange rate appreciation. Prati, Sahay, and Tressel (2003), using a panel data model, suggest that for countries whose ODA is in excess of 2 percent of GDP a year, a doubling of aid would appreciate the level of real exchange rate by, at most, 4 percent in the short run, rising to about 18 percent over a five-year period and 30 percent over a decade.

- Time-series models tend to reveal that the real exchange rate responds less to aid variations than to other exogenous factors, such as terms of trade variations.

- Some studies of African countries find that aid inflows appear to be associated with a real depreciation, reflecting increased productivity (supply-side response) as a result of aid. See, for example, Nyoni (1998), Sackey (2002), and IMF (2005d). The latter observes that aid that is not absorbed is not associated with any real exchange rate appreciation, noting that in a number of cases, aid surges went largely into reserves.

Exchange Rates and Exports

Region-specific studies find real exchange rate changes to be a significant determinant of the share of exports in GDP in SSA. Balassa (1990) estimates

that a 1 percent change in the level of the real exchange rate is associated with a change of 0.8 percent to 1 percent in the share of exports in GDP. Similarly, Ghura and Grennes (1993) find that an actual exchange rate that is 1 percent above a model-based equilibrium exchange rate lowers the share of exports by 0.096 percent. Rajan and Subramanian (2005a) argue that in countries that receive more aid, export-oriented, labor-intensive industries grow more slowly than other industries, suggesting that aid does lead to Dutch disease.

However, the impact of exchange rate *instability* on exports can also be an important consideration. With a smaller sample of countries, Sekkat and Varoudakis (2000) estimate a higher elasticity between exchange rate misalignment and the share of exports in some sectors, but this result is not always significant. These studies, however, do not estimate the real exchange rate effects in the context of other factors that might hinder export growth.

To the extent that higher aid flows alleviate supply bottlenecks, they can offset the effect of an exchange rate appreciation on export growth. In a study covering 60 developing countries, Elbadawi (2002) finds that real exchange rate depreciation did play a significant role in export growth (with the elasticity varying between 0.54 and 0.64 for the entire group). But the coefficients of regional dummies in the study suggest that all other things equal, nontraditional exports from East Asia and Latin America would be higher than those from SSA, implying that supply constraints, not included in the model, might significantly account for the poor performance of nontraditional exports in this region.

Exchange Rates and Economic Growth

Recent studies find that growth accelerations are associated with real depreciation, suggesting that a large real appreciation associated with scaling up could have long-term growth costs. Several studies have built on Hausmann, Pritchett, and Rodrik's (2004) analysis of jumps in countries' medium-term growth trends, which they label "growth accelerations." Their study found that the onset of accelerations had a strong correlation with real exchange rate depreciation. This finding has been confirmed for SSA (IMF, 2005f). Almost all the sustained growth cases in SSA avoided overvaluation during the growth period. The study also notes the close link between avoidance of exchange rate misalignment and macroeconomic stability, reinforcing the case for aid inflows to be accompanied by prudent macroeconomic management.

Overvaluation of the exchange rate dampens growth. With a dataset that includes 73 developing countries, spanning the period from 1975 to 1992, Razin and Collins (1997) find that overvaluation does have a significant negative impact on growth, while there is no statistically significant relationship between undervaluation and growth. According to their estimates, a 1 percent overvaluation is associated with a 0.06 percent decline in the real per capita growth rate. Dollar (1992) estimates that a 1 percent distortion of the exchange rate dampened the per capita growth rate by about 0.02 percent for

95 developing countries between 1976 and 1985.[34] Similarly, Cottani, Cavallo, and Khan (1990) estimate that for a group of 24 developing countries over the period 1960–83, the growth-dampening effect of exchange rate misalignment was about 0.1 percent. Ghura and Grennes (1993) find that a 1 percent overvaluation dampens real per capita GDP growth by about 0.02 percent. Bleaney and Greenway (2001) also estimate a negative effect of lagged exchange rate misalignment on growth. They estimate, with data covering 14 SSA countries over the period 1980–95, that a 1 percent lagged misalignment dampens GDP growth by 0.04 percent.

Exchange Rates and Investment

One of the channels through which a temporarily stronger exchange rate may influence the growth rate is the impact on investment. Razin and Collins (1997) posit that, in addition to its effect on the competitiveness of the tradables sector, a stronger exchange rate may also affect domestic and foreign investment, thereby influencing the capital accumulation process. Bleaney and Greenway (2001) suggest that an overvaluation might hurt investment even though it lowers the price of imported capital goods, because it reduces the returns to investment in the tradables sector and because the resulting current account deficit creates the need for tighter macroeconomic policies.

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[34]In this case, the right-hand-side variable is not exchange rate misalignment but exchange rate distortion. Whereas misalignment indicates the extent to which an exchange rate is overvalued given the fundamentals, Dollar's index specifically measures the extent to which the exchange rate is distorted away from its free-trade level.

Appendix 2. The Macroeconomics of Aid

Appendix Table A.2.1 Official Net Transfers to SSA Countries
(In percent of GDP)

(More than 15 percent)

1980–84	1985–89	1990–94	1995–99	2000–03	1980–2003
Equatorial Guinea 47	São Tomé and Príncipe 34	São Tomé and Príncipe 38	São Tomé and Príncipe 78	Eritrea 52	São Tomé and Príncipe 46
Cape Verde 39	Guinea-Bissau 33	Mozambique 35	Guinea-Bissau 36	São Tomé and Príncipe 24	Guinea-Bissau 30
Guinea-Bissau 36	Mozambique 29	Guinea-Bissau 30	Mozambique 29	Mozambique 23	Mozambique 27
Comoros 29	Cape Verde 28	Eritrea 29	Rwanda 26	Sierra Leone 23	Eritrea 25
São Tomé and Príncipe 26	Equatorial Guinea 25	Cape Verde 26	Liberia 21	Congo, Dem. Rep. of 20	Cape Verde 23
Mozambique 22	Comoros 25	Equatorial Guinea 22	Malawi 20	Guinea-Bissau 18	Equatorial Guinea 21
Gambia, The 18	Gambia, The 22	Rwanda 20	Eritrea 20	Burundi 18	Comoros 16
Lesotho 16	Lesotho 17	Malawi 19	Cape Verde 20	Malawi 15	Gambia, The 16
Ethiopia 15		Burundi 17			Malawi 15
		Gambia, The 17			
		Uganda 17			
		Tanzania 16			
		Zambia 15			

(Between 5 and 15 percent)

1980–84	1985–89	1990–94	1995–99	2000–03	1980–2003
Mali 12	Malawi 12	Chad 14	Sierra Leone 13	Ethiopia 12	Burundi 14
Senegal 11	Chad 11	Niger 14	Burundi 13	Rwanda 11	Liberia 13
Burundi 11	Mali 11	Lesotho 13	Niger 13	Uganda 10	Rwanda 11
Seychelles 10	Burundi 10	Comoros 12	Chad 13	Niger 10	Ethiopia 11
Central African Rep. 9	Niger 9	Sierra Leone 12	Central African Rep. 12	Zambia 10	Sierra Leone 11
Tanzania 9	Zambia 9	Ethiopia 12	Burkina Faso 12	Tanzania 10	Lesotho 11
Malawi 9	Ethiopia 9	Central African Rep. 11	Zambia 12	Liberia 10	Mali 10
Burkina Faso 8	Tanzania 9	Mali 10	Comoros 11	Burkina Faso 10	Tanzania 10
Chad 8	Central African Rep. 8	Benin 10	Madagascar 10	Gambia, The 9	Niger 9
Niger 7	Burkina Faso 7	Madagascar 9	Mali 10	Mali 9	Zambia 9
Botswana 6	Benin 6	Burkina Faso 8	Ethiopia 10	Cape Verde 8	Chad 9
Benin 6	Senegal 6	Guinea 8	Uganda 9	Ghana 8	Burkina Faso 8
Madagascar 6	Guinea 6	Ghana 8	Tanzania 9	Chad 8	Central African Rep. 7

