

United Nations
Economic
Commission for
Africa

UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL



**Joint Conference of Ministers of
Finance and Ministers of
Economic Development and Planning**

**30 April to 8 May 1999
Addis Ababa, Ethiopia**

Financing Africa's Development: Issues on Aid Effectiveness

Background Papers

ECAC
330.34
F4915

✓
ESPD/99/014

Ref # 26050

United Nations
Economic
Commission for
Africa

UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL



**Joint Conference of Ministers of
Finance and Ministers of
Economic Development and Planning**

**30 April to 8 May 1999
Addis Ababa, Ethiopia**

Financing Africa's Development: Issues on Aid Effectiveness

Background Papers

Preface

The publication contains a number of research papers commissioned by the Economic and Social Policy Division to shed some light on the issues of official development assistance to Africa and the problems of mobilizing development finance. The paper by the Economic and Social Policy Division on **"Official Development Assistance to Africa: Challenges, Opportunities and Outlook"** provides a synthesis of the main issues that have dominated the debate of official development assistance flows and the effectiveness of aid in promoting development. We have focused on the political economy of aid; aid policies, investment and growth; aid and public expenditure patterns; aid and the exchange rate; and the need to design the aid relationship. The paper draws important conclusions, notably on the need for improved ownership of aid-funded projects and programmes; the need for strengthening institutional aid delivery mechanisms; the importance of a strategic vision of aid-funded activities; the importance of reforming the current consultative fora and mechanisms for aid activities; and the need for the involvement of non-governmental and grassroots organizations in formulation and implementation of aid-funded projects and programmes. The paper also offers practical suggestions of the process of transition from the current aid system to an "Ideal Aid System". Such a transition would invariably have to involve: institutionalisation of national conferences on development strategy, to be attended by all local stakeholders; preparation of public expenditure review documents, and all other important documents embodying economic and social policy reforms by recipient governments; advanced donor co-ordination aimed at pooling aid resources at the sectoral level; increased investment in recipient countries capacity for accounting and auditing public expenditure; and reform of the current donor consultation fora by moving them to recipient countries, co-chairing and enlarging participation. Furthermore, there also may be need for donor or donor agencies to enter into formal agreements on division of labour in aid delivery.

The second paper prepared by David Dollar and William Easterly is on **"The Search for the Key: Aid, Investment, and Policies in Africa"**. The paper looks at some of important keys and constraints that need to be unlocked and/or removed if Africa is to achieve its full potential. It reviews some of the keys that worked and offers pointers towards more effective strategy. The paper points out that the search for the key to Africa's growth stressed either **"aid-financed investment"** as the key to unlock Africa's development potential or **"aid-induced policy reform"**. The authors further argue that neither of these has worked in Africa. On the other hand, policy reform did have a large effect on growth, but aid did not systematically lead to policy reform. In their view, there is now sufficient evidence to indicate that the combination of good policies and foreign aid has been effective at promoting efficient investment and growth. Accordingly, donors should target foreign aid to good policy environments, if aid is to be effective in promoting development in Africa.

The third paper on **"Aid Dependency: A Critique"** has been prepared by Professor Paul Collier. The paper notes that the mainstream development analysis of the 1960s was dominated by the "two-gap model", whereby the development process was perceived as being constrained by savings and foreign exchange, with aid being instrumental in filling these "gaps". However, subsequently "dependency" has replaced "gaps" in the current debate on aid flows. The paper examines some of the major beliefs that have emerged as regards aid to developing countries and its effectiveness. Among these beliefs is the perception that Africa has grown more slowly than other continents in part because it has received much more aid relative to GDP than other developing areas; the belief that the analysis of "welfare dependency" in poor households can be carried over to aid-receiving countries; and the belief that enormous increase in private capital flows to developing countries has made aid unnecessary and indeed a distraction for countries to make concerted efforts to attract foreign direct investment. Other beliefs that have emerged which the paper indicates relate to the view that aid flows, determined by donor fads, are so fickle that they are a source of instability rather than a basis for sustainable development growth; and that aid is in any case doomed since the forces that have recently led to reduction in aid budgets are likely to continue.

The paper undertakes a detailed analysis of these issues and concludes that one of the most encouraging developments in Africa is that macroeconomic reform is now spreading across the continent. During the next few years many countries could reach the "post-stabilisation stage". It is precisely in these newly stabilised, high risk, low income environments that aid plays its most critical role. Hence, far from Africa needing to emerge from aid dependence, the continent is entering a phase during which "big aid" will make its most vital contribution. The next decade in Africa could provide the opportunity for aid to be vindicated.

The fourth paper by Dr. Ibrahim A. Elbadawi is on **"External Aid: Help or Hindrance to Export Orientation in Africa."** The paper contends that Africa should start thinking through undertaking orderly transition from the current aid dependence on foreign aid for financing development. There is need to improve Africa's international competitiveness. It is the view of the author that a combination of further debt relief, reforms of the current aid regimes and enhanced policy environment should allow a managed transition to a mixed menu of ODA and private flows. However, the attempt by Africa to increase its share of investments from international private capital markets should be firmly anchored to the basic tenets of an export-based development strategy. In order to provide a basis for these conclusions, the author estimates the relationship between development aid, real exchange rates and non-traditional exports for a panel of sixty-two developing countries, including twenty-eight African countries.

These papers are presented as background documents to the Joint Conference of African Ministers of Finance and Ministers of Economic Development and Planning. It is planned that they should be published in a learned journal for wider dissemination.

Table of Contents

1. **Official Development Assistance to Africa: Challenges, Opportunities and Outlook: Paper by the Economic Commission for Africa (ECA) E/ECA/ESPD/CMF7/2**
2. **The Search for the Key: Aid, Investment and Policies in Africa: by David Dollar and William Easterly E/ECA/ESPD/EXP7/2**
3. **Aid Dependence: "A Critique": by Paul Collier (E/ECA/ESPD/EXP7/3)**
4. **External Aid: Help or Hindrance to Exports: by I. Elbadawi (E/ECA/ESPD/EXP7/4)**

United Nations
Economic
Commission for
Africa

**UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL**



**Joint Conference of Ministers of
Finance and Ministers of
Economic Development and Planning**

**30 April to 8 May 1999
Addis Ababa, Ethiopia**

**Distr.: Limited
E/ECA/ESPD/CMF/2**

Original: English

**OFFICIAL DEVELOPMENT ASSISTANCE TO AFRICA: CHALLENGES,
OPPORTUNITIES AND OUTLOOK**

**OFFICIAL DEVELOPMENT ASSISTANCE TO AFRICA: CHALLENGES,
OPPORTUNITIES AND OUTLOOK**

**An Issues Paper for the Seventh Session of the Conference
of African Ministers of Finance**

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION.....	1
II. THE CURRENT DEBATE ON AID TO AFRICA.....	4
III. THE AFRICAN EXPERIENCE: CASE STUDIES.....	16
IV. AID FLOWS TO AFRICA: PROSPECTS, PROBLEMS AND REALITIES.....	27

I. INTRODUCTION

1. As is well known, the most important source of information on "aid flows" is the Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD). The high-income members of the OECD are the main (though not the only) source of external finance to developing countries. The DAC is charged with helping its member countries to coordinate their development assistance and to encourage the expansion and improve the effectiveness of the aggregate resources made available to recipient countries. The DAC monitors the flow of all financial resources from its members, but its main concern is monitoring the flow of official development assistance (ODA).

2. According to the DAC's definition, to qualify as official development assistance, financial flows are required to satisfy three criteria: that they originate in an official sector of the donor; that their main objective is the promotion of economic development or welfare; and that they are provided on concessional terms, with a grant element of at least 25% on loans. According to this definition, ODA includes capital projects, food aid, emergency relief, peacekeeping efforts, technical co-operation, contributions to multilateral institutions, and concessional funding to multilateral development banks. It excludes military aid and non-concessional flows from official creditors, which are considered "other official flows".

3. Having noted the above, we also note that the origins of the current international aid system can be traced to several more or less simultaneous initiatives following the end of the Second World War and the beginning of the Cold War. The largest aid package in history was the "Marshall Plan", which helped the countries of Western Europe rebuild their economies after the severe devastation of World War II.¹ A system of international assistance developed after the Second World War, in which several key procedural norms emerged to shape the aid regime as developed countries began to extend aid to developing countries. It is important to note that at this juncture, "aid" was perceived in the context of a specific "developmental paradigm", in which poor countries were viewed as being trapped in a low-income equilibrium and unable to generate adequate investment by themselves to promote capital formation and rapid growth.² It was believed that an influx of capital from the outside was needed to provide the spurt of growth that would make economic "takeoff" possible.

4. As aid to developing countries expanded and its impact on recipient countries became a central issue, the concepts of "aid fatigue" and "aid dependence" emerged. The concept of "aid dependence", although much utilized, is seldom defined and has been used to mean a number of things including the following:

- Receiving more aid than can be usefully utilized;

¹ The Marshall Plan initiated after the Second World War for the reconstruction and recovery of the economies of Western Europe devastated by the war was among the largest aid packages the world had witnessed.

² See Nicholas Van de Walle "Managing Aid to Africa: The Rise and Decline of the Structural Adjustment Regime", Paper prepared for the AERC-ODC Collaborative Workshop on Managing the Transition from Aid Dependency in Sub-Saharan Africa, Nairobi, Kenya, May 21-22, 1998.

- Receiving aid at all or receiving aid above a certain level ;
- Ineffective aid;
- When aid generates a "need" for more aid or militates against the achieving of its own intended objectives;
- When the design of aid programmes (or, more generally, policies) is dominated by the donor community.

5. Aid dependency has to be defined in the context of the extent to which aid has succeeded in supporting or failed to support a given objective. The main objectives that have often been identified by donors for giving aid have included: to promote growth; reduce poverty; promote female emancipation and/or gender equality; environmental sustainability and good governance.³ Aid dependence has usually been considered as a "bad thing", but this often arises from confusing "aid dependence" with "bad aid." Bad aid may simply be ineffective aid, i.e. aid with harmful effects so that the recipient would be better off with less aid.

6. The nature of aid dependence of African countries comprises two main elements. The first is the nature of aid and the mechanisms used to deliver it. These tend to make local administrative and political processes beholden to external constituencies and as such, they are often inefficient and uncoordinated. The second is that a sudden reduction in aid, in its totality or in one of the components, often leads to severe economic and social disruption in many of these countries.⁴ The key elements of the aid-dependency syndrome are:

- The post-colonial aid regime that has emerged has been one in which the donors have retained the final decision over all allocation decisions on aid;
- A proliferation of projects, which results in failure of accountability to central government and political processes;
- Projects tend to have high administrative costs and to operate on the basis of tied aid. Moreover, they often fail to be coordinated among donors;
- Projects often have recurrent costs, which countries find difficult to match;
- Negotiating programme aid and debt relief takes up an enormous amount of the time of a small number of key officials;
- Donors spend a lot of time monitoring, evaluating and accounting for the flow of resources;

³ Robert Lensink and Howard White "Aid Dependence: Issues and Indicators". Paper prepared for the Expert Group on Development Issues (EGDI), which meets under the auspices of the Swedish Ministry of Foreign Affairs, October 1997.

⁴ Ravi Kanbur: A Framework for Thinking through Reduced Aid Dependence, paper presented at the AERC-ODC Meeting on Managing the Transition from Aid Dependency in Sub-Saharan Africa, Nairobi, Kenya, May 21-22, 1998.

- The "incentives" of donor agencies are closely tied to achieving the transfer of resources and to the desire to show the donor that resources did go to priority uses identified by the donor, rather than by the recipient.
- A preference by Western donors for bilateral over multilateral organizations to disburse their aid during the early years, a shift to multilateral organizations during the latter 1960s and in the 1970s and then a further shift to non-governmental organizations in recent years.
- The aid system that emerged was basically inter-governmental, in which the rich-country governments provided resources to poor-country governments (the role of northern NGOs emerged later).

7. Maintaining a stable macroeconomic environment is a pre-requisite for aid effectiveness designed to promote growth and help alleviate poverty. Recent research has confirmed that aid is most effective in a good policy environment, while its impact could be severely diminished or even made harmful in a poor policy environment. Conducive economic policies will directly or indirectly catalyze the use of aid in support of economic and social goals. Conversely, however, policies that lead to budgetary and balance-of-payments imbalances and high inflation are likely to produce a climate of economic uncertainty and stagnation, and will further constrain government capacity to manage the economy. But the appropriateness of policy itself should be gauged in relation to its sensitivity to the physical, human and technological environments and socio-political setups of the country concerned, as well as to the international development environment constraints confronting it. The more that this policy is reflective of a common vision of donors and recipients, the more effective it is likely to be as an environment for the wise management of aid.

8. The objective of this Conference is to avail the African Ministers of Finance and Central Bank Governors the opportunity to participate, from an African perspective, in the current debate on aid. The debate itself is mostly conducted in donor-community circles. Four sets of issues seem to be of importance from the African perspective:

- Given the post-independence experience with aid flows to the continent, in what way, if any, do various African countries consider themselves aid dependent?
- Given the post-independence experience with the volume of aid flows, and given the remaining development agendas that need to be addressed by African countries, how do various African countries assess the adequacy of external assistance: adequate, more than is required, less than is expected?
- Given post-independence experience with aid flows, how do various African countries judge these flows in terms of effectiveness? What, from the African perspective, has been the impact of aid on the most important macroeconomic variables, on institutional capacity and on economic and social policymaking?
- Given that the donor community is now involved in rethinking the ruling aid relationship, in what directions do African countries think this relationship should be redefined?

- What is the relationship between "aid effectiveness" and the "policy environment"?

9. To help focus ideas the remainder of the issues paper will provide the most important aspects of the current debate on aid. The content of the paper relies on papers commissioned specially for this Conference, but also reviews the most recent literature on the subject.

10. The latest available information on ODA flows to Africa demonstrates significant differences between African countries. For 1996, for example, net ODA flows as a ratio of GNP varied from 67.5% for Guinea Bissau, 59.8% for Mozambique and 51.2% for Rwanda to 0.5% for Mauritius, 0.7% for Tunisia and 1.8% for Morocco. Differences as between the five regions of the continent are such that North Africa has the lowest ratio of 1.6% followed by East Africa (9.6%). The three remaining regions all had relatively high ratios: Southern Africa (17.6%), Central Africa (17.9%) and West Africa (18.7%)⁵.

11. It is these relatively high aid ratios, coupled with the observed lackluster economic growth performance of Africa since the mid-1970s, which lead to the renewed debate on aid: its effectiveness, impact and future. As noted in donor circles, with or without case studies, but certainly without effective participation of the recipient countries. To fill this lacuna five case studies, one from each of the ECA regions were commissioned for this conference. The five countries involved are Egypt (North Africa), Cameroon (Central Africa), Republic of Guinea (West Africa), Uganda (East Africa) and Malawi (Southern Africa).

12. According to the available aggregate information the five countries present an interesting and varied aid experience. Except for Uganda, which experienced an increase in the nominal volume of ODA flows, all countries experienced a decline. Aid-dependency ratios calculated by the World Bank include "aid per capita", "aid/GNP ratio", "aid/gross domestic investment ratio" and aid/imports ratio", which have declined over the 1990s. The level of dependence, however, differs. The case studies, it is hoped, will give the details of the aid experience over a longer period since independence draw important lessons for future aid relationships.

II. THE CURRENT DEBATE ON AID

13. In recent years, and despite annual fluctuations, aid flows to the developing countries have tended to decline to the point where, in 1996, ODA's share of the combined GNPs of donor countries was the lowest (0.27%) since comparable statistics on aid first became available. The worldwide decline in aid flows was due to a number of factors: the end of the Cold War, which reduced aid's strategic role; the fiscal problems in most developed countries, which resulted in cuts

⁵ World Bank, (1998), World Development Indicators 1998, Washington D.C.

in aid budgets of donor countries; and the perception that aid has not been used effectively by its recipients, which weakened the aid constituency in donor countries.

14. As in many other developing regions, the experience of African countries with ODA flows is a post-independence phenomenon. The high aid dependence observed in many African countries partly reflects the low savings rates prevailing in many of these countries. At a time of rising expectations in many African countries, it is disquieting that aid's effectiveness is being called into question by a number of studies. Several factors have been cited as contributing to the poor record of aid effectiveness in Africa, including the lack of recipient ownership, ineffective management of aid resources by donors and recipients, the prevalence of donor-driven programmes, poor aid coordination, lack of adequate counterpart funds for project implementation, poor policy environment; and a shortage of resources for recurrent operations and maintenance.

15. The current debate on aid flows to Africa has centered mainly on the following issues: aid effectiveness; the intensity of aid in Africa; aid dependency; what does aid to Africa finance; the impact of aid dependency on governance and institutions in Africa; and the aid relationship. All of these issues have been addressed by a number of thematic papers prepared as background documentation for this Conference. This section reviews the most important conclusions of these papers.

The Political Economy of Aid⁶

16. As noted previously, aid was considered a gap-filling mechanism that enabled developing countries to access additional funding for capital investment. Over time, aid has become a large-scale and multi-faceted business, expanding beyond its original stopgap role. In the process, low-income developing countries have become dependent on this mechanism in different ways. The simplest definition of **aid dependence** is the ratio of aid to GNP. However, a more relevant definition is the percentage of public expenditures being covered by aid. It is assumed that the higher the percentage of public expenditures provided for by aid, the higher the dependence on aid.

17. Although aid dependence may be a temporary phenomenon, it has become a long-term fact of life for many African countries. Historically, aid dependence was, in a way, a direct result of Africa's colonization. Colonialism in Africa did not do much to prepare countries for their transition to self-rule. As a result, many countries filled line positions with expatriates and relied on aid funding to support this technical assistance and expertise. In addition, the economic crisis that began in the late 1970s, characterized by higher energy costs and lower revenues from Africa's commodity exports, led African countries to seek finance on international markets. As the crisis persisted, the countries became squeezed between their revenues and higher costs, leading to higher levels of dependence on foreign aid.

⁶ See Deborah Brautigam and Kwesi Botchwey: *The Impact of Aid Dependence on Governance and Institutions in Africa* prepared for the AERC-ODC Collaborative Research Project on Managing the Transition from Aid Dependency in Sub-Saharan Africa, May 1998.

18. An investigation of the political economy of aid is concerned with the impact of aid on institutions and the process of governance. The concept of **institutions** is taken as referring to organizations or to the "rules of the game" in a social system: the norms, codes of conduct, laws, and patterns of behaviour that enable human interactions to have some degree of predictability. The impact of aid dependence on organizations that construct budgets, manage economic policy, make decisions about priorities, and carry out development initiatives is evaluated.

19. Effective governance, it is argued, can only be achieved if the following three conditions are met: good leadership, capable public institutions, and societies that exert pressure for a well-functioning state.

20. Given the above concepts, the impact of aid on institutions can be summarized as follows:

- As aid agencies became the main source of finance for many African countries, donors and lending agencies started dictating budget priorities and expenditure parameters for African governments;
- These developments jeopardized one of the critical governance functions of African states, namely setting the budget according to national priorities;
- The severe constraints placed on many budgets of African countries and the reluctance of donors to support recurrent costs led to a dramatic decrease in civil-service salaries in real terms, thereby resulting in increased corruption and a paring down of the functions of the state as demanded by donors;
- Furthermore, the process led to the weakening of the state and its capacity to generate revenues, thus contributing to the aid dependence of African countries;
- Wars and political instability in a number of African countries and the process of transition toward democratic rule (good as it is) all increased the aid dependence of these countries.

21. The above political-economy considerations raise the following issues for discussion:⁷

- To what extent, if any, have the multiplicity of donors and their various conditionalities imposed extra-institutional costs on aid-recipient countries in terms of time and efforts spent in following up various commitments?
- To what extent has the donors substituted governments in terms of articulating economic policy programmes. If donors' involvement in the preparation of policy documents is seen as being dominating, how did this affect ownership of such policy measures in terms of the credibility and legitimacy of government leadership in defending them before domestic constituencies?
- What effect did reliance on aid flows have on the budget process, both in terms of measures to raise revenue and priorities for public expenditure? What effect did reliance on aid have on the exercise of budget control by the government?

Aid Policies, Investment and Growth⁸

22. One important aspect of the current aid debate deals with the impact of aid on investment and growth. Two major approaches could be distinguished in this respect: the aid-financed investment approach and the aid-induced policy reform approach. Both approaches were believed to have mounted a search for understanding the "key" to Africa's growth and development performance.

23. The aid-financed investment approach has its roots in the dominant growth models of the 1950s and 1960s that are variously called the Harrod-Domar models, the Two-Gap model or the financing-requirement models. The approach postulates that growth is proportional to investment by a constant that is reciprocal of the so-called "Incremental Capital Output Ratio (ICOR)".⁹ The basic assumption is that there is a short-to-medium-run direct link between aid and investment, and between investment and growth. The most important results of critically, and empirically, examining the implied claims of this approach could be summarized as follows:

⁷ The large amounts of foreign aid have had both positive and negative implications for institutions in Africa. On the positive side, a number of the projects financed by aid money have strengthened the recipients' institutions through training, reorganization, and the provision of new technologies for data collection and analysis. It should also be noted that, in many instances, aid has made it possible to "hold the head of a drowning state out of the water for at least a time!"

⁸ See David Dollar and William Easterly: *The Search for the Key: Aid, Investment and Policies in Africa*, Development Research Group, World Bank, May 1998.

⁹ The Incremental Capital Output Ratio (ICOR) is defined as the number of additional units of capital required to produce an additional unit of output.

- (a) Aid has not led to investment: country illustrations show a very wide gap between actual investment and the investment predicted if aid had gone one for one into investment. In Madagascar, for instance, actual investment stayed under 2 percent of GDP for the period 1960-1992 while predicted investment would have reached 18 percent of GDP in 1990;
- (b) In the short-to medium run, investment did not lead to growth. An illustrative example on Zambia shows that the evolution of actual output for the period 1960-1994 declined from 1,000 to 600 dollars while predicted output would have reached 2,500 dollars in 1994 at 1985 prices;
- (c) There exists no correlation between growth predicted for aid-financed involvement and the actual rate of growth: An illustrative example on Mauritania shows that the country would have followed a trajectory much like South Korea if the aid-financed investment approach had worked. Per capita income would have increased from 750 dollars in 1963 to 8,500 dollars in 1995. The reality is that Mauritania's per capita income has stagnated over the whole period.

24. The alternative approach to investigating the "key" to Africa's growth performance is to analyze economic policies that countries have pursued over the years and the role of aid therein. Policies affect growth both through capital accumulation and capital efficiency. The idea is to assess the extent to which governments implementing growth-enhancing reforms can be assisted by foreign aid. Previous findings have come up with the conclusion that aid has supported governments with good policies and those with bad policies alike. Zambia provides a good example of how aid can enable governments to delay reforms.

25. Thus both approaches do not seem to provide a key to a better understanding of Africa's growth and development performance. The traditional aid-investment-growth linkages are not very robust. It is rather the difference in economic policies that can explain much of the difference in growth performance. While foreign aid cannot promote sustainable policy reforms in countries that lack local support for reforms, aid can be a powerful tool for growth when reforms are endogenously owned. Therefore, the combination of private investment, good policies and foreign aid is a quite powerful conduit through which growth can be achieved. As a result, disbursing aid into good policy environments appears to be the key recommendation of this analysis. If donors adopted this recommendation, it would no doubt be an improvement on current practice.

26. The major issue raised by the above type of analysis is the proposal for adopting ex-post conditionality in the allocation of aid. Under this proposal, developing countries will be classified according to their economic-policy environments, appropriately defined: good-policy countries will receive aid, while bad-policy countries will be denied aid. The point for discussion is, therefore, whether good policy environments can be defined appropriately. The

current practice of defining policy stance on purely macroeconomic indicators may prove to be a shade restrictive, especially in the context of development objectives.

Aid and Public Expenditure¹⁰

27. The issue of what does aid finance, and to which sectors is aid money allocated, is closely related to that of "aid fungibility" in the African context. If a grant is intended for a project that the recipient government would have financed anyway, then the aid money releases resources that the government can spend on other things. In this sense, aid is "fungible". If aid is "fungible", then the development impact of aid on, say, education, is not the education projects built but the incremental public expenditures by the government from the resources released by the aid. It cannot be said a priori whether, in a particular country, aid is fungible or not, or whether the presence of fungibility is good or bad. It all depends on whether the preferences of the donor are different from those of the recipient and on how the government uses the resources released by the aid projects. Empirical findings point to a diversity of situations. Aid has been found to be fungible in some countries but not in others, in some sectors rather than others, or at the national level but not at the state level.

28. Assuming that the donor and the recipient have different preferences (e.g. the donor wishes to target aid to particular sectors whereas the recipient would like to treat the aid as budgetary support), the extent to which the recipient treats the aid as fungible depends on the "costs" of deviating from donor preferences. It is suggested that these costs are related to the donors' ability to monitor aid-related expenditures which, in turn, may be connected to the number of the donors in the country.

29. The main findings on aid and public expenditure can be summarized as follows:

- Every dollar of aid leads to a 90-cent increase in government spending; there is little evidence that aid leads to greater tax relief in Africa;
- Although most aid is intended for capital expenditures, aid to Africa leads to an increase in current and capital spending in equal amounts;
- An almost equal amount of aid goes towards repaying the principal on past loans;
- In Africa, aid to the energy, transport and communications sectors leads to some increase in public spending in those sectors but not on a one-for-one basis. By contrast, the worldwide sample shows that aid to transport and communications is almost fully non-fungible;
- Aid to the education sector has an almost one-for-one effect on education spending in Africa while there is no clear effect in the global sample;

¹⁰ See Shantayanan Devarajan, Andrew Sunil Rajkumar and Vinaya Swaroop: What Does Aid to Africa Finance, paper presented at the AERC-ODC Meeting on Managing the Transition from Aid Dependency in Sub-Saharan Africa, Nairobi, Kenya, May 21-22, 1998.

- Overall, aid to Africa is partially fungible. Governments do not spend all sectoral aid in that sector, nor do they treat such aid as merely budgetary support.
- The greater the number of donors to a country, the greater the likelihood that aid is fungible (possibly because monitoring is more difficult).

30. The policy conclusions based on the above type of analysis are as follows:

- Donors should be concerned about the quality of the overall public expenditure programme of the recipient country;
- The shift of aid by some donors to budgetary support is a welcome trend. However, sectoral aid programmes and projects still have a role to play in development assistance, as it was shown that aid to particular sectors has an influence on the composition of public spending, albeit not on a one-for-one basis.

Aid and the Exchange Rate¹¹

31. One of the early contributions to the analysis of the impact of aid was focussed on the potential conflict between aid flows, especially unsustainable and excessive aid flows, and export competitiveness. At least some of the "unsustainable" aid flows will be used to finance expenditure on nontradable goods and services. With the prices of tradables given, the effect of such expenditure on nontradable goods is that there will be a relative price shift in favour of nontradables, i.e. an appreciation of the real exchange rate, where the real exchange rate (RER) is generically defined as the ratio of the price of tradables to nontradables. The immediate effect of the relative price shift is that more of the (cheaper) tradables, especially imports, will be demanded leading to deterioration in the external balance, which in turn will require more aid flows. The demand effect is further reinforced by the intersectoral resource transfers from tradables to nontradables, which cause the most significant squeeze on the former sector. The unsustainable expansion of aggregate demand (due to positive but temporary terms of trade shocks, natural resource boom or short-to-medium run surges of aid or capital flows) and the relative price shifts leading to real exchange rate overvaluation and deterioration of non resource-booming exports is the essence of the so-called "Dutch disease".

32. Two main issues relevant to the impact of aid on export competitiveness as proxied by the real exchange rate are whether ODA flows to Africa are excessive relative to some sustainable ratios, and if yes, to what extent ODA flows were responsible for causing a disequilibrium, real-exchange-rate overvaluation (relative to an appropriately specified real-exchange-rate equilibrium) and therefore a deterioration in export competitiveness.

¹¹ See Ibrahim Elbadawi: Aid and the Exchange rate, Economic Commission for Africa (ECA) paper presented to the Seventh Session of the Conference of African Ministers of Finance.

33. To assess the impact of ODA and private capital flows--among other fundamentals--on the long-run behaviour of the real exchange rate (RER), a model of the real exchange rate for a panel of 62 countries, including 28 African ones, has been estimated. The results strongly corroborate the predictions of the theoretical model, including that both ODA and private capital flows were robustly and negatively associated with the real exchange rate in the long run. As a long-run determinant of the real exchange rate, ODA has an elasticity of -0.084, which would lead to a 3% RER overvaluation following a temporary increase in ODA by 35% (-0.084×0.35). With an elasticity of 0.047, a short-run (and unsustainable) rise in private capital flows of similar magnitude (i.e. 35%) would cause a much smaller RER overvaluation of about 1.6%. Moreover, "unsustainable" ODA flows were shown to have caused substantial partial RER overvaluation in many African and non-African countries during the 1990s. In the cases of Zambia and Egypt (highly aid-dependent countries) the partial RER overvaluation due to aid dependence could not be fully reversed by the effects of other fundamentals and RERs in these two cases experienced overall overvaluations. The results also suggest that other highly aid-dependent countries (such as Uganda and Tanzania) are likely to experience RER overvaluations in the future.

34. The results of the RER model also show that a combination of further fiscal reforms (especially a reduction of government consumption), deepened trade reforms to increase the openness of the economy and, to a lesser degree, the building up of reserves is the most effective medium-to-longer-term measure for limiting disequilibrium effects on RER of unsustainable capital flows and ODA spurts or temporary positive terms of trade shocks. For example, expanding the trade volume by 3 percentage points of GNP, reducing government consumption by 2 percentage points of GNP and increasing reserves by 5 percentage points of GNP could depreciate the RER by, respectively, 1.98, 0.84, and 0.24%, which would offset some of the effect on RER of the 35% unsustainable increase in ODA. However, in the short-run capital account instruments such as accumulation of reserves and retirement of external debt, in addition to applying a range of discriminatory measures to influence the composition of private capital inflows towards longer-term flows, are more responsive than standard fiscal and trade policies.

35. Building upon the RER estimation results, which allows for the computing of indexes of real-exchange-rate misalignment relative to an estimated RER equilibrium (RERMIS: measured as undervaluation), a model for the determination of non-traditional exports for the same panel of countries is also estimated. The results strongly corroborate a Laffer curve effect for ODA on non-traditional exports, where the ODA/GNP ratio and its square have semi-elasticities of 2.63 and -4.98, respectively. Thus the results lend support to a major proposition of the aid-effectiveness literature--that there exists some threshold of aid flows, beyond which further aid may impede rather than help growth and development in general. In this case the evidence suggests that excessive dependence on foreign aid has a deleterious impact on non-traditional exports -- and hence it could undermine the most effective source of dynamic growth in the second half of this century.

36. A test of the proposition that aid is more effective in a good policy environment was also undertaken where each of ODA/GNP and its square was co-variated with RERMIS, the latter

being a proxy for good policy that is most relevant to export performance. To account for the effect of the level of development on required/optimum ODA flows, separate covariate terms for each of low and middle-income countries were estimated. Again in both cases the evidence supports the relevance of good policy environment for aid effectiveness in enhancing exports, and especially export diversification. The estimated Laffer curve parameters were 9.49 and -21.77 for low-income countries and 24.38 and -245.56 for the middle income group.

37. Finally, the ODA/RERMIS Laffer curve effect on exports allows for the estimation of optimum ODA/GDP thresholds for various African countries. Comparing actual ODA ratios to the estimated thresholds permits the calculation of aid dependency ratios. This reflects a precise concept of aid dependency, based on the extent to which excessive ODA flows exceeded the threshold beyond which more ODA actually hinders rather than helps export expansion. According to this concept, several African countries were characterized as being "excessively aid dependent".

38. The main issues for discussion as regards the impact of aid flows on a country's exchange rate hinge on the following aspects. First and foremost, how to manage an orderly transition to less aid dependence and how to effectively utilize substantial aid flows in the transitional period without undermining export-oriented, real-exchange-rate competitiveness. Second, how would Africa participate positively and actively in the private capital market -- first by repatriating previous capital and then attracting new capital -- without risking destabilizing financial crisis or undermining its export-oriented growth strategies through the ensuing appreciation of the real exchange rate.

Redesigning the Aid Relationship¹²

39. In current discourse on aid, four related and widespread beliefs can be identified and can jointly be termed the 'aid dependency school'.¹³ These beliefs are:

- (a) that Africa has grown more slowly than other continents in part because it has received much more aid relative to GDP than other developing areas;
- (b) that the enormous increase in private capital flows to developing countries has made aid unnecessary and indeed a distraction: governments should focus on attracting private capital rather than aid;
- (c) that aid flows, determined by donor fads, are so fickle that they are a source of instability rather than a basis for sustained growth; and,

¹² See Paul Collier: Redesigning the Aid Relationship, Economic Commission for Africa (ECA), paper prepared for the Seventh Session of the Conference of African Ministers of Finance.

¹³ A fifth belief is that the analysis of 'welfare dependency' in poor households carries over to aid-receiving countries such that an aid dependency syndrome results whereby aid payments create very high implicit marginal tax rates and so discourage work, trapping recipients into continued need for aid.

(d) that aid is, in any case, doomed: the forces which have recently led to reductions in aid budgets will continue, so that aid will rapidly decline in real terms.

40. All these beliefs are challenged on both theoretical and empirical grounds with a view to identifying the directions in which the future aid relationship between donors and recipients could be framed.

41. Has aid been detrimental to growth in Africa? It is now empirically established that although on average aid has been ineffective, this is because of a massive, but readily rectifiable, mistake in aid allocation. Aid is highly effective in raising growth in good macroeconomic policy environments and is ineffective or even harmful in poor policy environments. On average, aid has been ineffective because too much of it has been concentrated in the latter. Such evidence refutes the careless causal inference from the association of Africa's high aid receipts with its slow growth. Moreover, it has been established that not only does aid increase growth in good policy environments, it also raises private investment: on average, a dollar of aid increases private investment by \$1.80. While there exist diminishing returns to aid even in good policy environments, it is established that the point at which aid starts to have negative effects is far in excess of the range pertinent for Africa. Aid continues to have beneficial results for growth even at the margin, until the share of aid in GDP is around 20%. Moreover it is found that 'big aid' interacts favourably with policy improvement. Thus, within the range of aid flows which is pertinent for Africa, the evidence suggests that, subject to a satisfactory policy environment, the more aid which is provided, the faster an economy will grow.

42. Does aid detract from private investment? In a globalised economy it is private rather than public transfers which will eventually be decisive in sustaining growth. Africa's private capital flows are currently less than \$3 per capita, and so remain dwarfed by aid flows. In Africa an important task is indeed to increase private capital inflows. However, aid has a central role in facilitating this transformation. The empirical evidence cited above demonstrates that aid is effective in attracting private investment as long as the policy environment is satisfactory. Indeed, current African experience suggests that far from having become less important, aid is now more valuable than ever.

