

# Can the West Save Africa?<sup>1</sup>

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**Abstract:** In the new millennium, the Western aid effort towards Africa has surged due to writings by well-known economists, a celebrity mass advocacy campaign, and decisions by Western leaders to make Africa a major foreign policy priority. The result has been what often seems like a crusade for “the West to save Africa.” Africa is the target of such a crusade more than other regions because of its poor growth, high poverty, and poor social indicators, although the crusade often implies that typical living conditions in Africa are even worse than they really are. This literature survey puts this crusade into perspective based on results from the literature on aid to Africa and stylized facts. It contrasts the predominant “transformational” approach (West comprehensively saves Africa) to occasional swings to a “marginal” approach (West takes one small step at a time to help individual Africans). The transformational approach assumes that Western outsiders have a large effect on African outcomes; the marginal approach is more modest about the role of the West and more likely to take indigenous factors seriously. The large-scale interventions of the “transformational” approach need stronger research support than small-scale “marginal” actions, since one wants to be sure there will not be large-scale *negative* effects. Unfortunately, the technology of research goes in the opposite direction, with severe econometric problems of testing transformational approaches due to endogeneity of interventions, unconvincing identification strategies, and unclear specifications of outcome equations. As a result the quality of the literature on evaluating large-scale programs is poor (with the huge aid and growth literature as the prime example). The theoretical underpinnings of the transformational approach have also suffered from a reliance on mechanical models that ignore such basics as the importance of incentives for the relevant actors (particularly local actors). Evaluation of “one step at a time” initiatives is generally easier either through controlled experiments or simple case studies where it is easier to attribute outcomes to actions. Despite this shaky evidence base, the predominant aid approach of the West has consistently been transformational over the last five decades. We see two themes emerge from the literature survey: (1) **escalation**. As each successive Western transformational effort has yielded disappointing results (as judged at least by stylized facts, since again the econometrics are shaky), the response has been to try an even more ambitious effort. So Western efforts to transform Africa have escalated from (a) a project approach to improve education, health, infrastructure, and agriculture, to (b) “structural adjustment” to force changes in government policies through conditional aid, to (c) institutional transformation, such as attempts to control corruption, increase democracy, and improve property rights in land, to (d) ending civil wars and rebuilding failed states, now sometimes combining military force with financial aid. The escalation may have happened because donors were stuck on the assumption that outsiders were the answer to Africa’s problems. The escalation makes the econometric problems of testing transformational approaches even worse over time, so the quality of the civil war literature is poorer than the aid and growth literature. (2) **the cycle of ideas**. Rather than a progressive testing and discarding of old failed ideas, we see a cycle in aid ideas in many areas in Africa, with ideas going out of fashion only to come back again later after some lapse long enough to forget the previous disappointing experience. Examples include the repeated attempts to do a “Big Push” to get out of a “poverty trap” through sharp aid increases, the oscillation between vertical and horizontal approaches in health, the repeated attempts to institute formal land registries, the attempt to do “integrated rural development” or a “Green Revolution” in agriculture, the repeated attempts at setting international goals for improvements in social indicators through UN summits, and the persistent attempt to use aid conditions as a lever to change aid recipient behavior. Both escalation and cyclicity of ideas are symptomatic of the lack of learning that seems to be characteristic of the “transformational” approach. In contrast, the “marginal” approach has had some successes in improving the well-being of individual Africans, such as the dramatic fall in mortality and sharp increases in education levels and access to clean water.

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## I. Africa's Needs and Western response