Column 1
- Rwanda
- Zambia
- Congo, Rep. of
- Kenya

Column 2
- 6 Madagascar
- 6 Togo
- 6 Rwanda
- 5 Seychelles
- Ghana
- Sierra Leone
- Kenya

Column 3
- 7 Senegal
- 7 Togo
- 6 Kenya
- 6 Côte d'Ivoire
- 6 Zimbabwe
- 6
- 5

Column 4
- 9 Benin
- 7 Senegal
- 6 Gambia, The
- 6 Ghana
- 5 Togo
- Guinea
- Lesotho

Column 5
- 7 Comoros
- 7 Benin
- 7 Madagascar
- 6
- 5
- 5

Column 6
- 7 Uganda — 8
- 6 Madagascar — 8
- 6 Senegal — 8
- Benin — 8
- Congo, Dem. Rep. — 6
- Ghana — 6
- Togo — 6
- Guinea — 6

(Less than 5 percent)

Column 1
- 4 Swaziland
- 4 Togo
- 4 Zimbabwe
- 4 Mauritius
- 3 Sierra Leone
- 2 Côte d'Ivoire
- 2 Uganda
- 2 Cameroon
- 2 Guinea
- 1 Congo, Dem. Rep. of
- 1 Ghana
- 1 Gabon
- 0 Nigeria
- n.a. South Africa
- n.a. Eritrea
- n.a. Namibia
- n.a. Angola
- n.a. Liberia

Column 2
- 4 Congo, Rep. of
- 4 Uganda
- 4 Botswana
- 4 Congo, Dem. Rep. of
- 3 Zimbabwe
- 2 Mauritius
- 2 Angola
- 2 Gabon
- 2 Cameroon
- 1 Côte d'Ivoire
- 1 Swaziland
- 1 Nigeria
- 0 Liberia
- n.a. South Africa
- n.a. Namibia
- n.a. Eritrea

Column 3
- 5 Cameroon
- 5 Congo, Dem. Rep. of
- 5 Angola
- 3 Congo, Rep. of
- 3 Seychelles
- 2 Gabon
- 2 Botswana
- 2 Swaziland
- 2 South Africa
- 1 Mauritius
- 0 Nigeria
- 0 Liberia
- n.a. Namibia

Column 4
- 4 Equatorial Guinea
- 4 Congo, Rep. of
- 4 Angola
- 4 Congo, Dem. Rep.
- 3 Seychelles
- 1 Zimbabwe
- 1 Swaziland
- 0 Kenya
- 0 Côte d'Ivoire
- 0 Cameroon
- −2 South Africa
- n.a. Botswana
- n.a. Mauritius
- Nigeria
- Gabon
- Namibia

Column 5
- 5 Central African Rep.
- 3 Senegal
- 2 Lesotho
- 2 Togo
- 2 Seychelles
- 2 Guinea
- 1 Cameroon
- 1 Kenya
- 1 Zimbabwe
- 0 Equatorial Guinea
- 0 Angola
- 0 Swaziland
- −1 Côte d'Ivoire
- −2 Congo, Rep. of
- −3 South Africa
- n.a. Mauritius
- Botswana
- Nigeria
- Gabon
- Namibia

Column 6
- 5 Seychelles
- 4 Kenya
- 4 Congo, Rep. of
- 3 Zimbabwe
- 3 Angola
- 3 Botswana
- 2 Côte d'Ivoire
- 2 Cameroon
- 1 Swaziland
- 1 Mauritius
- 1 South Africa
- 1 Gabon
- 1 Nigeria
- n.a. Namibia

Table A.2.2. Aid Inflows and Real Exchange Rate Appreciation: Empirical Evidence

Study	Sample	Aid and Real Exchange Rate Appreciation Relationship	Effect of 1 Percent Real Increase in Aid
Cross-Sectional Studies			
Van Wijnbergen (1985)	6 African countries, 1969–83	Mixed	Appreciation of 0.2–0.9 percent over two years for some countries; no significant change for others
Adenauer and Vagassky (1998)	4 CFA franc zone countries, 1980–92	Positive	Appreciation of 0.13 percent over 2 years
Bulir and Lane (2002)	9 developing countries	Positive	n.a.
Prati, Sahay, and Tressel (2003)	87 developing countries, 1960–98	Positive	Appreciation of 0.04 percent in the first year
Elbadawi (1999)	62 developing countries (28 from Africa), 1984–85, 1989–90, 1994–95	Positive	Appreciation of 0.09 percent in the first year[1]
Yano and Nugent (1999)	44 developing countries, 1970–90	Mixed	n.a.
Country-Specific Studies			
Younger (1992)	Ghana, 1960–88	Positive	n.a.
Kasekende and Atingi-Ego (1999)	Uganda, 1970–96	Positive	Appreciation of 0.03 percent in the first year
Nyoni (1998)	Tanzania, 1967–93	Negative	Depreciation of 0.13 percent in the first year
Sackey (2002)	Ghana, 1962–96	Negative	Depreciation of 0.03 percent in the first year
IMF (2005e)	Ethiopia, Ghana, Mozambique, Tanzania, Uganda	Negative	Depreciation of 1.5–6.5 percent the year following an aid surge[2]

Sources: As cited

n.a. indicates that the study does not yield an elasticity measure.
[1]Indicates response to 1 percent increase in ratio of ODA to GNP.
[2]Indicates response to an aid surge with inflows ranging between 2 percent and 11 percent of GDP.

Table A.2.3. Empirical Studies of Kinks in the Relationship between Inflation and Growth

	Inflation threshold (percent)	Growth effect of higher inflation below the threshold	Countries	Period	Inflation measure	Remarks
Fischer (1993)	15	Negative	80	1960–89	CPI	
Barro (1991)	10–20	Not significant	117	1960–90	10-year average CPI	
Sarel (1996)	8	Positive	87	1970–90	5-year average CPI	
Bruno and Easterly (1998)	40	Not significant	97	1961–92	CPI	
Ghosh and Phillips (1998)	>5	Positive	145	1960–96	Average annual CPI	
Kochhar and Coorey (1999)	5	Positive	84 (low- and middle-income countries only)	1981–95	Average annual CPI	
Khan and Senhadji (2000)	7–11 (for developing countries only)	Positive	140	1960–98	5-year average CPI	1–3 percent threshold for industrial countries Controlled for investment and unemployment
Burdekin, Denzou, Keil, Sitthiyot, and Willett (2000)	3 (for developing countries only)	Positive	51	1967–92		8 percent threshold for industrial countries
Gylfason and Herbertsson (2001)	10–20	Positive	170	1960–92	5-year average GDP deflator	

CPI = consumer price index.