43. The reason for this is that several African countries have recently implemented sufficient reforms that their macroeconomic policy environments are 'satisfactory'. These economies are currently growing quite rapidly, at approximately the growth rate achieved by East Asia prior to the current crisis. However, these high growth rates are unsustainable on present investment rates, which are around nine percentage points of GDP below East Asia. The reforming African governments are benefiting from a transient 'bounce-back' effect, as a result of removing grossly damaging policies. Hence, either growth rates will decline or investment rates will rise: the next few years constitute a window of opportunity for African development. How long the window will remain open is uncertain. Reforming African countries may possibly be able to sustain high growth with low investment for a decade or more if their previous policy environments substantially increase the productivity of the existing capital stock. However, it seems unlikely

that a reforming country could sustain high growth on low investment for much more than a decade, and several of Africa's reformers are already well into their first decade of improved policies. Hence, the time scale for increased investment may now be quite short.

44. An increase of around nine percentage points of GDP in African investment rates cannot be achieved in such a short time scale primarily through increased domestic savings. To do so would require consumption to fall. Hence, much of the increase in investment must be financed from a combination of foreign and repatriated private capital flows, and aid. Despite the improved policy environment of the reforming African countries, their ability to attract private investment (foreign direct investment or repatriated capital flight) will continue to be determined by perceptions of risk, the tax environment and infrastructure, among other factors. All these are related to investment and the way it is financed. Noting that public investment is potentially complementary to private investment, it should also be realized that if such investment is financed through increased taxation, it is questionable how effectively it would enhance growth. Hence, a substantial part of the needed increase in public investment must come initially from aid.

45. Is aid a source of fiscal instability? Two main reasons are given as to why aid receipts might be unreliable. One is that donors may use aid to advance a political agenda driven by the political concerns of their domestic electorates. Secondly, donor procedures for disbursement may be so cumbersome that even when funds are committed, there may be long and unpredictable lags before governments are able to utilize them. But, even if aid is less reliable than government revenue, it might nevertheless reduce the overall unreliability of the resource flow to the government if it moves inversely with revenue.

46. As with any portfolio, an important consideration is not just the volatility of each component, but whether the risks are co-variant. Hence, in measuring the reliability of aid both its volatility and its co-variance must be taken into account. The relative reliability of aid and government revenue for 36 African countries (which were IDA recipients over the period 1970-95) is empirically evaluated. Despite the fact that the results are country specific, the two most important results of the evaluation at the aggregate level of the sample are: (a) that the coefficient of variation of aid is lower than that of revenue, implying that aid is *more* reliable than revenue, and (b) that the normalized co-variance of aid and revenue is *negative* implying that there is a further benefit from aid: it acts as a buffer to revenue shocks, tending to increase when revenue is low. Hence, on the aggregate evidence, a budget with a large component of aid would be more reliable than one with a small component of aid, both because the aid component is more certain than revenue, and because it tends to offset revenue shocks.

47. Will aid receipts continue to decline? Aid levels have fallen in recent years and this has produced an environment of aid pessimism: the expectation that regardless of the above considerations, aid will continue to decline. While it is incontrovertible that aid budgets have declined in real terms, this should not be extrapolated. The reason for this caution is that the observed decline of aid was caused by fiscal retrenchment in the USA and Western Europe and

the end of the Cold War. Both fiscal retrenchment and the ending of the Cold War are one-off effects: aid drops like a step function. Qualitatively offsetting these effects, the global economy is growing rapidly, and prospects for continued growth have seldom been so good. Global growth works to increase aid through three routes. First, the existing group of donors becomes richer and this enables all expenditures to rise. Secondly, as middle-income nations catch up with the developed countries they can be expected to initiate aid programmes as symbols of arrival at developed country status, thereby gaining participation in the institutions of donor clubs. Thirdly, as some low-income countries grow out of poverty, a given pool of donor funds can become concentrated on a smaller group of countries.

48. The main jeopardy to this process of rising aid flows is not the one-off events discussed above, but the perception that aid has been ineffective. Paradoxically, this view has become prevalent at just the time when research has identified not only that, on average, aid has been ineffective, but also that the circumstances in which aid is unambiguously effective, namely, a reasonable macroeconomic policy environment. In the past, partly because aid was allocated according to a political agenda, it failed to reflect this policy environment. Were donors to persist with such aid allocations the gradual accumulation of evidence on the ineffectiveness of aid would continue to undermine the basis for aid budgets: aid would decline simply because it was demonstrably a waste of money. If, however, aid becomes increasingly concentrated upon satisfactory policy environments, then, not only will aid effectiveness demonstrably increase, but the concentration will itself increase the flow of aid to the post-stabilization countries. Hence, conditional upon donors channeling aid to those environments in which the policy environment is already satisfactory, instead of the attempt to use aid to induce reform where policy is poor, there are reasonable prospects for rising aid flows into satisfactory policy environments.

49. One of the most encouraging developments in Africa is that macroeconomic reform is now spreading across the continent. During the next few years, many countries will reach the post-stabilization stage. It is precisely in these newly stabilized, high-risk, low-income environments that aid plays its most crucial role. Hence, far from Africa needing to emerge from aid dependence, the continent is entering a phase during which 'big aid' will make its most vital contribution. The next decade in Africa will be an opportunity for aid to be vindicated. A corollary is that in these environments, aid should be counted as part of the core budget for an extended period, rather than as an exceptional financing item. This argument applies both to grants and to the grant equivalent of aid. Unless this is done, the newly reformed economies will appear to have massive fiscal deficits. Not only will this needlessly discourage investment, it will also discredit the process of budgeting, since it will appear to signal a problem which is non-existent.

50. The above case for continued aid to Africa raises the issue of transition from poor policy environments to the post-stabilization phase and, hence, to good policy environments. From an African perspective, the major policy issue thus becomes one of whether the African economies have become stabilized and how long they will remain so. For countries where the post-

stabilization phase has not yet been reached, what is the remaining reform agenda that needs to be implemented and at what pace? Moreover, what prospects do these countries have for increased aid flows and private capital flows?

III. AFRICAN EXPERIENCE: CASE STUDIES

51. The latest available information on ODA flows to Africa demonstrates a significant degree of divergence in aid dependency among African countries, which partly mirrors differences in domestic savings rates. For 1996, for example, net ODA flows as a percentage of GNP varied from 67.5% for Guinea Bissau, 59.8% for Mozambique and 51.2% for Rwanda to 0.5% for Mauritius, 0.7% for Tunisia and 1.8% for Morocco. The differences between the five regions of the continent are such that North Africa, which has the lowest ratio, stood at 1.6%, followed by East Africa (9.6%), whereas the three remaining regions all had relatively high ratios: Southern Africa (17.6%), Central Africa (17.9%) and West Africa (18.7%)¹⁴.

52. It these relatively high aid ratios, coupled with the observed lacklustre economic- growth performance of Africa since the middle of the 1970s, which led to the renewed debate on aid: its effectiveness, impact and future. The debate has largely been conducted in donor circles, with or without case studies, but certainly without effective participation of the recipient countries. To fill this lacuna five case studies, one from each of the ECA regions, were commissioned for this conference. The five countries involved are Egypt (North Africa), Cameroon (Central Africa), the Republic of Guinea (West Africa), Uganda (East Africa) and Malawi (Southern Africa).

53. According to the available aggregate information the five countries present interesting and varied aid experience in the 1990s. Except for Uganda, which experienced an increase in the nominal volume of ODA flows, all countries experienced a decline. Aid-dependency ratios calculated by the World Bank include "aid per capita", "aid/GNP ratio", "aid/gross domestic investment ratio" and aid/imports ratio". For all countries the ratios have declined over the 1990s. The level of dependence, however, differs. The case studies, it is hoped, will give the details of the aid experience over a longer period since independence.

54. **The Case Study of Cameroon¹⁵:** The study analyses official development assistance flows to the Republic of Cameroon since the country's independence in 1960. However, due to a lack of reliable statistical information for the period prior to 1986, most analysis is based on the ten-year period from 1986 to 1996.

¹⁴ World Bank, (1998), World Development Indicators 1998, Washington D.C.

¹⁵ See Victor Ndoping: Study on External Development Assistance to Cameroon since Independence (1960-1996), Economic Commission for Africa (ECA), paper prepared for the Seventh Session of the Conference of African Ministers of Finance.

55. The volume of bilateral and multilateral assistance to Cameroon from 1960 to 1985 is estimated at CFA 732 billion or about 3 billion dollars. The bulk of this assistance (85 percent) was in the form of loans. Bilateral assistance came mainly from France, Germany, the USA, Canada and Benelux, while the main multilateral donors were the European Development Fund (EDF), World Bank, African Development Bank (ADB) and United Nations Development Programme (UNDP). French aid was channeled to different sectors of the economy. German aid financed mainly infrastructure development while Canadian aid went to human and institutional development, infrastructure, environment and private sector development. From 1974, new bilateral donors came on the scene with some Middle Eastern countries such as Saudi Arabia providing important amounts. Multilateral donors were mainly involved in infrastructure, agriculture and human-resource development. In 1974, the country started borrowing huge amounts from the international financial market to finance its industrial development and its balance-of-payments deficits. This trend led later to Cameroon's external-debt-overhang problem.

56. In 1986-1996, the patterns of foreign assistance to Cameroon changed relative to the first period. Two salient features characterized the 1986-1996 period. Firstly, although the most important donors remained mostly the same, multilateral aid became more important than bilateral assistance. Multilateral aid in 1996 totaled 200 million dollars against 93 million from bilateral donors. Secondly, France lost its importance to the World Bank as the main donor. In 1996, these two donors provided 61 and 102 million dollars, respectively. However, it should be noted that just a few years before, in 1993, France had reimbursed Cameroon's outstanding debt to the World Bank and it had provided the country with budgetary assistance amounting to 296 million dollars. Over the last few years, the sectoral distribution of aid to Cameroon has been characterized by the prominence of 5 sectors which, in 1996, absorbed 84 percent of total assistance. These are: economic management; transport; agriculture, forestry and fisheries; regional development; and natural resources.

57. Most of the infrastructure projects in Cameroon during the last 15 years have been financed through external resources. In 1993/94, foreign aid's share of total public investment peaked at 80 percent. Cameroon has also relied on foreign assistance to finance its budget deficits over the years. The question of the impact of external aid on exchange rates may not be relevant for the case of Cameroon because its currency has a fixed peg to the French franc. However, it could be argued that at least part of the aid package that France has provided to the country, especially assistance targeting budget- deficit financing, was indirectly a result of this fixed peg.

58. The position of Cameroon regarding other aspects of the aid is that it is the responsibility of both donors and the country concerned to see to it that activities related to aid are sustainable. This involves capacity building in order to ensure a successful transfer of responsibilities from the donors to nationals. In addition, it should be ascertained that externally financed projects are in conformity with the broad priorities set out by government for the country's socio-economic development. Furthermore, there is also need to give due consideration to the following aspects:

- Regarding the issue of integrating aid activities into national budgets and plans, Cameroon's view is that these are indeed integrated in the national budget and the economic plan. For the 1997/98 budget, paragraph 37 of the Memorandum on Economic and Financial Policy of the country clarifies this point;
- With respect to aid coordination, Cameroon does not have any operational formal framework of aid coordination. However, the government established, in 1995, the Development Aid Coordination Committee (CCAD) which is a consultative organ of discussion between the country and bilateral as well as multilateral donors. The broad objective of the Committee, which is chaired by the Prime Minister, is to ensure an optimal use of external development aid to the country. Currently, all members of the CCAD have been nominated but the Committee has not yet been operational;
- With regard to the impact of aid on institutional capacity, a number of projects financed by external assistance have focused on institutional capacity. This has been the case, for example, with the public service reform, sponsored by institutions such as the UNDP, World Bank and French Development Fund. Other multilateral and bilateral donors have been involved in projects including institutional decentralization, reform of the justice system, governance, grassroots democracy, and strengthening capacity in economic management. Realizing that despite progress achieved, more still needs to be done, the UNDP has agreed to finance a nine-month multi-sectoral project on governance with political, economic, and socio-cultural interfaces.

59. Cameroon's views on the direction that a reform of the "aid relationship" should take evolve around the need to re-establish the country's economic stability by strengthening its current economic reforms, which should lead to economic growth and poverty reduction. Most specifically, reforms in development assistance should, at the domestic level, aim at reinforcing government's analytical capacity in terms of managing public investment, increasing the involvement of local communities in the implementation and eventually the management of the projects, and operationalising the Development Aid Coordination Committee. At the international level, the periodical reviews of projects and programmes between the country and the donors should be institutionalized. Roundtables for consultations and resource mobilization should also be organized regularly, especially now that Cameroon belongs to the group of least-developed countries. Finally, cooperation between the country and the donor community should be decentralized to non-public structures such as NGOs, and local communities.

60. **The Case of Egypt¹⁶:** The last twenty-five years witnessed some dramatic changes in the economic and ODA environment affecting Egypt. The seventies saw a large increase in international ODA flows to developing countries. The open door policy declared by President

¹⁶ See Dr. Ali Soliman: Official Development Assistance to Africa: Case Study of Egypt, Economic Commission for Africa (ECA), paper prepared for the Seventh Session of the Conference of African Ministers of Finance.

Sadat in 1974 raised expectations tremendously. Egypt became an increasingly attractive destination for foreign investment. Moreover, ODA began to flow from various sources. The Western countries were now willing once again to support the development efforts of Egypt. The Arab countries that benefited from a substantial (almost fourfold) increase in oil prices began to pump aid and investments into Egypt. The large jump in oil prices also benefited Egypt directly as it grew to be a significant oil producer and exporter. In addition, remittances from Egyptians working abroad became an increasing source of income. Moreover, the World Bank began again to offer assistance to Egypt.^{17/}

61. Foreign aid and private flows contributed to a very rapid economic growth. Between 1974 and 1984 the average growth of real GDP approached 9% p.a. Average domestic saving was close to 21% and national investment 27% of GDP, rates not much unlike those that later became associated with the (so-called) Asian miracle. However, ambitious investment and a relaxed policy of public expenditures and welfare tendencies including extended consumer subsidies led to accelerated public debt. Total external debt increased from US\$ 3.0 billion in 1974 to \$ 19.1 billion in 1980. Of this amount, about 75% was public or publicly guaranteed debt accumulation. Total debt amounted to about 90% of GNP. The situation deteriorated rapidly as oil prices began to plummet in 1981. By 1986, the nominal price per barrel of oil was almost one-fourth of its 1981 levels. Declining oil revenues were coupled with a widening trade deficit and increased borrowing. Moreover, the terms of borrowing worsened, due especially to very high interest rates on the dollar. Arrears accumulated. A stand-by agreement was reached with the IMF in mid-1987 and a subsequent Paris Club rescheduling was concluded. These two agreements could not be fully implemented, however, due to continued macro difficulties. The debt overhang was just too big.

62. By 1988, total foreign debt had reached \$46.4 billion or about 150.7% of GNP. This high debt burden placed Egypt amongst the 5 most heavily indebted nations. Its absolute debt amount was slightly less than Poland's and equal to that of Turkey, both of which have much larger GNPs. Total debt service exceeded 22.2% of receipts from the export of goods and services. Egypt could not sustain this high debt burden and arrears kept mounting. It defaulted on its debt in 1987 and had to undertake drastic policy changes. This crisis signalled the need for substantial policy reform. The new government installed towards the end of 1987 began an ambitious programme of economic and legislative reform*^{18/}.

63. The public enterprise sector was recognised as a main source of the budget deficit. The notion of privatisation began to be accepted after a period of vehement opposition. Also, starting 1988 major tax initiatives were taken. Meanwhile, the decline in new official development assistance was reflected in yet smaller net long-term financial flows. In 1989, Egypt received almost half the level of net official flows it received in 1986 (\$0.9 billion vs. \$1.7 billion). In 1989, total public foreign debt stood at about 2.5 times its 1980 level. Also, mounting debt-service

^{17/}Ibid. pp. 343-52

^{18/}The Economic Reform and Stabilization Programme (ERSAP)

charges meant that net flows on debt were almost one-third their preceding levels, a mere \$ 746 million, compared with \$ 2,297 million in 1980. In 1989 the net transfers on debt (i.e. disbursements minus debt principal repayments and interest charges) began to become negative.

64. The real break in the debt situation coincided with the invasion of Kuwait crisis of August 1990. The regional role that Egypt can play in ensuring peace and stability was underscored. The effort that Egypt exerted in the liberation of Kuwait and its losses due to the loss of jobs for its workers in the Gulf were recognised. The US agreed in Dec. 1990 to cancel Egypt's outstanding military debt that stood at \$7.1 billion. In May 1991, Egypt concluded with the members of the Paris Club an agreement to reschedule and reduce a total debt of about \$19.6 billion. Debt reduction was related to a number of policy measures that Egypt promised to undertake according to a certain time-schedule. A fresh shot of official aid was forthcoming at a level not seen since the inception of the open-door policy in 1974.

65. As Egypt moves into the new century, and is hoping for less reliance on ODA, there are some structural difficulties that threaten the realisation of this hope. These challenges include the following:

- Egypt is facing an increasingly tight ODA environment, as many developed countries are reducing their assistance budgets due to domestic budgetary pressures. The disintegration of the Soviet Union also meant the loss of an important market and technical assistance partner. Moreover, many of the former Soviet republics are vying for international aid funds from bilateral and multilateral sources.
- The United States is responsible for about one-third of all DAC assistance extended to Egypt. On the other hand, Egypt and Israel are the two most prominent recipients of U.S. aid funds. This reliance causes concern to policymakers in Egypt as the U.S. aid budget is subject to active review and is susceptible to U.S. pressure groups. Also, there are growing claims by some American ethnic groups for diversion of U.S. aid funds to other countries.
- Over the last 25 years, Egypt has failed to realise substantial increases in its commodity trade revenues. Its share in international trade declined as it lost some traditional markets, especially in Eastern Europe, and has not developed others. Nontradable sectors seem to be a favoured investment, with concomitant loss of efficiency in other trade sectors. Thus, the international competitiveness of Egyptian industry and agriculture is coming into question.
- In addition too stagnant trade receipts, two other major sources of foreign currency for Egypt, namely tourism and workers remittances, are subject to wide oscillations due to external factors. The third source, Suez Canal dues, has been stagnant, if not declining,

over the last decade. On the other hand, FDI has increased perceptibly over the same period, but not enough to make up for the potential loss of foreign-currency receipts.

- Egypt's ability to increasingly forego ODA depends on its ability to increase its domestic savings. This desirable goal was not realized in the past few years. On the contrary, the deflationary impact of the ERSAP program was reflected in lower domestic-saving ratios.
- The bulging size of the domestic debt is another problem facing the policymaker, as more funds are needed to finance the development programme. As domestic debt charges are eating more of the current budget, more foreign assistance, and not less, would be required for some deserving activities such as health and education.

66. **The Case Study of Guinea¹⁹:** In spite of its huge economic potential (enabling natural environment, rich lands and soils), the Republic of Guinea is among the least developed countries, with an annual per capita GDP of about US\$ 600. To develop its economic potential, Guinea has largely resorted to external aid. The Guinean aid policy remained closely linked to the evolution of the economic management, and to the political orientation of the country. Thus, two main periods can be distinguished in the evolution of the country's aid policy: from 1958 (date of accession to independence) to 1984, and from 1984 to date. Roughly speaking, the first period corresponds to the socialist regime, while the second period coincides with the free-market orientation.

67. During the 1958-1984 period, assistance received amounted to US\$ 1,278 million, mainly in the form of bilateral aid from socialist countries, namely the Soviet Union, China and Eastern European countries (more than 50%). Multilateral and bilateral aid from Western countries was relatively limited, though it tended to increase during the last years of the socialist regime (1978-1984), due to the beginning of a new political era. During this period, aid was mainly directed to the industrial and mining sectors (57%), physical infrastructure (13%), rural development (8%) and social sectors, education and health (2%). There was an obvious gap between official statements and the reality of aid allotment.

68. The economic performance of the country during that period was far below expectations. Its investment rate was one of the lowest recorded in Sub-Saharan Africa (less than 15%). The literacy rate was about 30% (against 76% for the sub-region). Economic growth was very low, about 2% on average per year during the whole period, less than the population growth rate of 2.9%. Because of the slow economic growth and the over-valuation of the local currency, the

¹⁹ See Professor K. Yansane: Official Development Assistance to Africa: Prospects, Challenges: A Case Study of the Republic of Guinea, Economic Commission for Africa (ECA), paper prepared for the Seventh Session of the Conference of African Ministers of Finance.

country was unable to service its external debt, which amounted to 92% of its GDP: overdue external payments stood at about US\$ 300 million.

69. Economic and political liberalization marked the second period, 1985 to the present day. Public enterprises were dismantled and the State withdrew from productive sectors to the benefit of the private sector. Economic liberalization was undertaken within the framework of a structural adjustment programme, which received the support of the whole international financial community. From 1984 to date, aid received by the Republic of Guinea amounted to US\$3,300 million, coming mainly from multilateral financial institutions (54%) in particular the World Bank, followed by the African Development Bank (ADB). Moreover, Western countries belonging to the Paris Club substantially increased their aid, thus becoming the second largest group of donors (26%) after international financial institutions. These countries also helped Guinea to significantly reschedule its external debt at the level of the Paris Club. Contrary to this trend, aid provided by socialist countries decreased considerably, mainly because of the collapse of the Soviet Union (USSR) and the on-going economic reforms in China and Eastern Europe.

70. On the basis of the change in the composition of donors, and in view of the reform programmes that were implemented during the period, the sectoral allocation of aid changed compared to the earlier period. Thus physical infrastructure became the major sector to receive aid, with a share of 30% of the external assistance, followed by rural development (21%) and the social sectors (20%). The remaining 29% went to energy, water and the mining sector (which is still the pillar of the Guinean economy).

71. A number of observations can be made regarding the impact of aid on the economic performance of the country: economic growth averaged about 4% per annum and the investment rate increased gradually to reach 20% in 1995. The shortages of consumer and capital goods recorded during the first period now belong to the past. Above all, the literacy rate has improved substantially to reach 42% in 10 years.

72. The Guinean aid policy is still facing many problems:

- ◆ the public investment programme is made up of a set of projects with very limited coherence among themselves, and often sponsored by donors;
- ◆ aid coordination is still embryonic and needs to be strengthened;
- ◆ local capacity to conceive and monitor aid is very limited in spite of efforts made for a decade now;
- ◆ The low level of counterpart financial resources also and mostly affects ownership of activities. This limits the absorption capacity of the country.

73. The policy implications of the above assessment of the Guinean experience on aid could be summarized as follows. The first priority is to raise national fiscal revenues to a level

comparable to the average for the African countries, (i.e. 20%, against the current 12%), to prevent aid dependency and to be in a position to embark on an effective dialogue with donors. Moreover, aid to be sought should be as concessional as possible. Aid-management structures should be better coordinated. Finally, external aid should be incorporated in the long-term economic policy of the country.

74. The Case Study of Malawi²⁰:

75. The Case Study of Uganda²¹: ODA to Uganda has been dictated by three broad factors. During the early years following independence in the 1960s, aid was in the form of post-colonial assistance, with the dominance of one donor: the United Kingdom. The difficult situation during the 1970s necessitated substantial foreign assistance to finance the country's imports. This was due the low negative growth of the economy coupled with important capital flight, high coffee smuggling and deterioration in terms of trade. As a result, the ratio of ODA to GDP averaged 10.8 percent between 1973 and 1979. Since the early 1980s, ODA has been dominated by multilateral institutions, namely the IMF and World Bank. This was the result of the adoption of a stabilization and rehabilitation programme that was announced in 1981. However, as political instability prevailed during the first half of the 1980s, it was not until 1986 that donor flows became very strong. Between 1986 and 1996, ODA flows averaged 13.4 percent of GDP as compared to 9 percent between 1982 and 1985. Over the last five years to 1997, pledges at Consultative Group Meetings have been characterized by a wide variety of donors that are dominated by multilateral institutions (63 percent of total pledges, with the World Bank representing 23 percent of the total). This is a shift that translates the country's policy of favouring highly concessional financing. The pledges from bilateral donors are dominated by European countries which have accounted for 70 percent of total bilateral pledges, most of them grants.

76. With respect to the sectoral distribution of aid, it is noted that the bulk of external assistance has been absorbed by multi-sectoral projects, including the Economic Reconstruction Assistance and the Northern Uganda Rehabilitation Project. In the 1962-1978 and 1979-1997 periods, they accounted for 75 and 46 percent of total external assistance, respectively. However, donors are now shifting from multi-sectoral to sector programmes. The sectors that have been targeted are mainly agriculture and industry. Others such as health, mining and energy, and transport and communications have also benefited, albeit to a lesser extent. One

²⁰ See Professor M. Chikaonda: Official Development Assistance to Africa: Case Study of Malawi, Economic Commission for Africa (ECA), paper prepared for the Seventh Session of the Conference of African Ministers of Finance.

²¹ See Dr. L.A. Kasendeke and Mr. Ating Ego: Official Development Assistance and Africa: Country Case Study of Uganda, Economic Commission for Africa (ECA), paper prepared for the Seventh Session of the Conference of African Ministers of Finance.

interesting finding of the analysis in this connection is that, apart from health, social sectors have not been given priority, especially from 1973 onwards.

77. The evolution of Uganda's external debt and policy shows that the country's outstanding debt has been relatively high. The outstanding debt stock amounted to 1,286 million in 1986 and doubled within 5 years to reach 2,591.5 million dollars in 1991. In the same year, the debt-service ratio represented 95 percent of exports, while the ratio of debt to GDP was 106.8 percent. By 1997, despite an increase in the stock of debt to 3,661.2 million -- due, in a way, to Uganda's success in attracting foreign financing over the last ten years -- the ratio of debt to GDP had improved to 63.2 percent. This was certainly the result of the country's new strategy to source highly concessional financing.

78. With respect to the issue of aid policy, it was not possible to establish any policy for the 1962-1980 period. Between 1981 and 1984, it seems that the policy was to rehabilitate infrastructure ravaged by years of war and neglect. Aid for the 1987-1997 period was geared mainly towards financing specific programmes. The current strategy, in regard of the high level of debt stock, has been to negotiate debt rescheduling, buyback and restructuring of the uninsured commercial debt. Some success has been achieved in this regard. It should also be noted that Uganda has benefited from the Highly Indebted Poor Countries (HIPC) initiative which, at the completion point in April 1998, resulted in a relief amounting to 650 million dollars. As a result of these efforts, the country's debt-service ratio declined from the highly unsustainable rate of 127.7 percent in 1991/92 to the sustainable rate of 24 percent in 1997.

79. It has been established that ODA flows to Uganda have had a significant impact on key macroeconomic variables. In the 1980s, the impact of ODA on growth was through increased capacity utilization resulting from economic rehabilitation efforts. In the 1990s, within an improved macroeconomic environment, external resources have been generally utilized to finance the expansion of the capacity of the economy, especially by putting in place basic infrastructure. Donor resources have also been directed to sectors that are essential in sustaining economic growth, such as finance and education. In addition, Uganda has, until now, relied on foreign savings to kick-start investments. These have been concentrated mainly in structures rather than equipment and machinery. Foreign assistance is still very much necessary to finance the huge investment needs of the country. With respect to the impact of ODA on consumption, intuition dictates that there has been indeed an important causality from ODA to consumption, although a bivariate causality test does not support this relationship. ODA has had a direct impact by increasing government consumption and an indirect one by reviving private sector income-generating activities. Regarding ODA's impact on the country's exchange rate, the main worry has been that large inflows of foreign resources have been a source of appreciation pressures on the Ugandan shilling, thus reducing the competitiveness of the export sector. A bivariate causality test has shown that there is indeed a long-run unidirectional causation relationship between ODA and exchange-rate appreciation. However, data does not support this causation in the short-run. The impact of ODA on the budget is thought to have been positive.

Indeed, statistics show that aid support to the government budget during the adjustment process has strengthened economic performance and social welfare.

80. With regard to the issue of ownership of aid activities, it should be noted that aid activities in Uganda during the last ten years responded generally to the country's own economic programme that resulted from its consultative meeting in 1986. As such, multilateral and bilateral donors have been called upon to help implement the programme that was endogenously defined. It is indeed acknowledged that the ownership of the programme and the political will to implement it are the two key elements that explain the success of Uganda's economic reform.

81. Uganda has also encouraged the involvement of NGOs in aid-related projects, especially those targeting the poor such as projects implemented within the Poverty Eradication Action Plan (PEAP). This has had an impact on institution building at the grassroots level. In addition, decentralization efforts have been made to increase the participation of the population in contributing to economic growth. The direct involvement of donor NGOs in development and poverty-reduction activities at the local community level appears to have been a successful experience in Uganda.

82. In light of the foregoing, some lessons drawn from the experience of Uganda could be elements of a strategy on the reform of the "aid relationship". The first one is that ownership of aid-related programmes is critical to their success. Secondly, there is a need for each country to adopt a clear aid strategy to prevent an eventual problem of debt overhang that may result from increased ODA inflows. Thirdly, macroeconomic and political stability are essential to trigger increased donor interest and hence more resource inflows. Finally, there is a need for reduced conditionality on aid to increase absorption. In this context, it would help recipient countries if donors could agree on the same set of conditions.

Summary:

83. From the above brief account of the country case studies the following issues emerge for further consideration:

- **Ownership:** The need for improved ownership of aid-funded programmes and projects is expressed in most of the country case studies. Uganda, however, has already achieved a measure of ownership of such programmes and projects by ensuring that aid activities respond generally to the country's own economic programmes. Important facets of Ugandan aid ownership include mobilizing political will to ensure implementation and success of the programmes, bilateral and multilateral donors being called upon to support programmes that are endogenously defined, and encouraging the involvement of non-governmental organizations and grassroots organizations;

- **The need for strengthening institutional aid delivery mechanisms:** A number of the case studies pointed to the need to strengthen aid delivery mechanisms and institutions. The case study of Guinea points to the lack of coherence of programmes and projects that constitute the “public investment plan”, to the fact that aid coordination is still embryonic and needs to be strengthened, to the limited local capacities to conceive and monitor aid activities, and to the low level of local counterpart funds which affects ownership and absorption capacity;
- **The importance of a strategic vision of aid-funded activities:** Overall aid flows to a country are a result of the interaction of “exogenous” and “endogenous” factors. The endogenous factors include macroeconomic policies adopted by the country and political stability. Macroeconomic and political stability are essential to attract aid flows and foreign direct investment. The exogenous factors include the economic and political climate in the donor countries, developments in the world economy and movements in commodity prices of export interest to African countries. It is imperative that a country has a realistic assessment and evaluation of developments in both endogenous and exogenous factors that affect its aid flows. The case of Egypt as provided below provides some illuminating pointers.
- **Reform of the current consultative fora:** A number of the case studies pointed to the need to improve consultative mechanisms of aid activities. The study on Cameroon points to the need for institutionalizing periodical reviews of projects and programmes and organizing consultation meetings for resource mobilization on a regular basis.
- **Involvement of non-governmental and grassroots organizations:** A number of the studies pointed to the importance of encouraging the involvement of these institutions in conceiving and implementing aid-funded programmes and projects. The study on Cameroon points to the need for increasing the involvement of local communities in the implementation and eventual management of the projects. On the other hand, the study on Uganda indicates that the country has been encouraging these institutions to become involved and their direct involvement in development and poverty reduction at the local community level appears to have been extremely successful.
- **The case study of Egypt** presents some important lessons on how to respond to the realities of aid dependency and modalities for improving aid effectiveness. Egypt has for sometime been a major recipient of external aid. Taking due cognizance of the relatively heavy dependency it used to have on aid flows, Egypt has not only embarked on comprehensive programmes for attracting “foreign direct investment”, but has also developed a “strategic vision” for future external aid flows. In this process, the country has identified the major constraints that it will face in the near future in attracting aid, the responses needed to ameliorate the adverse impact of

declining aid flows, and efforts needed for the country to become self-reliant in a given planning horizon.

IV. AID FLOWS TO AFRICA: PROSPECTS, PROBLEMS AND REALITIES

84. In a sense the current debate on aid could be interpreted as an acknowledgement that the level, composition and mechanisms of aid delivery continue to be problematic. Thus, for example, the nature of aid and the mechanisms to deliver it make local administrative and political processes beholden to external constituencies, and are inefficient and uncoordinated. However, despite this inefficiency, a sudden reduction in aid, either in its totality or in one of its components, would cause severe economic and social disruptions in many countries.

Elements of an Ideal Aid System

85. Faced with the prospects of aid reduction, a country has a number of options it can pursue and the implications of an aid reduction, along with the possible counteracting policy interventions, will depend on the role of the tradable and non-tradable sectors in the economy. Given an aid reduction, there may well be an argument for targeted policies to help those sectors and groups adversely affected by the relative price-spillover effects. Furthermore, faced with an aid reduction, the government can take a number of measures:

- It can either cut expenditure or increase revenue to finance a given level of expenditure. What combination of each is used will determine the distributional consequences of aid reduction. The appropriate mix to use depends on country circumstances;
- A key element of a strategy for reducing aid dependence would be for official creditors to give deep debt relief and reduce gross flows to maintain net flows constant in the first instant. This can then form the basis for the country itself to plan a reduction in net flows over time;
- The transition from aid dependency would cause aid flows to become a separate source or risk to the economy. Aid flows might be curtailed sharply: the higher the current level, the greater the probability of a cutback and the greater the depth of the cut back; and
- The answer to the general volatility of government resources is to develop contingency funds, which are built up in good times to be disbursed in bad. A more conservative fiscal stance is required in good times and political will is required in any event to reduce aid dependence

86. Taking into account these strategic considerations one proposal for an ideal aid system starts by recognizing that the current aid system is a spiral of weak recipient capacity (for monitoring and evaluation) leading to donors taking an ever increasing and intrusive role in decisions regarding public expenditure (motivated by an incentive to disburse funds) resulting in further weakened recipient capacity. The key to breaking this spiral, it is suggested, is to return spending authority, control and accountability to the country in question. The components of an ideal aid system that could bring about the desired results would include the following:

- An overall development strategy in the context of which the government will present its rolling expenditure and revenue plans;
- A mechanism to discuss these plans with domestic and donor constituencies;
- An understanding between development partners that the expenditure and revenue plans would be scrutinized for broad coherence, feasibility and policy consistency, not for the details of projects;
- Once plans are agreed, donors would contribute to a pool of aid which, along with government's own resources, would finance the entire expenditure package.