### A. Explosion of interest in "saving Africa"

The last few years have seen unprecedented attention to an attempt by the West to save Africa.<sup>2</sup> British Prime Minister Tony Blair called at the World Economic Forum in Davos in January 2005 for "a big, big push forward" in Africa to end poverty, financed by an increase in foreign aid.<sup>3</sup> Tony Blair commissioned a Report on Africa, which released its findings in March 2005, likewise calling for a "big push." Gordon Brown and Tony Blair put the cause of ending poverty in Africa at the top of the agenda of the G-8 Summit in Gleneagles, Scotland in July 2005. Rock celebrity Bob Geldof assembled well-known bands for "Live 8" concerts on July 2, 2005 in nine cities around the world to lobby the G-8 leaders to "Make Poverty History" in Africa. Even movie stars got involved, with Angelina Jolie touring Kenya with Jeffrey Sachs to make an MTV video in 2005. In the 2005 summit at Gleneagles, Scotland, the G-8 agreed to double foreign aid to Africa, from \$25 billion a year to \$50 billion to finance the big push, as well as to forgive the African aid loans contracted during previous attempts at a "big push." Two years later, Germany again made Africa an important item on the agenda of the G-8 summit it is hosted in Heiligendamm in June 2007. The G-8 again reiterated the promises made in 2005. Japan pledged to double its own aid to Africa in May 2008 over the next five years.<sup>4</sup> ("Double" seems like a Schelling point in the discourse on increasing aid; it goes back many decades.)<sup>5</sup> Continuing the trend of using each G8 summit to promise again the same things promised in previous summits, the G8 Summit in Japan in July 2008 agreed: "We are firmly committed to working to

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<sup>2</sup> Following a very common convention, this paper means sub-Saharan Africa whenever it uses the name "Africa."

<sup>3</sup> International Herald Tribune, Friday January 28, 2005, p. 1

<sup>4</sup> [http://www.kantei.go.jp/foreign/hukudaspeech/2008/05/28speech\\_e.html](http://www.kantei.go.jp/foreign/hukudaspeech/2008/05/28speech_e.html)

<sup>5</sup> JFK advisor Walt Rostow proposed doubling aid in 1960, as did World Bank President Robert McNamara in 1973, the World Bank again in 1990, the aforementioned G8 summits in 2005-2008, the Chinese promised to double their own aid to Africa in an Africa conference in 2006, and Presidential candidate Barack Obama promised in 2008 to double aid to Africa if elected.

fulfill our commitments on ODA made at Gleneagles, and reaffirmed at Heiligendamm, including increasing... ODA to Africa by US\$ 25 billion a year by 2010.”<sup>6</sup>

The goals of the Western effort are ambitious, not limited to promoting overall economic growth. A 2000 UN Summit agreed upon “Millennium Development Goals” (MDGs) for the year 2015 such as cutting poverty in half, reaching universal primary enrollment, sharply reducing mortality of infants and mothers, achieving gender equality, dramatically increasing access to clean water and other social indicators. Although this effort is worldwide, most of the MDG campaign focuses on Africa, where the shortfalls to the goals are the greatest (perhaps because of numerical goal design accidents – see discussion below).

The G8 also is making efforts to address civil war and “failed states” (also known as “fragile” and “post-conflict” states) in Africa, saying at the 2008 summit:

Peace and security are fundamental to states' ability to meet the needs of their people. Fragile and post-conflict states remain farthest from reaching the MDGs. Overcoming fragility and successful recovery requires comprehensive, integrated and sustained international assistance, including peacekeeping and peacebuilding efforts where necessary, tailored to the particular context.<sup>7</sup>

Saving Africa has remained hot in the popular imagination, with the magazine *Vanity Fair* devoting its July 2007 celebrity-laden issue to Saving Africa, with feature articles such as “Madonna’s Malawi.” In what might qualify as a surrealistic moment, the Administrator of USAID asked a staffer to summarize the policy conclusions of the *Vanity Fair* analysis for U.S. foreign aid.<sup>8</sup> In the World Economic Forum in Davos in January 2008, a diverse panel of celebrities ranging from Bono to Bill Gates to Queen Rania of Jordan called for “emergency” action to meet the Millennium Development Goals by the year 2015.

This campaign places an emphasis on rapid transformation as opposed to gradual progress. As the Africa aid advocacy group founded by Bono (DATA) reminded the G8 in its 2008 report:

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<sup>6</sup> 2008 G8 Summit Declaration, “Development and Africa,” July 8, 2008

<sup>7</sup> 2008 G8 Summit Declaration, “Development and Africa,” July 8, 2008

<sup>8</sup> I verified this by getting an actual copy of the memo.