Table A.2.4. Incremental Effect of Aid on Domestic Revenue

Study	Sample	Domestic Revenue[1]
Heller (1975)	9 Anglophone African countries, 1960–71	–0.42
Pack and Pack (1990)	Indonesia, 1966–86	0.29
Cashel-Cordo and Craig (1990)	46 Least Developed Countries, 1975–80	(African countries) 10.29 (non-African countries) –4.25
Gang and Khan (1990)	India, 1961–84	0.00
Khilji and Zampelli (1991)	Pakistan, 1960–86	-0.01
Leuthold (1991)	8 African countries, 1973–81	0.00
Khan and Hoshino (1992)	5 Asian countries, 1955–76	1.20
Gupta (1993)	India, 1969–93	0.01
Pack and Pack (1993)	Dominican Republic, 1968–86	–0.39
Rubino (1997)	Indonesia	–1.40
Iqbal (1997)	Pakistan, 1976–95	0.00
Franco-Rodrigues, Morrissey, and McGillivray (1998)	Pakistan, 1960–95	(Direct effects) –2.90
		(Total effects) –3.60
MacGillivray and Ahmed (1999)	The Philippines, 1960–92	0.10
Franco-Rodriguez (2000)	Costa Rica, 1971–94	1.10
McGillivray (2000)	Pakistan, 1956–95	0.00
Swaroop, Jha, and Sunil Rajkumar (2000)	India, 1970–95	0.00

Sources: McGillivray and Morrisey (2001); Feeny and McGillivray (2003); as cited.
[1]Figures are the total effect of a one unit increment in aid on domestic revenue collections.

Table A.2.5. Tax Revenue and Trade Taxes, by Region
(In percent of GDP)

| | Tax Revenue | | International Trade Taxes | | | |
| | | | Import duties | | Export duties | |
Country Subgroups[1]	Early 1990s	Early 2000s	Early 1990s	Early 2000s	Early 1990s	Early 2000s
Americas	14.9	16.3	2.5	1.9	0.2	0.0
Sub-Saharan Africa	16.3	15.9	4.9	3.5	1.0	0.4
Central Europe and BRO[2]	27.3	23.4	1.4	0.9	0.8	0.4
North Africa and Middle East	15.1	17.1	3.6	3.0	0.1	0.1
Asia and Pacific	13.6	13.2	3.2	1.9	0.3	0.2
Small islands	25.5	24.5	13.5	9.7	0.3	0.0
Unweighted average						
Developing countries[3]	17.9	17.6	3.9	2.7	0.5	0.2
High-income countries	26.6	27.5	2.0	1.3	0.0	0.2
PRGF–eligible countries	15.2	14.8	4.8	3.5	0.6	0.3

Source: Keen and Simone (2004).
[1]Subgroups contain only developing countries.
[2]Baltic countries, Russia, and the other countries of the former Soviet Union.
[3]Defined as low- and middle-income countries.

Table A.2.6. Relationship between Public and Private Investment in Sub-Saharan Africa

Study	Data and Coverage	Results
Greene and Villanueva (1991)	23 developing countries (Asia, SSA, and Latin America); pooled sample	Public investment increases private investment
Hadjimichael and Ghura (1995)	41 SSA countries; panel data	Public investment increases private investment; also studied other policy determinants of private investment
Odedokun (1997)	48 developing countries (SSA, Asia, Europe, and North Africa); panel data	Public infrastructure investment increases private investment; non-infrastructure crowds out private investment
Ghura and Goodwin (2000)	31 developing countries (Asia, SSA, and Latin America); panel data	Public investment increases private investment in SSA, but crowds out in Asia and Latin America
Belloc and Vertova (2004)	7 HIPC countries, 5 in SSA; country-level vector autoregressions	Public investment increases private investment in 6 of 7 countries

Table A.2.7. The Effect of Public Investment on Output

Study	Data and Coverage	Results
Canning and Bennathan (2000)	Penn World Tables and specialized infrastructure data; annual; all country income levels	Output elasticity with respect to roads and electricity in range of 0.05–1.0; highest for MICs; strong input complementarity
Calderon and Serven (2004)	World Bank data with infrastructure indices; 5-year averages; all country income levels	Large output gains to closing infrastructure gaps
Barro (1991)	Penn World Tables, World Bank and UN; averages, 1960–85; all country income levels	No impact of public investment on growth
Easterly and Rebelo (1993)	Specialized data capturing broad public investment; 10-year averages; all country income levels	No impact of public investment aggregate on per capita growth, but big impact (0.6) for transport and communication and direct public investment of the government (0.4)
Devarajan, Swaroop, and Zou (1996)	Government Financial Statistics; 5-year averages; LICs and MICs	Studies impact of changes in budget composition; capital spending has negative effect
Khan and Kumar (1997)	Penn World Tables, World Bank, World Economic Outlook; 10-year averages; LICs and MICs	Public investment has positive impact on per capita growth (0.3), but weakening in recent samples
Clements, Bhattacharya, and Nguyen (2003)	World Bank; 3-year averages; LICs	Public investment has positive impact (0.2) when not deficit-financed
Gupta, Clements, Baldacci, and Mulas-Granados (2004)	IMF; annual; LICs	Positive impact of public capital outlays (0.7) on per capita growth

Source: Adapted from Table 1 in IMF (2004a) to those studies that include evidence from LICs.

Note: Growth regression studies use country average growth rates typically calculated over 5- or 10-year periods. The numbers in parentheses in the third column indicate the estimated response of this average to a permanent increase in the expenditure share of 1 percent of GDP. They should thus be interpreted as the long-run response to a small permanent change in the expenditure share. While Gupta Clements, Baldacci, and Mulas-Granados (2004) use annual growth data, their specification allows them to distinguish short- and long-run impacts.

LIC = low-income country; MIC = middle-income country.

Table A.2.8. Impact of Health and Education Sectors on Output

Study	Data and Coverage	Results
Barro (1991)	Penn World Tables, World Bank and UN; averages 1960–85; all country income levels	Significant role for human capital (especially initial stock of secondary education)
Barro and Sala-i-Martin (1995)	Data similar to Barro's (1991); 10-year averages; all country income levels	Positive impact of education spending on per capita growth (0.2)
Devarajan, Swaroop, and Zou (1996)	Government Financial Statistics; 5-year averages; LICs and MICs	Impact of changes in budget composition; current spending has positive impact, mixed results for functional breakdown
Krueger and Lindahl (2001)	Similar to Barro (1991) augmented with World Values Survey; data averages of various lengths; all country income levels	Big impact of change in schooling on growth, but only detectable in long-period averages (10-20 years); size of effect varies with econometric specification
Baldacci and others (2004)	World Bank and IMF; 5-year averages; LICs and MICs	Positive impact of spending on education (0.5) and health (0.4) after 5 years; education impact rises to 1.4 after 15 years; diminishing returns to level of education and health spending
Canning, and Sevilla Bloom (2003)	Penn World Tables, UN, and World Bank; 10-year averages; all country income levels	Studies impact of health indicators and not expenditure; 1-year increase in average life expectancy raises output by 4 percent

Note: These studies use country average growth rates typically calculated over 5- or 10-year periods. The numbers in parentheses in the third column indicate the estimated response of this average to a permanent increase in the expenditure share of 1 percent of GDP. They should thus be interpreted as the long-run response to a small permanent change in the expenditure share.

LIC = low-income country; MIC = middle-income country.