Practical Suggestions for a Transition from the current Aid System to an Ideal System

87. Practical suggestions for the transition from the current aid system to the ideal system include the following:

- The institutionalizing of a national conference on development strategy, to be attended by all the local stake-holders, in which the rolling plans for expenditure and revenue are presented, discussed and agreed upon;
- The preparation of Public Expenditure Review documents, and all other important documents embodying economic and social policy reform measures, by recipient governments;
- Advanced donor coordination aimed at pooling aid resources at the sector level;
- Increased investment in recipient countries' capacity for accounting and auditing public expenditure;
- The reform of the current donor consultation fora (Consultative Groups and Roundtables) by moving them to countries, co-chairing them with countries, servicing them with government documents only, and enlarging participation;

- Formal agreements between two or more donor agencies on a division of labour in a particular country.

88. Some of these practical suggestions are readily available for implementation by governments and, indeed, some African governments have already implemented a number of them. Other suggestions, however, are beyond the control of African governments and their implementation requires agreement between donors among themselves, as well as understanding with recipient governments. Partial implementation, however, will never give rise to the proposed ideal.

89. The 1996 Development Co-operation Report described a convergence of thinking in the international community that has led to a broad consensus of support for a results-oriented and people-centered model of development co-operation. The main elements of this consensus are that:²²

- Development co-operation is based on giving the central responsibility for formulating and carrying out integrated national development strategies to each developing country's government, institutions and people;
- In this new environment of development partnership, the role of responsible external actors should be to complement local resources, encourage local initiative, enhance opportunities in the global markets and systems and foster the strengthening of local capacities for self-reliance.
- There appears to be a new orientation in the context of development co-operation towards emphasis on promoting trade and private investment in developing countries, as opposed to promoting development in general. Capacity development for increased trade and private investment in aid-dependent countries is now clearly on the international agenda.

90. The other elements of the new DAC Development Assistance Strategy are:²³

- That development assistance is a vital complement to the resources that developing countries themselves must generate as the most important source of investment in their own economic and social progress;
- That other policies of industrialized countries should be coherent, and that they should not undercut development objectives of developing countries ;
- That aid flows should be targeted with priorities for the social sectors ;and

²² Organization for Economic Cooperation and Development (OECD): Development Co-operation: Efforts and Policies of the Members of the Development Assistance Committee, 1997 Report.

²³ Organization of Economic Co-operation and Development (OECD): Development Co-operation: Efforts and Policies of the Members of the Development Assistance Committee, 1995 Report.

- That new modalities for an aid relationship based on partnership should be established on a shared vision.

91. The "*shared vision*", which is expected to characterize the new aid relationship, needs to recognize the responsibilities of the recipient countries as well as those of the donor community. As far as the role of development partners is concerned, there is need for such partners to establish clear goals and a persuasive rationale for development co-operation efforts that can be accepted by their external constituencies: the need to demonstrate how development co-operation contributes to development progress, and how development progress serves shared interests of the people in the industrialized and the developing countries.

92. Be the above as it may, and despite the fact that a case for increased flows of official development assistance can be made on the grounds of improved policy environments, increased ODA flows must be seen from an African perspective as an unrealistic reading of the current evidence: skepticism by the aid constituencies regarding the effectiveness of aid, ongoing revisions of budget priorities in donor countries for convergence purposes and otherwise, and the demise of strategic considerations as motivations for aid.

93. Given the uncertainty as regards future aid flows to Africa, it is imperative that African countries evaluate the implications for their economies and countries of declining trends in official development assistance. If empirical results pertaining to the effectiveness of aid in good policy environments are expected to inform future aid policies of donors then the best African governments can do to attract ODA flows in the future is to invest in improving their policies in a dynamically sustained fashion.

United Nations
Economic
Commission for
Africa

**UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL**



**Joint Conference of Ministers of
Finance and Ministers of
Economic Development and Planning**

**30 April to 8 May 1999
Addis Ababa, Ethiopia**

**Distr.: Limited
E/ECA/ESPD/EXP7/2**

Original: English

**THE SEARCH FOR THE KEY:
AID, INVESTMENT, AND POLICIES IN AFRICA**

**THE SEARCH FOR THE KEY:
AID, INVESTMENT, AND POLICIES IN AFRICA¹**

**By
David Dollar & William Easterly
Development Research Group, World Bank**

¹ Preliminary version. Views expressed here are not to be taken as those of the World Bank or its member governments. Comments welcome.

TABLE OF CONTENTS

	<u>Page</u>
I. AID-FINANCED INVESTMENT	1
Testing the aid-financial investment approach.....	3
Source of growth accounting	8
Policies, investment and growth	14
II. AID-INDUCED POLICY REFORM	16
III. POLICIES PLUS MONEY	25
IV. CONCLUSION	32
BIBLIOGRAPHY.....	33

Development economists have made many attempts to find the key to growth in Africa. Paging through a bibliography on Africa, it is evident that economists have not yet found that key. One finds titles in a bibliography like *Economic Crisis in Africa*, *The Destruction of a Continent*, *The Crisis and Challenge of African Development*, *Africa in Economic Crisis*, *Africa: Dimensions of the Economic Crisis*, *Africa's Growth Tragedy*, *The Vampire State in Africa*, *The Open Sore of a Continent*, *Africa in Chaos*, and *Africa: What Can Be Done?*¹ Since we development economists continue writing these articles and books, it is obvious that past keys have not yet unlocked Africa's potential for growth.

In this paper, we review some of the keys that have not worked and offer pointers towards more effective strategy. We do not think that there is one key to growth, but we think there is evidence that some strategies work better than others. We want to review the past intellectual history of "keys to growth" because it induces humility about current "keys to growth", because it clarifies what mistakes donors and government should not repeat, and because old ideas keep resurfacing.

We see two main phases of the search for the key to growth. The first stressed aid-financed investment as the key to unlock Africa's development potential. The second stressed aid-induced policy reform as the key. Neither key worked, as we will see in this paper, because aid neither increased investment nor induced policy reform. The first key also failed because investment did not have a tight link to growth in the short run, and not even much of a link in the long run in Africa. Policy, in contrast, did have a large effect on growth, but aid did not systematically lead to policy reform. In the third section of the paper we present evidence that the combination of good policy and foreign aid has been effective at promoting efficient investment and growth. Thus, donors should target foreign aid to good policy environments if aid is to be effective in promoting development in Africa.

I. AID-FINANCED INVESTMENT

The initial attempt to induce development in Africa (and elsewhere) followed a very simple formula. Economists suggested that growth was proportional to investment, by a constant that was the reciprocal of what economists called the Incremental Capital Output Ratio (ICOR). Investment was low because of low domestic savings in Africa, but aid donors could finance additional investment. Increasing aid financing would increase investment, which would increase growth. Donors added conditionality that additional domestic saving would match aid increases, making possible an even more than one for one increase in investment when aid increased.

Vestiges of old "keys to growth"

Seeing whether these predictions came true is not only of historical interest. Vestiges of this approach, which development economists variously called the Harrod-Domar model, the Two-Gap model, and the financing requirements model, remain in current development practice in Africa and elsewhere. We will call it the aid-financed investment approach to development. While this approach is nowhere near as influential as it was in the 1960s, the same aid-to-

investment-to-growth language continues to crop up today. It is quite possible that these expressions of the aid-to-investment-to-growth dogma are *pro forma* and not taken seriously in practice. Yet, in any event report-writers continue to use this language. This suggests that applied development economists have not yet found a fully satisfactory replacement for the aid-financed investment paradigm.

For example, a 1993 report on Zambia stated "it is often thought to require investment of at least 20 percent of GDP to achieve output growth of 5 percent (an ICOR of 4)..."² The 1996 report on Zambia reiterated that "a useful (if simplistic) tool for comparing growth and investment scenarios across countries is an ICOR," since the ICOR reflects the "dependence of continued growth on new investment."³ The report sets the non-mining ICOR at 4 in Zambia. In Zimbabwe, the ICOR of 4 pops up again: "With improved efficiency, which would reduce the incremental capital-to-output ratio to about 4, growth could exceed 5% p.a. without a further rise in investment as a share of GDP."⁴ (By the way, Easterly 1997 demonstrates theoretically that the ICOR is a measure of physical capital intensity, not efficiency of investment.)

Going further afield from Africa, a report in 1995 told Latin Americans that "enhancing savings and investment by 8 percentage points of GDP would raise the annual growth figure by around 2 percentage points"⁵ (again an ICOR of 4). Another report warned the ex-Communist countries that "investment finance of the order of 20 percent or more of GDP will be required" to reach "growth rates of 5 percent" (yet another ICOR of 4). This report on the ex-Communist economies noted that "conditional official assistance ... contributes to cover the gap between domestic savings and investment."⁶

The expressions of confidence in a short-run to medium-run relationship between aid, investment, and growth are still surprisingly widespread, especially in work on Africa. "Africa's economic performance is expected to improve in 1992-93," but the improvement in these two years hinges on -- among other things -- "the increase in investment that is needed to promote economic growth."⁷ As another source puts it, "The adjustment experience of sub-Saharan Africa has demonstrated that to achieve gains in real per capita GDP an expansion in private saving and investment is key."⁸ For Africa, "official financing on concessional terms will be necessary," even if not sufficient, "to improve growth prospects."⁹

Getting down to individual countries, a 1996 report on Uganda argued any aid reduction "could be harmful for medium-term growth in Uganda, which requires external inflows..."¹⁰ A 1997 report called "Accelerating Malawi's Growth" said that "Different growth rates have different implications". The optimistic scenario required investment of "24% of GDP by the end of the period." A less optimistic growth scenario would imply "an investment rate of around 20%."¹¹ In a 1995 report on Madagascar, concessional "external debt would increase significantly ... to modernize and expand Madagascar's aging plant and equipment and weak infrastructure."¹²

The inventors of the aid-financed investment key in the 1950s and 1960s had confidence in two short to medium run links: the link between aid and investment, and between investment and growth. We can test empirically how well these links held in Africa.

Testing the aid-financed investment approach

We perform two simple exercises for African countries: we regress investment on aid, and we regress growth on investment.¹³ The prediction of the aid-financed investment model is that there will be a significant coefficient of greater than or equal to one in the investment on aid equation. In the growth on investment equation, the prediction is that there will be a significant short-to-medium run relationship between growth and investment, implying a "reasonable" ICOR of between 2 and 5. We do not use any other controls, because the models we are testing are bivariate models -- investment depends on aid, and growth depends on investment. We also do not attempt to control for endogeneity of aid or investment -- our interest is in whether aid, investment, and growth jointly evolved as the inventors of the aid-financed investment key to growth expected.

Table 1 shows the results of the investment on aid equation, using overseas development assistance as a ratio to GDP as our definition of "aid." The investment to GDP numbers are from Summers and Heston 1993, with subsequent updates.

Table 1: Results of regressing Gross Domestic Investment/GDP on ODA/GDP country by country in Africa, 1965-95

Coefficient of Investment on ODA	Number of countries	Percent of Sample
Total	34	100%
Positive, significant, and ≥ 1	0	0%
Positive and significant	8	24%
Positive	17	50%
Negative	17	50%
Negative and significant	12	35%

Table 1 shows that no African country satisfied the prediction that investment would increase with aid at least one for one. Eight countries showed a positive and significant relationship between aid and investment, but twelve countries showed a *negative* and significant relationship. Table 1 is not good news for the aid-financed investment approach to African development.

Of course, there are many statistical difficulties establishing a *causal* relationship between aid and investment. Our aim is less ambitious. We just want to know if aid and investment evolved the way the proponents of the aid-financed investment model predicted. The answer is unambiguous: no.

To see an individual country illustration of the Table 1 results, Figure 1 shows actual and predicted investment in Madagascar. Actual investment stayed under 2 percent of GDP. The predicted investment, if aid had gone one for one into investment, would have reached 18 percent of GDP.

For the second exercise, we regress annual growth on investment/GDP lagged one year (with a constant) for each African country over 1960-95. The reader might object that it is unreasonable to expect investment to pay off one year to the next. We agree; we use annual data with a one year lag only because that has been the practice in the aid-financed investment approach.¹⁴ We will also do a statistical exercise using four-year averages. The results from the annual data are as follows:

Table 2: Regression of GDP growth on lagged investment country by country

	Number of countries	Percent of sample
Total sample of African countries	35	
Positive and significant w/ $2 < ICOR < 5$	2	6%
Positive and significant	5	14%
Positive	18	51%
Negative	17	49%

Note: regression includes a constant term

Only two African countries meet the condition of a positive and significant relationship with a "reasonable" ICOR between 2 and 5. Only five African countries have a positive and significant relationship between investment and growth of any kind in the annual data. Half of the sample has a negative (though not significant) relationship between investment and growth.

Chart1

Figure 1: Madagascar: Actual investment to GDP and that predicted by aid-financed investment model

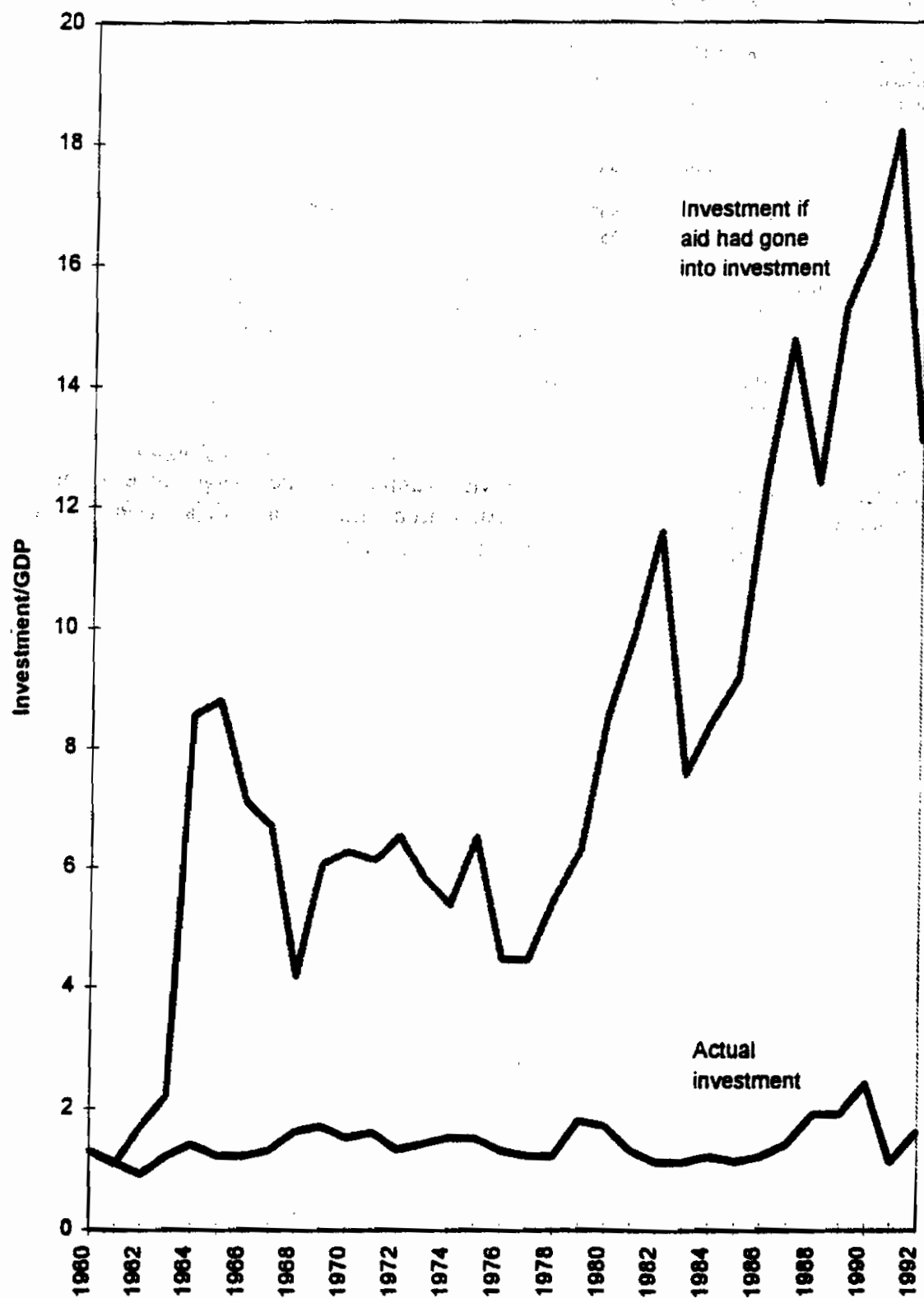


Figure 2 shows the evolution of actual output in Zambia compared to that predicted by the ICOR model with actual Zambian investment. Output would have reached near \$2500 in 1985 international prices, instead of declining to \$600. This is assuming an ICOR of 4, which as we saw above is a popular ICOR.

Table 3 shows the results of a regression of four-year average growth rates on four-year average investment rates, lagged one period, for the sample of African countries.

Table 3: LS // Dependent Variable is GROWTH (4 year averages)
Included observations (Africa only): 307
White Heteroskedasticity-Consistent Standard Errors &
Covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.782878	0.370807	7.504927	0.0000
Investment/GDP, lag	0.044044	0.030759	1.431915	0.1532
R-squared	0.008705	Mean dependent var		3.259935
Adjusted R-squared	0.005455	S.D. dependent var		3.792423
S.E. of regression	3.782066	Akaike info criterion		2.667034
Sum squared resid	4362.726	Schwarz criterion		2.691313
Log likelihood	-843.0038	F-statistic		2.678356
Durbin-Watson stat	2.049589	Prob(F-statistic)		0.102752

The relationship between growth and investment in Africa is still not statistically significant with four-year averages. This echoes results in the worldwide sample, in which lagged investment is also not significant in a panel growth regression (Blomstrom, Lipsey, and Zejan 1996). The short-run to medium-run link from investment to growth is simply absent.

inv and growth cht

Figure 2: Zambian per capita income if all of actual investment had gone into growth as ICOR model predicted

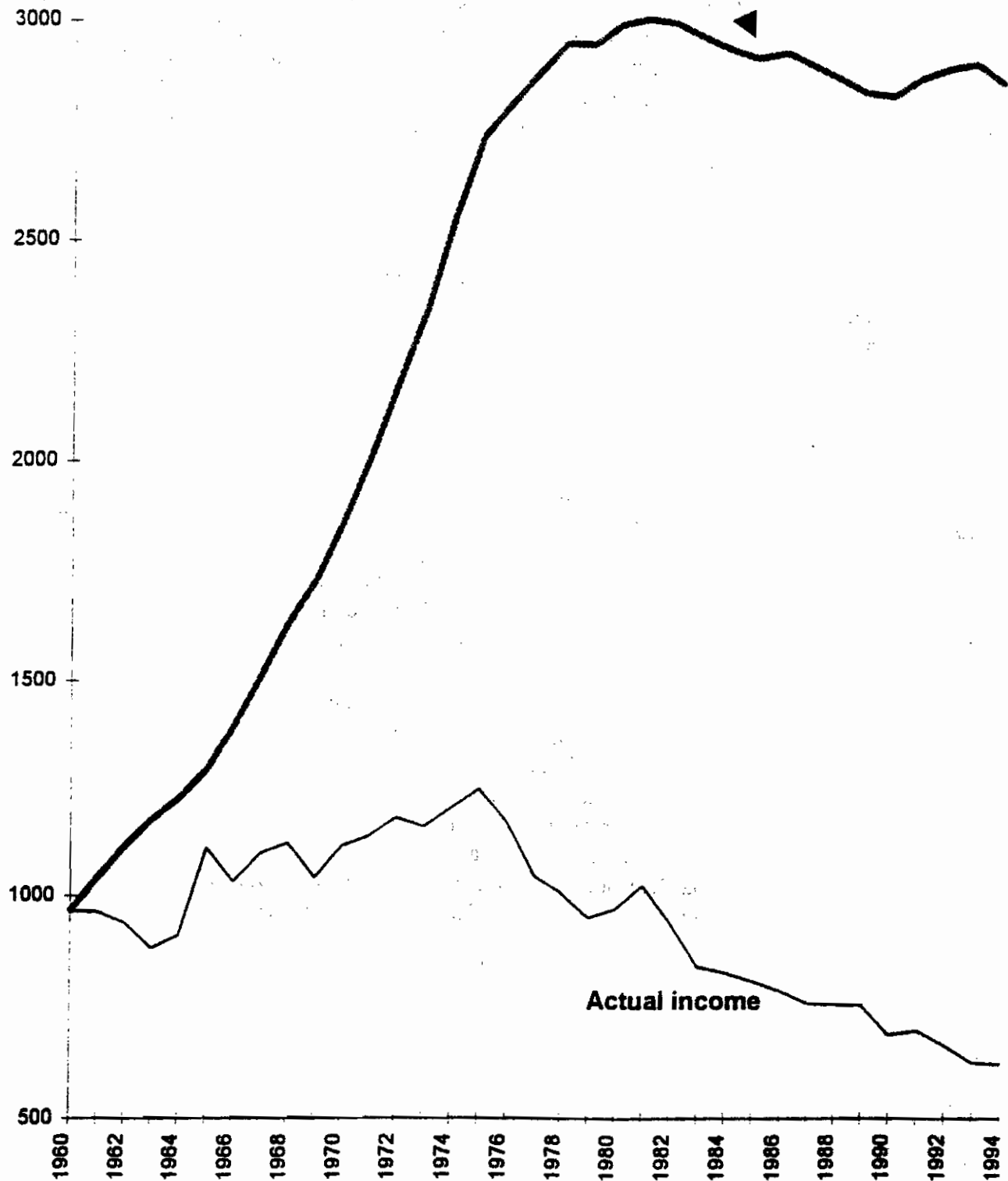


Figure 3 shows a scatter plot of the data underlying Table 3, with lines marking average investment and average GDP growth. We see that the off-diagonal quadrants contain as many datapoints as the diagonal ones. We label some particularly egregious outliers. Gabon in 1977-81, for example, had sharply negative GDP growth despite lagged investment of over 35 percent of GDP. In the other direction, Lesotho in 1973-77 had growth of nearly 15 percent with lagged investment of only 8 percent.

We can also test the aid to investment to growth links jointly. We ask how much per capita growth would have been in each country if all aid went into investment and investment went into growth with an ICOR of 4. (We subtract population growth in each country to give per capita growth.) Figure 4 gives us the answers, compared with African countries' actual per capita growth rates. There is no apparent correlation between growth predicted by the aid-financed investment to growth approach and the actual growth rate. Moreover a majority of the datapoints lie below the 45% line in the graph, indicating that actual growth fell short of predicted growth. Countries like Guinea-Bissau, Zambia, Zimbabwe, and Mauritania should have done well according to the aid-financed growth model; instead they had close to zero per capita growth.

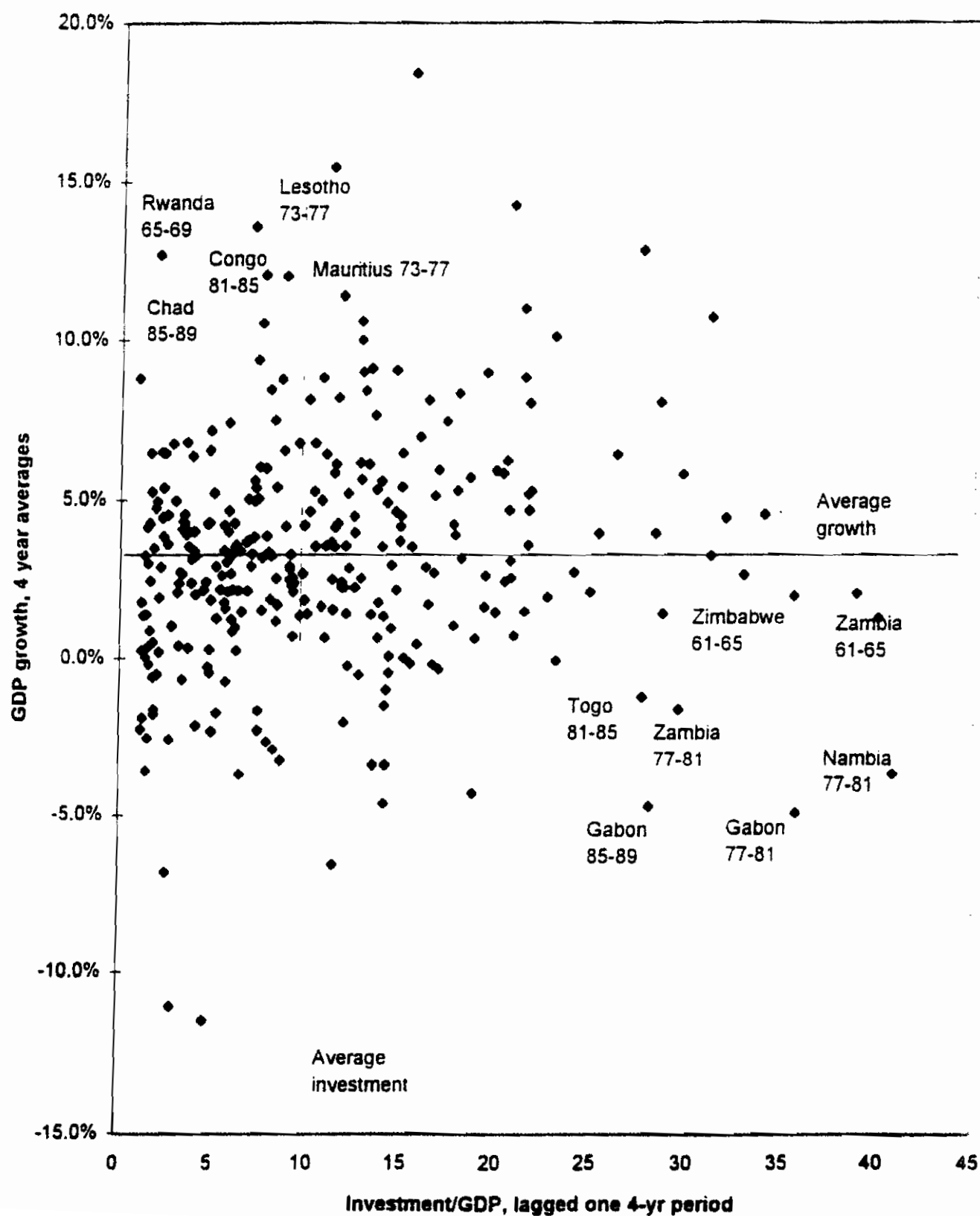
Figure 5 shows the example of Mauritania's income over time if the aid-financed investment approach had worked. Mauritians would have followed a trajectory much like South Koreans if only this approach had worked; instead Mauritians saw their per capita income stagnate.

Sources of growth accounting

The evidence so far has demonstrated the failure of the short-run investment to growth link. It is obvious that in the long run, physical (and human) capital play some role in producing output. Research on East Asia suggests a large role for physical and human capital accumulation during their rapid growth (Young 1994, Krugman 1995). The question then becomes, how big a role do physical and human capital investment play in Africa, compared to other factors? Even if they play a role, is investment the endogenous outcome of policies?

We address the first question in Table 4. We use the data of Benhabib and Spiegel 1994 (B-S) on physical capital, human capital, labor and output. We then calculate how much of growth is due to factor accumulation in 5 East Asian nations (the only ones in their sample) and 25 African nations. We see according to their sample, that East Asia indeed had a large advantage over Africa in physical capital accumulation. Labor force growth was about the same in the two places. However, Africa had a large advantage over East Asia in growth of human capital. The three factors balance out to account for 1 percentage point of the 3.1 percentage point growth differential between East Asia and Africa, 1965-85. This leaves 2.1 percentage

Chart1

**Figure 3: Growth and lagged investment in Africa, 4-year averages,
1953-1995**

Current

**Figure 4: Actual growth versus that predicted by the Financing Gap model
for African countries**

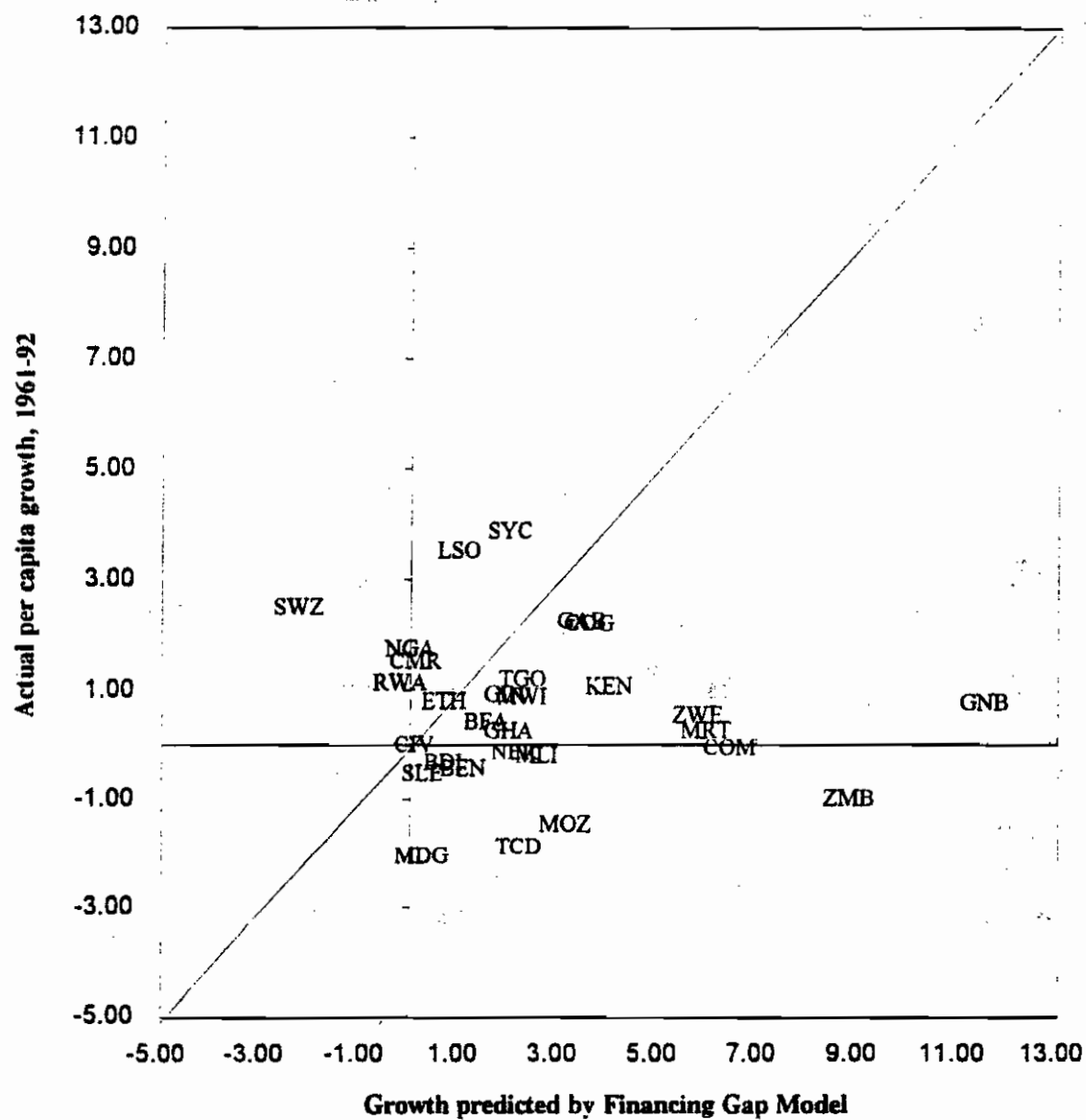
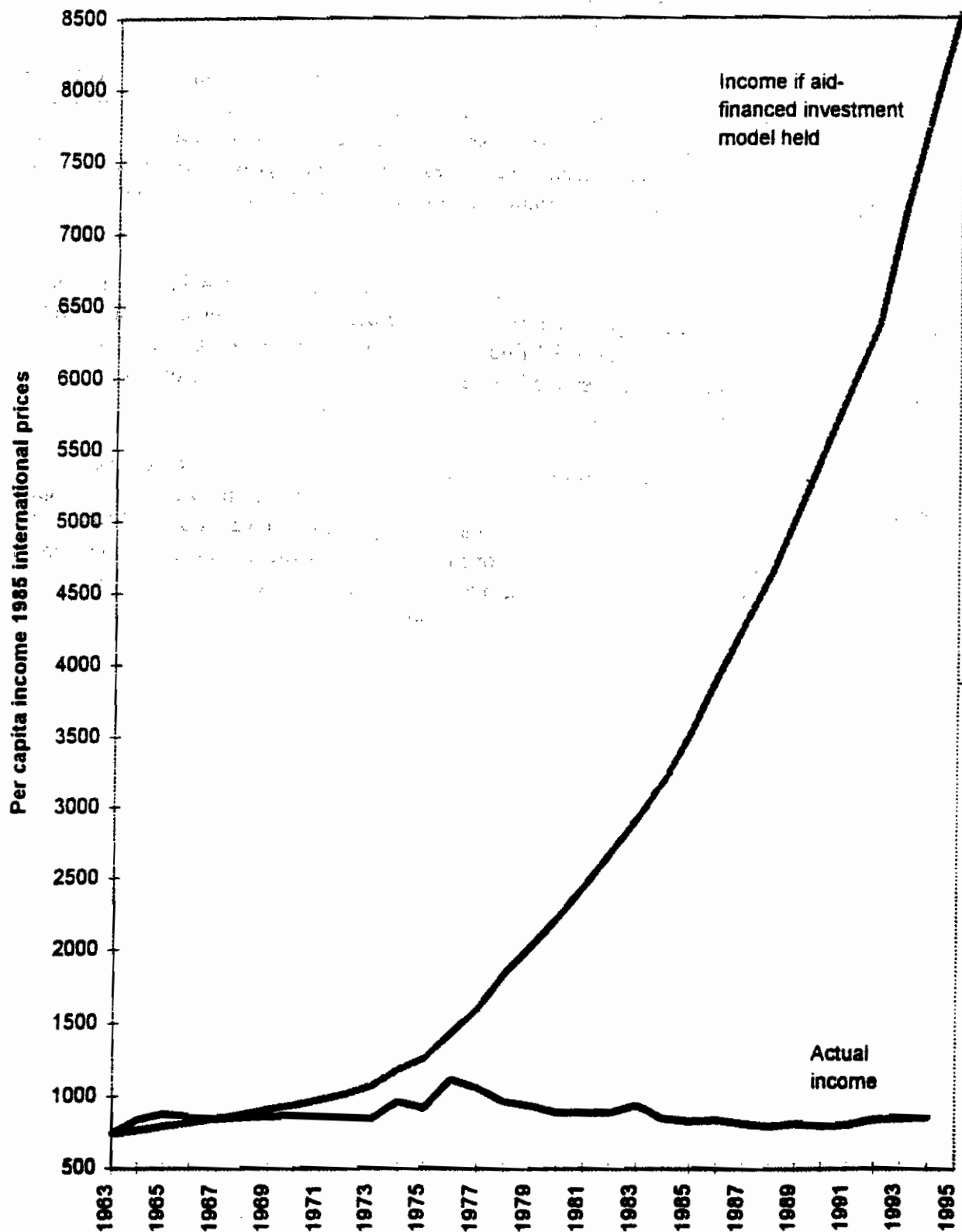


Chart1

Figure 5: Mauritania: Gap between aid-financed investment model and reality



points of the growth explained by "total factor productivity growth." Whatever TFP growth contains, the main story behind Africa's failure relative to East Asia's success is *not* factor accumulation.