“Incrementalism will continue to help some people in Africa, but would be a disaster for most. ... it certainly won't bring about the ultimate goal - help for Africa to 'build the successful future all of us want to see'. {quote from 2005 G8 Summit Communique}” (DATA 2008, p. 5)

Two books for general audiences by well known economists have set out an ambitious agenda for transforming Africa by Western intervention: Jeffrey Sachs' *The End of Poverty* (2005, with much of the same material restated more recently in a subsequent book by the same author, *Common Wealth* (2008)), and Paul Collier's *The Bottom Billion* (2007). The present author also has published a book for general audiences on the same issues, albeit much more limited about what the West can do for Africa: *The White Man's Burden* (2006).

The debate on whether the West can “save Africa” revives a long-standing debate in development economics. One side of this view sees very rapid and comprehensive social change as possible, emanating from an elite of political leaders and outside experts who can start from a blank slate in achieving development. The other side sees only gradual social change as possible (at least, gradual on average, since this side would concede there could be occasional rapid breakthroughs), emanating more from the emergent self-organizing order of many decentralized private entrepreneurs, creative inventors, and one-step-at-a-time political reformers, all constrained by existing traditions and social norms that have evolved for their own reasons over a long period. This debate has shown up in many forms over time, and with many different protagonists. In the 1950s, Albert Hirschman's “unbalanced growth” was a partial version of the second view, in contrast to the first view: the “Big Push” arguments of Rosenstein-Rodan and Rostow that everything would need to change at once leading to “balanced growth.” In the 1980s, the advent of structural adjustment revived the debate about comprehensive versus partial reform. In the 1990s, the debate was about shock therapy vs. gradualism in the transition from Communism to capitalism. In the new millennium, the “Big Push” has regained favor in some aid policy circles, particularly with regard to Africa.

Of course, mainstream economics has much to contribute to this debate, first as the source of one of the most successful models of the “emergent self-organizing order”, the “invisible hand” of markets, often counterposed to counter-productive government intervention in markets. This might suggest a bias towards the marginal approach in economics. However, economics has also contributed ideas such as general equilibrium, theory of the second best, and complementarities between policy interventions that might point towards a more comprehensive approach to avoid unintended consequences of a single partial equilibrium intervention.

As applied to Africa, the debate at its extreme poles pits comprehensive reformers with many interventions devised by development experts to end poverty rapidly vs. advocates of gradual improvement in social indicators and pre-conditions for entrepreneurship and markets. Another form of the debate sees pervasive market failure in Africa that can only be corrected by top-down government action, whereas the other side of the debate sees predatory governments as themselves being part of the problem causing malfunctioning markets rather than part of the solution. The first approach tends to assume the problems are technical; the second recognizes the existing situation has been determined by social and political economy forces only dimly understood by outsiders. The first approach assumes a large impact of Western actions on African outcomes; the second sees African outcomes as being mainly determined by African actions. To put it another way, the transformational approach tends to assume that all characteristics of African societies are changeable by outsiders, while the marginal approach tries to discriminate between what outsiders can change and what they cannot. Admittedly, this dichotomy is oversimplified and most scholars will fall somewhere in between the two extremes sketched out here. Also the various divides are not perfectly correlated with each other: the comprehensive vs. piecemeal debate does not map exactly into the speed vs. gradualism debate. But stating the dichotomy in its starkest form helps clarify ideas and put in context many other debates on how to

help Africa. To give labels to the two extremes for the purposes of the Africa discussion, let us call the first approach “transformational” and the second approach “marginal.”<sup>9</sup>

We will see that both approaches have been studied in the academic literature on aid to Africa. The stronger the ambition of a transformational approach, the stronger the support it would seem to require from research findings, since the consequences of success and failure are greater for large-scale programs than for small-scale ones. Unfortunately, the technology of research seems to go in the opposite direction – it is harder to test effects of transformational programs than marginal ones. The difficulties of testing the transformational approach are due to severe identification problems involving multiple endogenous variables and selection biases in aggregate data, the usual impossibility of natural experiments at the system level, and the difficulties of attribution of effects with a program that involves multiple interventions. Partly due to these problems, the quality of the literature on aggregate evaluations of aid to Africa has often turned out to be lower than other empirical work in economics, including aggregate econometrics in rich countries. This literature also suffers from theoretical shortcomings, as standard neoclassical theory – such as the central role of incentives – often seems neglected in favor of mechanical models without firm theoretical basis.