Table A.2.9. Impact of Increasing Corruption by One Unit[1]

Study	Impact on	Finding
Mauro (1995)	Real per capita GDP growth	–0.3 to –1.8 percentage points
Leite and Weidmann (2002)	Real per capita GDP growth	–0.7 to –1.2 percentage points
Tanzi and Davoodi (2002)	Real per capita GDP growth	–0.6 percentage points
Abed and Davoodi (2002)	Real per capita GDP growth	–1 to –1.3 percentage points
Mauro (1995)	Ratio of investment to GDP	–1 to –2.8 percentage points
Mauro (1998)	Ratio of public education spending to GDP	–0.7 to –0.9 percentage points
Mauro (1998)	Ratio of public health spending to GDP	–0.6 to –0.9 percentage points
Gupta, Davoodi, and Alonso-Terme (2002)	Income inequality (Gini coefficient)	+3.5 to +4.25 Gini points
Gupta, Davoodi, and Alonso-Terme (2002)	Income growth of the poor	–2 to –10 percentage points
Ghura (2002)	Ratio of tax revenues to GDP	–1 to –2.9 percentage points
Tanzi and Davoodi (2002)	Measures of government revenues to GDP ratio	–0.1 to –2.7 percentage points
Gupta, de Mello and Sharan (2002)	Ratio of military spending to GDP	+ 1 percentage point
Gupta, Davoodi, and Tiongson (2002)	Child mortality rate	+ 1.1 to 1.5 deaths per 1,000 live births
Gupta, Davoodi, and Tiongson (2002)	Primary student dropout rate	+ 1.1 to 1.4 percentage points
Tanzi and Davoodi (1998)	Ratio of public investment to GDP	+ 0.5 percentage points
Tanzi and Davoodi (1998)	Percent of paved roads in good condition	–2.2 to –3.9 percentage points

Sources: IMF, Fiscal Affairs Department; Transparency International (2001).

[1]Corruption is measured on a scale of 0 (highly clean) to 10 (highly corrupt).

Most of the above studies use the Transparency International corruption measure, rescaled so that higher values in the range 1-10 correspond to higher corruption. When the International Country Risk Guide measure of corruption was used, it was rescaled in the same way. Both the Transparency International and International Country Risk Guide measures rely on expert perceptions. For Gupta, Davoodi, and Tiongson (2000), an index was constructed from National Service Delivery Surveys. This has the advantage of being based on reported service client experience.

References

Abed, George T., and Hamid R. Davoodi, 2002, "Corruption, Structural Reforms, and Economic Performance in the Transition Economies," in *Governance, Corruption, and Economic Performance*, ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund), chapter 18.

Adam, Christopher, 2004, "Fiscal Policy Design in Low-Income Countries," in *Fiscal Policy for Development: Poverty, Reconstruction, and Growth*, ed. by Tony Addison and Alan Roe (New York: Palgrave MacMillan).

———, 2005, "Exogenous Inflows and Real Exchange Rates: Theoretical Quirk or Empirical Reality?" paper presented at IMF Seminar on Foreign Aid and Macroeconomic Management, Maputo, Mozambique, March 14–15. Available at: *http://www.imf.org/external/np/seminars/eng/2005/famm/pdf/adam.pdf*

Adam, Christopher S., and David L. Bevan, 2003, "Aid, Public Expenditure and Dutch Disease," CSAE Working Paper 184 (Oxford: Centre for the Study of African Economies, Oxford University). Available at: *http://www.bepress.com/csae/paper184*

———, 2004, "Aid and the Supply Side: Public Investment, Export Performance and Dutch Disease in Low Income Countries," Department of Economics Discussion Paper Series 201 (Oxford: Department of Economics, Oxford University). Available at: *http://www.economics.ox.ac.uk/Research/wp/pdf/paper201.pdf*

Adenauer, Isabell, and Laurence Vagassky, 1998, "Aid and the Real Exchange Rate: Dutch Disease Effects in African Countries," *Intereconomics*, Vol. 33, No. 4, pp. 177–85.

Agbeyegbe, Terence D., Janet Gale Stotsky, and Asegedech WoldeMariam, 2004, "Trade Liberalization, Exchange Rate Changes, and Tax Revenue in Sub-Saharan Africa," IMF Working Paper 04/178 (Washington: International Monetary Fund).

Agence Française de Développement, Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung, Kreditanstalt für Wiederaufbau Entwicklungs-bank, U.K. Department for International Development, and the World Bank, 2005. "Pro-Poor Growth in the 1990s: Lessons and Insights from 14 Countries," Working Paper 32885 (Washington: World Bank).

Andrews, David, Lodewyk Erasmus, and Robert Powell, 2005, "Ethiopia: Scaling Up," *Finance and Development*, Vol. 42, No. 3 (September), pp. 32–35.

Atingi-Ego, Michael, 2005. "Choice of Appropriate Monetary Policy Instrument Mix by Bank of Uganda" (unpublished; Kampala: Bank of Uganda).

Balassa, Bela A., 1990, "Incentive Policies and Export Performance in Sub-Saharan Africa," *World Development*, Vol. 18, No. 3 (March), pp. 383–91.

Baldacci, Emanuele, Benedict J. Clements, Sanjeev Gupta, and Qiang Cui, 2004. "Social Spending, Human Capital, and Growth in Developing Countries: Implications for Achieving the MDGs," IMF Working Paper 04/217 (Washington: International Monetary Fund).

Baldacci, Emanuele, and Kevin Fletcher, 2004, "A Framework for Fiscal Debt Sustainability Analysis in Low-Income Countries," in *Helping Countries Develop: The Role of Fiscal Policy,* ed. by Sanjeev Gupta, Gabriela Inchauste, and Benedict Clements (Washington: International Monetary Fund), chapter 6.

Bangura, Sheku, Damoni N. Kitabire, and Robert Powell, 2000, "External Debt Management in Low-Income Countries," IMF Working Paper 00/196 (Washington: International Monetary Fund).

Barro, Robert J., 1991, "Economic Growth in a Cross Section of Countries," *Quarterly Journal of Economics*, Vol. 106, No. 2 (May), pp. 407–44.

———, and Xavier Sala-i-Martin, 1995, *Economic Growth* (New York: McGraw-Hill).

Bauer, Peter T., 1972, *Dissent on Development* (Cambridge: Harvard University Press).

Belloc, Marianna, and Pietro Vertova, 2004. "How Does Public Investment Affect Economic Growth in HIPC? An Empirical Assessment," Working Paper No. 416 (Siena, Italy: University of Siena, Department of Policitical Economics). Available at: *http://www.econ-pol.unisi.it/quaderni/416.pdf*

Berg, Andy, 2005, "High Aid Inflows Case Study: Ghana," paper presented at IMF Seminar on Foreign Aid and Macroeconomic Management, Maputo, Mozambique, March 14–15. Available at: *http://www.imf.org/external/np/seminars/eng/2005/famm/pdf/berg.pdf*

Bevan, David L., 2005. "An Analytical Overview of Aid Absorption: Recognizing and Avoiding Macroeconomic Hazards," paper presented at IMF Seminar on Foreign Aid and Macroeconomic Management, Maputo, Mozambique, March 14–15. Available at: *http://www.imf.org/external/np/seminars/eng/2005/famm/pdf/bevan.pdf*

Bleaney, Michael, and David Greenaway, 2001, "The Impact of Short Terms of Trade and Real Exchange Rate Volatility on Investment and Growth in Sub-Saharan Africa," *Journal of Development Economics*, Vol. 65, No. 2 (August), pp. 491–500.