We can also address the importance of factor accumulation by seeing how much of the cross-country variation in the combined East Asia and Africa sample does factor accumulation explain. Since output growth is the sum of TFP growth and factor growth, we have:

$$\text{Variance (output growth)} = \text{Variance (TFP growth)} + \text{Variance (Factor growth)} + 2 * \text{Covariance (TFP growth, Factor growth)}$$

We can calculate with this formula what percentage of the variance of output is due to the variance of factor growth in the B-S data. Neoclassical theory tells us that the covariance term (which was 16% of total output growth variance) should be assigned to total factor productivity. It measures the degree to which factor accumulation responds to TFP growth. But even without this term, TFP growth's cross-country variation accounts for 60 percent of output growth's variance while factor accumulation only accounts for 24 percent.

Nehru and Dhareshwar 1993 find that capital accumulation in East Asia was not as far ahead of Africa as B-S indicate (growth rates of 7.4 percent and 5.3 percent respectively). However, Nehru, Swanson, and Dubey 1993 find that growth in human capital was equal in the two places. These alterations to the Benhabib-Spiegel figures roughly cancel out, still leaving most of the growth differential explained by total factor productivity growth.

We did the variance decomposition in the growth accounting exercises of Nehru and Dhareshwar 1993 and King and Levine 1994. In both, physical capital growth rate per capita variation accounts for below 25 percent of per capita output growth variation 1960-89. We looked also at Bosworth and Collins' 1996 reporting of TFP growth and physical and human capital accumulation for 8 regions and 3 time periods. The variance in factor accumulation accounts for only 20 percent of the cross-regional, cross-time variation.

Table 4: Sources of growth decomposition between East Asia and Africa, 1965-85
Rate of growth of:

	Physical Capital	Labour	Human Capital	All Factors of Production	Total Factor Productivity	Output
5 East Asian nations	8.4%	2.4%	2.2%	4.3%	2.4%	6.7%
25 Subsaharan African Nations	1.9%	2.2%	5.7%	3.3%	0.3%	3.6%
East Asia-Africa growth difference explained by:	2.1%	0.0%	-1.2%	1.0%	2.1%	3.1%
Share of cross-country output growth variance in East Asia+ Africa sample explained by:				24%	76%	

- Notes:**
- (1) Source for each factor's growth by country is Benhabib and Spiegel 1994
 - (2) We assume share of 1/3 for each factor of production
 - (3) We assigned the covariance term between factor accumulation and TFP growth (16% of growth variance) to TFP, because it is TFP-induced factor accumulation according to neoclassical theory.

East Asian Nations:

MALAYSIA
JAPAN
THAILAND
INDONESIA
KOREA

African Nations:

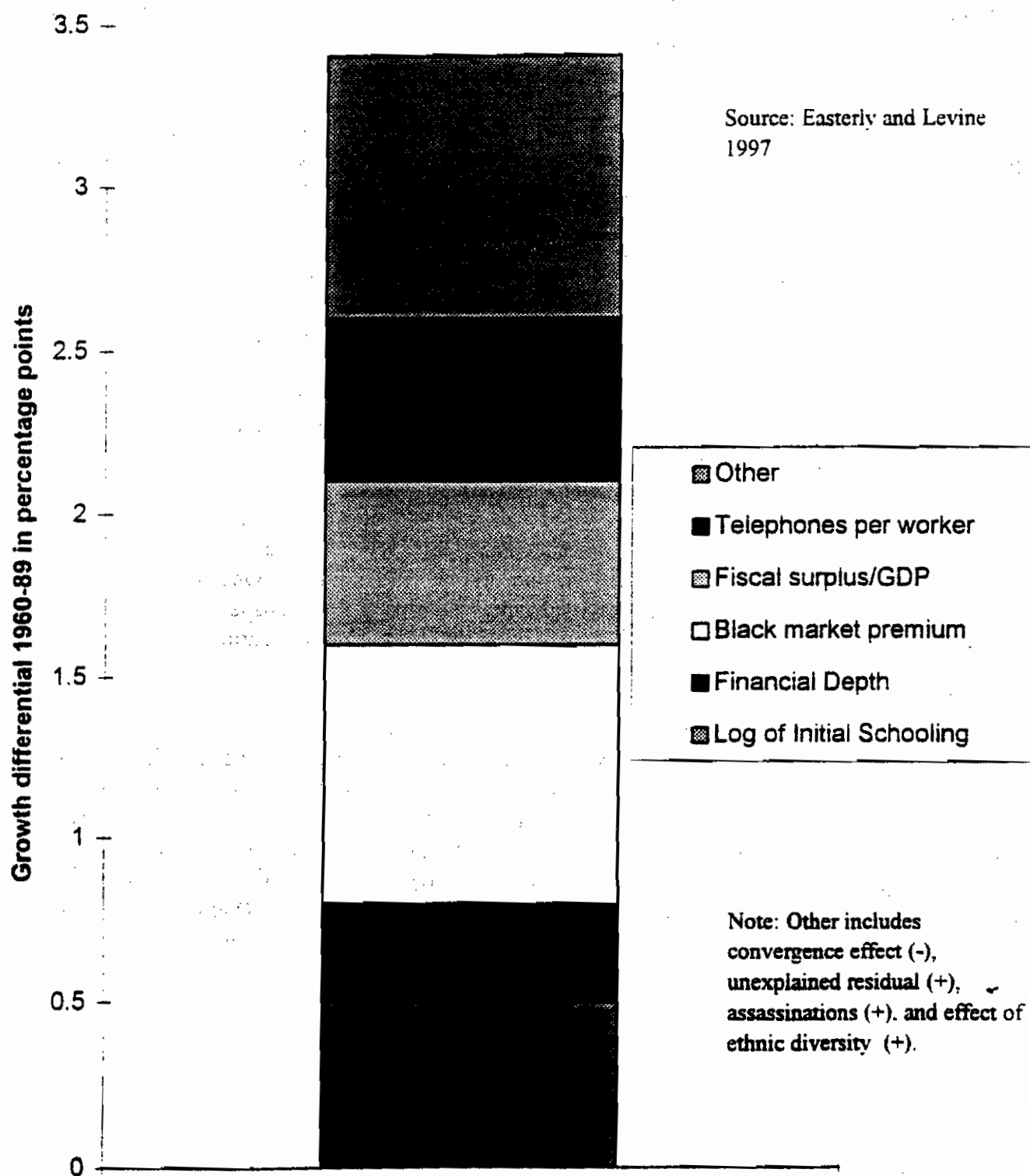
BOTSWANA
CAMEROON
CENT AFRICAN REP
CHAD
GABON
GHANA
COTE D'IVOIRE
LESOTHO
LIBERIA
MADAGASCAR
MALAWI
MALI
MAURITIUS
MOZAMBIQUE
NIGER
NIGERIA
RWANDA
SENEGAL
SIERRA LEONE
SOMALIA
SUDAN
SWAZILAND
TANZANIA
UGANDA
ZAMBIA

Policies, investment, and growth

Even the part of output growth variation explained by capital accumulation does not necessarily imply a causal link from capital accumulation to growth. In the neoclassical model, as already mentioned, capital accumulation is a function of the TFP growth rate in the steady state. An increase in TFP growth would raise both capital growth and output growth, but there would not be a causal relation between capital growth and output growth (Barro and Sala-i-Martin 1995). In models that endogenize TFP growth, it becomes a function of economic policies. In endogenous growth models that stress physical and human capital accumulation, capital growth and output growth both respond to economic policies. This suggests that we should look to policies more than to investment as “key” to Africa’s poor growth.

Policy differentials can take us quite far in explaining the Africa - East Asia growth difference. Figure 6 shows that 5 indirect indicators of policy explain 2.6 of the 3.4 percentage point growth differential between East Asia and Africa. The five are telephones per worker, fiscal surplus/GDP, the black market premium on foreign exchange, financial depth (M2/GDP), and initial schooling.¹⁵ The other portion is the net of the convergence effect (which was an advantage for Africa) and an Africa dummy variable that measures how much of Africa’s poor growth was unexplained.¹⁶ Given the importance of policies in explaining Africa’s growth, we now turn to the question of how aid influenced policy.

Chart 1

Figure 6: Decomposition of Growth Difference Between East Asia and Africa by Policy Indicator

II. AID-INDUCED POLICY REFORM

What we have established so far is that the traditional aid to investment to growth linkages underlying the aid-financed investment "key to growth" are not very robust. On the other hand, differences in economic policies can go a long way toward explaining differences in countries' growth rates. This finding is encouraging, because it means that reforms that in many cases are not technically difficult can help poor countries increase their growth rates and accelerate poverty reduction. Most economists now recognize the importance of policy, and the proximate objective of development assistance has gradually shifted from financing investment to inducing policy reform. So this section asks: did aid-induced policy reform turn out to be the key to unlock Africa's growth potential?

If policy reforms have short-term costs -- perhaps focused on particular segments of the population -- then foreign aid can potentially help reformers get launched. Stabilization typically requires fiscal adjustments that will lead to higher taxes or lower services for some groups. Trade liberalization will hurt firms and workers in previously protected industries. State enterprise reform and privatization are likely to lead to transitional unemployment. If a government wants to implement growth-enhancing reforms, foreign aid can help with the adjustment costs.

Jeffrey Sachs (1994) analyzes eight major economic reform episodes in the post-war period: Bolivia, Chile, Germany, Israel, Mexico, Poland, and Turkey. In each case he finds a crucial contribution of aid, though he also stresses that the government in question committed itself to reform before large-scale aid arrived. Sachs concludes that the role of aid is to "help good governments to survive long enough to solve problems" (p. 512).

On the other hand, Dani Rodrik (1996) points out that "aid can also help bad governments to survive. For debating purposes, one can cite at least as many cases as Sachs does to demonstrate an association between plentiful aid and *delayed* reform.... One of the pieces of conventional wisdom about the Korean and Taiwanese reforms of the 1960s is that these reforms took place in large measure because US aid, which had been plentiful during the 1950s, was coming to an end..." (p. 31).

Burnside and Dollar (1997) examined the relationship between aid and an index of macroeconomic and trade policies, for 56 developing countries. They showed first that policies can be explained to a considerable extent by underlying country characteristics. These characteristics included the rule of law, ethnic fractionalization (which is associated with poor policies), or political instability (also associated with poor policies). When they added aid to the regression equation, they found no effect of aid on the policy index. This finding does not refute Sachs's view that aid has contributed to reform in certain cases. Rather, it suggests that aid has supported governments with bad policies to about the same extent that it has supported reforming

governments. Aid-induced policy reform turned out to be no more of a key than aid-financed investment. Aid-induced reform was not the key because aid did not, on average, induce reform.

We can get some insight into the relationship between aid and policy by looking at individual country cases. Zambia is a good example of Dani Rodrik's critique that aid can enable governments to delay reforms. Policies in Zambia were poor and getting poorer throughout the 1970-93 period, yet the amount of aid that the country received rose continuously, reaching 11% of real GDP by the early 1990s (Figure 7). The Bank and the Fund gave Zambia received 18 adjustment loans over this period. One could argue that this large amount of assistance sustained a poor policy regime.

For each Zambia, however, there is a Ghana. Ghana received very little aid during the period it had bad policies, while donor support has been strong since it reformed (Figure 8). Case studies of Ghana generally find that foreign financing helped consolidate a good reform program. In the Burnside-Dollar sample of 56 countries, these different experiences cancel out: aid and policy are virtually uncorrelated. When they introduced other variables that are likely to affect policy into the equation, there was still no relationship between aid and policy.

One obvious response to the problem that finance may as well delay reform as encourage it, is to make assistance *conditional* on policy reform. The International Monetary Fund and the World Bank intend to give financial support only as governments carry out reform measures. These conditional flows are only a small part of official flows; nevertheless, other donors pay attention to progress with structural adjustment programs in making their decisions about aid allocations. In the 1980s there was great hope that making a large fraction of development assistance conditional on policy reform would spur growth and poverty reduction throughout the developing world.

There are a number of reasons, however, why conditionality failed to be the key that would yield permanent improvements in policy. First, conditionality is inherently hard to monitor. Take, for example, a condition that seems relatively simple: that the fiscal deficit not exceed a certain level. Government policy influences the fiscal deficit, but shocks not under the government's control also affect it. A country may miss an agreed fiscal target because of a shock. We would want them to, because a target that is "good policy" in one environment becomes "poor policy" in an altered environment. Thus, whether or not a country has met a policy target requires an element of subjective judgment. The subjectivity involved becomes more acute as the reforms become more complex institutionally.

Figure 7. Zambia: Aid and Policy

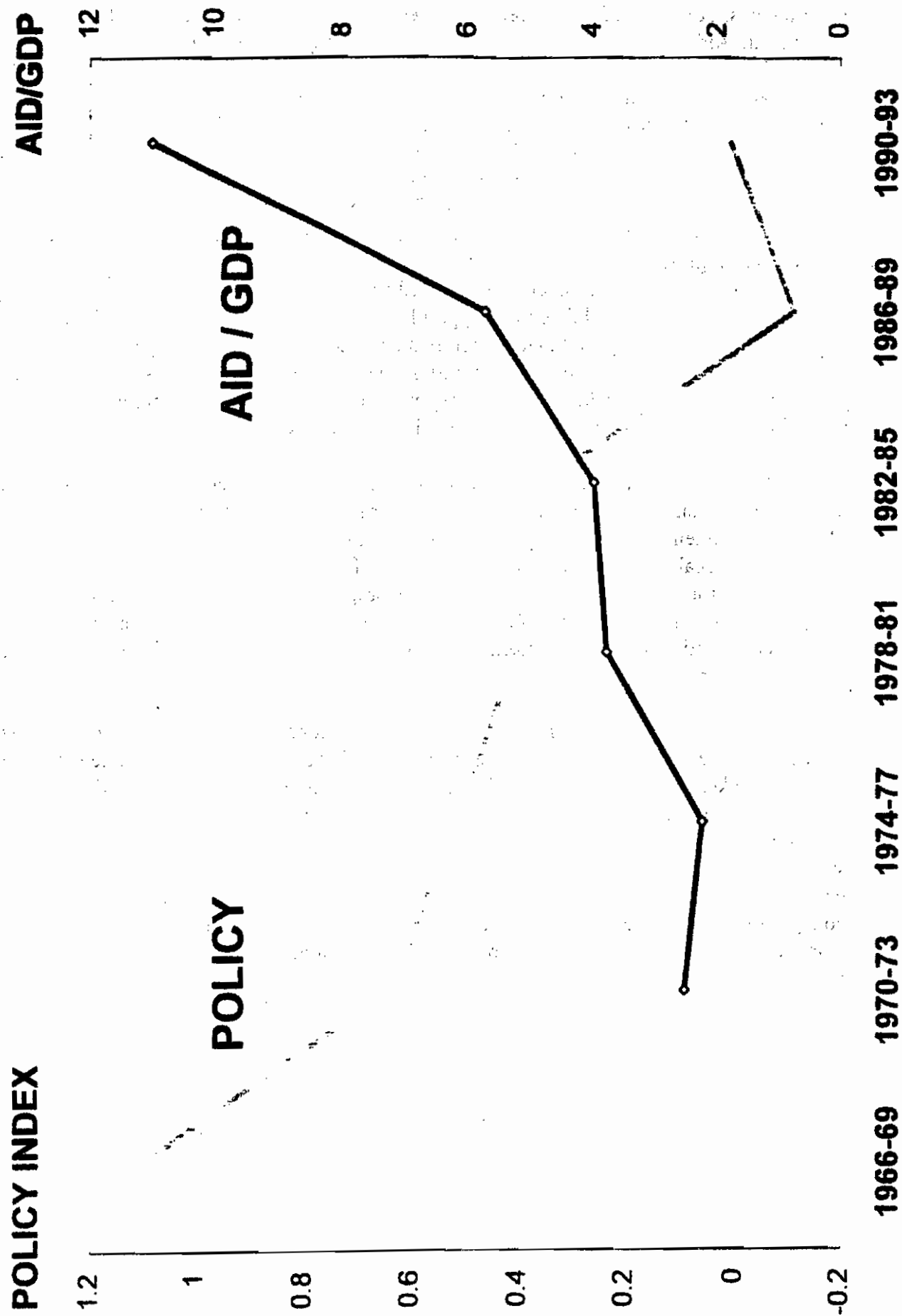
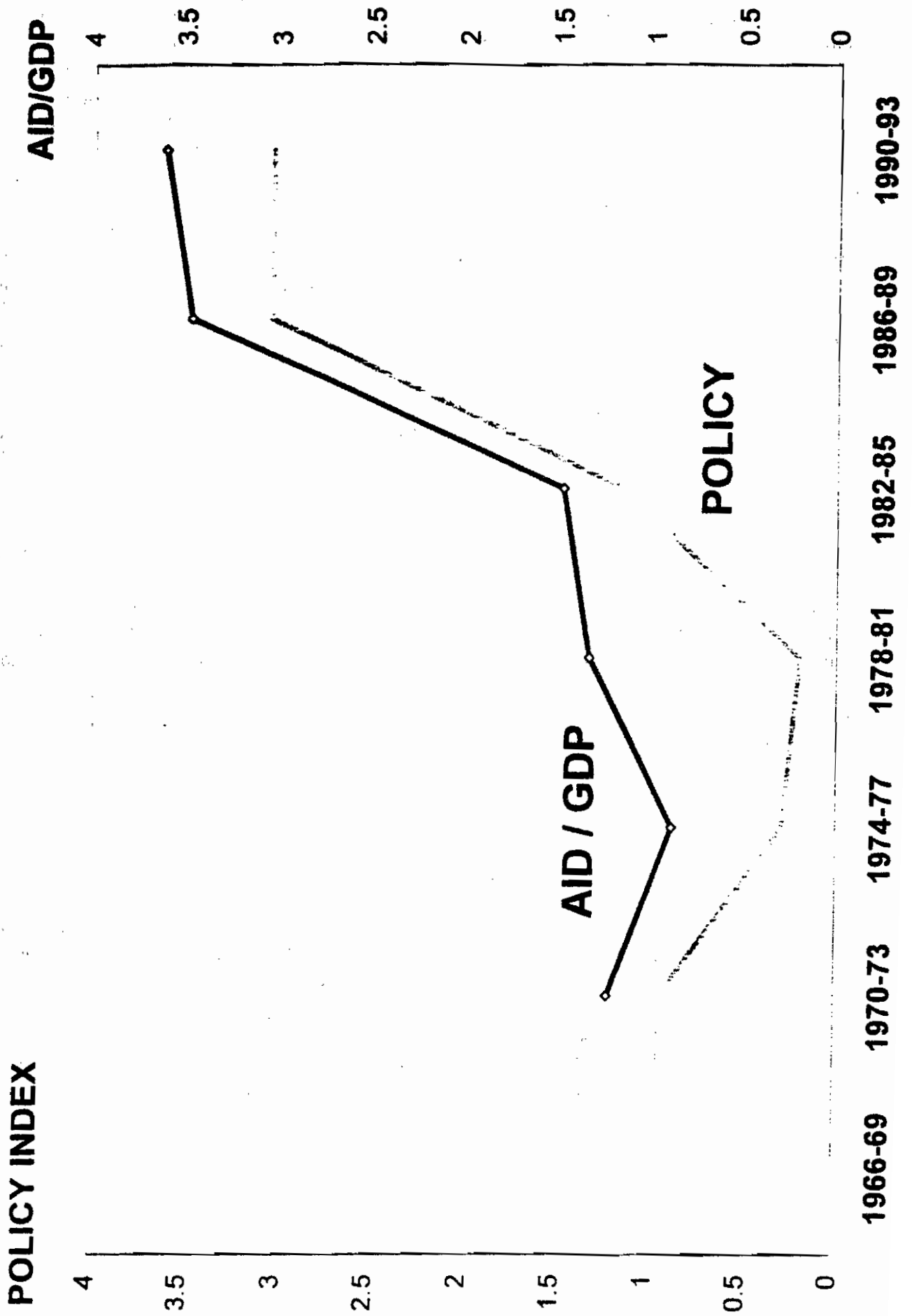


Figure 8. Ghana: Aid and Policy



The second problem with conditionality is that it only has a force during the life of the adjustment program. A government in financial difficulty may agree to certain reforms and carry them out in order to obtain conditional resources. If there is no strong commitment to these reforms, then the government can reverse them at the end of the adjustment program. From a theoretical point of view, it seems unlikely that conditional aid could induce permanent policy change if there is not a domestic constituency for reform.

The third and probably most serious problem with conditionality concerns the incentives within donor agencies. Governments set up donor agencies to provide financial assistance. These agencies want to disburse funds. The monitoring of policy reform requires some subjective judgment. So the likely outcome is that the donors will find that governments are making a good effort -- even where there is little objective progress -- and disburse their funds. The *Economist* describes this kind of donor behavior as follows:

Over the past few years Kenya has performed a curious mating ritual with its aid donors. The steps are: one, Kenya wins its yearly pledges of foreign aid. Two, the government begins to misbehave, backtracking on economic reform and behaving in an authoritarian manner. Three, a new meeting of donor countries looms with exasperated foreign governments preparing their sharp rebukes. Four, Kenya pulls a placatory rabbit out of the hat. Five, the donors are mollified and the aid is pledged. The whole dance then starts again. (August 19, 1995)

There is a large empirical literature on structural adjustment lending and its effect on policies [see e.g. Mosley (1987), Mosley et al. (1995), and Thomas (1991)]. These reviews draw primarily on case studies. These reviews conclude that conditionality to promote reform is ineffective in countries in which there is no strong local movement in that direction. Mosley et al., for example, conclude that in Africa structural adjustment lending of the World Bank affected the policies of recipients "a little, but not as much as the Bank hoped." In their view the main problem with conditionality was that the World Bank had strong incentives to disburse funds, and thus was inclined to see a good effort even where there was none. In their sample of adjustment loans, governments carried out only 53% of loan conditionalities. *Nevertheless, almost all of these adjustment loans disbursed.*

The lesson of the case study literature is that the existence of a conditional loan in no way ensures that governments will reform. Recall that the Fund and the Bank gave Zambia 18 conditional loans during the period depicted in Figure 7. Collier (1997) gives the example of Kenya, in which the World Bank provided aid to support policy reforms in the agricultural sector. However, the Bank financed the identical reforms five separate times, and each time the government did not do the reforms or subsequently reversed them. Yet all of these adjustment loans disbursed.

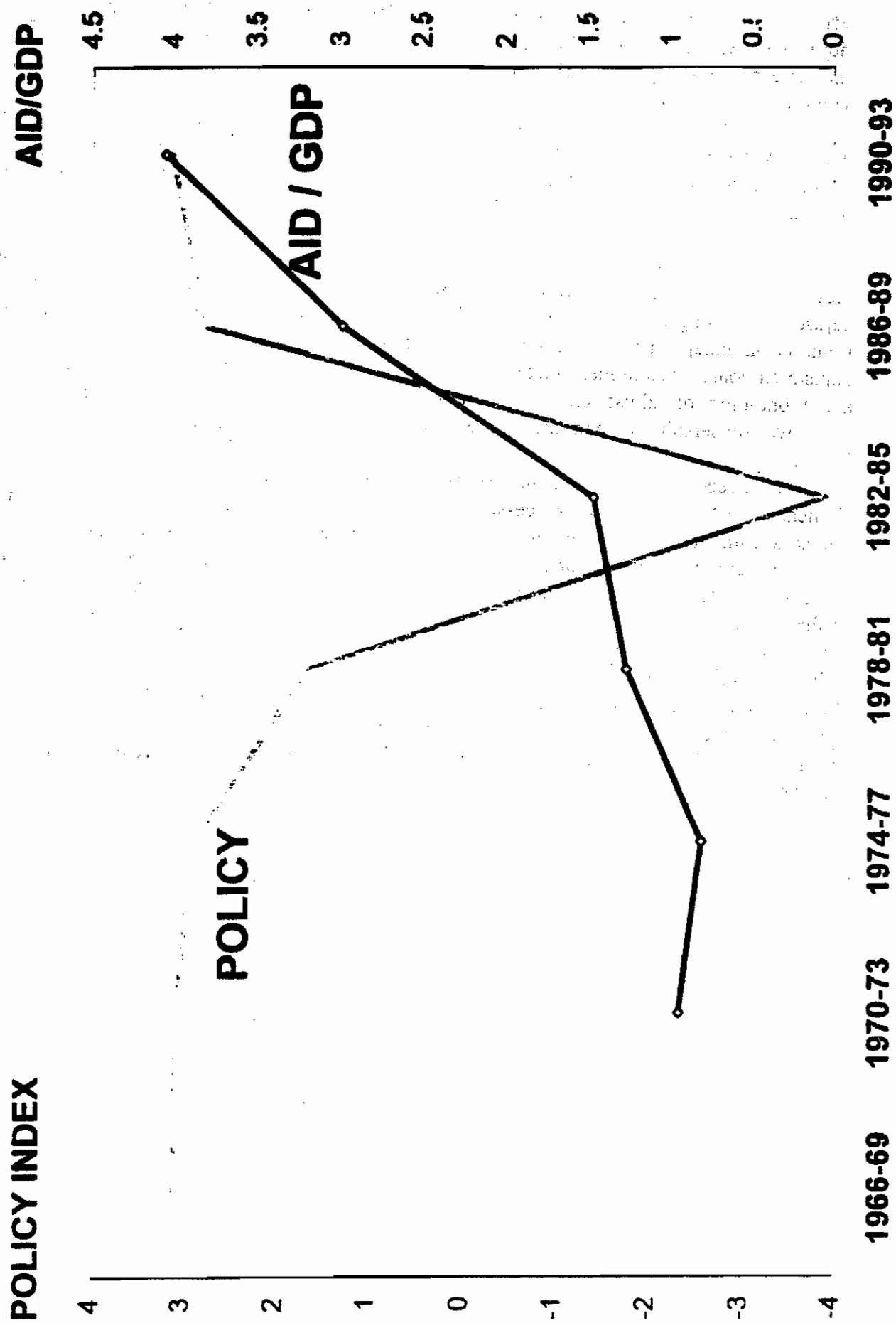
At the same time, adjustment lending has successfully supported many reform programs. Among the cases cited by Sachs in which foreign aid helped reforming government, several were the recipients of adjustment loans from the IMF and the World Bank. In her case studies of aid

effectiveness in Latin America, Cecilia Lopez (1997) singles out Bolivia as a case in which adjustment lending provided finance to a determined reforming government. Bolivia is a good example of a country in which foreign assistance increased in lock-step with policy reforms (Figure 9). Much of this increase in finance came through adjustment loans. Gustav Ranis' 1995 review of policy-based lending concluded that: "the lending cum conditionality process works well only when local polities have decided, largely on their own, possibly with outside technical help, to address their reform needs, effect certain policy changes sequentially, and approach the international community for financial help in getting there."

In its own internal reviews the World Bank has come to the same conclusion reached by these outside studies, that strong domestic support of the reform program is necessary if adjustment lending is to succeed. The Operations Evaluation Department (OED) of the World Bank is an independent office that judges ex-post the success or failure of all loans. For adjustment loans, it examines whether governments have actually reformed. OED has found that about one-third of adjustment loans fail to achieve the expected reforms. It has identified "borrower ownership" or commitment as a key factor in successful adjustment (World Bank, 1997).

In a recent study Dollar and Svensson (1998) investigated underlying determinants or indicators of "ownership" of successful reform programs. They had a large sample of World Bank adjustment loans (105 cases in which reforms were successfully carried out, and 55 cases in which reforms were not carried out). They found a number of political-institutional features clearly associated with successful reform programs. In particular, the probability of success of reform depended on whether the government was an elected one and on how long it had been in power. Other things equal, a newly elected government that signed an adjustment program had a 95% probability of success, compared to only 65% for an authoritarian government that had been in power 12 years or longer (Figure 10). The political-economy variables successfully predicted the outcome of 75% of adjustment loans. Many of the failed adjustment loans were predictable in that the environments into which the Bank made the loans were not conducive to reform.

Figure 9. Bolivia: Aid and Policy

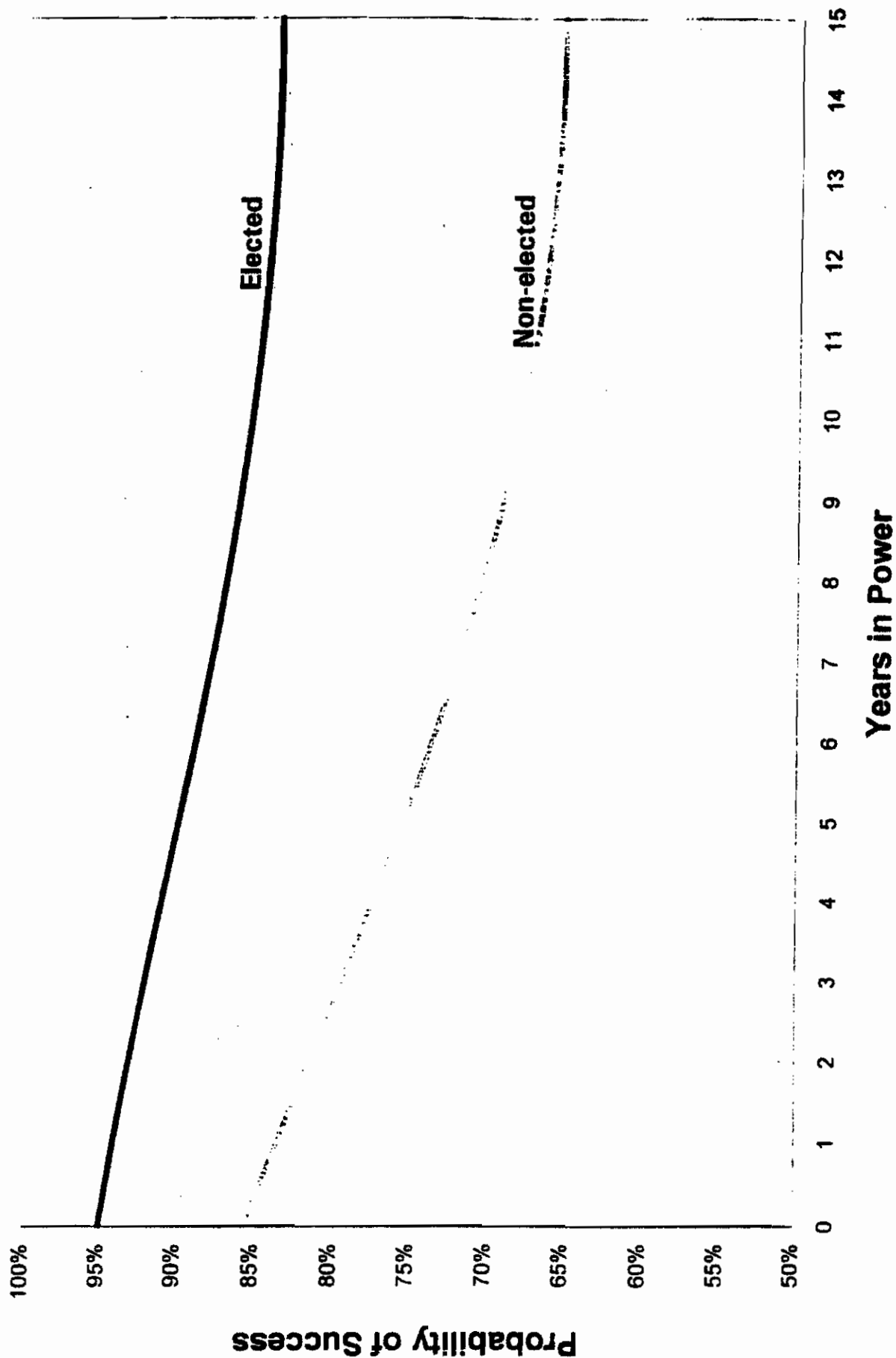


This study also examined factors under the control of the World Bank: the size of the loan, the number of conditions, the amount of resources used to prepare the loan, and the amount of resources devoted to analytical work in the four years prior to the adjustment loan. It found that these "Bank effort" variables are remarkably similar on average for successful and failed adjustment programs. When they combined all the variables in a multivariate analysis of success and failure of adjustment programs, what emerged was that successful reform depends on institutional-political characteristics of countries. The Bank-related variables have no significant relationship with reform outcome.

In the past, World Bank behavior did not sufficiently take into account that the success or failure of reform is to a large extent outside its control. Zambia provides a case in point: in the 1980s the World Bank approved four structural adjustment loans for Zambia, totaling \$212 million. These loans disbursed almost fully (the Bank canceled less than 2% of the committed amount). After loan completion, the Operations Evaluation Department rated three out of the four as failures. The government did not satisfactorily implement the reforms supported by these loans. The Dollar-Svensson results suggest that this outcome was largely predictable. Zambia at that time did not have conditions conducive to reform. A non-democratic government had been in power for a long time, and such a government is not a likely reformer. It may have been worth taking a chance on the first adjustment loan. But it is easy to conclude in retrospect that a succession of policy-based loans for Zambia was not a good use of resources.

What these different studies suggest is that countries' own institutional and political features determine policy reform. Foreign finance -- even conditional finance -- is not likely to generate a reform program in a country in which there is no domestic constituency for reform. Development economists increasingly recognize this "borrower ownership" of the reform program as a prerequisite for success. Once a serious reform program has started in a country, then financial assistance can be useful to help consolidate it.

Figure 10. Elections, Tenure, and Probability of Successful Reform



III. POLICIES PLUS MONEY

One of the main themes of our paper is that good policies are more important than money. With bad policies, aid and investment do not generate many results. Good policy, on the other hand, will tend to attract money and use it well. However, we do not want to go too far in emphasizing the primacy of policy over finance. The main point that we want to make in this section is that the combination of good policy and finance is very powerful. First, we are going to show that the combination of good policy and a high level of private investment is strongly correlated with growth. Then we are going to examine in more detail the determinants of private investment and in particular argue that in a good policy environment foreign aid crowds in private investment. The conclusion that emerges from this analysis is that large financial assistance is only useful to poor countries after they have made substantial progress with policy reform. Once they have reached that stage, however, the money is quite important.