Another example of how the sweeping nature of the transformational approach makes life harder for academics is the difficulty of writing an academic survey article on this approach – such as this one! This survey will be a little unusual for this reason, trying to cover a ludicrously vast amount of ground to do justice to the transformational ambitions, yet inherently able only to hit the high points (or low) points of the related literatures. This survey will also refer to articles by non-economists (and at times even non-academics) to give an idea of how the transformational economics recommendations have often encompassed more areas than can be handled by

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<sup>9</sup> Although some may see this divide as corresponding to left vs. right, there are many trenchant critiques of the “transformational” view from the left, such as Scott (1998) and Ferguson (). Easterly 2006 pointed out that market reforms under structural adjustment and shock therapy (usually associated with the right) were very much “transformational” attempts.

rigorous academic research in economics, and also the prominence of non-academic figures in influencing policy debates on Africa. Because of the inherent difficulty of conclusively testing transformation approaches, this paper presents the stylized facts in each major area as well as referring to (the generally unsatisfactory) econometric work. The stylized facts do not resolve the outstanding questions, but they may be helpful in putting counterfactuals into perspective.

It is inherently easier to test the effects of the marginal approach, since smaller actions can often be made the subject of natural experiments. Even when natural experiments are not performed or even feasible, indicators of inputs and outcomes are usually easier to measure, plus attribution of outcomes to inputs is usually more intuitive, so that even stylized facts and case studies can give some partial verdict on marginal approaches. This contrast in itself may be an argument against the transformational approach and in favor of the marginal approach (isn't it better to do something whose effects you can discern than something large-scale whose effects could be either positive or negative?)

Another consequence of the differential ease of testing for positive effects of marginal approaches compared to transformational approaches is that there is more possibility of learning from the former. We will see that, perhaps because the transformational approach has been dominant, aid ideas have often been cyclical, with the same ideas going out of fashion only to come back again many years later – a pattern that is suggestive of lack of learning. We will see other examples that show little or no learning over time.

Another suggestive symptom of lack of learning has been escalation. When one long list of transformational actions does not achieve satisfactory results, new (untested) actions are added – as opposed to deciding which of the first set of actions contributed to success or failure (very hard to do in the transformational approach). So aid to Africa has escalated over time from individual projects to structural adjustment to institutional transformation to ending civil wars and reconstructing failed states.

The political economy of aid is such that the adoption of the transformational approach and its non-testability (and lack of learning as to which interventions don't work) may be an equilibrium given the strong demand among the rich country public for "big efforts to address big problems," compared to the weak demand for accountability of aid agencies for demonstrably achieving results.

One final clarification is that this survey is about Western efforts to transform Africa, not a general discussion of the determinants of long run African development, and not a survey of all conceivable actions (including those by insiders) that might foster that development. Perhaps one unintended benefit of the effort to "save Africa" is that it has stimulated discussion of these broader development issues for Africa, but this survey does not cover all such issues.

#### *B. Poor growth and income levels*

Why are calls to "save Africa" more common than calls to "save Latin America" or "save Asia"? The most obvious explanation is that Africa has a particularly unhappy combination of a low level of income and other social indicators, and low rate of progress on these indicators.<sup>10</sup>

First and foremost, Africa commands attention because it is the poorest region and has the worst per capita growth rates (which are obviously related facts if we measure poverty at the end of the period). Figure 1 shows an index on a log base 2 scale of an index of per capita income in the median African and non-African nation from 1950 to 2006, with the index=1.0 in 1950 (and thus  $\log(\text{index})=0$  in 1950). The median country in Africa had positive growth 1950-1970, but was already falling behind the non-Africa median developing country as early as 1960.<sup>11</sup> Divergence accelerated after 1970, when the median African country's growth was