Bloom, David E., David Canning, and Jaypee Sevilla, 2004. "The Effect of Health on Economic Growth: A Production Function Approach," *World Development*, Vol. 32, No. 1 (January), pp. 1–13.

Boone, Peter, 1996, "Politics and the Effectiveness of Foreign Aid," *European Economic Review*, Vol. 40, No. 2, pp. 289–330.

Briceño-Garmendia, Cecilia, Antonio Estache, and Nemat Shafik, 2004, "Infrastructure Services in Developing Countries: Access, Quality, Costs and Policy Reform," Policy Research Working Paper No. 3468 (Washington: World Bank).

Bruno, Michael, and William Easterly, 1998, "Inflation Crises and Long Run Growth," *Journal of Monetary Economics*, Vol. 41, No. 1, pp. 3–26.

Bulir, Aleš, and A. Javier Hamann, 2005, "Volatility of Development Aid: From the Frying Pan into the Fire?" paper presented at IMF Seminar on Foreign Aid and Macroeconomic Management, Maputo, Mozambique, March 14–15. Available at: *http://www.imf.org/external/np/seminars/eng/2005/famm/pdf/hamann.pdf*

Bulir, Aleš, and Timothy Lane, 2002, "Aid and Fiscal Management," IMF Working Paper 02/112 (Washington: International Monetary Fund).

Burdekin, Richard C.K., Arthur T. Denzau, Manfred W. Keil, Thitithep Sitthiyot, and Thomas D. Willett, 2000, "When Does Inflation Hurt Economic Growth? Different Nonlinearities for Different Economies," Working Paper 22 (Claremont, California: Claremont Colleges).

Burnside, Craig, and David Dollar, 2000,"Aid, Policies and Growth," *American Economic Review*, Vol. 90, No. 4 (September), pp. 847–68.

Calderon, Cesar, and Luis Serven, 2004, "The Effects of Infrastructure Development on Growth and Income Distribution," Policy Research Working Paper No. 3400 (Washington: World Bank).

Canning, David, and Esra Bennathan, 2000, "The Social Rate of Return on Infrastructure Investments," Policy Research Working Paper No. 2390 (Washington: World Bank).

Canning, David, David Bloom, and Jaypee Sevilla, 2003, "Geography and Poverty Traps," *Journal of Economic Growth*, Vol. 8, pp. 355–78.

Cashel-Cordo, Peter, and Steven Craig 1990, "The Public Sector Impact of International Resource Transfers," *Journal of Development Economics*, Vol. 32, No. 1 (January), pp. 17–42.

Chauvet, Lisa, and Paul Collier, 2004, "Development Effectiveness in Fragile States: Spillovers and Turnarounds," CSAE Working Paper (Oxford: Centre for the Study of African Economies, Oxford University).

Chauvet, Lisa, and Patrick Guillaumont, 2004, "Aid and Growth Revisited: Policy, Economic Vulnerability and Political Instability," in *Toward Pro-Poor Policies Aid, Institutions, and Globalization,* ed. by Bertil Tungodden, Nicholas Stern, and Ivar Kolstad (New York: Oxford University Press and World Bank).

Chenery, Hollis B., and Alan M. Strout, 1966, "Foreign Assistance and Economic Development," *American Economic Review*, Vol. 56, No. 4, pp. 679–733.

Chu, Ke-young, Sanjeev Gupta, Jerald Alan Schiff, and others, 1995, *Unproductive Public Expenditures: A Pragmatic Approach to Policy Analysis*, IMF Pamphlet Series, No. 48 (Washington: International Monetary Fund).

Clemens, Michael, and Steven Radelet, 2003, "Absorptive Capacity: How Much Is Too Much?" in *Challenging Foreign Aid: A Policymaker's Guide to the Millennium Challenge Account,* ed. by Steven Radelet (Washington: Center for Global Development), chapter 7.

———, and Rikhil Bhavnani, 2004, "Counting Chickens When They Hatch: The Short-term Effect of Aid on Growth," Working Paper 44 (Washington: Center for Global Development).

Clements, Benedict J., Rina Bhattacharya, and Toan Quoc Nguyen, 2003, "External Debt, Public Investment, and Growth in Low-Income Countries," IMF Working Paper 03/249 (Washington: International Monetary Fund).

Collier, Paul, and Jan Dehn, 2001, "Aid, Shocks, and Growth," Policy Research Working Paper No. 2688 (Washington: World Bank).

Collier, Paul, and David Dollar, 2002, "Aid Allocation and Poverty Reduction," *European Economic Review*, Vol. 46, No. 8 (September), pp. 1475–1500.

Collier, Paul, and Anke Hoeffler, 2004, "Aid, Policy and Growth in Post-Conflict Societies," *European Economic Review*, Vol. 48, No. 5 (October), pp. 1125–45.

Collier, Paul, and Steve O'Connell, 2005, "Opportunities, Choices and Syndromes," paper presented at AERC/Harvard workshop on Explaining African Economic Growth, 1960–2000, Weatherhead Center for International Affairs, Harvard University, Cambridge, Massachusetts, March 18–19, 2005. Available at: *http://www.wcfia.harvard.edu/conferences/batesafrica/PapersPDF/Collier O'C onnell.pdf*

Commission for Africa, 2005, *Our Common Interest: Report of the Commission for Africa* (London: Department for International Development). Available at: *http://www.commissionforafrica.org/english/report/thereport/cfafullreport_1.pdf*

Cottani, Joaquin A., Domingo F. Cavallo, and M. Shahbaz Khan, 1990, "Real Exchange Rate Behavior and Economic Performance in LDCs," *Economic Development and Cultural Change*, Vol. 39, No. 1 (October), pp. 61–72.

Daseking, Christina, and Bikas Joshi, 2005, "Debt and New Financing in Low-Income Countries, " paper presented at IMF Seminar on Foreign Aid and Macroeconomic Management, Maputo, Mozambique, March 14–15. Available at: *http://www.imf.org/external/np/seminars/eng/2005/famm/pdf/bikas.pdf*

Davoodi, Hamid R., Erwin R. Tiongson, and Sawitree S. Asawanuchit, 2003, "How Useful Are Benefit Incidence Analyses of Public Education and Health Spending?" IMF Working Paper 03/227 (Washington: International Monetary Fund).

de Mariz Rozeira, Christine, 2005, "Tax Treatments Applicable to Foreign-Financed Projects: Experience and Principles"(unpublished; Washington: International Monetary Fund).

de Renzio, Paolo, 2004, "The Challenge of Absorptive Capacity," report on a seminar held at U.K. Department for International Development, London, September 9 (London: Overseas Development Institute). Available at: *http://www.odi.org.uk/pppg/cape/Absorptive%20Capacity%20Seminar%20-%20Final%20Report.pdf.*

———, 2005, "Scaling Up Versus Absorptive Capacity: Challenges and Opportunities for Reaching the MDGs in Africa," ODI Briefing Paper (London: Overseas Development Institute).

Devarajan, Shantayanan, Vinaya Swaroop, and Hengfu Zou, 1996, "The Composition of Public Expenditure and Economic Growth," *Journal of Monetary Economics*, Vol. 37, No. 2, pp. 313–44.

Diamond, Jack, 2006, *Budget System Reform in Emerging Economies: The Challenges and the Reform Agenda,* Occasional Paper No. 245 (forthcoming; Washington: International Monetary Fund).