We showed in section 1 that total investment is not a very good predictor of growth. Furthermore, Easterly and Rebelo (1993) have shown that public investment has no robust relationship at all with growth. Pritchett (1996) argues that much public investment does not actually translate into increases in physical capital. Private investment, on the other hand, does have some relationship. Table 5 shows a panel regression of growth on private investment as a share of GDP, an index of economic policy, and initial income. The index of economic policy includes openness as measured by Sachs and Warner (1995), inflation, the budget surplus, and a measure of institutional quality (rule of law, absence of corruption) from Knack and Keefer (1995). There are a number of problems with interpreting this regression that we will return to: for the moment treat it as telling us about partial correlations. There is a strong partial correlation between private investment and growth, after controlling for policy and initial income. But if we interact policy and private investment (regression 2), the interactive term has more statistical significance than either private investment alone or policy alone. Rapid growth is associated with the combination of good policies and high private investment.

Table 5: Growth, Investment and Policy

Time dimension: six four-year periods: 1970-73 to 1990-93

Countries: 49

Dependent variable: Growth rate of per capita GNP

Method	(1) OLS	(2) OLS	(3) 2SLS
# obs	198	198	194
Constant	2.57 (0.96)	3.25 (1.23)	2.76 (1.03)
Private Investment	0.14 (2.94)	0.07 (1.24)	-0.02 (0.13)
Policy Index	0.78 (5.57)	0.27 (1.22)	0.21 (0.74)
Initial Income	-0.65 (1.74)	-0.63 (1.71)	-0.42 (0.98)
Investment x Policy	--	0.03 (2.54)	0.04 (1.95)
R ²	.40	.41	.40
Adj. R ²	.37	.38	.37

Note: t-statistics (in parentheses) have been calculated with White's heteroskedasticity-consistent standard errors, for all regressions in the paper.

The reason that we have to be careful interpreting this regression is that it may be that growth causes private investment, rather than vice versa. Furthermore, we will show later in this section that good policy increases private investment; that is, the latter variable is clearly endogenous. In the third column we address these problems by instrumenting for private investment and for private investment interacted with policy. The results are qualitatively the same as the OLS regression. An exogenous change in private investment would have no effect on growth in a country in which policies are very poor and only a modest effect in the developing country of average policy. This reaffirms the conclusion of our first section that investment by itself is no magic key for development.

In a good policy environment, on the other hand, an exogenous increase in private investment has a fairly strong effect. An increase in private investment of 6 percentage points of GDP (the standard deviation in this sample) would increase growth by 0.6 percentage points. Hence, it is only when interacted with good policy that we find a positive and significant effect of investment.

What can developing countries and their supporters do to increase private investment in a good policy framework? To address this question we attempted to explain private investment as a function of

- initial income level;
- demographic-political characteristics such as ethnolinguistic fractionalization or political stability;
- economic policies
- government consumption
- foreign aid.

This approach is consistent with the new growth literature, in which private accumulation is a function of initial conditions and the incentive regime.

The basic effort to explain differences in private investment across countries and over time is fairly successful (Table 6). High levels of private investment are associated with good economic policy, low levels of government consumption, and political stability. (Since economic policy enters positively both this equation and the growth equation with private investment included, policies affect growth both through the accumulation of capital and through the efficiency of capital.)

It is interesting that initial income appears with a large positive coefficient. In growth regressions we typically find that, other things equal, poor countries grow faster. In this private investment equation, other things equal, richer countries have higher investment. This finding suggests that low-income countries have trouble generating savings or attracting foreign investment even after they have put good policies (including secure rule of law) into place. It is also noteworthy that aid enters with an insignificant coefficient in the private investment equation.

The picture changes if we interact aid with the economic policy index. There is a positive coefficient on this interactive term, and a negative one on aid squared interacted with the policy index. This is similar to what Burnside and Dollar found concerning aid, policies, and growth: foreign aid leads to higher private investment in an environment of good policies, but not in an environment of poor policies. The negative coefficient on the quadratic term means that there are diminishing returns to aid: the marginal impact of aid declines and becomes negative at high volumes. The measurement of this curvature is not very precise as it depends on a few large outliers in the aid times policy dimension. If we drop these outliers, the positive coefficient on the aid times policy term remains strongly positive (regression 3). Because of concerns about the endogeneity of aid, we repeat these three regressions using instruments for aid and the interactive terms (regressions 4-6).

The basic story remains the same in these instrumented regressions. Regression 6 says that the interaction of aid and good policy has much more explanatory power than either variable alone. The effect of foreign aid on private investment depends on the quality of economic policies. In a good policy environment, 1 percent of GDP in aid crowds in 1.9 percentage points of private investment; in a poor policy environment aid crowds out private investment (Figure 11).

These results help explain why the growth effect of aid depends so critically on economic policies. It appears that when a poor country puts good policies into place, private investors—both domestic and foreign—are uncertain as to the reliability of the reform. If there is fear of reversal, then investors will hold back. Also, even with good management, impediments such as weak infrastructure hamper low-income countries. In this environment foreign aid to a reforming government may improve the environment for private investment—both by creating confidence in the reform program and by helping ease infrastructure bottlenecks. In a poor policy environment, on the other hand, aid financing crowds out private investment, probably by increasing the government's capacity to undertake projects that compete with the private sector.

The positive coefficient on the interactive term has a second, equally important interpretation: the impact of policy reform depends on the amount of assistance that a poor country is receiving. Regression 6 indicates that a 1 unit increase in the policy index has a negligible impact on private investment if aid equals zero. (Burnside and Dollar show that there

is still some modest growth effect, which presumably comes from more efficient use of existing capital stock.) With aid equal to 2 percent of real PPP GDP, on the other hand, the same policy reform would increase private investment by 1.4 percentage points. This response of private investors is one reason why the growth effect of reform is greater when a poor country is receiving some foreign aid.

Table 6: Panel Regressions Explaining Private Investment

Time dimension: Six four-year periods, 1970-75 to 1990-93

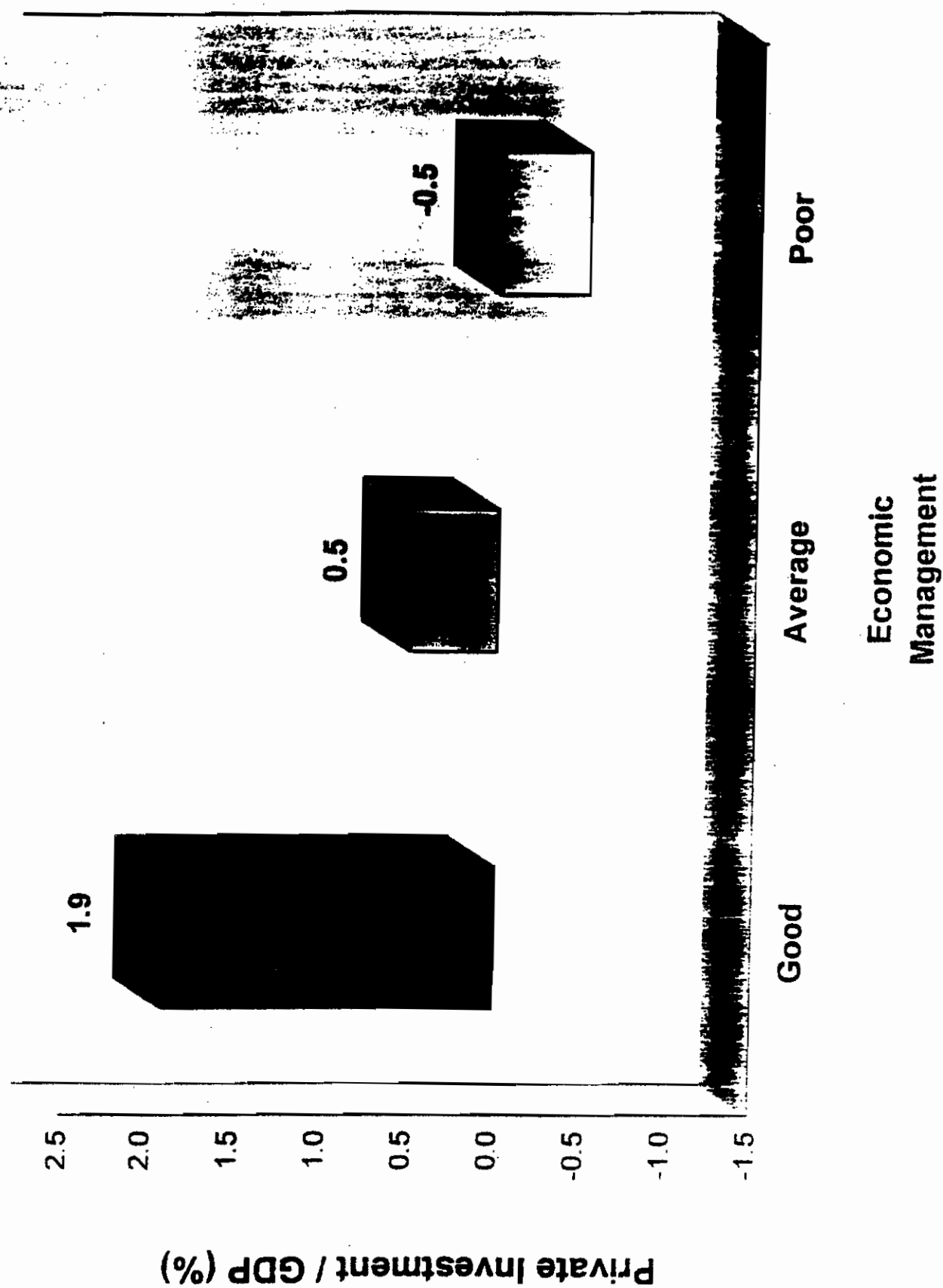
Countries: 49 aid recipients

Dependent variable: Private investment relative to GDP

Regression No. Observations Method	1 183 OLS	2 183 OLS	3 180 OLS	4 183 2SLS	5 183 2SLS	6 180 2SLS
Constant	-18.7 (2.99)	-19.6 (3.07)	-17.6 (2.80)	-22.8 (2.90)	-26.4 (2.87)	-18.7 (2.10)
Initial GDP per capita	4.31 (5.74)	4.44 (5.86)	4.20 (5.61)	4.87 (4.90)	5.18 (4.53)	4.35 (3.92)
Ethnic fractionalization	-01 (0.64)	-01 (0.47)	-01 (0.72)	-01 (0.40)	-00 (0.10)	-01 (0.64)
Assassinations	-72 (1.94)	-57 (1.60)	-60 (1.63)	-72 (2.00)	-49 (1.29)	-51 (1.34)
Ethnic x assassin	.01 (1.38)	.01 (0.84)	.01 (0.98)	.01 (1.36)	.00 (0.57)	.00 (0.66)
M2/GDP (lagged)	.03 (0.99)	.04 (1.19)	.03 (0.91)	.03 (0.87)	.04 (0.99)	.03 (0.72)
Sub-Saharan Africa	5.51 (3.52)	4.96 (3.07)	5.38 (3.36)	5.05 (3.17)	2.95 (1.39)	4.97 (2.78)
East Asia	5.76 (5.91)	6.45 (6.66)	6.36 (6.49)	5.95 (6.03)	7.07 (6.39)	6.96 (6.67)
Policy index	0.37 (1.79)	-0.12 (0.45)	-0.02 (0.07)	0.33 (1.51)	-0.51 (1.20)	-0.36 (0.97)
Gov. consumption	-30.4 (2.26)	-31.5 (2.36)	-27.7 (2.02)	36.0 (2.38)	-31.9 (1.96)	-26.6 (1.66)
Aid/GDP	.06 (0.33)	-.11 (0.44)	-.33 (1.24)	0.39 (1.00)	0.41 (0.58)	-0.50 (0.70)
Aid x Policy	--	0.65 (2.71)	0.44 (2.28)	--	1.72 (1.98)	0.87 (2.30)
Aid ² x Policy	--	-.05 (2.04)	--	--	-0.17 (1.85)	--
R ²	.43	.45	.44	.42	.36	.43
Adj. R ²	.38	.39	.39	.37	.29	.37

Note: t-statistics (in parentheses) have been calculated with White's heteroskedasticity-consistent standard errors, for all regressions in the paper

Figure 11. Marginal Impact on Private Investment of 1% of GDP in Aid



IV. CONCLUSION

Our study of aid, investment, and policies in Africa leads to four principal conclusions:

- The traditional aid-investment-growth linkages are not very robust. Aid does not necessarily finance investment and investment does not necessarily promote growth.
- Differences in economic policies can explain much of the difference in growth performances. Poor quality of public services, closed trade regimes, financial repression, and macroeconomic mismanagement explain Africa's poor record.
- Foreign aid cannot easily promote lasting policy reform in countries in which there is no strong domestic movement in that direction. Country "ownership" of reforms is more important than donor conditionality.
- These three conclusions imply that societies themselves must take the lead in putting growth-enhancing policies into place. When this happens, foreign aid can play a powerful supporting role, bringing ideas, technical assistance, and money. The combination of private investment, good policies, and foreign aid is quite powerful.

So where do we stand on the search for the key in Africa? The failure of past keys induces us to be cautious on claims for a new key. But even if aid-cum-private investment-cum-policy reform falls short of being the one and only key to growth, disbursing aid into good policy environments would be an improvement on current practice.

BIBLIOGRAPHY

- Alesina, Alberto, and David Dollar, 1998, "Who Gives Aid to Whom and Why?" mimeo.
- Ayittey, George. *Africa in Chaos*. (New York: St. Martin's Press, 1998).
- Barro, Robert and Xavier Sala-i-Martin, *Economic Growth*, McGraw-Hill 1995
- Benhabib, J. and M. Spiegel, "The role of human capital in economic development: evidence from aggregate cross-country data," *Journal of Monetary Economics* 34 1994 143-173
- Blomstrom, Magnus, and Mats Lundahl, eds., *Economic Crisis in Africa: Perspectives on Policy Responses* (New York, NY: Routledge, 1993).
- Blomstrom, Magnus, Robert Lipsey, and Mario Zejan, "Is Fixed Investment the Key to Growth?", *The Quarterly Journal of Economics*, Volume CXI, Issue 1, February 1996, 269-276
- Borgin, Karl, and Kathleen Corbett, *The Destruction of a Continent: Africa and International Aid* (San Diego, CA: Harcourt Brace Jovanovich, 1982)
- Bosworth, Barry and Susan Collins, "Economic growth in east Asia: accumulation versus assimilation." *BROOKINGS PAPERS ON ECONOMIC ACTIVITY* No. 2:135-203, 1996
- Burnside, C. and D. Dollar, 1997, "Aid, Policies, and Growth," Policy Research Working paper, no. 1777, The World Bank.
- Burnside, C. and D. Dollar, 1998, "Aid, the Incentive Regime, and Poverty Reduction," forthcoming in Oxford U. Press book.
- Boone, Peter. 1994. "The Impact of Foreign Aid on Savings and Growth." London School of Economics, mimeo.
- Collier, Paul, 1997, "The Failure of Conditionality," in C. Gwin and J. Nelson, eds., *Perspectives on Aid and Development*, Washington, DC: Overseas Development Council.
- Dollar, David and Jakob Svensson, 1998, "What Explains the Success or Failure of Structural Adjustment Programs?" World Bank mimeo.
- Easterly, William. "The Ghost of Financing Gap: How the Harrod-Domar Model Still Haunts Development Economics", World Bank Working Paper 1807, 1997.
- Easterly, William and Ross Levine, "Africa's Growth Tragedy: Policies and Ethnic Divisions", *Quarterly Journal of Economics*, November 1997, 1203-1250.
- Easterly, William R., and Sergio T. Rebelo. 1993. "Fiscal Policy and Economic Growth: An Empirical Investigation." *Journal of Monetary Economics* 32(3): 417-58.
- European Bank for Reconstruction and Development, *1995 Transition Report*

- Frimpong-Ansah, Jonathan, *The Vampire State in Africa: The Political Economy of Decline in Ghana* (London: James Currey Limited, 1991).
- Glickman, Harvey, *The Crisis and Challenge of African Development* (New York, NY: Greenwood Press, 1988).
- Hadjimichael, Michael T. Michael Nowak, Robert Sharer, and Amor Tahari, *Adjustment for Growth: The African Experience*, IMF Washington DC, October 1996.
- International Monetary Fund, *Financial Programming and Policy: The Case of Sri Lanka*, 1996a.
- International Monetary Fund, *World Economic Outlook* October, 1996b.
- International Monetary Fund, *World Economic Outlook*, October 1993.
- International Monetary Fund, *World Economic Outlook*, May 1992.
- King, Robert and Ross Levine, "Capital Fundamentalism, economic development, and economic growth," *Carnegie-Rochester Conference Series on Public Policy* 40 (1994), North-Holland, 259-292.
- Knack, Stephen, and Phillip Keefer. 1995. "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures." *Economics and Politics* 7 (3): 207-227.
- Lopez, Cecilia, 1997, *Impacto de la Ayuda Externa en America Latina - 1972-1992*, Bogota: Tercer Mundo.
- Mosley, P., 1987, *Conditionality as a bargaining process: Structural adjustment lending, 1980-86*, Princeton Essays in International Finance, no 168, Princeton.
- Mosley, P., J. Harrigan and J. Toye, 1995, *Aid and power*, Vol. 1, Second edition, Routledge, London.
- Nehru, Vikram and Ashok Dhareshwar, "A new database on physical capital stock: sources, methodology, and results," *Revista de Analisis Economico* Volume 8, No. 1, June 1993.
- Nehru, Vikram, Eric Swanson, and A. Dubey, "A new database on human capital stock: sources, methodology, and results," *Journal of Development Economics*, forthcoming, 1994.
- Pritchett, Lant. "Mind your p's and q's: the cost of investment is not the value of public capital", World Bank Working Paper 1660, October 1996.
- Ranis, Gustav, 1995, "On Fast-Disbursing Policy-Based Loans," mimeo.
- Ravenhill, John, ed., *Africa in Economic Crisis* (Basingstoke, NH: Macmillan, 1986).
- Rodrik, D., 1996, Understanding Economic Policy Reform, *Journal of Economic Literature*, XXXIV.
- Sachs, Jeffrey, 1994, in Williamson (1994).
- Sachs, Jeffrey D. and Andrew Warner. 1995. "Economic Reform and the Process of Global Integration." *Brookings Papers on Economic Activity* (1):1-118.

- Sadiq Ali, Shanti, and Anirudha Gupta, eds., *Africa: Dimensions of the Economic Crisis; an Analysis of the Problems and Constraints of Development* (New Delhi: Sterling Publishers, 1987).
- Soyinka, Wole, *The Open Sore of a Continent: a Personal Narrative of the Nigerian Crisis* (New York, NY: Oxford, 1996).
- Thomas, Vinod et al. (eds.), 1991, *Restructuring economies in distress: Policy reform and the World Bank*, Oxford University Press.
- Williamson, J. (ed.), 1994, *The political economy of policy reform*, Institute for International Economics, Washington, DC.
- World Bank, 1993, *Zambia: Prospects for Sustainable and Equitable Growth*, Report No. 11570-ZA, August 23
- World Bank, 1995a, *Latin America After Mexico: Quickening the Pace*, June 1995
- World Bank, 1995b, *RMSM-X Model Building Reference Guide*, July
- World Bank, , 1995c *Madagascar Country Economic Memorandum*, Report no. 14385-MAG, May 31
- World Bank, 1995d, *Zimbabwe Country Economic Memorandum*, Report No. 13450-ZIM, Vol. 1, Overview, April 21
- World Bank, 1996a, *Uganda: The Challenge of Growth and Poverty Reduction*
- World Bank, 1996b, *Zambia: Prospects for Sustainable Growth 1995-2005*, August 1
- World Bank, 1997a, Operations Evaluation Department, *Annual Review of Development Effectiveness*.
- World Bank, 1997b. *Accelerating Malawi's Growth: Long-term Prospects and Transitional Problems*

Endnotes

¹¹ The authors of these books or articles are, in order: Blomstrom and Lundahl [1993], Borgin and Corbett [1982], Glickman [1988], Ravenhill [1986], Sadiq Ali and Gupta [1987], Easterly and Levine [1997], Frimpong-Ansah [1991], Soyinka [1996], Ayittey [1998], and Turok [1987]. These were taken from Easterly and Levine's [1997] bibliography and from recently published works.

² p. 101, World Bank (1993).

³ p. 91, World Bank (1996b)

⁴ World Bank 1995d, p. 33

⁵ The World Bank 1995a, (p. 23)

⁶ European Bank for Reconstruction and Development 1995, p. 66, p. 5, p. 71. The Chief Economist of the EBRD, Nicholas Stern, clarified in private correspondence that ICOR-based estimates of required investment finance do not determine EBRD lending decisions to individual countries.

⁷ IMF (1992, p. 18)

⁸ Hadjimichael et al (1996, p. 1)

⁹ IMF (1993, p. 79)

¹⁰ p. 23, World Bank 1996a.

¹¹ p. 15, World Bank 1997b

¹² p. 99, World Bank 1995c

¹³ This section applies to Africa analysis from Easterly 1997.

¹⁴ See World Bank (1995b) and International Monetary Fund (1996a).

¹⁵ based on Easterly and Levine 1997

¹⁶ The Africa dummy is about .017, so that half of the growth differential is unexplained when Africa's convergence advantage is taken into account.

United Nations
Economic
Commission for
Africa

**UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL**



**Joint Conference of Ministers of
Finance and Ministers of
Economic Development and Planning**

**30 April to 8 May 1999
Addis Ababa, Ethiopia**

**Distr.: Limited
E/ECA/ESPD/EXP7/3**

Original: English

AID 'DEPENDENCY': A CRITIQUE

AID 'DEPENDENCY': A CRITIQUE

**By
Paul Collier**

The findings, interpretations, and conclusions expressed in this paper are entirely those of the author. They do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent.

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION.....	1
II. HAS AID BEEN DETERIMENTAL?.....	2
III. IS AID DEPENDENCY LIKE WELFARE DEPENDENCY?.....	3
IV. DOES AID DETRACT FROM PRIVATE INVESTMENT.....	5
V. IS AID A SOURCE OF FISCAL INSTABILITY?.....	9
VI. WILL AID RECEIPTS CONTINUE TO DECLINE?.....	12
VII. CONCLUSION: IMPLICATIONS FOR POLICY.....	13
REFERENCES.....	14

I. INTRODUCTION

The language of aid is an instructive guide to the implicit assumptions which underlie the analysis of its efficacy. Mainstream analysis of the 1960s was dominated by the 'two-gap model'. The development process was perceived as being constrained by savings and foreign exchange, with aid being instrumental in filling these 'gaps'. 'Dependency' has replaced 'gaps' in current aid discourse: just as the old left believed that *trade* between poor and rich economies caused immiserising dependency, so the new right currently believes that *aid* has had this effect. Of course, schools of thought in economic policy are seldom precisely articulated. However, at the risk of caricature, I will state five related beliefs which are widespread in current discourse on aid, and I will term these jointly, the 'aid dependency school'.

The first belief is that Africa has grown more slowly than other continents in part because it has received much more aid relative to GDP than other developing areas. The second belief is that the analysis of 'welfare dependency' in poor households carries over to aid-receiving countries. To elaborate, recent analysis of poor households in developed countries has established reasonable evidence for a dependency syndrome whereby welfare payments create very high implicit marginal tax rates and so discourage work, trapping recipients into continued need for welfare. Aid dependency infers that poor countries are subject to the same trap. The third belief is that the enormous increase in private capital flows to developing countries has made aid unnecessary and indeed a distraction: governments should focus on attracting private capital rather than aid. The fourth belief is that aid flows, determined by donor fads, are so fickle that they are a source of instability rather than a basis for sustained growth. The final belief is that aid is in any case doomed: the forces which have recently led to reductions in aid budgets will continue, so that aid will rapidly decline in real terms.

One by-product of the aid dependency school is the treatment of aid in fiscal programming. The IMF routinely calculates and reports fiscal deficits *excluding* aid. Thus, if a country with an otherwise balanced budget receives aid and spends it, the budget will be reported as being in deficit. Where the aid is a pure grant the fiscal position will also be reported as inclusive of grants. However, where the aid is in the form of highly concessional lending, no allowance is made. In effect, all aid is treated as an exceptional financing item: a way of meeting a fiscal 'gap'. However, while the savings and foreign exchange gaps were in their time seen as persistent, the fiscal gap is seen as temporary. Fund programs commonly aim to eliminate the fiscal gap over a horizon of a few years. Underlying this planned withdrawal from aid are the five notions identified above: aid is historically detrimental, the disincentive effect provides a theoretical underpinning for this experience, private, not public capital is important, aid has been fickle so that it cannot be relied upon as a component of a budget, and in any case aid budgets are rapidly falling so that governments must learn to live without it.

In this paper I offer a critique of these beliefs.

II. HAS AID BEEN DETRIMENTAL?

2. Has aid been detrimental?

The historical efficacy of aid has been ably analyzed by Burnside and Dollar (1998). They show that although on average aid has been ineffective, this is because of a massive, but readily rectifiable mistake in aid allocation. Aid is highly effective in raising growth in good macroeconomic policy environments, and is ineffective or even harmful in poor policy environments. On average aid has been ineffective because too much of it has been concentrated in the latter. Since the Dollar and Burnside evidence establishes convincingly that aid is effective in good policy environments it refutes the careless causal inference from the association of Africa's high aid receipts with its slow growth. Indeed, Dollar and Burnside establish that not only does aid raise growth in such environments, it also raises private investment: on average, a dollar of aid increases private investment by \$1.80.

A possible counter to the Burnside and Dollar evidence, is that while it establishes that in good policy environments aid is beneficial, it may nevertheless be the case that beyond a certain amount, at the margin aid becomes detrimental. The government becomes so overwhelmed by aid projects that the business of government becomes dominated by the need to satisfy donors, replacing the need to satisfy citizens. Africa may have suffered from 'big aid' even if smaller amounts of aid are advantageous. However, at present the evidence does not support this view. Burnside and Dollar indeed find that even in good policy environments there are diminishing returns to aid. However, the point at which aid starts to have negative effects is far in excess of the range pertinent for Africa: aid continues to have beneficial results for growth even at the margin, until the share of aid in GDP is around 20 per cent. Further, they find that 'big aid' interacts favorably with policy improvement. They compare a country with an average amount of aid, with one which has double the average. In both cases they investigate the effect of a given improvement in policy. The country with big aid' gets a 50 per cent larger increase in its growth rate from the policy reform than the country with average aid. Hence, on this evidence, if anything 'big aid' appears to help a government to manage change rather than distract it. Although Africa is associated with 'big aid' several countries and regions outside Africa have experienced very large aid programs. For example through the European Community, Ireland received transfers of around 5 per cent of GDP. It became the most rapidly growing economy in Europe and there has been no suggestion that 'big aid' was dysfunctional. Even larger amounts have been transferred through European Community and Italian programs to Sicily. While there is evidence of waste in these programs, Sicily has grown more rapidly than the Italian average. Thus, within the range of aid flows which is pertinent for Africa, the evidence suggests that, subject to a satisfactory policy environment, the more aid which is provided, the faster will an economy grow.

3. Is aid dependency like welfare dependency?

The Burnside-Dollar evidence calls into question the theoretical analysis of the aid dependency school. If aid really had the sort of disincentive effects on poor countries that

III. IS AID DEPENDENCY LIKE WELFARE DEPENDENCY?

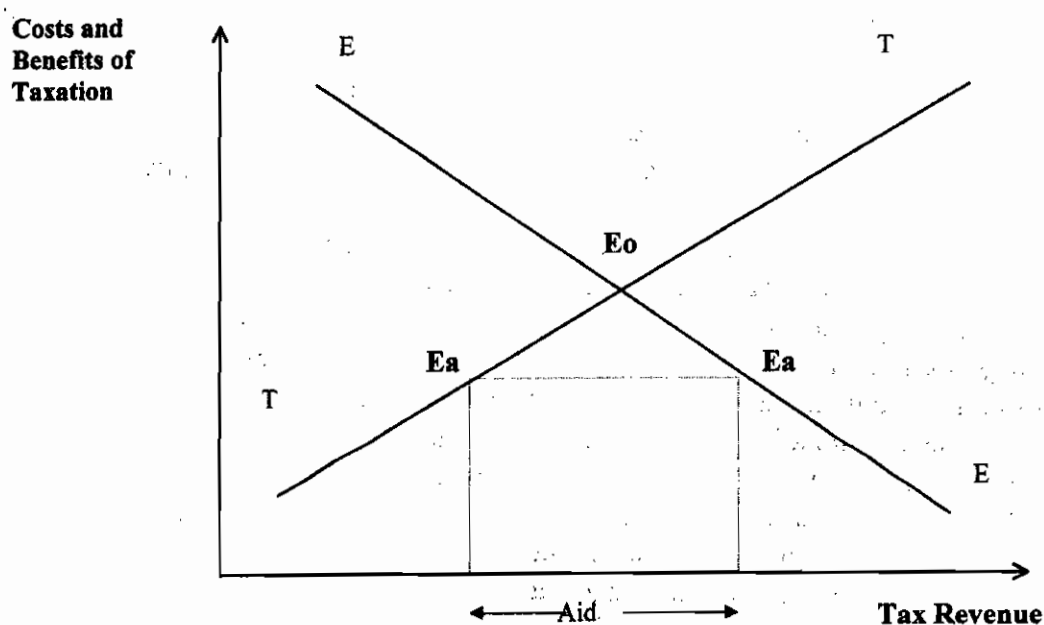
The Burnside-Dollar evidence calls into question the theoretical analysis of the aid dependency school. If aid really had the sort of disincentive effects on poor countries that welfare payments have on poor households aid should reduce growth irrespective of the policy environment. Indeed, we might expect that the better the policy environment, and so the higher the potential growth rate in the absence of aid, the more damage aid would do. However, the analogy with welfare dependency is not just empirically questionable, it is more fundamentally mistaken.

First, the scale of aid relative to income is tiny by comparison with welfare payments. The 'poverty trap' of welfare recipient households commonly involves households for whom welfare payments constitute a large majority of total income and who thereby face implicit marginal tax rates of 80% or more. By contrast, gross aid flows to Africa peaked at around 12% and implicit marginal tax rates are correspondingly radically lower. Alesina and Dollar (1998) analyse the patterns of donor aid allocation. The donors who most sharply reduce aid in response to rising incomes are the Nordic group. Their aid flows start to fall once per capita incomes rise above \$600 and are largely eliminated once incomes rise above \$1,600. However, since the loss of aid involved in this policy is only around \$3 per capita, the marginal tax rate implied by Nordic policy is well under one percent. Similarly, USAID tapers out its, historically, much larger aid budget but it does so much more gradually. The implicit tax rate imposed by USAID is less than one half of one percent. Other donors currently are less responsive to changes in income. Hence, the aggregate marginal tax rate implied by donor reductions in aid as income rises is probably in single digits. Any disincentive effect at the aggregate level is therefore trivial. Further, incentive effects can only operate at the level of individual decision takers, rather than the national aggregate. Suppose for the moment that, implausibly, it was indeed the case that for each extra dollar of (say) Zambian national income, aid declined by a dollar. At the aggregate level there would therefore be a 100% marginal tax rate and so no incentive whatsoever to work. Nevertheless, this would not create a poverty trap for Zambians. This is because Zambians do not decide their income collectively. Each individual Zambian household, if it earned an extra dollar, would lose only its infinitesimal share (less than a millionth) of the dollar of aid which Zambia in aggregate would lose. The loss of aid would therefore take the form of negative externalities to

individual household decisions. In effect, Zambians would be locked in a 'work trap': households would work even though in aggregate it made them no better off.

The one exception to the absence of an incentive effect of aid is with respect to the behaviour of governments. Directly, aid accrues to the government and so it indeed faces an incentive problem vis-à-vis taxation. In the absence of aid a government has to balance the political unpopularity of taxation against the political popularity of public expenditure. At the margin, a dollar of tax revenue has as many political costs as a dollar of expenditure has political benefits. The receipt of aid by the government does not change this fundamental balancing requirement of political economy, but it necessarily changes the levels of taxation and expenditure at which balance is achieved. Figure 1 depicts the rising political costs of taxation by the T-T schedule, and the diminishing political benefits of public expenditure along the E-E schedule. The intersection of the two schedules at E_0 is the equilibrium without aid. The with-aid equilibrium, E_a , involves both higher expenditure and lower taxation than without aid.

Figure 1: The Fiscal Effects of Aid



If the political process broadly encapsulates the economic costs and benefits of taxation and expenditure, then this response is optimal. The first inference from this is that aid will indeed induce governments to have lower taxation than without aid. In effect, the population is choosing that some of the benefits of aid accrue to households most efficiently by passing the money on to them to spend, by means of reducing taxation, while some of the benefits of aid accrue to

households most efficiently through increased public expenditure. It is hard to see this as an incentive *problem* since it is the solution to a household welfare-maximising problem which is identical to that which faces the donors. A priori, donors have no particular reason to prefer aid to accrue directly or indirectly to households. However, the reduction in taxation has favourable incentive effects at the household level. The marginal costs of taxation are often quite high in developing countries because there are few efficient tax handles. Hence, reduced tax effort can free households and firms from powerful disincentive effects of taxation. Thus, precisely counter to the welfare-dependency analogy, aid actually improves the incentive environment at the level of the individual agent. A simple extension of this argument is the more familiar 'debt overhang' effect. Debt, which is simply future negative aid, discourages investment because it constitutes a future tax liability. Hence, it is increased debt rather than increased aid which gives rise to an incentive problem: the counterparts to welfare-households trapped into idleness are firms trapped into disinvestment.