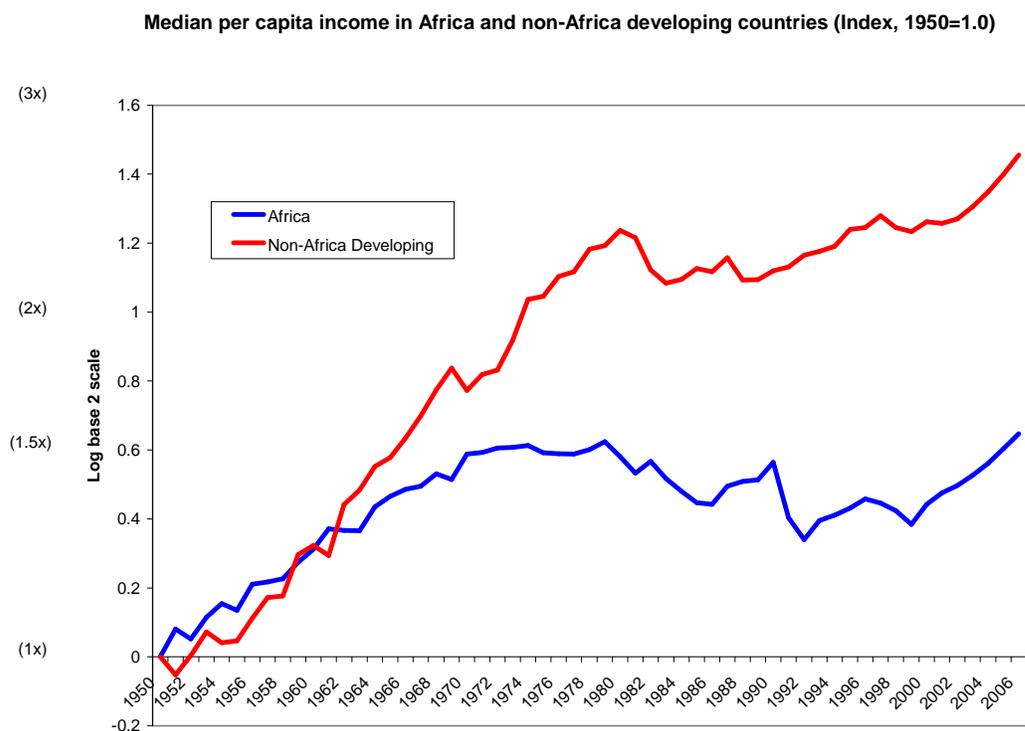
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<sup>10</sup> I do not have space to discuss the important issue of data quality, which is generally very poor for many of the indicators to be considered in this paper. Failure to invest more in data collection is one of the less noticed failures of the Western aid effort. For the purposes of description and analysis in this paper, I can only hope that the signal outweighs the noise, and I resort frequently to averages and medians to remove some of the noise.

<sup>11</sup> Some might argue for a population-weighted index of African performance, which would give heavy weight to Nigeria and South Africa. If we take the West's effort to save Africa as operating at the level of

actually negative until the mid-1990s. There has been some recovery since, but the 2006 level in the median African country is barely above the previous peak in 1973.

*Figure 1: Index of per capita income in Africa and other developing nations*



### *C. Poor social indicators*

Life expectancy is another indicator that highlights Africa's tragedy, thanks to the double blow of high infant mortality and high adult mortality from AIDS. It is possible to pick a threshold for life expectancy (58 years) in which *every* African country is below that threshold and only a handful of societies elsewhere are (see Figure 2).

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national governments (which is certainly how it was conceived), then the median country outcome seems like the right metric to discuss the outcome of Western efforts.