Dollar, David, 1992, "Outward-Oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976–1985," *Economic Development and Cultural Change*, Vol. 40, No. 3, pp. 523–44.

Easterly, William, 2001, *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics* (Cambridge, Massachusetts: MIT Press).

———, 2003, "Can Foreign Aid Buy Growth?" *Journal of Economic Perspectives*, Vol. 17, No. 3, pp. 23–48.

———, and Sergio Rebelo, 1993, "Fiscal Policy and Economic Growth: An Empirical Investigation," *Journal of Monetary Economics*, Vol. 32, No. 3, pp. 417–58.

Eifert, Benn, and Alan Gelb, 2005, "Improving the Dynamics of Aid: Towards More Predictable Budget Support," Policy Research Working Paper No. 3732 (Washington: World Bank).

Elbadawi, Ibrahim, 1999, "External Aid: Help or Hindrance to Export Orientation in Africa?" *Journal of African Economies,* Vol. 8, pp. 578–616.

———, 2002, "Real Exchange Rate Policy and Non-Traditional Exports in Developing Countries," in *Non-Traditional Export Promotion in Africa: Experience and Issues,* ed. by Gerald K. Helleiner (New York: Palgrave Macmillan).

Fagernäs, Sonja, and John Roberts, 2004. "Fiscal Impact of Aid: A Survey of Issues and Synthesis of Country Studies of Malawi, Uganda and Zambia," ESAU Working Paper No. 11 (London: Overseas Development Institute, Economic and Statistics Analysis Unit).

Feeny, Simon, and Mark McGillivray, 2003, "Aid and Public Sector Borrowing in Developing Countries," *Journal of International Development*, Vol. 15, pp. 989–98.

Fischer, Stanley, 1993, "The Role of Macroeconomic Factors in Growth," *Journal of Monetary Economics*, Vol. 32, No. 3, pp. 485–512.

Franco-Rodriguez, Susana, 2000, "Recent Developments in Fiscal Response with an Application to Costa Rica,"*Journal of International Development*, Vol. 12, Part 3, pp. 429–42.

———, Oliver Morrissey, and Mark McGillivray, 1998, "Aid and the Public Sector in Pakistan: Evidence with Endogenous Aid," *World Development,* Vol. 26, No. 7, pp. 1241–50.

Gang, Ira N., and Haider A. Khan, 1990, "Foreign Aid, Taxes and Public Investment," *Journal of Development Economics*, Vol. 34, Nos. 1–2, pp. 355–69.

Gatheru, Wamuyu, and Robert Shaw, eds., 1998, *Our Problems, Our Solutions: An Economic and Public Policy Agenda for Kenya* (Nairobi: Institute of Economic Affairs).

Ghosh, Atish, and Steven Phillips, 1998, "Warning: Inflation May Be Harmful to Your Growth," *Staff Papers*, International Monetary Fund, Vol. 45, pp. 672–710.

Ghura, Dhaneshwar, 2002, "Tax Revenue in Sub-Saharan Africa: Effects of Economic Policies and Corruption," in *Governance, Corruption, and Economic Performance*, ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund).

———, and Goodwin, Barry, 2000. "Determinants of Private Investment: A Cross-Regional Empirical Investigation," *Applied Economics*, Vol. 32, No. 14, pp. 1819–29.

———, and Thomas J. Grennes, 1993, "The Real Exchange Rate and Macroeconomic Performance in Sub-Saharan Africa, *Journal of Development Economics*, Vol. 42, No. 1, pp. 155–74.

Greene, Joshua E., and Delano Villanueva, 1991, "Private Investment in Developing Countries: An Empirical Analysis," *Staff Papers*, International Monetary Fund, Vol. 38, No. 1, pp. 33–58.

Group of Eight, 2005, *Gleneagles Communiqué on Africa, Climate Change, Energy and Sustainable Development* (London: U.K. Foreign and Commonwealth Affairs Office). Available at: *http://www.g8.gov.uk*

Guillaumont, Patrick, and Lisa Chauvet, 2001, "Aid and Performance: A Reassessment," *Journal of Development Studies*, Vol. 37, No. 6, pp. 66–92.

Gupta, Kanhaya, 1993, "Sectoral Fungibility of Foreign Aid: Evidence from India" (unpublished; Edmonton, Alberta, Canada: University of Alberta).

Gupta, Sanjeev, Benedict Clements, Emanuele Baldacci, and Carlos Mulas-Granados, 2004, "Fiscal Policy, Expenditure Composition, and Growth in Low-Income Countries," in *Helping Countries Develop: The Role of Fiscal Policy,* ed. by Sanjeev Gupta, Gabriela Inchauste, and Benedict Clements (Washington: International Monetary Fund, 2004), chapter 2.

Gupta, Sanjeev, Benedict Clements, Alexander Pivovarsky, and Erwin R. Tiongson, 2004, "Foreign Aid and Revenue Response: Does the Composition of Aid Matter?" in *Helping Countries Develop: The Role of Fiscal Policy,* ed. by Sanjeev Gupta, Gabriela Inchauste, and Benedict Clements (Washington: International Monetary Fund).

Gupta, Sanjeev, Hamid R. Davoodi, and Rosa Alonso-Terme, 2002, "Does Corruption Affect Income Inequality and Poverty?" in *Governance, Corruption, and Economic Performance*, ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund).

Gupta, Sanjeev, Hamid R. Davoodi, and Erwin R. Tiongson, 2002, "Corruption and the Provision of Health Care and Education Services," in *Governance, Corruption, and Economic Performance*, ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund), chapter 10.

Gupta, Sanjeev, Luiz de Mello, and Raju Sharan, 2002,"Corruption and Military Spending," in *Governance, Corruption, and Economic Performance*, ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund).

Gylfason, Thorvaldur, and Tryggvi T. Herbertsson, 2001, "Does Inflation Matter for Growth?" *Japan and the World Economy*, Vol. 13, pp. 405–28.

Haacker, Markus, 2004a, *The Macroeconomics of HIV/AIDS* (Washington: International Monetary Fund).

———, 2004b, "The Impact of HIV/AIDS on Government Finance and Public Services," in *The Macroeconomics of HIV/AIDS,* ed. by Markus Haacker (Washington: International Monetary Fund), chapter 7.

———, 2005, "Fiscal and Macroeconomic Aspects of the Response to HIV/AIDS," in *The HIV Pandemic: Local and Global Implications,* ed. by Eduard Beck and others (forthcoming; New York: Oxford University Press).

Hadjimichael, Michael T., and Dhaneshwar Ghura, 1995, "Public Policies and Private Savings and Investment in Sub-Saharan Africa: An Empirical Investigation," IMF Working Paper No. 95/19 (Washington: International Monetary Fund).

Hansen, Henrik, and Finn Tarp, 2001, "Aid and Growth Regressions,"*Journal of Development Economics,* Vol. 64, No. 2, pp. 547–70.

Hausmann, Ricardo, Lant Pritchett, and Dani Rodrik, 2004, "Growth Accelerations," NBER Working Paper 10566 (Cambridge, Massachusetts: National Bureau of Economic Research).

Hausmann, Ricardo, and Roberto Rigobon, 2003. "An Alternative Interpretation of the 'Resource Curse:' Theory and Policy Implications," in *Fiscal Policy Formulation and Implementation in Oil-Producing Countries,* ed. by Jeffrey M. Davis, Rolando Ossowski, and Annalisa Fedelino (Washington: International Monetary Fund), chapter 2.