IV. DOES AID DETRACT FROM PRIVATE INVESTMENT?

In a globalised economy it is private rather than public transfers which will eventually be decisive in sustaining growth. China has now made this transition, receiving around \$30 per capita in foreign investment. India is on the verge of making it, with per capita inflows at around \$6 in 1997. By contrast, for Africa private capital flows are currently less than \$3 per capita, and so remain dwarfed by aid flows. In Africa an important task is indeed to increase private capital inflows. However, aid has a central role in facilitating this transformation. The Burnside and Dollar evidence cited above demonstrates that aid is effective in attracting private investment as long as the policy environment is satisfactory. Indeed, current African experience suggests that far from having become less important, aid is now more valuable than ever. The reason for this is that several African countries have recently implemented sufficient reforms that their macroeconomic policy environments are 'satisfactory' in the Burnside-Dollar sense. These economies are currently growing quite rapidly, at approximately the growth rate achieved by East Asia prior to the current crisis. However, these high growth rates are unsustainable on present investment rates, which are around nine percentage points of GDP below East Asia. The reforming African governments are benefiting from a transient 'bounce-back' effect, as a result of removing grossly damaging policies. Hence, either growth rates will decline or investment rates will rise: the next few years constitute a window of opportunity for African development. Quite how long the window will remain open is uncertain. Reforming African countries may possibly be able to sustain high growth with low investment for a decade or more if their previous policy environments substantially reduced the productivity of the existing capital stock. As Easterly (1998) shows, there has been little short-run relationship between growth and investment. However, it seems to me unlikely that a reforming country could sustain high growth on low investment for much more than a decade, and several of Africa's reformers are already well into their first decade of improved policies. Hence, the time scale for increased investment may now be quite short. An increase of around nine percentage points of GDP in African investment rates

cannot be achieved in such a short time scale primarily through increased domestic savings. To do so would require consumption to fall. This would directly accentuate poverty and also threaten the political viability of the programs. Hence, much of the increase in investment must be financed from a combination of foreign and repatriated private capital flows, and aid. There is considerable scope for the repatriation of previous flight capital. Collier *et al.* (1998) estimate that for 23 African countries as of 1990 around 39% of private wealth (excluding land) was held abroad. Were this repatriated the private capital stock would rise by around 60%. However, capital repatriation is probably influenced by similar considerations to private foreign investment, and the flows of the latter to Africa have been very small: on the latest data Sub-Saharan Africa is attracting only around one dollar per capita of foreign investment. Survey evidence suggests that important impediments to greater foreign investment in the newly reformed African environments are perceived high risk, poor infrastructure, and high taxation.

Consider, for example, the country which according to the 1998 *Africa Competitiveness Report*, investors rate as having the most improved business environment, namely Uganda. The *Institutional Investor* risk rating for Uganda is currently only 22 on a scale of 0-100 (0 is maximum risk, 100 is maximum safety). The bottom edge of the NICs is around the mid-40s. One reason for Uganda's poor risk rating is that it started its reforms from such a disturbed history that even as late as 1992 it was rated as the riskiest of the African countries then rated, with a score of only 5. Hence, although Uganda has massively improved its rating, at its present rate of progress it will take nearly a decade before it reaches a rating level associated with large private capital inflows. A second reason why Uganda has such a poor risk rating is that it is in Africa. El Haque *et al.* (1997) establish that while the risk ratings globally are explicable on fundamentals, there is a significant Africa dummy: African countries are systematically rated as more risky than is warranted by the fundamentals. Since the *Institutional Investor* risk ratings are compiled through taking a consensus of 'informed' opinion, this is not a failing of the agency itself but rather it is a quantitative measure of a widespread misperception in the global investment community. Jaspersen *et al.* (1997) show that the risk rating is a significant determinant of private foreign investment flows. This is almost certainly not because the rating is itself given so much weight in investor decisions, but rather because it reflects the considerations which go into their decisions. The same considerations which influence private foreign investment also influences the repatriation of capital flight. Collier *et al.* (1998) show that the *Institutional Investor* risk ratings are significant and powerful in determining the proportion of African private wealth which is held abroad. Approximately, each one point improvement in the risk ratings induces African wealth holders to hold a further one percent of their portfolios in Africa.

However, risk is not the only factor deterring private investment in Africa. Jaspersen *et al.* find that there is a further significant Africa dummy even controlling for risk: Africa gets less foreign investment than they would predict from the fundamentals. I return to evidence for Uganda. Firms operating in Uganda currently face severe problems of poor infrastructure. For example, electric power is on average available only 60% of the time. As a result costs of operation are much higher than they need be and private investment gets diverted into the

purchase of generators. Around one third of private equipment investment by Ugandan firms has gone into generators. Hence, even before allowing for the disincentive effect on investment, the effective investment rate could be 50% higher if firms had been free to spend their investment budgets on other equipment. Similarly, transport costs are cited as a major problem, particularly by exporters. Two reasons why transport costs are so high in Uganda are that the road network is inadequate and petroleum prices are very high due to high taxation. More generally, recent survey evidence of Ugandan firms shows that they rate high taxation as one of their greatest problems. Further, while they expect other aspects of the policy environment to improve or remain satisfactory, they expect taxation to become worse. Investment is discouraged by expectations of future investment rather than by current levels, and so these expectations are particularly worrying: each dollar of revenue raised in taxation is discouraging more investment than it would were expectations less pessimistic. One reason why firms have such expectations is that it has been IMF policy until very recently to raise the ratio of tax revenue to GDP by one percentage point each year.

This, combined with rapid growth in the economy, has given the Ugandan government one of the most rapidly growing tax revenues in the world.

An implication of risk, infrastructure and taxation as constraints on private investment is that even if the first two continue to improve at their present rate, while expectations of rising taxation are revised downwards, private investment will only gradually taper in over the next decade. If, as I suspect, 'bounce-back' growth starts to fade before that, then there will be a 'gap': either public investment is temporarily increased, or growth will decelerate. A reasonable fear is that were growth to decelerate, private investment would be discouraged, so that the window of opportunity would close. Hence, in the next few years it is important that public investment in Africa increases rapidly.

Public investment is potentially complementary to private investment. However, if it is financed through increased taxation, it is questionable how effectively it would enhance growth. On average, an additional dollar of GDP accruing as government savings reduces private savings by 50c. In less abstract terms, an improvement in Ugandan roads financed by even higher petroleum prices would initially increase transport costs, since the accumulation of an asset is being financed out of recurrent income, with most of the benefits accruing in the distant future. Hence, a substantial part of the needed increase in public investment must come initially from aid.

Thus, in the circumstances of newly reformed African economies aid needs to taper in ahead of private investment. Recall that Burnside and Dollar have established that in good policy environments an extra dollar of aid increases private investment by \$1.80. The Ugandan example suggests how this might come about: the aid both improves infrastructure and lowers damagingly high taxation, both of which are constraints. The Burnside-Dollar results on aid effectiveness directly provide a *static* case for allocating more aid to those countries which already have

satisfactory policy environments. I am suggesting that there is a further dynamic case for a temporary increase in aid. Specifically, I have distinguished between the following phases in a post-reform environment:

Phase 1: Bounce-back: high growth achieved by policy reform despite low public and private investment

Phase 2: Aid-dependent growth: high growth maintained by high public investment, despite low private investment

Phase 3: Sustainable growth: high growth maintained by high private investment, with public investment increasingly financed through taxation of the rapidly growing taxable base.

Aid thus needs to taper in before it tapers out in the reformed environments. Note how this produces a completely different pattern of aid from that envisaged in the old policy-conditionality framework. There, aid was to be used to induce policy reform, so that most aid would need to be deployed in those environments with the worst policies. As policies improved, the scope for inducing further reform would gradually diminish so that aid would taper out.

There is a further dynamic aspect of aid allocation which is that aid should obviously be related to income levels. In this sense aid must indeed taper out with success, and indeed this has always happened. As noted above, the marginal tax rates implied by this loss of aid are very low and in any case private disincentive effects are avoided because virtually all the aid losses resulting from growth accrue as externalities to private decisions. However, including it gives an overall trajectory of aid determined by two considerations. First, there are the medium-term dynamics discussed above: as the economy moves beyond the bounce-back phase, aid is determined negatively by private investment. An overall investment rate of around 25-30% of GDP is needed to maintain rapid growth, and aid fills the gap by letting public investment rise to temporarily high levels while private investment gradually rises. Secondly, there are the long-term dynamics: as the economy grows, aid is determined negatively by income. Rapid growth reduces poverty and so reduces the justification for aid. These two processes are on very different time scales. For example, in Uganda if the risk ratings improve at the rate of the last six years, it will take about eight years for Uganda to establish a sufficiently good reputation with investors that private capital flows will be sufficient to sustain rapid growth. It would be optimistic to imagine that Uganda could sustain growth rates of 8-10% during these eight years on its present investment rate of around 17% of GDP. There is still scope for growth from policy reform, for example, through further trade liberalisation, but this is unlikely to be as large as the pay-offs already achieved from the dramatic policy improvements of the past decade. Hence, Uganda needs increased aid during the next eight years to maintain its recent growth rates. An important part of the case for this is that if Uganda can sustain high growth it is likely to have demonstration effects across the continent. If this strategy is implemented and is successful, then the considerations determining Ugandan aid flows become wholly different. In eight years time Uganda will still be extremely poor. Its case for aid will then be the familiar static one that in a

satisfactory policy environment aid is effective in reducing poverty. As Uganda gradually grows out of absolute poverty through rising incomes and out of relative poverty by catching up the richer economies through the 'conditional convergence' effect, aid will further taper.

To summarise, in newly reformed poor economies the path of aid should be determined for a period by strategic considerations of the need for investment. Only once this phase has been successfully achieved does the long term tapering of aid through growth become pertinent.

V. IS AID A SOURCE OF FISCAL INSTABILITY?

As noted above, the IMF treats aid receipts as an exceptional financing item to meet a budget deficit, rather than as a core component of non-tax receipts. While the underlying reason for this treatment is, in my view, an acceptance of all of the 'aid dependency school' propositions, there is one proposition which is regularly offered as an explanation. This is that aid flows are so unreliable as to be a source of instability. Thus, a safety-first strategy requires that aid be treated as windfall exceptional financing, rather than as a flow of receipts on which a government can reliably maintain expenditures in excess of revenues.

There are two main reasons why aid receipts might be unreliable. One is that donors may use aid to advance a political agenda driven by the political concerns of their domestic electorates. Secondly, donor procedures for disbursement may be so cumbersome that, even when funds are committed, there may be long and unpredictable lags before governments are able to utilise them. There are good grounds for both of these concerns. For example, the aid cut-off to Pakistan when it matched India's testing of nuclear weapons constitutes a major fiscal shock which could not reasonably have been anticipated in budgetary planning. Similarly, both Côte d'Ivoire and Uganda received entitlements to Stabex funds from the European Union as a consequence of the fall in world coffee prices in 1989. However, Côte d'Ivoire was able to gain access to these funds in a reasonably timely fashion, whereas disbursement to Uganda was so delayed that much of the money was received during the boom in world coffee prices five years later. However, while such stories demonstrate that there is some basis for concern, similar stories could be told about the unreliability of tax revenues. African governments are highly dependent upon trade taxes for their revenue, typically accounting for half of overall receipts. Yet trade taxes are dependent upon the capacity of the economy to export and import. African exports are highly concentrated in a narrow range of commodities the prices of which are volatile. Hence, exports are much more volatile than GDP as a whole. The capacity to import is dependent partly upon exports, and partly upon aid. Hence, *a priori*, it is not clear that aid would be significantly less reliable than government revenue.

Even if aid is less reliable than government revenue, it might nevertheless reduce the overall unreliability of the resource flow to the government if it moves inversely with revenue. That is, as with any portfolio, an important consideration is not just the volatility of each

component, but whether the risks are co-variant. Hence, in measuring the reliability of aid both its volatility and its co-variance must be taken into account.

I measure the relative reliability of aid and government revenue for 36 African countries which are IDA recipients over the period 1970-95. I standardise by measuring both aid and revenue year-by-year in 1995 US\$ per capita. The weighted average for these countries over the period was that aid amounted to \$72.4 while government revenue was \$279.7.

In assessing the reliability of aid and revenue we need some measure either of volatility or unpredictability. In principle, these are very distinct concepts: for example, if either has a regular cycle it could be highly volatile yet highly predictable. One approach would therefore be to model both aid and revenue as time series, determining how well they could be predicted econometrically, and taking the regression errors as the measure of 'unreliability'. However, this is not the approach followed here. In practice, both governments and the IFI teams that assist them do not make such predictions, often for the good reason that the results would lack robustness. Hence, I rely upon a much more straightforward measure of unpredictability, namely, volatility. The measure of volatility which scales for the mean level of receipts is the coefficient of variation (standard deviation/mean). I thus calculate the coefficient of variation of aid receipts and revenue both for each country and for the weighted average of all 36 countries. The results are reported in Table 1. The final column of the Table reports the normalised co-variance of aid and revenue (co-variance/the product of the means).

The results are, of course, country-specific. However, in assessing the future riskiness of aid policy makers may well regard the information from the entire group of African countries a better guide than the historical experience of just their own country. After all, the move from a single country to the full sample represents the move from 25 observations to 900. The best guide to the full sample is the weighted average.

There are two key results. First, the coefficient of variation of aid is lower than that of revenue. Aid is *more* reliable than revenue, not less reliable as the aid dependency school believes. Secondly, the normalised co-variance of aid and revenue is *negative*. This implies that there is a further benefit from aid: it acts as a buffer to revenue shocks, tending to increase when revenue is low. Hence, on the aggregate evidence, a budget with a large component of aid would be more reliable than one with a small component of aid, both because the aid component is more certain than revenue, and because it tends to offset revenue shocks.

In some countries the contribution of aid to the overall stability of government resources is striking. For example, in Uganda the coefficient of variation of aid is only one tenth that of revenue. In such a case, if reliability was the criterion for inclusion in the budget the fiscal deficit should be reported excluding revenue, rather than excluding aid.

To conclude, this particular belief of the aid dependency school is demonstrably false. There is no volatility basis for the exclusion of aid from the measurement of core fiscal resources.

Table 1: The Volatility of Revenue and Aid in 36 African Countries, 1970-95

Country	Aid (\$ per capita)		Revenue (\$ per capita)		Covariance/ Product of means Aid with revenue	
	Mean	Coeff. of variation	Mean	Coeff. of variation		
Burundi	42.7	0.29	39.8		0.27	0.0156
Benin	44.7	0.18	86.1		0.08	0.0101
Burkina Faso	44.6	0.22	36.4		0.21	0.0330
Botswana	150.7	0.31	853.1		0.64	-0.0729
Cameroon	47.0	0.29	198.2		0.34	-0.0515
Congo	82.9	0.33	324.9		0.65	0.1173
Comoros	167.6	0.05	69.5		0.18	-0.0024
Ethiopia	18.7	0.32	33.3		0.31	-0.0279
Gabon	169.9	0.30	2493.1		0.39	-0.0258
Ghana	35.2	0.51	65.8		0.37	-0.0124
Guinea	77.0	0.12	80.6		0.10	-0.0080
Gambia	104.2	0.44	86.4		0.34	0.0288
Guinea-Bissau	123.6	0.23	0.4		0.20	0.0159
Kenya	39.3	0.34	105.4		0.29	0.0083
Liberia	67.3	0.35	175.5		0.23	0.0028
Lesotho	76.7	0.26	121.1		0.39	0.0624
Madagascar	37.2	0.28	66.5		0.85	-0.0417
Mali	60.1	0.21	42.3		0.21	0.0102
Mauritania	265.9	0.34	193.7		0.08	0.0199
Mauritius	73.1	0.28	478.1		0.33	0.0040
Malawi	39.8	0.39	50.6		0.17	0.0214
Niger	65.1	0.23	88.8		0.28	0.0121
Nigeria	2.6	0.65	216.6		0.51	0.0333
Rwanda	48.2	0.22	39.4		0.30	0.0294
Sudan	43.1	0.52	107.4		0.20	0.0199
Senegal	75.9	0.31	152.0		0.24	0.0290
Somalia	50.2	0.43	38.9		0.23	-0.0314
Swaziland	103.2	0.38	358.2		0.33	0.0806
Seychelles	399.3	0.30	2718.7		0.27	-0.0562
Chad	49.2	0.21	28.3		0.40	-0.0370
Togo	67.7	0.30	158.2		0.34	0.0231
Tanzania	46.0	0.46	74.7		0.20	0.0465
Uganda	18.0	0.07	19.3		0.70	0.0011
Zaire	19.9	0.38	53.5		0.68	0.1249

	Aid (\$ per capita)		Revenue (\$ per capita)	Covariance/ Product of means	
Zambia	82.5	0.57	206.4	0.69	-0.2150
Zimbabwe	37.2	0.59	273.1	0.25	-0.0390
Weighted average	72.4	0.35	279.7	0.37	-0.0007

VI. WILL AID RECEIPTS CONTINUE TO DECLINE?

Aid levels have fallen in recent years and this has produced an environment of aid pessimism: regardless of the above considerations, aid will continue to decline. While it is incontrovertible that aid budgets have declined in real terms, this should not be extrapolated.

By historical accident, both the USA and Western Europe have been through a phase of fiscal retrenchment at the same time: the USA because the budget deficit became a high profile political issue, and Europe because of the need to meet the 'convergence criteria' for monetary union. Unsurprisingly, during this phase aid budgets were reduced because its recipients, though poor, are not enfranchised. However, the American budget is now balanced and the European governments have nearly all met the convergence criteria. A further powerful effect reducing aid budgets has been the end of the cold war. During the cold war much aid was used to secure political allegiance. Now that it is over the value of allegiance has fallen and so the incentive for aid has correspondingly fallen. This may well account for why in the past bilateral aid was so unrelated to the policy environment: developmental effects of aid were secondary considerations to political alignment.

Both fiscal retrenchment and the ending of the cold war are one-off effects: aid drops like a step-function. Qualitatively offsetting these effects, the global economy is growing rapidly, and prospects for continued growth have seldom been so good. Global growth works to increase aid through three routes. First, the existing group of donors become richer and this enables all expenditures to rise. Secondly, as middle-income nations catch up the developed countries they can be expected to initiate aid programs as symbols of arrival at developed country status, thereby gaining participation in the institutions of donor clubs. Thirdly, as some low-income countries grow out of poverty, a given pool of donor funds can become concentrated upon a smaller group of countries.

The main jeopardy to this process of rising aid flows is not the one-off events discussed above, but the perception that aid has been ineffective. Paradoxically, this view has become prevalent at just the time at which research has identified not only that on average aid has been ineffective, but the circumstances in which aid is unambiguously effective, namely, a reasonable macroeconomic policy environment. In the past, partly because aid was allocated according to a political agenda, it failed to reflect this policy environment. Were donors to persist with such aid

allocations the gradual accumulation of evidence on the ineffectiveness of aid would continue to undermine the basis for aid budgets: aid would decline simply because it was demonstrably a waste of money. If, however, aid becomes increasingly concentrated upon satisfactory policy environments, then, not only will aid effectiveness demonstrably increase, but the concentration will itself increase the flow of aid to the post-stabilisation countries.

Hence, conditional upon donors channelling aid to those environments in which the policy environment is already satisfactory, instead of the attempt to use aid to induce reform where policy is poor, there are reasonable prospects for rising aid flows into satisfactory policy environments.

VII. CONCLUSION: IMPLICATIONS FOR POLICY

In this paper I have challenged a widespread view that aid should rapidly wither to an inglorious demise. I termed this the 'aid dependency school'. I addressed five related tenets of the 'school'. The first was that high aid has been the cause of slow growth in Africa. I summarised evidence that, subject to a satisfactory policy environment, aid raises growth and, until remarkably high levels of aid are reached, the more aid that is provided the faster is growth. The second was that aid has a disincentive effect analogous to welfare dependency. I showed that any disincentive effects of aid on national work effort are negligible and that indeed there might be positive incentive effects arising from the reduced distortionary effects of the tax system. The third and most important, was that aid detracts from private investment. I argued that in economies in which policy had recently been reformed, aid has a vital role to play, both in sustaining growth until private investment increases, and in leading-in private investment. The fourth is that aid flows are so fickle that they are too risky to include as a core component of the budget. I showed that aid has actually been less volatile than government revenue, and that the co-variance between aid and revenue has been negative. Together, these imply that for a given overall deficit, the larger the share of aid in a budget the more secure will be the fiscal position. The fifth is that aid is doomed to decline because of continued contractions in donor budgets. I argued that such a view confused a step function with a trend: the end of the cold war and fiscal retrenchments in Europe and the USA were one-off events, which will gradually be overtaken by rapid growth.

One of the most encouraging developments in Africa is that macroeconomic reform is now spreading across the continent. During the next few years many countries will reach the post-stabilisation stage. It is precisely these newly stabilised, high risk, low income environments in which aid plays its most crucial role. Hence, far from Africa needing to emerge from aid dependence, the continent is entering on a phase during which 'big aid' will make its most vital contribution. The next decade in Africa will be opportunity for aid to be vindicated. A corollary, is that in these environments aid should be accounted as part of the core budget for an extended period, rather than as an exceptional financing item. This argument applies both to grants and to the grant equivalent of aid. Unless this is done, the newly reformed economies will appear to have

massive fiscal deficits. Not only will this needlessly discourage investment, it will discredit the process of budgeting, since it will appear to signal a problem which is non-existent.

REFERENCES

Alesina, A., and D. Dollar (1998) 'Who gives aid to whom and why?', mimeo, World Bank

Collier, P., A. Hoeffler and C. Pattillo (1998) 'Capital Flight as a Portfolio Choice', mimeo, World Bank.

Haque, N. U., M. Nelson and D.T. Mathieson (1997) 'Creditworthiness Ratings: Their Political and Economic Content', mimeo, International Monetary Fund.

Jaspersen F.Z., A.H. Aylward and A.D. Cox (1997) 'The Effects of Risk on Private Investment', mimeo, IFC.

United Nations
Economic
Commission for
Africa

**UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL**



**Joint Conference of Ministers of
Finance and Ministers of
Economic Development and Planning**

**30 April to 8 May 1999
Addis Ababa, Ethiopia**

**Distr.: Limited
E/ECA/ESPD/EXP7/4**

Original: English

**EXTERNAL AID: HELP OR HINDRANCE TO EXPORT
ORIENTATION IN AFRICA**

EXTERNAL AID: HELP OR HINDERANCE TO EXPORT ORIENTATION IN AFRICA

By
Ibrahim A. Elbadawi
African Economic Research Consortium

This paper is prepared for the UN Economic Commission for Africa as a background to the meeting of the African Council of Ministers of Finance. The views expressed here are not necessarily those of UNECA or affiliated organizations. I am grateful to Azita Amjadi of the World Bank for providing the data on non-traditional exports. The author would also like to acknowledge the research assistance by Rajal Upadhyaya.

ABSTRACT

The central proposition of this paper is that African countries should start thinking through undertaking and orderly transition from the current high dependence on foreign aid for financing economic and social development. Aid dependency should be reduced not because the international development community believes it will eventually happen, but because such dependence on foreign aid could substantially impair Africa's export competitiveness and therefore derail the Continent export-oriented development strategies. A combination of further debt relief, reforms of the current aid regime and enhanced policy environment should allow a managed transition to a mixed menu of ODA and private capital flows. However, the attempt by Africa to increase its share of investments from international private capital markets should be firmly anchored to the basic tenets of an export-based development strategy. To provide the basis for these policy conclusions, I estimate the relationship between development aid (ODA), real exchange rates (RER) and non-traditional exports for a panel of 62 Developing countries, including 28 Africa countries. [U]nsustainable ODA flows were shown to have caused substantial partial RER overvaluation in many African and non-African countries. Moreover, exceptionally high aid dependent African countries have either experienced, or are likely to experience, overall RER overvaluation. Conditional on absence of RER overvaluation--a proxy for good policy environment of relevance to export performance--a robust Laffer curve type relationship exists between aid and non-traditional exports. The empirical results suggests that in addition to its direct effect, ODA also influences non-traditional exports through the misalignment of RER relative to its equilibrium. The Laffer curve relationship [j]ustifies a "precise" concept of aid dependency, based on the extent to which excessive ODA flows exceeded the threshold beyond which more ODA actually [h]inders rather than [h]elps export expansion. According to this concept, several African countries were characterized as being "aid dependent".

TABLE OF CONTENTS

	Page
I. INTRODUCTION.....	1
II. FOREIGN AID, CAPITAL FLOWS AND REAL EXCHANGE RATES IN AFRICA.....	3
1. The RER Econometric Analysis.....	5
2. External Aid, Capital Flows and Real Exchange Rate Misalignment.....	7
III. EMPIRICAL ANALYSIS OF NON-TRADITIONAL EXPORTS.....	9
1. The Determinants of Non-Traditional Exports in Developing Countries.....	10
IV. OPTIMUM THRESHOLDS OF ODA FLOWS FOR AFRICA.....	11
V. CONCLUSIONS.....	13
1. Some Policy Recommendations.....	14
REFERENCES.....	23

I. INTRODUCTION

The main justification for official development assistance (ODA)¹ to poor income developing countries is its "gap filling" role due to shortfalls in domestic savings and foreign exchange earnings relative to "required" investment-- consistent with the achievement of "desired" growth targets or other broader development goals. Dependence on ODA in this context is fairly straightforward and is a natural consequence of underdevelopment, where while accelerated growth is critical for transformation to higher levels of development and less aid dependence, it may not be feasible due to binding saving-investment and foreign exchange gaps and lack of access (or inability) to borrowing from private capital markets². However, save for a few exceptions aid-receiving countries have tended to slide into increasing aid dependency over the years with little, if any, development achievements. This evidence is no where starker than in Africa, specially Sub-Saharan Africa (SSA).

Among the few African countries that achieved successful transitions to higher and sustained growth and less aid dependence are Botswana, Mauritius, Morocco and Tunisia, in addition to South Africa which doesn't have a history of aid dependence in the first place. The rest of Africa has however, saw itself sustaining high aid ratios, with little growth to show for in most countries. In twenty years ODA flows into Sub-Saharan Africa (measured as a ratio to GNP) almost doubled, reaching 15% in the 1990s. In North Africa Egypt continued to receive staggering ODA flows, which averaged \$3530 m per annum in the 1990s, and accounted for close to 10% of the country's GNP.

One of the key and early contributions to the analysis of the impact of aid were focussed on the potential conflict between aid flows, especially unsustainable and excessive aid flows, and export competitiveness. At least some of the "unsustainable" aid flows will be used to finance expenditure on nontradable goods and services. With the prices of tradables given, there will be a relative price shift in favor of nontradables (i.e. an appreciation of the real exchange rate, where the real exchange rate is generically defined as the price of tradables to nontradables). The immediate effects of the relative price shift affect the demand side, where more of the (cheaper) tradables (especially imports) will be demanded leading to deterioration in the external balance, which in turn will require more aid flows. The demand effect is further reinforced by the intersectoral resource transfers from tradables to nontradables sectors, which causes the most significant squeeze on the former sector. The unsustainable expansion of aggregate demand (due to positive but temporary terms of trade shocks, natural resource boom

¹ The definition of aid, adopted by the World Bank's (1997) data base "World Development Indicators" and most other sources, is the "official development assistance" (ODA) directed at the promotion of economic development and welfare. This definition, therefore, excludes assistance for meeting emergency situations. ODA comprises grants, debt forgiveness and concessional loans, where the latter must have a grant element of at least 25%.

² However, in a recent contribution Easterly (1997) provided an extensive critique of the methodology of estimating financial requirements on the basis of ICOR as well as the Harrod-Domar growth model that underlie the methodology. Instead, Easterly suggests a range of "subjective" indicators for projecting growth such as: world average growth, the country's historical average growth, country policies, and external conditions. Though still using an ICOR framework, in a more recent paper Amoako and Ali (1998), attempt to accommodate some of Easterly's recommendations, in their estimation of the development finance requirements for SSA.

or short-to-medium run surges of aid or capital flows) and the relative price shifts leading to real exchange rate overvaluation and deterioration of non resource-booming exports is the essence of the so called the "Dutch disease".

In addition to the "Dutch disease" effect of aid, the association of aid dependence with development failures in most developing, particularly in SSA, has led to a vast literature on rethinking the effectiveness of aid in economic development. The aid effectiveness literature discusses the potential negative macroeconomic and institutional impacts of excessive aid dependency, and draws some conditions for limiting these negative consequences and for enhancing aid effectiveness. The empirical evidence from this literature suggests that aid has not been significantly associated with growth, while the association of aid with saving and investment has been mixed, ranging from negative to no association with the former and positive to no effect on the latter. However, a recent important contribution to this literature (Burnside and Dollar, 1997) shows that aid has been effective in good policy environment, but it has not by itself stimulated good policy. This suggests that, "greater selectivity in aid allocation (in support of strong policies) might have delivered better performance on growth and poverty alleviation in recipient countries." (Tsikata, 1998: p.26).

In terms of the institutional and governance impact of aid, it is argued that as aid expanded over the years far beyond its "gap filling" role into a "multi-faceted" business involving both sides of the aid community, it has exacted very substantial costs on aid-receiving countries (e.g. Brautigam and Botchwey, 1998)³. This concern about the allegedly devastating effects of aid dependency on institutions and governance provides the basis for the argument that measures aimed at enhancing aid effectiveness should inextricably be linked to [r]eduction of aid flows even in the short-to medium runs (e.g. Kanbur, 1998). This micro-institutional argument is a much more radical proposition than the "revisionist" macroeconomic "gap-filling" approach which recognizes the need for ultimate and substantial reductions of aid for Africa, but reasons that even higher aid may be needed in the short run in support of poverty-reducing growth policy, before ultimate elimination of development aid could be achieved (Amoako and Ali, 1998). Also the evidence on aid fungibility (e.g. Devarajan et al, 1998) has opened up a debate on the effectiveness of current aid regimes, specially the use of grants and concessional lending to support policy-based conditionality (e.g. Kanbur, 1998; Collier, 1996, 97; Collier and Gunning, 1997a).

This paper attempts to contribute to this literature by analyzing the relationship between development aid (ODA), real exchange rates and non-traditional exports in Africa. I am hastened to admit that this issue is not new. Indeed, the concern about mismanagement of unsustainable aid flows triggering a vicious cycle from aid flows to stagnating exports and deteriorating external balance and vice versa, has in fact been one of the early contributions in the aid effectiveness literature in the context of SSA. For example, van Wijnbergen (1986) shows that excessive aid flows could be particularly devastating when export production is

³ The authors identify five types of institutional and governance costs due to aid dependency: institutional overload and capacity weakening; loss of sovereignty and weakened ownership of policies and plans; further instability, repetitive budgeting and budget fragmentation; reinforcement of patronage; and undermining of accountability and democratic decision-making.

characterized by positive (learning-by -doing) externalities and capital market imperfections—as in the cases of non-traditional, and especially manufacturing exports from SSA. Under perfect capital markets, van Wijnbergen assumes that exporters could counter the resource squeeze due to transitional aid boom by borrowing and investing in the export sector to ensure that the sector productivity is quickly recovered once the real exchange rate equilibrium is restored following the decline of aid to more sustainable levels. Certainly, a transition from the current total dependence on ODA for financing development in Africa to a mixed menu of ODA and private capital flows represents a challenge but also an immense opportunity for the Continent (e.g. Collier, 1997). However, the experience with private capital flows also shows that they could also lead to disequilibrium real exchange rate overvaluation, which could substantially derail the drive for export expansion and especially export diversification in Africa (e.g. Elbadawi and Helleiner, 1998). Even worse, excessive private capital flows could increase the chances of financial crisis (e.g. Mexico in 1994, South Africa in 1996 and 1997 and several East Asian countries in 1998).

Paradoxically however, and despite the importance of export competitiveness and the consensus about export-orientation as the most robustly successful development strategy, the theoretical "Dutch disease" literature has managed to motivate only limited empirical work on the impact of ODA on real exchange rates and exports⁴. As such this paper attempts to fill an important lacuna in the academic and policy debate on the effectiveness of aid in Africa. Section 2 contains an analysis of the trends of ODA and private capital flows and real exchange rates in Africa. In this section I also highlight the role of aid and private capital flows as determinants of the real exchange rate, using results of an empirical real exchange rate model (estimated by Elbadawi, 1998a) covering a panel of 62 developing countries, who also estimates indexes of real exchange rate misalignment (RERMIS) for these countries (a description of data and sources is contained in the Data Appendix). In section 3 I estimate a non-traditional export equation for a panel of the same set of countries. While accounting for a range of determinants, the export equation focuses on the role foreign aid and RERMIS, which serves as an indicator of policy environment of relevance to export performance. In section 4 I investigate further the relationship between aid and non-traditional exports, including deriving "optimum" export maximizing thresholds for ODA/GNP ratios for a sample of African countries. Section 5 concludes.

II. FOREIGN AID, CAPITAL FLOWS AND REAL EXCHANGE RATES IN AFRICA

The experiences of SSA and East Asia present two polar cases in terms of ODA and private capital flows. ODA flows into SSA has always remained high and rising, while its has been very low and declining in E.Asia (EA). In the cases of North Africa (NA) and Latin America and the Caribbean (LAC) on the other hand, ODA flows were steady but at low levels

⁴ In addition to van Wijnbergen (1986) only two other papers (Younger, 1992; White and Wignaraja, 1992) are cited in a recent review of the literature by Tsikata (1998).

(Figure 1). As a ratio to GNP, ODA flows into SSA rose steadily from 9% in 1970s to 11% in the 1980s and 15% in the 1990s. In NA ODA declined from 3.3% in the 1970s to about 2.5% since the 1980s, while it remained at around 1% in LAC throughout the three decades, and declined from a negligible share of 0.4% in EA during the 1970s to even smaller share of only 0.3% in the 1990s. This story contrasts sharply with private capital flows, where net private capital flows as a ratio to GNP, increased by more than twofold in EA from 2.4% in 1970s to 5.7% in 1990s, while the ratios for SSA declined from an already minuscule share of 1% in the 1970s to just 0.3% in the 1990s. On the other hand, while both of NA and LAC attracts higher levels of private capital flows than SSA, both regions experienced declining ratios, where the GNP share for NA declined from 3.6% in the 1970s to 1.0% in the 1990s, and that of LAC declined from 2.9% to 2.0% between the two decades.

One of the central concerns of this paper is analyzing the impact of ODA, net private capital inflows (NKI) on the real exchange rate (RER), since the latter is a key macroeconomic variables in the analysis of export competitiveness. Table 1 provides the basis for this analysis for 1990-95⁵. First, the Table makes clear that, at least as a first approximation, the high aid dependence in SSA has not prevented steady real depreciations-- consistent with the level of development of most of these countries-- from taking place. The rate of real depreciation in 1990-96 relative to 1986-89 was 27% for low income SSA. In middle income SSA and in NA (as in LAC and EA), where there appears to be more concern about RER stability, the depreciation rates were much smaller ranging between 1% for middle income SSA to 8% for NA.

Second, while ODA remains high and rising (relative to the second half of the 1980s) in both of low income SSA and NA (mainly because of ODA to Egypt), it was low and declining in middle income SSA. Average annual ODA flows per country in the first group reached \$449 m in 1990s up by 47% from the 1986-89 levels, while the ratio of ODA to GNP reached 13% in the 1990s up by 35% from the ratio set in the previous period. The aid dependence of low income SSA is further demonstrated by the staggering ratios of ODA to GNP for several countries such as Guinea-Bissau (52%), Zambia (30%), Tanzania (29%), Mauritania and Gambia, T. (25%), Uganda (19%) and Burkina Faso (17%)⁶. Similarly, the average annual ODA flows into NA was \$596 m per country, which rose by 92% compared to the previous period. However, the aggregate flows for NA were driven by the huge ODA flows to Egypt, which average \$3530 m per annum in the 1990s, and account for close to 10% of the country's GNP. The flows to other countries were much smaller, ranging from 0.7% for Algeria, 1.9% for Tunisia to 3% for Morocco. On the other hand ODA flows to middle income SSA declined by 11% between 1986-89 and 1990-96 to reach just \$86.5 m per annum per country, which accounts for just 2% of GNP. This is comparable to LAC with a share of ODA to GNP at 1.6%, though much larger than that of EA at 0.5%.