**Figure 2: Life expectancy in 2001 (red below 58, blue above 74, yellow in between)**

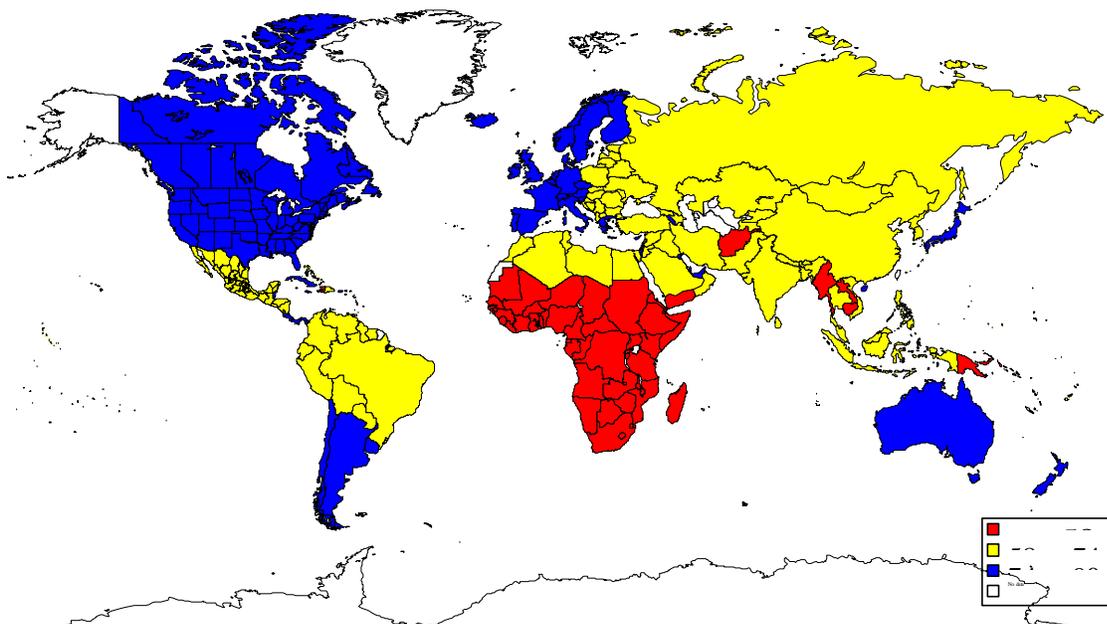


Table 1 highlights a fuller set of indicators on which Africa does very poorly in international comparisons. It dramatizes this by showing for every indicator in which there are  $N$  African observations, what percent of the  $N$  worst places in the world according to this indicator are occupied by African nations. For these indicators, Africa makes up 25-35 percent of the worldwide sample, but occupies 70-80 percent of the worst rankings in the sample. Africa does very badly not only on per capita income, growth, and life expectancy, as already mentioned, but also on related social indicators such as infant mortality, AIDS prevalence, malnutrition, literacy, and the overall Human Development Index of the UN (which is a composite of the other indicators in this table). Deaton (2008) shows that life satisfaction (as measured by the Gallup World Poll) is strongly correlated with per capita income, so these measures suggest well-being in some broad sense is indeed significantly worse in Africa than elsewhere. (Deaton suggests the average Togolese man would be hospitalized for depression if he lived in Denmark).

**Table 1: Ranking of African countries by key international indicators where Africa does comparatively the worst**

| <i>Variable</i>                                       | <i># observations (T)</i> | <i>#African observations (N)</i> | <i># of N worst places occupied by African countries (K)</i> | <i>share of African observations in sample (N/T)</i> | <i>% of N worst places occupied by African countries (K/N)</i> |
|---|---------------------------|----------------------------------|--|--|--|
| Income per capita                                     | 130                       | 44                               | 35   | 34%  | 80%  |
| Percent of Population Living on less than a \$1 a day | 99                        | 28                               | 23   | 28%  | 82%  |
| Per capita growth 1960-2003                           | 113                       | 44                               | 34   | 39%  | 77%  |
| Life expectancy                                       | 187                       | 48                               | 42   | 26%  | 88%  |
| Infant mortality                                      | 195                       | 48                               | 36   | 25%  | 75%  |
| Percent of Population 15-49 that is HIV positive      | 149                       | 38                               | 32   | 26%  | 84%  |
| Prevalence of malnutrition, 2003                      | 148                       | 44                               | 31   | 30%  | 70%  |
| Literacy  | 122                       | 34                               | 21   | 28%  | 62%  |
| Human Development Index                               | 177                       | 44                               | 36   | 25%  | 82%  |