Heller, Peter S., 1975, "A Model of Public Fiscal Behavior in Developing Countries: Aid, Investment, and Taxation,"*American Economic Review,* Vol. 65, No. 3, pp. 429–45.

———, 2005, "Pity the Finance Minister: Issues in Managing a Substantial Scaling-Up of Aid Flows," IMF Working Paper 05/180 (Washington: International Monetary Fund).

———, and Sanjeev Gupta, 2004, "More Aid: Making It Work for the Poor," in *Helping Countries Develop: The Role of Fiscal Policy,* ed. by Sanjeev Gupta, Gabriela Inchauste, and Benedict Clements (Washington: International Monetary Fund), chapter 15.

Hood, Ron, David Husband, and Fei Yu, 2002, "Recurrent Expenditure Requirements of Capital Projects: Estimation for Budget Purposes," Policy Research Working Paper No. 2938 (Washington: World Bank).

International Monetary Fund (IMF), 2004a, "Public Investment and Fiscal Policy" (unpublished; Washington: International Monetary Fund). Available at: *http://www.imf.org/external/np/fad/2004/pifp/eng/pifp.pdf*

———, 2004b, "Rebuilding Fiscal Institutions in Post-Conflict Countries" (unpublished; Washington: International Monetary Fund). Available at: *http://www.imf.org/external/np/fad/2005/022505.htm*

———, 2004c, "Public-Private Partnerships," (unpublished; Washington International Monetary Fund). Available at: *http://www.imf.org/external/np/fad/2004/pifp/eng/031204.htm*

———, 2005a, "The Federal Democratic Republic of Ethiopia: 2004 Article IV Consultation and Sixth Review Under the Three-Year Arrangement Under the Poverty Reduction and Growth Facility," IMF Staff Country Report No. 05/25 (Washington: International Monetary Fund).

———, 2005b, "The Federal Democratic Republic of Ethiopia: Debt Sustainability Analysis," IMF Staff Country Report No. 05/27 (Washington: International Monetary Fund).

———, 2005c, "The Federal Democratic Republic of Ethiopia: Selected Issues and Statistical Appendix," IMF Staff Country Report No. 05/25 (Washington: International Monetary Fund).

———, 2005d, "The Macroeconomics of Managing Increased Aid Flows: Experiences of Low-Income Countries and Policy Implications" (Washington: International

Monetary Fund). Available at: *http://www.imf.org/external/np/pp/eng/2005/ 080805a.htm*

———, 2005e, "Public Investment and Fiscal Policy—Summaries of the Pilot Country Studies" (unpublished; Washington: International Monetary Fund). Available at: *http://www.imf.org/external/np/pp/eng/2005/040105b.htm*

———, 2005f, "Monetary and Fiscal Policy Design Issues in Low Income Countries" (unpublished; Washington: International Monetary Fund). Available at: *http://www.imf.org/external/np/pp/eng/2005/080805m.htm.*

———, and World Bank, 2004, "Debt Sustainability in Low-Income Countries: Further Considerations on an Operational Framework and Policy Implications" (Washington: IMF and International Development Association). Available at: *http://www.imf.org/external/np/pdr/sustain/2004/091004.pdf*

Iqbal, Zafar, 1997, "Foreign Aid and the Public Sector: A Model of Fiscal Behaviour in Pakistan,"*Pakistan Development Review*, Vol. 36, No. 2, pp. 115–29.

Islam, Muhammed N., 2003, "Political Regimes and the Effects of Foreign Aid on Economic Growth," *Journal of Developing Areas*, Vol. 37, No. 1, pp. 35–53.

Joint United Nations Program on HIV/AIDS (UNAIDS), 2004, *2004 Report on the Global AIDS Epidemic* (Geneva: UNAIDS).

Kasekende, Louis A., and Michael Atingi-Ego, 1999, "Uganda's Experience with Aid," *Journal of African Economies*, Vol. 8, No. 4, pp. 617–49.

Keen, Michael, and Alejandro Simone, 2004, "Tax Policy in Developing Countries: Some Lessons from the 1990s and Some Challenges Ahead," in *Helping Countries Develop: The Role of Fiscal Policy,* ed. by Sanjeev Gupta, Gabriela Inchauste, Benedict Clements (Washington: International Monetary Fund), chapter 12.

Khan, Haider Ali, and Eiichi Hoshino, 1992, "Impact of Foreign Aid on the Fiscal Behavior of LDC Governments," *World Development*, Vol. 20, No. 10, pp. 1481–88.

Khan, Mohsin S., and Manmohan S. Kumar, 1997, "Public and Private Investment and the Growth Process in Developing Countries,"*Oxford Bulletin of Economics and Statistics*, Vol. 59, No. 1, pp. 69–88.

Khan, Mohsin S., and Abdelhak S. Senhadji, 2001, "Threshold Effects in the Relationship between Inflation and Growth," *IMF Staff Papers*, International Monetary Fund, Vol. 48, pp. 1–21.

Khilji, Nasir M., and Ernest M. Zampelli, 1991, 'The Fungibility of U.S. Assistance to Developing Countries and the Impact on Recipient Expenditures: A Case Study of Pakistan," *World Development*, Vol. 19, No. 8, pp. 1095–105.

Klitgaard, Robert, R. Maclean-Abaroa, and H. Lindsey Parris, 1999, *Corrupt Cities: A Practical Guide to Cure and Prevention,* (Oakland, California: ICS Press).

Kochhar, K. and Sharmini Coorey, 1999, "Economic Growth: What Has Been Achieved and How?" in *Economic Adjustment and Reform in Low-Income Countries: Studies by the IMF Staff,* ed. by H. Bredenkamp and S. Schadler (Washington: International Monetary Fund), pp. 71–98.

Krueger, Alan B., and Mikael Lindahl, 2001,"Education for Growth: Why and for Whom?" *Journal of Economic Literature,* Vol. 39, No. 4, pp. 1101–36.

Lee, Jang-Yung, 1997, "Sterilizing Capital Inflows," *Economic Issues No. 7* (Washington: International Monetary Fund).

Leite, Carlos, and Jens Weidmann, 2002, "Does Mother Nature Corrupt? Natural Resources, Corruption, and Economic Growth," in *Governance, Corruption, and Economic Performance,* ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund), chapter 7.

Leuthold, Jane H., 1991, "Tax Shares in Developing Economies: A Panel Study,"*Journal of Development Economics*, Vol. 35, No. 1, pp. 173–85.

Lofgren, Hans, and Carolina Diaz-Bonilla, 2005, "An Ethiopian Strategy for Achieving the Millennium Development Goals: Simulations with the MAMS Model" (unpublished; Washington: World Bank).

Masha, Iyabo, 2004, "An Economic Assessment of Botswana's National Strategic Assessment for HIV/AIDS," in *The Macroeconomics of HIV/AIDS,* ed. by Markus Haacker (Washington: International Monetary Fund), chapter 9.

Mauro, Paolo, 1995, "Corruption and Growth,"*Quarterly Journal of Economics*, Vol. 110, No. 3, pp. 681–712.

———, 1998, "Corruption and the Composition of Government Expenditure, *Journal of Public Economics,* Vol. 69, No. 2, pp. 263–79. Reprinted in *Governance, Corruption, and Economic Performance,* ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund, 2002), chapter 9.

McGillivray, Mark, 2000, "Aid and Public Sector Behavior in Developing Countries," *Review of Development Economics*, Vol. 4, No. 2, pp. 156–63.