⁵ Adding 1996 will not change the overall story of 1990-96. However, due to inconsistencies between the data for World Development Indicators 1997 (which do not include 1996) and the 1998 version, I decided to confine the analysis to 1995 for this version of the paper.

⁶ The ratio of ODA to GNP in Mozambique was even more striking at ****% (Kanbur, 1998).

Third, except for EA and to some extent middle income SSA, all other regions, especially low income SSA, have so far failed to attract substantial private capital flows. The average regional shares of NKI in GNP for the 1990s were 5.2% for EA, 3% for middle income SSA, 2% for LAC and 0.1% for low income SSA. However, in this latter group Ghana stands out as a promising case for enhanced private capital flows, where the level of NKI reached an average annual level of \$272 m up by 3200% for the levels of the second half of the 1980s, which also accounted for 4.3% of GNP. On the other extreme, Cote d'Ivoire experienced substantial capital outflows during the 1990s-- due to the CFA franc overvaluation and the country's financial sector crisis-- which averaged about \$19 m per annum during the period.

The above preliminary evidence suggests, among others, that despite substantial ODA flows into Africa real exchange rates in the region have, nonetheless, continued to depreciate, following the trend that began with the adjustment era of the 1980s. Still pending however, are two main questions on whether ODA flows to Africa (especially low income SSA and Egypt) are excessive relative to some sustainable ratios, and if yes, to what extent ODA flows were responsible for causing a disequilibrium RER overvaluation (relative to an appropriately specified RER equilibrium) and therefore a deterioration in export competitiveness. Before we address these issues, we discuss next the Econometric estimation of the long-run path of the RER.

1. The RER Econometric Analysis

The empirical analysis of RER in this paper is motivated by the model of Elbadawi (1998a). Elbadawi's model emphasizes the interplay of the flow long-run fundamentals of current account balance, most notably foreign aid, and the determinants of the longer term propensity for accumulation (or de-accumulation) of net foreign assets (NFA). This model results in the following empirical equation, which was estimated by Elbadawi (1998a) for a panel of 62 countries.

$$\text{Loge}_t = \alpha + \beta'F_t - \gamma_1 \text{oda}_t - \gamma_2 \text{nfi}_t + \gamma_3 (\Delta \text{resv}_t - \text{nki}_t) + \delta \text{loge}_{t-1} - \theta_1 \text{MACRO}_t + \theta_2 \text{DEVAL}_t \quad (1)$$

The vector F , which contains four of the trade balance fundamentals {terms of trade (Log TOT), government consumption ratio (Log G. CONSP/GDP), trade openness (Log OPEN), productivity (PROD)}, affects the long-run RER according to the vector of coefficients $\beta = (\beta_1, -\beta_2, +\beta_3, -\beta_4)'$. The fifth current account fundamental is $\text{oda} = \text{ODA/GNP}$, which is predicted to have a negative effect on RER. One capital account variable, Δresv , (ratio of change in international reserves to GNP) is expected to have a positive long-term effect on RER (i.e. accumulation of reserves requires a real exchange rate depreciation). The other two capital account variables, nki (ratio of net foreign capital inflows to GNP) and nfi (ratio of net foreign

income to GNP) are expected to have negative long-run effects on the RER, however⁷. Therefore, in addition to the standard trade balance fundamentals, the above equation lend itself to interesting interpretation of the oda effect as well as the capital account stock determinants of the RER in the long run:

- ∃ Should a country successfully achieved a higher sustainable level of net foreign income in the very long run, the RER in this country will eventually converge to a more appreciated RER equilibrium;
- ∃ However, in the medium-to-long runs (when the stock of net foreign assets (NFA) is less than the desired level), this country may have to depreciate its RER (i.e. run a current account surplus--which is the counterpart of accumulating reserves) to allow building of assets to desired levels;
- ∃ The required level of RER depreciation may be ameliorated by the extent of "sustainable" levels of private capital flows or foreign aid, both of which support a more appreciated long-run RER path if they could be sustained in the future.

The above equation also accounts for two short-run determinants of RER. DEVAL refers to the rate of nominal exchange rate devaluation (where the exchange rate is defined in terms of domestic currency per unit of the foreign currency). The second variable, (MACRO: given by the ratio of the change in domestic credit to initial stock of broad money), is an indicator of expansive macroeconomic policy and is expected to lead to RER appreciation, while the short-run impact effect of nominal devaluation is expected to lead to RER depreciation. Finally, the partial adjustment term (given by the coefficient of $\log e_{t-1}$) reflects the self-correcting mechanism that calls for future depreciation of the actual RER, given initial conditions of RER overvaluation.

The full results of the four variants of equation 1 are reported in Appendix Table 1. The results of the regressions strongly corroborate the theoretical predictions of the model for current and capital accounts fundamentals as well as short-run effects (Elbadawi, 1998a) contains a full discussion). In this paper I will confine further analysis to the effect of ODA and other long-run fundamentals, where the estimated coefficients (for the effects of productivity, ODA, net foreign income, net private capital inflows and change in reserves) are transformed into elasticities to facilitate comparisons (Table 2)⁸.

Starting with the effect of ODA, and as predicted by the model, it is negatively associated with RER with an estimated elasticity of -0.084. This implies that, ceteris paribus, a temporary and "unsustainable" increase in ODA/GNP ratio by 35%⁹ would lead to 3% RER

⁷ Note that the model also predicts the long-run effects of Δresv and nki on RER to have equal, though opposing, coefficients.

⁸ Given that Hausman specification tests suggest that the random effect model is uniformly superior to the fixed effect model in the two sets of regressions reported in Appendix Table 1, Table 2 is based on the results of the random effects regression of equation 4 of Appendix Table 1.

⁹ As happened for ODA flows to low income SSA between 1990-95 and 1986-89.

overvaluation. With an elasticity of 0.047 a short-run (and unsustainable) rise in private capital flows of similar magnitude (i.e. 35%) would cause much less but non-negligible RER overvaluation of about 1.6%. On the other hand, net foreign income has a very small effect on RER with an estimated elasticity of only -0.025. If any thing, given that most African countries are in fact debtors rather than creditors--i.e. they accumulate net foreign debt payments rather than net income--the effect of this fundamental in Africa should have led to "weaker" (and therefore more "competitive") rather than "stronger" (and less competitive) currencies. In addition, the terms of trade has a negative and significant effect, with an elasticity of about -0.743¹⁰. This suggests that mismanagement of positive but temporary terms of trade shocks could be the most costly mistake--in terms of export competitiveness--a policy maker could make. Finally, productivity (proxied by the log of the ratio of real GNP per worker to that of the G7) was found to have a negative elasticity of -0.083. This result is consistent with the theoretical prediction of the model that "sustained" productivity enhancement should lead to a more appreciated equilibrium RER.

Our results show that a combination of further fiscal reforms (specially reduction of government consumption), deepened trade reforms to increase openness of the economy and building up of reserves could be effective medium to longer terms measures for limiting disequilibrium real exchange rate effects of unsustainable capital flows and ODA spurts or temporary positive terms of trade shocks. First, the degree of openness of the economy (appropriately adjusted for economic size)¹¹ has a positive long-run elasticity of about 0.659. This results suggests that a more liberalized and open trade regimes require a more depreciated equilibrium RER. Second, government consumption (as a ratio to GDP), being mainly dominated by nontradables, also has an appreciable, though negative, long-run elasticity of about -0.416. Third, the reserve ratio had an equal and opposite elasticity to that of net capital inflows (at -0.047)¹².

Comparing the orders of magnitudes of the effects of various fundamentals, fiscal adjustment and trade liberalization remains the most effective instruments for protecting real exchange rate competitiveness from destabilizing and unsustainable surges of aid and private capital flows in the medium to long runs. However, in the short-run capital account instruments such as accumulation of reserves and retirement of external debt, in addition to applying a range of discriminatory measures to influence the composition of private capital inflows towards longer term flows, are more responsive than standard fiscal and trade policies.

¹⁰ Theoretically, the terms of trade influence on the RER could not be signed a priori, depending on whether income or substitution effects dominate, with the former leading to RER appreciation (decrease) and the latter to RER depreciation (increase). However, most empirical evidence suggests that income effect tends to dominate the substitution effect.

¹¹ The measure of openness is given by the residual of a panel regression of $\log(X+M/GNP)$ on GNP and GNP squared. This measures adjust the trade ratio to the size of the economy.

¹² Comparison of estimation results of the unrestricted model (not reported here)-- which allows the size of the effect of the change in reserves to differ from that of net capital inflows-- and that of the restricted model reveals that the latter is superior.

2. External Aid, Capital Flows and Real Exchange Rate Misalignment

[S]ustainable ODA/GNP ratios for a given country are chosen to be the median ratio for the income group to which the country in question belong, while "sustainable" NKI/GNP are those ratios consistent with the country's sustainable current account balance for given growth rates, share of the country's debt to its GNP investors are willing to hold, etc (for more details on the construction of sustainable values for these two and other fundamentals see Appendix of Elbadawi, 1998a)¹³. A deliberately conservative approach was adopted for the calculation of "sustainable" values for the ODA/GNP ratios, to ensure that we do not exaggerate incidence of aid dependency or its potential impact on real exchange rates. The sustainable values of the fundamentals could then be used to compute indexes for the equilibrium RER (ERER) and the real exchange rate misalignment (RERMIS), measured as $(\log \text{RER}/\text{ERER}-1)100\%$, where $\log \text{ERER}$ is calculated using the derived long-run equation of Appendix Table 1 (regression # 4)¹⁴.

The story of real exchange rate misalignment and the contributions of each of ODA and capital flows to RERMIS (positive means undervaluation) are reported in Table 3 for 1990-95.

Taking into consideration our rather conservative approach to assessment of aid dependence, the analysis of the RERMIS and the contribution of each of the two fundamentals (ODA/GNP and NKI/GNP) to the disequilibrium behavior of the real exchange rates in Africa and other regions, suggests the following broad conclusions.

First, high aid dependence in low income SSA has exerted a significant impact on the RER, leading to a partial RER overvaluation of more than 2% per annum during the 1990s. This however, is very substantially ameliorated by other fundamentals, especially NKI/GNP, which is so low relative to its sustainable value, that it effected a partial RER undervaluation of more than 10% per annum. In the end the net behavior of RER in SSA during the 1990s is one of a small undervaluation of 4.0% per annum. There are clear warning signals that some of the highest aid dependent countries (Tanzania, Uganda and especially Zambia) may experience substantial RER overvaluation in the future. For example even though RER in Tanzania has been undervalued at an annual rate of 8.6% in the 1990s, aid dependence has caused about -19% rate of partial RER [o]vervaluation per annum. A less dramatic but worrisome case is Uganda, with 3% rate of undervaluation and -6.5% partial [o]vervaluation

¹³ Williamson (1994: p. 187) recommends an *ex ante* approach for estimating, "the set of real effective exchange rates (or paths) needed to achieve simultaneous internal and external balance by some date in the medium-run future, and to maintain balance thereafter." The so called "fundamental equilibrium exchange rate" (FEER). This FEER concept, therefore, calls for specifying (or assuming) behavioral specifications for the fundamentals and using the real exchange rate equations in the context of a bigger model to derive (paths) for the equilibrium real exchange rate, given the assumed (paths) for the fundamentals. By and large, our approach for estimating "sustainable" fundamentals resembles the FEER approach. In particular, the capital account fundamentals are obtained using a model that links sustainable net capital flows and net foreign income to sustainable current account balance (Edwards, 1997), sustainable change in reserves to long-term import requirements, and sustainable foreign aid ratios to levels that are consistent with avoiding excessive aid dependency.

¹⁴ The derived long-run effects are obtained by setting the coefficient of MACRO to zero, setting $\log \text{RER}(t) = \log \text{RER}(t-1)$ and solving for the long-run equation of $\log \text{RER}$ as a function of the seven current and capital accounts fundamentals.

due to excessive aid dependence. Finally, Zambia's RER was [o]vervalued by -4.0% per annum over the period, with more than -20% partial overvaluation due to aid dependence. On the other hand the huge overvaluation of Cote d'Ivoire (at -25%) were not caused by excessive aid dependence.

Second, middle income SSA was undervalued (at an annual rate of 11%). However, RER in Gabon was virtually in equilibrium with excessive aid dependence (relative to its income level) contributing -3.5% partial overvaluation per annum. Mauritius was substantially undervalued at 14% per annum, however, this outcome was not influenced by any of the two fundamentals. The real exchange rate in South Africa was also substantially undervalued (at an annual rate of 12%), with the aid flows at sustainable levels but capital flows were much lower than sustainable levels (with partial undervaluation of 11%).

Third, except for Egypt, which has an overvalued currency (at a rate of -5.7% per annum), NA was substantially undervalued (at a rate of 19% for Algeria, 7.6% for Morocco and 4.5% for Tunisia). In the case of Egypt the effect of excessive aid dependence is shown in terms of large RER overvaluation at an annual rate of -10%, which was offset by the shortfall in private capital flows which led to a partial RER undervaluation of 10.5% per annum. On the other hand, Tunisia's ODA flows is roughly consistent with median levels for middle income countries, while the smaller capital flows relative to sustainable levels have caused 7.8% partial undervaluation, which was only partially offset by other fundamentals (the overall rate of undervaluation was 4.5% per annum). Morocco shows very minor signs of aid dependency, which led to -1.7% real exchange rate overvaluation. However, this is more than compensated for by the substantial under-valuation (at 10.8%) due to shortfalls in private capital flows relative to sustainable levels. Finally Algeria had experienced less aid than median levels for its income group (causing 1.2% partial undervaluation) and very substantial shortfall in private capital flows (leading to 14.9% partial undervaluation). These two fundamentals account for the major share of the substantial RER undervaluation of 19% per annum experienced by this country throughout the 1990s.

Fourth, the average performance of LAC was one of undervaluation (at 2.3% per annum), to which both less aid dependency and especially lower capital flows (relative to sustainable levels) have contributed 0.4 and 9.2%, respectively. However, the experience of LAC in the 1990s was quite diverse. For example, the low income countries of the region (such as Nicaragua and Peru) experienced substantial RER overvaluation (-74 and -46%, respectively), to which excessive aid dependence contributed -36% in the case of Nicaragua. On the other hand all of the middle income countries either experienced substantial undervaluation (e.g. Chile at 17%) or mild undervaluation (e.g. Columbia at 0.9%, Brazil at 7%). However, in the case of Mexico excessive private capital flows have caused a -7% partial overvaluation per annum during the 1990s, which contributed to an overall annual overvaluation of -18%. This evidence is consistent with the financial crisis that impacted this country in 1994.

Fifth, EA had experienced a modest overvaluation during the 1990s (at -1.8% per annum) to which excessive capital inflows (relative to sustainable levels) contributed -6% partial overvaluation. With the exception of Thailand, our results suggest that the exchange rate and financial crises that have impacted the region since 1997 appear to be linked to accumulation of past real exchange rate overvaluation. For example Indonesia, Republic of Korea and Malaysia have experienced average annual rates of overvaluation at -1.5, -9.0 and -33%, respectively, to which excessive capital flows contributed -24% for the case of Malaysia.¹⁵

3. EMPIRICAL ANALYSIS OF NON-TRADITIONAL EXPORTS

The empirical model for analyzing the performance of non-traditional exports by developing countries, is motivated by two interesting polar theoretical models of export determination. Dani Rodrik (1994) argues that, at least in the cases of the very successful development experiences of Korea and Taiwan, spectacular and sustained export growth was achieved with little increase in the profitability of exports--as measured by the RER depreciation. Rodrik develops a model to explain the phenomenal expansion of exports in the two countries as been driven by a sustained boom in investment (and import) demand financed by capital flows. However, Rodrik argues, that the long investment (and capital goods imports) spells were made possible by sustained rise in private returns to capital engineered by the two governments through a range of strategic interventions; to enhance capacity but also to resolve coordination failures that usually characterize modern sector production. On the other extreme, Paredes (1988) develops a model that predicts a significant role for real exchange rate competitiveness (as a proxy for profitability of exporting) and for real exchange rate stability in the determination of export supply response. He then estimates a manufacturing exports model for several Latin American countries to corroborate his model¹⁵.

A unifying empirical framework based on the above two models should account for: profitability of the export sector (measured by the evolution of RER and the RER misalignment); macroeconomic stability relevant for export performance (stability of RER); investment or imports of capital goods; as well as a range of factors affecting technical capabilities and effectiveness of strategic interventions. The latter group of variables should include initial stock of human capital, income distribution profile, index of institutional quality and the capacity of infrastructure (such as power generation, telecommunication, road and port facilities). Assuming the existence of binding financial gaps, ODA flows (presumably to finance investment or imports of capital goods) should be included as well.

In addition to controlling for the above non-price factors, this paper's empirical analysis of non-traditional exports will particularly emphasize the role of RER-based profitability and stability variables. In this connection, the empirical model will extend Paredes' work by explicitly linking export supply to equilibrium and disequilibrium effects of the RER. The relevance of RER misalignment relative to its equilibrium as a determinant of export supply is straightforward, given the tradability of exports. In addition, the level of equilibrium RER also

¹⁵ See Elbadawi (1998a) for a more detailed discussion.

matters for exports. It has been argued that even though a country may manage to avoid massive overvaluation, it could nevertheless trap itself in a sub-optimal export growth path by maintaining a "low" equilibrium RER, due for example to adopting a less open trade regime (e.g. Valdés, 1985; Edwards, 1992).

Returning to the effect of aid, the main focus of the analysis of this paper, I explore two specific channels through which aid may affect non-traditional exports, both of them suggested by the aid effectiveness literature (see the overview in the introductory section). First, there may be a Laffer curve effect linking ODA to exports, suggesting that there exists an optimum level of aid beyond which further aid will be counter productive. Second, aid may only be effective in good policy environment (e.g. Burnside and Dollar, 1997). Using RERMIS as an indicator of good policy of relevance to export performance, two covariate variables $\{(ODA/GNP) * RERMIS$ and $(ODA/GNP) \text{ squared} * RERMIS\}$ are included in the export regressions.

1. The Determinants of Non-Traditional Exports in Developing Countries

Table 4 provides estimates of a non-traditional export performance equation for the panel of the 62 developing countries over 1989/90 and 1994/95¹⁶. The results strongly corroborate most of the main predictions of this paper's empirical framework. The results are very robust and all three regressions of Table 4 fit the data very well. More than 80% of the variation in non-traditional export/GDP ratio is explained by the model.

Starting with regression 1, two of the RER-based variables (RERMIS, RERVAR), the terms of trade variability, the schooling variable and the imports of machinery are all very significantly and robustly associated with export performance, and their effects are consistent with theoretical predictions. However, the GDP per worker in the OECD countries (a proxy for external demand) is only marginally significant. Moreover, the levels of RER (as well as the equilibrium RER) were not significantly related to exports, when RERMIS is included. If anything, the results improves considerably when only the RERMIS was used as a proxy for profitability of exporting. This suggests that what matters for exports is that the real exchange rate should not be allowed to become overvalued, and that further real depreciation of the RER relative to its equilibrium (i.e. undervaluation) will only further enhance export performance. However, the absolute level of RER (or its equilibrium level) is irrelevant to export performance.

The results strongly support corroborate the Laffer curve effect for ODA on non-traditional exports, where the ODA/GNP ratio and its square have semi- elasticities of 2.63 and -4.98, respectively. Thus our results corroborate a major proposition of the aid effectiveness literature--that there exists some threshold of aid flows, beyond which further aid may impede rather than help growth and development in general. In this case the evidence suggests that

¹⁶ Consistent data on non-traditional exports, obtained from the World Bank, is available only for 1984/85, 1989/90 and 1994/95, where one lag was used as instrument.

excessive aid dependence has deleterious impact on non-traditional exports--and hence could undermine the most effective source of dynamic growth in the second half of this century. In regressions 2 and 3, I test for another argument of the aid effectiveness literature, which is that aid is more effectiveness in a context of good policy environment. In regression 2 each of ODA/GNP and its square were co-variated with RERMIS, where the latter is a proxy for good policy of relevance to exports. Moreover, to account for the effect of the level of development on required/optimum ODA flows, I estimate in regression 3 separate covariate terms for each of low and middle income countries. Again in both cases the evidence corroborate the relevance of good policy environment for aid effectiveness in support of export expansion, especially export diversification. The Laffer curve parameters were 6.42 and -13.0 for regression 2, and 9.49 and -21.77 (24.38 and -245.56) for the low income (middle income) group of regression 3.

A brief description of the results for the remainder of the determinants in the three regressions follows. The RERMIS (measured as undervaluation) has an elasticity of 0.44 (regression 1), while RER variability (the indicator of relevant macroeconomic instability) has a negative effect ranging from -2.4 to -6.1. As expected, terms of trade variability has a deleterious effect on non-traditional exports, with an effect ranging from -2.1 to -2.6. A less clear effect, from a theoretical perspective, is the negative elasticity of the level of terms of trade, which ranges between -1.2 and -1.5. However, since the terms of trade variable refers to aggregate exports, the effect may reflect the influence of the secularly declining terms of trade for traditional (rather than non-traditional) exports. Human capital (measures by the schooling ratio) has an elasticity ranging from 1.2 to 1.5, which is a proxy for the degree of the skill of the labor force in the economy. Finally, imports of machines (a proxy for capital goods imports) has an elasticity ranging from 0.14 to 0.2.

The significant and robust association between non-traditional exports with each of human capital and imports of machinery on one hand and real exchange rate-based indicators on the other, has in my view, very important policy implications. First, it does lend support to Rodrik's model in that basic capabilities, and may be some strategic interventions to resolve market failures, are necessary pre-requisite for successful export-orientation. Second, however, our results also suggests that export promotion and export diversification requires supportive structure of incentive, especially appropriate and stable real exchange rates.

IV. OPTIMUM THRESHOLDS OF ODA FLOWS FOR AFRICA

The Laffer curve effect of ODA/GNP (adjusted for policy environment) allows some benchmark calculations of the optimum ODA/GNP that maximizes the ratio of non-traditional exports to GNP. First, in the most basic exercise I will ignore the indirect effect of ODA on exports through the RERMIS channels, and only consider the direct effect of ODA. Based on regression 4 of Table 4, Figure 2 depicts the component of non-traditional exports /GDP ratio that could be explained by the covariate $(ODA/GNP) * (RERMIS)$ and squared $(ODA/GNP) * (RERMIS)$ terms. The export maximizing ODA/GNP ratio was 22%, which is identical to the optimum ODA/GNP ratio for low income SSA, when one makes the

rather [un]realistic assumption that the eventual sustainable ODA/GNP ratio would evolve from the current ratios--i.e. it is not likely that there will be a dramatic departure from the past (see Appendix, section IV). Even by this very "loose" criteria, there are several countries that have had ODA/GNP ratios in excess of 22% during 1990-96. Therefore, these countries fall in the "wrong" side of the Laffer curve. In addition to two countries from the LAC region (Guyana and Nicaragua), there are seven African countries (Burundi, Mauritania, Gambia, T, Tanzania, Malawi, Rwanda and Zambia), that have had ODA/GNP ratios during 1990-96 ranging from 25% for Burundi to more than 43% for Nicaragua. Therefore, by any standard, these nine countries should be considered as experiencing "acute" aid dependency.

The second exercise takes into consideration the indirect effect (through RERMIS) on exports of ODA, and also assumes that the ODA ratios, that could be eventually sustained in the future, will not evolve from current levels (Appendix, section III). The results for low and middle income SSA and North Africa are reported in Table 5. An analysis of the results follows.

First, on average real exchange rates in low income SSA are very competitive (RER was [u]ndervalued by 6% during 1990-96), which is consistent with an export maximizing ODA/GNP ratio of 5%. However, given the average ODA/GNP of about 15%, this group is, on average, aid dependent where ODA ratios exceed optimum levels by close to 200%.

Second, the three East African countries: Kenya, Tanzania and Uganda have had aid dependency ratios in excess of 200% (the low income SSA average), not because of RER overvaluation but mainly because of high ODA ratios, especially in the cases of Uganda and Tanzania. Sudan and Burkina Faso are aid dependent as well, however, their degrees of dependency were much lower than the group average, by almost 100% in the case of Burkina and about 70% in the case of Sudan. In the case of Sudan the ODA ratio in the 1990s was relatively low by African standards (at 8.8%), while ODA flows to Burkina Faso were high (about 17.2%), the country has nonetheless, pursued a very competitive exchange rate policy--with the RER kept undervalued at more than 10% per annum during the period.

Third, in the cases of Cote d'Ivoire and Zambia our calculations suggest negative ODA flows, due to very high [o]vervaluation in the case of the former and a combination of small [o]vervaluation but very high ratio of ODA flows in the latter. If we rule out negative ODA flows (as a very extreme situation) and assume the average optimum ODA ratio for the low income SSA group, aid dependence for Cote d'Ivoire will be 83% and for Zambia will be 480%. Egypt belongs to the same category, where a combination of RER [o]vervaluation (at a rate of 6.9% during the 1990s) and high ODA ratios (at 8.8%) for its level of development, has caused this country to be so highly aid dependent that a negative transfer of about 6% of GNP is required for adjusting the RER to be consistent with export maximization. However, if we make the same assumption and rule out negative transfers and assume a sustainable ODA ratio of 3.7% (the average ratio for North Africa), Egypt will still have an aid dependency ratio of about 137%.

Fourth, the remaining three North African countries (Algeria, Morocco and Tunisia), the three middle income SSA countries (Gabon, Mauritius and South Africa) in addition to Ghana and Zimbabwe were predicted by the model as [n]ot suffering from aid dependency. If anything, these countries could in fact seek to increase their current ODA ratios and still be able to expand their export levels. Optimum ODA ratios in these countries are higher than current ratios by 26% for Ghana, 43% for Zimbabwe, 13% for Gabon, 88% for Mauritius, 99% for South Africa, 95% for Algeria, 29% for Morocco and 46% for Tunisia.

To situate the above analysis in an appropriate perspective, especially in terms of what could be and could not be implied from it, I would like to make two points. First, the above benchmark calculations are based on [p]artial equilibrium framework, and therefore, do not take into consideration important feedback effects (e.g. from export expansion to openness, real exchange rates..etc). The above analysis is not intended, therefore, for assigning numbers to specific countries but rather for establishing, based on the performance criterion of exports-orientation, some broad classification of countries in terms of aid dependency. In this context countries such as Burundi, Mauritania, T. Gambia, Tanzania, Malawi, Rwanda, Zambia and to a lesser extent Kenya and Uganda could be classified as having "acute" aid dependency. The second group (consists of Cote d'Ivoire and Egypt) could be characterized as countries that have "high" aid dependency--not because of the sheer magnitudes of the ODA ratios, but because they have allowed their RERs to be overvalued on the face of high ODA flows. The third category consists of countries that are mildly aid dependent, such as Burkina Faso and Sudan. Finally the fourth group consists of countries that do not appear to experience problems of aid dependency either because they ensured that their RER remained highly competitive (e.g. Algeria, Ghana and Zimbabwe)¹⁷, or because they combine competitive real exchange rate policy with very small ODA flows (Gabon, Mauritius, South Africa, Morocco and Tunisia).

Second, given the above caveat the concept of aid dependency proposed by this paper is, however, very appealing in that it permits the distinction between aid *dependency* and aid *intensity*. For example Ghana's much more competitive exchange rate than that of Kenya allows the former (and not the latter) to be classified as not aid dependent, even though both countries were characterized by the same aid intensity ratios in the 1990s.

V. CONCLUSIONS

To realize its goals of economic and social development, as well as to successfully consolidate and enhance its current economic reforms, Africa must adequately address two immediate policy concerns in this era of aid fatigue, globalization and private capital market integration. First and foremost how to manage an orderly transition to less aid dependence and how to effectively utilize substantial aid flows in the transitional period, without undermining export-oriented real exchange rate competitiveness. Second, how would Africa participate

¹⁷ However, these countries usually suffer from other problems such as high inflation, due to excessive devaluations aimed at maintaining RER competitiveness on the face of ODA inflows and monetary restraints, usually imposed by IMF conditionality (e.g. for an analysis on Ghana see Younger, 1992).

positively and actively in the private capital market-- first by attempting to repatriate previous flight capital¹⁸ and then attracting new capital--without risking destabilizing financial crisis or undermining its export-oriented growth strategies through the ensuing real exchange rate appreciation.

To assess the impact of ODA and private capital flows--among other fundamentals-- on the long-run behavior of the real exchange rate (RER), I estimate in this paper a model of the real exchange rate for a panel of 62 countries, including 28 African countries. The results strongly corroborates the predictions of the theoretical model, including that both ODA and private capital flows were robustly and negatively associated with the real exchange rate in the long-run (where the real exchange rate is generically defined as the ratio of the price of tradables to nontradables) . As a long-run determinant of the real exchange rate ODA has an elasticity of -0.084. This implies that, *ceteris paribus*, a temporary and "unsustainable" increase in ODA/GNP ratio by 35% would lead to 3% RER overvaluation. With an elasticity of 0.047 a short-run (and unsustainable) rise in private capital flows of similar magnitude (i.e. 35%) would cause much less but non-negligible RER overvaluation of about 1.6%. Moreover, "unsustainable" ODA flows were shown to have caused substantial partial RER overvaluation in many African and non-African countries during the 1990s. In the cases of Zambia and Egypt (high aid dependent countries) the partial RER overvaluation due to aid dependence could not be fully reversed by the effects of other fundamentals and RERs in these two cases experienced overall overvaluations. The results also suggest that other highly aid dependent countries (such as Uganda and Tanzania) are likely to experience RER overvaluations in the future.

The results of the RER model also show that a combination of further fiscal reforms (specially reduction of government consumption), deepened trade reforms to increase openness of the economy, and to a lesser degree building up of reserves are the most effective medium to longer terms measures for limiting disequilibrium effects on RER of unsustainable capital flows and ODA spurts or temporary positive terms of trade shocks. For example expanding the trade volume by 3%age points of GNP, reducing government consumption by 2%age points of GNP and increasing reserves by 5%age points of GNP could depreciate the RER by, respectively, 1.98, 0.84, and 0.24%, which more than offset the effect on RER of the 35% unsustainable increase on ODA. However, in the short-run capital account instruments such as accumulation of reserves and retirement of external debt, in addition to applying a range of discriminatory measures to influence the composition of private capital inflows towards longer term flows, are more responsive than standard fiscal and trade policies.

Building upon the RER estimation results, which allows computing indexes of real exchange rate misalignment relative to an estimated RER equilibrium (RERMIS: measured as undervaluation), I also estimate a model for the determination of non-traditional exports for the

¹⁸ Collier and Pattillo (1997) estimate that between 1970 and 1992 about 70% of Sub-Saharan African wealth came to be held outside the Sub-Continent. Also according to estimates of Collier and Gunning (1997b), the ratio of capital flight to wealth during this period was 0.37--compared to 0.29 for the Middle East, 0.17 for Latin America, 0.04 for South Asia and 0.03 for East Asia.

same panel of countries. The results strongly corroborate a Laffer curve effect for ODA on non-traditional exports, where the ODA/GNP ratio and its square have semi-elasticities of 2.63 and -4.98, respectively. Thus our results lend support to a major proposition of the aid effectiveness literature--that there exists some threshold of aid flows, beyond which further aid may impede rather than help growth and development in general. In this case the evidence suggests that excessive dependence on foreign aid has deleterious impact on non-traditional exports--and hence it could undermine the most effective source of dynamic growth in the second half of this century. Next, I tested for another proposition of the aid effectiveness literature--that aid is more effective in good policy environment. In the regression each of ODA/GNP and its square were co-variated with RERMIS, the latter being a proxy for good policy that is most relevant to export performance. To account for the effect of the level of development on required/optimum ODA flows, I estimate separate covariate terms for each of low and middle income countries. Again in both cases the evidence supports the relevance of good policy environment for aid effectiveness in enhancing exports, and especially export diversification. The estimated Laffer curve parameters were 9.49 and -21.77 for low income countries and 24.38 and -245.56 for the middle income group.

Finally, the ODA/RERMIS Laffer curve effect on exports allows estimation of optimum ODA/GNP thresholds for various African countries. Comparing actual ODA ratios to the estimated thresholds permits calculation of aid dependency ratios. This reflects a precise concept of aid dependency, based on the extent to which excessive ODA flows exceeded the threshold beyond which more ODA actually [h]inders rather than [h]elps export expansion. According to this concept, several African countries were characterized as being "aid dependent". Our results allow classification of African countries, in terms of the extent of their dependence, into four groups. The first group comprising Burundi, Mauritania, T. Gambia, Tanzania, Malawi, Rwanda, Zambia and to a lesser extent Kenya and Uganda could be classified as having "acute" aid dependency. The second group (consists of Cote d'Ivoire and Egypt) could be characterized as countries that have "high" aid dependency. The third category consists of countries that are mildly aid dependent: Burkina Faso and Sudan. Finally the fourth group consists of countries that do not appear to experience problems of aid dependency: Algeria, Ghana, Zimbabwe, Gabon, Mauritius, South Africa, Morocco and Tunisia.

1. Some Policy Recommendations

The central proposition of this paper is that African countries should start thinking through undertaking a staged and orderly transition from the almost total dependence (by many African countries) on foreign aid for financing their economic and social development. Aid dependency should be reduced not because the international development community indicates that eventually aid reduction is an inevitability, but because such dependence on foreign aid could substantially impair the export competitiveness of these countries and therefore derail--possibly for a considerable time--the export-oriented development strategies that have been recently embraced by Africa, attempting to hopefully replicate the experiences of South East Asia and some other successful countries in other regions (such as Chile). Moreover, I would argue that the transition to less aid dependence and more sustained and dynamic export-led

growth does not have to require drastic and painful adjustments costs, provided that two developments take place.

First, a "smooth" adjustment to less aid dependence in Africa would depend heavily on the foresight and creativity of the international development community, with regard to the need to address the issues of aid dependence in a broader context that provides for: a deeper and wider external debt relief for Africa (beyond the HIPC's initiative)¹⁹, which should allow for dramatic reductions in gross ODA flows and further gradual transitions to lower and more sustainable net ODA; and a move away from the current aid regime of *ex-ante* policy-based conditional lending to others forms that enhances ownership (e.g. *ex-post* conditional lending) and reciprocal benefits (e.g. trade and investment partnership) (see Collier, 1996, 97; Collier and Gunning, 1997a; Kanbur, 1998).