———, and Akhter Ahmed, 1999, "Aid, Adjustment and Public Sector Fiscal Behaviour in the Philippines,"*Journal of the Asia Pacific Economy*, Vol. 4, No. 2, pp. 381–91.

McGillivray, Mark, and Oliver Morrissey, 2001, "A Review of Evidence on the Fiscal Effects of Aid," CREDIT Research Paper No. 01/13 (Nottingham, England: Centre for Research in Economic Development and International Trade, University of Nottingham).

Mosley, Paul, 1980, "Aid, Savings and Growth Revisited,"*Oxford Bulletin of Economics and Statistics*, Vol. 42, No. 2, pp. 79–95.

Nkusu, Mwanza, 2004, "Aid and the Dutch Disease in Low-Income Countries: Informed Diagnosis for Prudent Prognoses," IMF Working Paper 04/49 (Washington: International Monetary Fund).

Nyoni, Timothy S., 1998, "Foreign Aid and Economic Performance in Tanzania," *World Development*, Vol. 26, No. 7, pp. 1235–40.

Odedokun, Matthew O., 1997, "Relative Effects of Public Versus Private Investment Spending on Economic Efficiency and Growth in Developing Countries," *Applied Economics*, Vol. 29, No. 10, pp. 1325–36.

Otim, Samuel, 1996, "Foreign Aid and Government Fiscal Behaviour in Low-Income South Asian Countries," *Applied Economics*, Vol. 28, No. 8, pp. 927–33.

Pack, Howard, and Janet R. Pack,1990, "Is Foreign Aid Fungible? The Case of Indonesia," *Economic Journal*, Vol. 100, No. 399, pp. 188–94.

———, 1993, "Foreign Aid and the Question of Fungibility,"*Review of Economics and Statistics*, Vol. 75, No. 2, pp. 258–65.

Prati, Alessandro, Ratna Sahay, and Thierry Tressel, 2003, "Is There a Case for Sterilizing Foreign Aid," Macroeconomic Challenges in Low-Income Countries Workshop (Washington: International Monetary Fund). Available at: *http://www.imf.org/external/np/res/seminars/2003/lic/pdf/tt.pdf*

Prati, Alessandro, and Thierry Tressel, 2005, "What Monetary Policy for Aid-Receiving Countries?" presented at the United Nations DESA Development Forum, United Nations, March 14–15 (forthcoming in conference volume; New York: United Nations).

Radelet, Steven, 2004, "Aid Effectiveness and the Millennium Development Goals," Working Paper No 39 (Washington: Center for Global Development).

Rajan, Raghuram G., and Arvind Subramanian, 2005a, "What Undermines Aid's Impact on Growth?" IMF Working Paper 05/126 (Washington: International Monetary Fund).

———, 2005b, "Aid and Growth: What Does the Cross-Country Evidence Really Show?" IMF Working Paper 05/127 (Washington: International Monetary Fund).

Rawlings, Laura, Lynne Sherburne-Benz, and Julie Van Domelen, 2004, *Evaluating Social Fund Performance: A Cross-Country Analysis of Community Investments* (Washington: World Bank).

Razin, Ofair, and Susan M. Collins, 1997, "Real Exchange Rate Misalignments and Growth," NBER Working Paper No. 6174 (Cambridge, Massachusetts: National Bureau of Economic Research).

Romp, Ward, and Jakob De Haan, 2005, "Public Capital and Economic Growth: A Critical Survey," *European Investment Bank Papers,* Vol. 10, No. 1.

Rubino, C., 1997, "Aid, The Public Sector and the Real Exchange Rate: The Case of Indonesia" (Unpublished Ph.d. thesis; Warwick, United Kingdom: Department of Economics, University of Warwick).

Sackey, Harry A., 2002, "External Aid Flows and the Real Exchange Rate in Ghana," AERC Research Paper 110 (Nairobi: African Economic Research Consortium).

Sarel, Michael, 1996, "Nonlinear Effects of Inflation on Economic Growth," *Staff Papers,* International Monetary Fund, Vol. 43, pp. 199–215.

Sekkat, Khalid, and Aristomene Varoudakis, 2000, "Exchange Rate Management and Manufactured Exports in Sub-Saharan Africa," *Journal of Development Economics,* Vol. 61, No. 1, pp. 237–53.

Singh, Ram D., 1985, "State Intervention, Foreign Economic Aid, Savings and Growth in LDCs: Some Recent Evidence," *Kyklos,* Vol. 38, No. 2, pp. 216–32.

Summers, Todd, and Jennifer Kates, 2003, *Global Funding for HIV/AIDS in Resource-Poor Settings* (Washington: Kaiser Family Foundation).

Sundberg, Mark, Hans Lofgren, and François Bourguignon, 2005, "Absorptive Capacity and Achieving the MDGs: The Case of Ethiopia," Development Economics Working Paper (Washington: World Bank).

Swaroop, Vinaya, Shikha Jha, and Andrew Sunil Rajkumar 2000, "Fiscal Effects of Foreign Aid in a Federal System of Governance: The Case of India," *Journal of Public Economics,* Vol. 77, No. 3, pp. 307–30.

Tanzi, Vito, and Hamid R. Davoodi, 1998, "Corruption, Public Investment, and Growth," in *The Welfare State, Public Investment, and Growth,* ed. by Hirofumi Shibata and Toshihiro Ihori (Tokyo: Springer Verlag).

———, 2002, "Corruption, Growth, and Public Finances," in *Governance, Corruption, and Economic Performance,* ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund), chapter 8.

Transparency International, 2001, *Global Corruption Report 2001* (Berlin).

Transparency International Kenya, 2002, *Kenya Urban Bribery Index 2002* (Nairobi).

U.K. Department for International Development (DfID), 2004, *Macroeconomic Issues for Scaling Up Aid Flows,* "How to Note" (London).

UN Millennium Project, 2005. *Investing in Development: A Practical Plan to Achieve the Millennium Development Goals.* (New York: United Nations Development Program).

Van Rijckeghem, Caroline, and Beatrice Weder, 2002, "Bureaucratic Corruption and the Rate of Temptation: Do Wages in the Civil Service Affect Corruption and by How Much?" in *Governance, Corruption, and Economic Performance,* ed. by George T. Abed and Sanjeev Gupta (Washington: International Monetary Fund).

van Wijnbergen, Sweder, 1985, "Aid, Export Promotion, and the Real Exchange Rate: An African Dilemma?" CEPR Discussion Paper No. 88 (London: Centre for Economic Policy Research).

World Bank, 2004, *World Development Report 2004* (Washington).

———, 2005, *Global Development Finance 2005: Mobilizing Finance and Managing Vulnerability* (Washington).

World Bank and IMF, 2005, *Global Monitoring Report 2005* (Washington).

Yang, Yongzheng, and Sanjeev Gupta, 2005, "Regional Trade Arrangements in Africa: Past Performance and the Way Forward," IMF Working Paper 05/36 (Washington: International Monetary Fund).

Yano, Makoto, and Jeffrey B. Nugent, 1999, "Aid, Nontraded Goods, and the Transfer Paradox in Small Countries," *American Economic Review,* Vol. 89, No. 3, pp. 431–49.

Younger, Stephen D., 1992, "Aid and the Dutch Disease: Macroeconomic Management When Everybody Loves You," *World Development,* Vol. 20, No. 11, pp. 1587–97.