Second, and building on measures for further debt relief, reforms of the current aid regime and further enhancement of economic and political environments in Africa, the Continent should be able to tap much higher levels of private capital flows for financing economic and social development. This is because, this Continent, especially the region to the south of the Sahara, is characterized by capital scarce economies²⁰, and therefore high rates of returns to capital. Moreover, removal of the debt burden and further consolidation of economic reforms and political stability should help address the lingering reputation of policy reversals, civil wars and political instability that has haunted Africa for so long and has so far affected the volume and composition of private capital flows into Africa (e.g. Collier, 1996, Elbadawi, 1996). However, I am hastened to point out that the experience with private capital flows also shows that they too could lead to disequilibrium real exchange rate overvaluation, and therefore a derailment off the path toward dynamic export-led growth. Even worse, excessive private capital flows could increase the chances of devastating financial crisis, capable of exposing world class success stories such as the East Asian economies. Therefore, while a transition from total dependence on ODA for development finance to a mixed menu of ODA and private capital flows represents a challenge, but also an immense opportunity for Africa, the attempt by Africa to increase its share of investment from international private capital markets should be firmly anchored to the basic tenets of an export-based development strategy (Elbadawi and Helleiner, 1998).

¹⁹ Elbadawi, Ndulu and Ndung'u (1996) show that the debt relief initiative for "Highly Indebted Poor Countries" will not be adequate for generating an annual 5% per capita GDP growth in SSA, which is the level deemed necessary for making a dent on the region's deepening poverty problems.

²⁰ Between 1970 and 1992, Collier and Gunning (1997b) estimate that the average capital per worker in SSA was only \$1,560; compared to \$10,844 for the Middle East, \$9,157 for South Asia and \$13,018 for East Asia.

TABLE 1 : AID, PRIVATE CAPITAL FLOWS & THE REAL EXCHANGE RATE IN AFRICA AND OTHER DEVELOPING COUNTRIES (1990-95)

Country/Region	RER	ODA	ODA/GNP	NKI	NKI/GNP
Burkina Faso	169.85	431.00	17.26	0.00	0.003
	(33.74)	(52.06)	(31.55)	(-100.00)	(-103.25)
Cote d'Ivoire	123.93	939.85	11.37	-19.13	-0.19
	(16.32)	(193.36)	(219.72)	(-1661.90)	(-27052.30)
Ghana	565.13	644.43	10.06	272.22	4.30
	(33.97)	(45.64)	(17.32)	(3199.60)	(3251.60)
Kenya	140.56	881.32	12.11	16.23	0.12
	(13.20)	(25.79)	(34.64)	(-89.61)	(-94.17)
Sudan	114.85	558.40	10.34	0.00	0.00
	(16.26)	(-37.14)	(39.06)	(0.00)	(0.00)
Tanzania	261.03	1065.67	29.27	36.52	1.09
	(73.03)	(22.88)	(29.68)	(-10.44)	(13.78)
Uganda	1138.29	705.83	19.24	35.23	0.76
	(122.75)	(126.83)	(234.68)	(-12.68)	(4.08)
Zambia	137.71	1003.15	30.31	49.33	1.61
	(-26.28)	(127.48)	(48.07)	(-53.55)	(-67.59)
Zimbabwe	189.38	513.06	9.11	21.90	0.28
	(49.96)	(94.32)	(91.01)	(-127.46)	(-118.17)
Low Income	138.44	448.93	13.33	3.42	0.13
Sub-Saharan Africa	(26.64)	(45.64)	(34.64)	(-90.48)	(-94.17)
Gabon	152.17	128.85	3.12	-41.27	-1.22
	(31.85)	(28.88)	(8.75)	(-120.50)	(-119.92)
Mauritius	122.49	44.17	1.50	110.20	3.24

South Africa	130.33	158.98	0.13	370.03	0.44
	(-5.78)	(1.27)	(44.81)	(-118.89)	(-117.35)
Upper-Middle Income	130.33	86.51	2.31	28.10	3.24
Sub-Saharan Africa	(1.32)	(-11.46)	(-47.49)	(31.16)	(-27.42)
Algeria	206.04	347.89	0.77	-212.82	-0.40
	(112.57)	(95.99)	(154.85)	(-120.17)	(-122.38)
Egypt, Arab Rep.	116.52	3525.79	9.73	342.08	0.86
	(8.12)	(113.75)	(89.20)	(-80.15)	(-83.95)
Morocco	150.33	844.94	3.14	468.68	1.68
	(3.06)	(88.11)	(33.92)	(13.96)	(-23.20)
Tunisia	148.33	257.51	1.93	324.00	2.07
	(7.04)	(-6.28)	(-34.92)	(591.94)	(282.83)
North Africa	149.33	596.41	2.53	333.04	1.27
	(7.58)	(92.05)	(61.56)	(-33.10)	(-53.58)
East Asia	128.77	465.29	0.52	6550.78	5.19
	(6.44)	(14.61)	(-37.15)	(252.47)	(107.43)
Latin America	165.17	147.98	1.69	139.15	2.10
	(5.38)	(46.37)	(-5.61)	(64.01)	(34.91)

Notes:

1. Bracketed terms indicate % rate of change in 1990-95 relative to 1986-89.
2. RER = Real Exchange Rate (equal to 100 in 1980).
3. ODA = Overseas Development Assistance (in current US\$).
4. NFI = Net Private Capital Flows (in current US\$).
5. GNP = Gross National Product (in current US\$).
6. Low Income Sub-Saharan Africa includes Burkina Faso, Burundi, Cameroon, Central African Republic, Congo, Cote D'Ivoire, Gambia, Ghana, Kenya, Madagascar, Malawi, Mauritania, Niger, Nigeria, Rwanda, Senegal, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe.
7. High Middle Income Sub-Saharan Africa includes Gabon, Mauritius and South Africa.
8. North Africa includes Algeria, Egypt, Morocco and Tunisia.
9. East Asia includes China, Indonesia, Korea (Rep.), Malaysia, Singapore, Thailand.
10. Latin America includes Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Trinidad & Tobago, Uruguay, Venezuela.

TABLE 2 : ODA AND OTHER FUNDAMENTALS OF THE LONG-RUN REAL EXCHANGE RATE IN DEVELOPING COUNTRIES

Fundamental	Elasticity (%)
Terms of Trade	-0.541
Degree of Openness of the Economy	0.481
Government Consumption / GDP	-0.304
Index of Productivity	-0.083
Net Foreign Income / GNP	-0.025
Official Development Assistance / GNP	-0.084
(Change in Reserves - Net Private Capital Inflows) / GNP	0.047

Notes

1. Source : Regression of Appendix Table 1
2. Degree of Openness of the economy is given by the residual from a panel regression of $\log((X + M) / \text{GNP})$ on GNP and GNP squared.
3. Index of Productivity is proxied by the ratio of the real GNP per worker to real GNP per worker for the G7, adjusted for terms of trade shocks.
4. Definitions of other variables are contained in the data appendix.
- 5.

TABLE 3 : AID, CAPITAL FLOWS, AND REAL EXCHANGE RATES IN AFRICA AND OTHER DEVELOPING REGIONS (1990-95)

Country/Region	RERMIS	RERMIS-ODA	RERMIS-NKI
Burkina Faso	9.48	-4.00	16.21
Côte d'Ivoire	-24.96	3.31	23.24
Ghana	13.84	4.95	-5.69
Kenya	3.38	2.40	14.18
Sudan	144.86	4.60	18.52
Tanzania	8.59	-18.93	8.36
Uganda	3.27	-6.47	17.96
Zambia	-4.07	-20.23	6.69
Zimbabwe	19.01	6.13	12.92
Low Income Sub-Saharan Africa	3.90	-1.96	13.83
Gabon	0.81	-3.47	22.26
Mauritius	14.11	-1.45	2.09
South Africa	11.70	0.32	11.20
Mid Income Sub-Saharan Africa	10.93	-1.66	9.86
Algeria	19.22	1.24	14.86
Egypt, Arab Rep.	-5.71	-9.90	10.54

Country/Region	RERMIS	RERMIS-ODA	RERMIS-NKI
Morocco	7.65	-1.70	10.77
Tunisia	4.46	-0.19	7.75
North Africa	5.44	-1.02	10.94
Latin America	-3.31	0.41	9.16
East Asia	-1.79	0.72	5.98

Notes

RERMIS	Overall real exchange rate misalignment (measured as undervaluation), given by $(\log(RER/ERER)-1) \times 100\%$, where ERER is the constructed equilibrium RER index.
RERMIS - ODA	Partial RERMIS due to lower ODA/GNP flows relative to sustainable ratios (ODA^*/GNP), given by $0.08 (ODA^*/GNP - ODA/GNP)$.
RERMIS - NKI	Partial RERMIS due to lower NKI/GNP ratio relative to sustainable ratio (NKI^*/GNP) and is given by $0.047(NKI^*/GNP - NKI/GNP)$.

TABLE 4 : AN EMPIRICAL MODEL OF NON-TRADITIONAL EXPORTS IN DEVELOPING COUNTRIES

Dependent Variable Log (NTX)	EQUATION 1 Random Effects		EQUATION 2 Random Effects		EQUATION 3 Random Effects	
	COEF	T-STAT	COEF	T-STAT	COEF	T-STAT
RERMIS	0.44	2.12	-	-	-	-
RERVAR	-2.36	-2.52	-3.33	-2.99	-6.12	-4.80
Log (MM/GNP)	0.20	3.29	0.20	3.36	0.14	2.50
Log (TOT)	-1.19	-3.03	-1.48	-3.74	-1.23	-3.56
TOTVAR	-2.58	-3.49	-2.49	-3.34	-2.08	-2.86
Log (SCH)	1.49	5.86	1.18	5.46	1.25	6.23
OECD GDP	0.2E-4	1.23	0.2E-4	1.28	0.2E-4	1.51
ODA/GNP	2.63	2.65	-	-	-	-
(ODA/GNP) ²	-4.99	-2.35	-	-	-	-
RERMIS X ODA/GNP	-	-	6.42	1.78		
RERMIS X (ODA/GNP) ²	-	-	-13.01	-1.57		
DLY X RERMIS X (ODA/GNP)	-	-	-	-	9.486	3.93

Dependent Variable Log (NTX)	EQUATION 1 Random Effects		EQUATION 2 Random Effects		EQUATION 3 Random Effects	
	COEF	T-STAT	COEF	T-STAT	COEF	T-STAT
DLMY X RERMIS X (ODA/GNP)	-	-	-	-	24.38	1.82
DLMY X RERMIS X (ODA/GNP) ²	-	-	-	-	-245.6	-1.78
DSSA	-0.31	-2.954	-0.22	-2.34	-0.2	-2.30
DEA	0.37	2.695	0.29	2.26	0.244	2.08
DLAC	0.17	1.708	0.18	1.87	0.152	1.79
C	-2.16	-1.743	-0.91	-0.74	-1.608	-1.47
Adjusted R Squared	0.83		0.81		0.81	
R Squared	0.93		0.92		0.92	
P Value for Hausman Tests	0.00		0.00		0.00	
Number of Observations	120					
Number of Countries	60					
Periods of Estimation	1984/85, 1989/90, 1994/95					

NOTE:

NTX	Non Traditional Exports
RERMIS	Real Exchange Rate Misalignment
RERVAR	Real Exchange Rate Variability (St. Dev of $\Delta \log RER$)
MM	Imports of Machinery goods
TOT	Terms of Trade
TOTVAR	Terms of Trade Variability (St. Dev of $\Delta \log TOT$)
SCH	Index of School Enrollment
OECD GDP	GDP of OECD Countries
ODA	Official Development Assistance
DLY	Dummy for Low Income Countries
DLMY	Dummy for Lower Middle Income Countries
DSSA	Dummy for Sub Saharan African Countries
DEA	Dummy for East Asian Countries
DLAC	Dummy for Latin American Countries

TABLE 5 : EXPORT MAXIMISING ODA/GNP RATIOS FOR AFRICA (1990-96)

COUNTRY / REGION	RERMIS (%)	ODA/GNP (%)	OPTIMUM ODA (%)	AID DEP (%)
Burkina Faso	10.89	17.16	8.42	103.70
Cote d'Ivoire	-21.00	11.16	-18.09 (4.9)	161.68 (85)
Ghana	18.16	10.13	13.69	-26.01
Kenya	4.51	11.35	3.57	218.12
Sudan	4.94	8.88	3.91	127.33
Tanzania	9.50	27.32	7.39	269.85
Uganda	6.94	18.10	5.44	232.71
Zambia	-4.79	28.65	-3.92 (4.9)	831.12 (480)
Zimbabwe	19.99	8.55	14.97	-42.92
Low Income Sub-Saharan Africa	6.18	14.52	4.86	198.60
Gabon	0.04	0.03	0.04	-13.23
Mauritius	0.14	0.01	0.11	-87.99
South Africa	0.13	0.001	0.10	-98.90
Middle Income Sub-Saharan Africa	0.13	0.02	0.10	-85.08
Algeria	20.01	0.76	15.83	-95.18
Egypt, Arab Rep.	-6.93	8.81	-5.60 (3.7)	257.30 (137)
Morocco	5.18	2.95	4.15	-28.80
Tunisia	4.02	1.75	3.22	-45.70
North Africa	4.60	3.57	3.68	-3.14

Notes

Optimum ODA is given by (see Appendix):

$$A^* = \frac{[\beta\gamma_1 - 2\gamma_2(emis)] - \sqrt{\beta^2\gamma_1^2 + 4\gamma_2^2(emis)^2}}{2\gamma_2\beta}$$

Where,

$emis = RERMIS / 100$

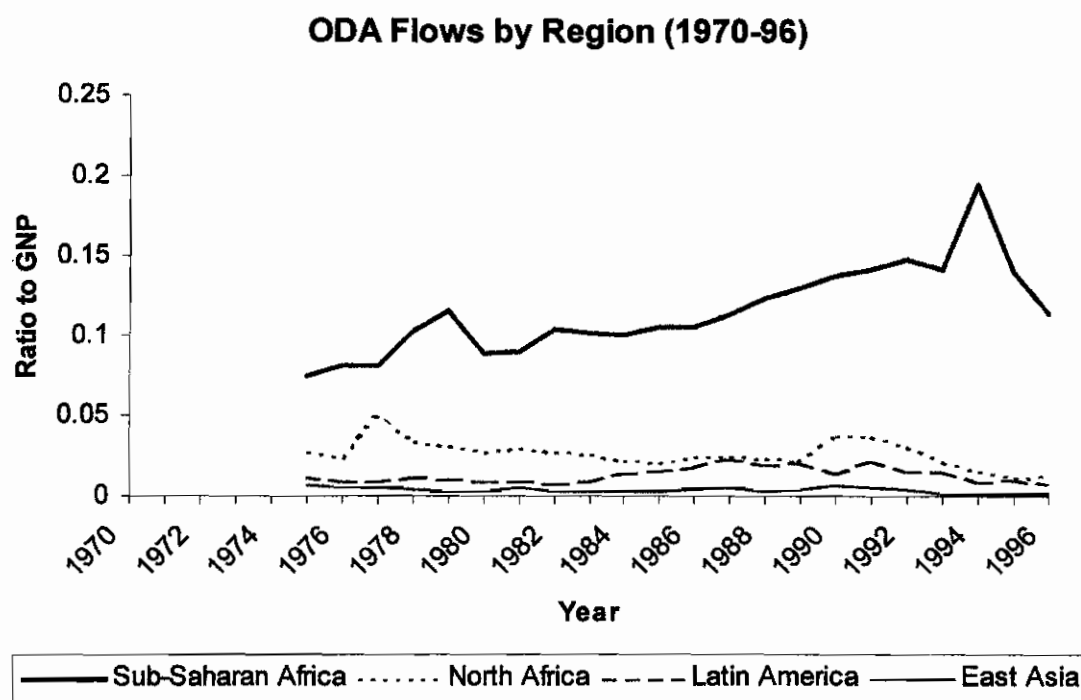
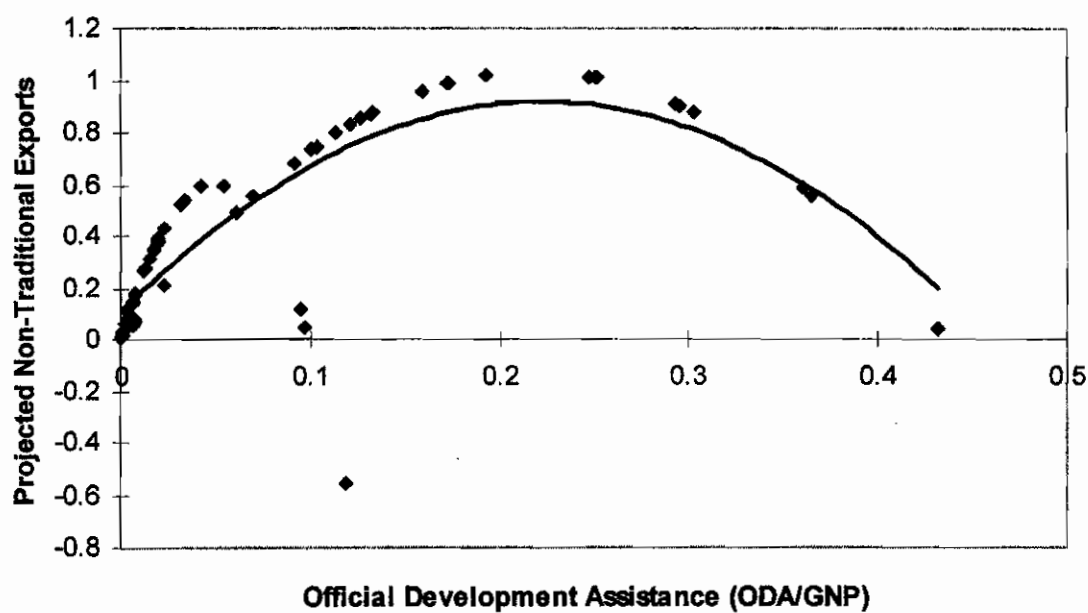
$\beta = 1.244$,

$\gamma_1 = 9.486$ for low income countries, and 24.378 for middle income countries,

$\gamma_2 = 21.775$ for low income countries, and 245.558 for middle income countries.

Aid Dep = $((ODA - \text{Optimum ODA}) / |\text{Optimum ODA}|) \times 100\%$

For the cases of Cote D'Ivoire, Egypt and Zambia, bracketed terms are given by ruling out negative official transfers and assuming the optimum ODA is equal to the group average.

Figure 1: ODA & NET PRIVATE CAPITAL FLOWS BY REGION (1970-1996)**FIGURE 2: ODA AND NON-TRADITIONAL EXPORTS IN DEVELOPING COUNTRIES**

Note :

This is a Laffer curve based on regression 3 of Table 4, where projected non-traditional exports is given by the component explained by (ODA/GNP) and $(ODA/GNP)^2$

REFERENCES

- Amoako, K.Y. and A. Ali (1998) "Financing Development in Africa: Some Exploratory Results," presented at the AERC/ODC Collaborative Research Workshop on "Transition to Less Aid Dependence in SSA," Nairobi, May 21-22.
- Brautigam, D. and K. Botchwey (1998) "The Impact of Aid Dependence on Governance and Institutions in Africa," presented at the AERC/ODC Collaborative Research Workshop on "Transition to Less Aid Dependence in SSA," Nairobi, May 21-22.
- Burnside, C. and D. Dollar (1997), "Aid, Policies and Growth," Policy Research Working Paper No. 1777, The World Bank, Washington, D.C., June.
- Collier, P. (1996), "The Role of the State in Economic Development: Cross-Regional Experiences" in I. Elbadawi and K. Schmidt-Hebbel (eds) Cross-Regional Reform and Development Experiences, Special Edition of Journal of African Economies (forthcoming 1998).
- Collier, P. (1997), "Globalization: Implications for Africa", presented at the AERC/IMF Seminar on "Trade Reforms and Regional Integration in Africa", Washington, DC, December 1997.
- Collier, P. and J. W. Gunning (1997a), "Policy Commitment Arrangements for Africa: Implications for Aid, Trade and Investment Flows," Presented at the AERC Collaborative Research Workshop on "Africa and the World Trading System," Accra, October.
- Collier, P. and J. W. Gunning (1997b), "Explaining African Economic Performance", CSAE Discussion Paper, University of Oxford.
- Collier, P. and C. Pattillo (1997) (editors), Investment and Risk in Africa, (forthcoming), McMillan Publishing Company.
- Devarajan S., A. Rajkumar and V. Swaroop (1998) "What Does Aid to Africa Finance?," presented at the AERC/ODC Collaborative Research Workshop on "Transition to Less Aid Dependence in SSA," Nairobi, May 21-22.
- Easterly, W., (1997), "The Ghost of Financing Gap: How the Harrod-Domar Growth Models Still Haunts Development Economics," Policy Research Working Paper no. 1807; World Bank, Washington D.C.
- Edwards, S. (1997), "Exchange Rate Issues in Developing and Transition Economies," in Elbadawi and Soto (eds) Foreign Exchange Markets and Exchange Rate Policies in Sub-Saharan Africa, Journal of African Economies, Supplement to Vol. 6 No. 3.: 37-73.
- Edwards, S. (1992), "Trade Orientation, Distortions and Growth in Developing Countries", Journal of Development Economics, 39, 31-57.

- Elbadawi, I. (1998a), "Real Exchange Rate Policy and Non-Traditional Exports in Developing Countries," Presented at the UNU/WIDER project meeting on "Growth, External Sector and Role of Non-Traditional Exports in Sub-Saharan Africa," Addis Ababa, Ethiopia, March.
- Elbadawi, I. (1996), "Consolidating Macroeconomic Stabilization and Restoring Growth in Sub-Saharan Africa," in B. Ndulu, N. van de Walle and Contributors (1996), Agenda for Africa's Economic Renewal, Overseas Development Council, Washington D.C.
- Elbadawi, I., B. Ndulu and N. Ndung'u (1996), "Debt Overhang and Economic Growth in Sub-Saharan Africa," in Z. Iqbal and R. Kanbur (editors), External Finance for Low Income Countries, IMF, Washington D.C., December.
- Elbadawi, I. and G. Helleiner (1998), "African Development in the Context of New World Trade and Financial Regimes: The Role of WTO and Its relationship to the World Bank and the IMF," Presented at the AERC Collaborative Research Workshop on "Africa and the World Trading System," Mombasa, April.
- Kanbur, R. (1998), "A Framework for Thinking Through Reduced Aid Dependence," presented at the AERC/ODC Collaborative Research Workshop on "Transition to Less Aid Dependence in SSA," Nairobi, May 21-22.
- Paredes, C. (1988), "Nominal Exchange Rate Regimes, The Real Exchange Rate and Export Performance in Latin America," Unpublished mimeo, CRADE and the Brookings Institute.
- Rodrik, D. (1994), "Getting Interventions Right: How South Korea and Taiwan Grew Rich", NBER Working Paper Series, No. 4964, December.
- Tsikata, T. (1998), "Aid Effectiveness: A Survey of the Recent Empirical literature," IMF Paper on Policy Analysis and Assessment, International Monetary Fund, Washington D.C., March.
- Valdés, A. (1985), "Exchange Rates and Trade Policy: Help or Hindrance to Agricultural Growth," Proceedings of the XIX International Conference of Agriculture Economists in Malaga,
- van Wijnbergen, S. (1986), "Aid, Export Promotion and the Real Exchange Rate: An African Dilemma," mimeo, The World Bank, October.
- White, H. and G. Wignaraja (1992), "Exchange Rates, Trade Liberalization and Aid: The Sri Lankan Experience," World Development, Vol. 20, No. 10, pp. 1471-1480.
- Williamson, J. (1994), "Estimating the FEERs," in John Williamson (Editor), Estimating Equilibrium Exchange Rates, Institute for International Economics, Washington D.C., USA, pp. 177-244, 1994.
- World Bank (1997), World Development Indicators, The World Bank, Washington D.C.
- Younger, S. (1992), "Aid and the Dutch Disease: Macroeconomic Management When Everybody Loves You," World Development, Vol. 20, No. 11, pp. 1587-1597.

Appendix

The Non-Traditional Export Maximizing ODA/GNP ratios

I. Equations:

I.1) Long-run real exchange rate

$$\text{Log } e = -\beta A + \dots$$

I.2) $\text{RERMIS} = \text{emis} = -\beta(A - \hat{A}) + \dots$

I.3) Non-traditional exports

$$\log \text{ntx} = \gamma_1 + \gamma_1 A(\text{emis}) - \gamma_2 A^2(\text{emis}) + \dots$$

I.4) Definitions:

e	Real Exchange Rate
emis	$\text{RERMIS} = (\log e - \log \hat{e})$
\hat{e}	Equilibrium RER
A	ODA / GNP
\hat{A}	Sustainable ODA / GNP
ntx	Non-Traditional Exports / GNP

II. Benchmark ODA Maximising Ratios

(II.1)

$$\frac{\partial \log \text{ntx}}{\partial A} = \gamma_1(\text{emis}) - \gamma_1 A \frac{\partial(\text{emis})}{\partial A} - 2\gamma_2 A(\text{emis}) - \gamma_2 A^2 \frac{\partial(\text{emis})}{\partial A}$$

$$\frac{\partial \log \text{ntx}}{\partial A} = \gamma_1(\text{emis}) - A \left[\beta \gamma_1 \left(1 - \frac{\partial \hat{A}}{\partial A} \right) + 2\gamma_2(\text{emis}) \right] + \gamma_2 \beta \left(1 - \frac{\partial \hat{A}}{\partial A} \right) A^2$$

(II.2)

$$\frac{\partial^2 \log \text{ntx}}{\partial A^2} = \left(1 - \frac{\partial \hat{A}}{\partial A} \right) [\gamma_2 \beta A - 2\gamma_1 \beta] - 2\gamma_2(\text{emis})$$

$$< 0 \text{ for } \frac{\partial \hat{A}}{\partial A} = 0, A \leq 0.15, \text{emis} \geq -0.16$$

$$< 0 \text{ for } \frac{\partial \hat{A}}{\partial A} = 1, \text{emis} > 0$$

(II.3) FOC :

$$\frac{\partial \log \pi x}{\partial A} = 0 \Rightarrow$$

(II.4) $aA + bA + c = 0$.

Where,

$$a = \gamma_2 \beta \left(1 - \frac{\partial \hat{A}}{\partial A} \right), \quad b = - \left[\beta \gamma_1 \left(1 - \frac{\partial \hat{A}}{\partial A} \right) - 2\gamma_2(emis) \right], \quad c = \gamma_1(emis)$$

And the maximum ODA ratio A^* is given by:

(II.5)

$$A^* = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

III. If we assume that the eventual sustainable level of aid will not be related to current aid

levels, i.e. $\frac{\partial \hat{A}}{\partial A} = 0 \Rightarrow$

$$A_1^* = \frac{[\beta \gamma_1 - 2\gamma_2(emis)] \pm \sqrt{\beta^2 \gamma_1^2 + 4\gamma_2^2(emis)^2}}{2\gamma_2 \beta}$$

IV If instead the eventual sustainable levels of aid will evolve from current levels :

$$\frac{\partial \hat{A}}{\partial A} = 1. \Rightarrow \text{(from II. A)}$$

$$A_1^* = \frac{\gamma_1}{2\gamma_2}$$

V Estimates from Equation 3 (Table 4)

(V.1) Low Income Countries

$$\hat{\beta} = 1.244, \quad \hat{\gamma}_1 = 9.486, \quad \hat{\gamma}_2 = 21.775$$

(V.2) Middle Income Countries

$$\hat{\beta} = 1.244, \quad \hat{\gamma}_1 = 24.378, \quad \hat{\gamma}_2 = 245.558$$

APPENDIX TABLE 1: AN EMPIRICAL MODEL OF REAL EXCHANGE RATE IN DEVELOPING COUNTRIES

Dependent Variable Log RER	EQUATION 1		EQUATION 2		EQUATION 3		EQUATION 4	
	FIXED		RANDOM		FIXED		RANDOM	
	COEFF	T-STAT	COEFF	T-STAT	COEFF	T-STAT	COEFF	T-STAT
Log(TOT)	-0.549	-3.654	-0.54	-3.911	-0.561	-3.658	-0.541	-3.91
Log(OPEN)	0.452	1.796	0.486	2.19	0.443	1.693	0.481	2.174
Log(GCON/GNP)	-0.551	-2.651	-0.294	-1.935	-0.388	-1.844	-0.304	-2.102
PRODUCTIVITY	-0.774	-2.203	-0.55	-2.042	-0.599	-1.994	-0.554	-2.059
NFYA/GNP	-0.465	-0.657	-0.772	-1.58	-0.623	-0.887	-0.771	-1.572
ODA/GNP	-0.366	-0.750	-0.920	-2.475	-0.452	-0.930	-0.908	-2.470
DRNK/GNP	3.786	2.393	3.223	2.86	3.56	2.208	3.191	2.84
MACRO1	-0.021	-0.319	-0.08	-1.687	-0.038	-0.653	-0.081	-1.713
DEVAL	0.7E-03	1.049	-0.9E-04	-0.238	-	-	-	-
LogRER(-1)	0.096	1.069	0.274	2.958	0.144	1.566	0.27	3.005
CONSTANT	-	-	-0.327	-0.863	-	-	-0.346	-0.935
Adjusted R Squared	0.6485		0.4372		0.6457		0.4397	
R Squared	0.7831		0.6527		0.7795		0.6513	
P Value			0.01831				0.0003	
Observations	120							
Countries	60							
Periods of Estimation	1984/85, 1989/90, 1994/95							

COUNTRY / REGION	RERMIS (%)	ODA/GNP (%)	OPTIMUM ODA (%)	AID DEP (%)
Burkina Faso	10.89	17.16	8.42	103.70
Cote d'Ivoire	-21.00	11.16	-18.09 (4.9)	161.68 (85)
Ghana	18.16	10.13	13.69	-26.01
Kenya	4.51	11.35	3.57	218.12
Sudan	4.94	8.88	3.91	127.33
Tanzania	9.50	27.32	7.39	269.85
Uganda	6.94	18.10	5.44	232.71
Zambia	-4.79	28.65	-3.92 (4.9)	831.12 (480)
Zimbabwe	19.99	8.55	14.97	-42.92
Low Income Sub-Saharan Africa	6.18	14.52	4.86	198.60
Gabon	0.04	0.03	0.04	-13.23
Mauritius	0.14	0.01	0.11	-87.99
South Africa	0.13	0.001	0.10	-98.90
Middle Income Sub-Saharan Africa	0.13	0.02	0.10	-85.08
Algeria	20.01	0.76	15.83	-95.18
Egypt, Arab Rep.	-6.93	8.81	-5.60 (3.7)	257.30 (137)
Morocco	5.18	2.95	4.15	-28.80
Tunisia	4.02	1.75	3.22	-45.70
North Africa	4.60	3.57	3.68	-3.14

Notes

Optimum ODA is given by (see Appendix):

NOTE:

RER	Real Exchange Rate
TOT	Terms of Trade
OPEN	(Real Exports + Real Imports) / Real GNP
GCON	Government Consumption
PRODUCTIVITY	Ratio of GNP per worker of country (i) to the average of OECD countries
GNP	Gross National Product at market prices
NFYA	Net Foreign Income from Abroad
ODA	Overseas Development Assistance
DRNK	(Change in Reserves/GNP) - (Net Capital Inflows)
MACRO1	(Change in domestic credit) / (lagged broad money supply)
DEVAL	Nominal Devaluation ($\Delta \log$ (nominal exchange rate))
RER	Real Exchange Rate
Pvalue	refers to the Hausman test for Fixed vs. Random Effects Model

ATA APPENDIX

SOURCES

All national accounts figures (including GDP, GNP, government consumption, public investment, capital inflows, international reserves) were obtained from the World Development Indicators database (World Bank; 1997).

All balances of payments and monetary figures (including nominal and real exchange rates, terms of trade) were obtained from the IMF database IFS in CDROM.

DEFINITIONS

Net Private Capital Inflows

Net capital inflows consist of private debt and non-debt flows. Private debt flows include commercial bank lending, bonds, and other private credits; non-debt private flows are foreign direct investment and portfolio equity investment.

Government consumption

General government consumption includes all current expenditures for purchases of goods and services by all levels of government, excluding most government enterprises. It also includes capital expenditure on national defense and security.

Net factor income from abroad

Net factor income includes the net labor income and net property and entrepreneurial income components of the SNA. Labor income covers compensation of employees paid to nonresident workers. Property and entrepreneurial income covers investment income from the ownership of foreign financial claims (interest, dividends, rent, etc.) and nonfinancial property income (patents, copyrights, etc.). Data are in current U.S. dollars.

Gross international reserves

Gross international reserves comprise holdings of monetary gold, special drawing rights, the reserve position of members in the IMF, and holdings of foreign exchange under the control of monetary authorities. The gold component of these reserves is valued at year end (December 31) London prices.

Gross domestic investment

Gross domestic investment consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets cover land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including commercial and industrial buildings, offices, schools, hospitals, and private residential buildings.

Official development assistance and official aid

Official development assistance (ODA) consists of net disbursements of loans and grants made on concessional terms by official agencies of the members of DAC and certain Arab countries to promote economic development and welfare in recipient economies listed as developing by DAC. Loans with a grant element of more than 25 percent are included in ODA. ODA also includes technical cooperation and assistance. Official aid refers to aid flows from official donors to the transition economies of Eastern Europe and the former Soviet Union and to certain advanced developing countries and territories as determined by DAC. Official aid is provided under terms and conditions similar to those for ODA.

Labor force

Total labor force comprises people who meet the ILO definition of the economically active population: all people who supply labor for the production of goods and services during a specified period. It includes both the employed and unemployed. While national practices vary in the treatment of such groups as the armed forces and seasonal, in general the labor force includes other unpaid caregivers and workers in the information sector.

Terms of Trade

A ratio of the export to import price indexes (1987=100).

Real Exchange Rate

A multi-lateral index defined as a ratio of the nominal effective exchange rate index multiplied by the CPIs of major trading partners to the CPI of the country in question. This is the reciprocal of an index constructed by the IMF, normalised to equal 100 in 1980. No information about trade weights, however, is provided.

Imports of Machinery Goods

The total machinery exports by developed countries to the country in question. This is a proxy for imports of capital goods.

Non Traditional Exports

Defined as all exports that are not classified as Atraditional, where the latter is defined as: the ten largest three-digit commodity groups in the country's exports in the base year (1983-84), unless these ten do not account for at least 75% of those exports, in which case more three digit groups are added until at least 75% is reached (World Bank, 1997).