#### *D. Not overdoing negative stereotypes*

Although there is plenty of bad news on Africa, it is important to steer clear of stereotypical extremes. Some of those who want to save Africa justify their mission by painting a picture of Africa that is even grimmer than the not-so-happy reality. For example Collier (2007, p.3) portrays African societies that “coexist with the twenty-first century, but their reality is the fourteenth century: civil war, plague, ignorance” (perhaps this statement is meant to be hyperbole in a book for general audiences). Celebrity activist Bob Geldof paints a similar picture: "War, Famine, Plague & Death are the Four Horsemen of the Apocalypse and these days they're riding hard through the back roads of Africa." The popular stereotype of Africans (reinforced by

statements like these) seems to be as starving AIDS-stricken refugees being slaughtered by child soldiers, an image reinforced by the Western media following the “if it bleeds, it leads” rule of journalism. The reality of Africa contradicts the extremely negative stereotypes. While many of these disasters may be more likely in Africa than elsewhere, they are inherently rare occurrences. Table 2 shows that the Four Horsemen are the experience of a small minority of Africans.

Table 2: The Four Horsemen of the Apocalypse in Africa?

|   | Proportion of<br>African<br>population |
|---|--|
| Average annual war deaths as proportion of population, 1965-2005                | 0.0001                                 |
| Proportion of male children ages 10-17 who were child soldiers in 1999          | 0.0019                                 |
| Average annual proportion affected by famine, 1990-2005                         | 0.0029                                 |
| Proportion of population who are refugees or internally displaced persons, 2005 | 0.0053                                 |
| Proportion of population who died from AIDS in 2007                             | 0.0020                                 |

Although Africa is often portrayed as a place of uniquely bad government and civil war, its performance on quantitative measures of governance and war indicators is not as bad as the social and poverty indicators above, again suggesting the importance of a balanced rather than stereotypical view of Africa (Table 3).

Table 3: Government, Institutions, and War in Africa

|   | <i># observations (T)</i> | <i>#African observations (N)</i> | <i># of N worst places occupied by African countries (K)</i> | <i>share of African observations in sample (N/T)</i> | <i>% of N worst places occupied by African countries (K/N)</i> |
|---|---------------------------|----------------------------------|--|--|--|
| World Bank Governance Ratings 2004        |                           |                                  |  |  |  |
| Democracy                                 | 207                       | 49                               | 19   | 24%  | 39%  |
| Political stability and violence          | 207                       | 49                               | 18   | 24%  | 37%  |
| Government effectiveness                  | 209                       | 49                               | 25   | 23%  | 51%  |
| Government regulation                     | 204                       | 49                               | 23   | 24%  | 47%  |
| Rule of law                               | 208                       | 49                               | 24   | 24%  | 49%  |
| Corruption                                | 204                       | 49                               | 22   | 24%  | 45%  |
| Other Indicators                          |                           |                                  |  |  |  |
| Freedom House Democracy Average 1972-2003 |                           |                                  |  |  |  |
|   | 187                       | 48                               | 20   | 26%  | 42%  |
| Economic Freedom Index, 1970-2003         |                           |                                  |  |  |  |
|   | 123                       | 29                               | 12   | 24%  | 41%  |
| Time in Civil War since Independence      |                           |                                  |  |  |  |
|   | 170                       | 46                               | 16   | 27%  | 35%  |

Africa is still over-represented in the worst rankings, hardly surprising for the poorest region for outcomes correlated with low income, but it occupies less than half of the worst places on the ladder. There are plenty of other non-African countries that share the bottom places for worst governance and war.

There are several examples documented in the literature of exaggeration of Africa's negatives (not necessarily intentional). A specific instance of exaggeration about war risk is documented by Suhrke and Samset 2007. They note the widespread repetition of a statistic that

half of all African civil wars start up again within five years after the end of a previous one. This statistic has been widely publicized by agencies ranging from the World Bank to the UN Peacebuilding Commission to the Blair Commission on Africa, and used to justify a recommendation of heavy involvement of UN and Western “peacekeeping” forces in Africa (which we will discuss below). The statistic reinforces the stereotype of African societies as war-torn and fragile. Suhrke and Samset trace the figure to a research study where the interpretation of the statistic was unclear (was it supposed to be unconditional risk or was it 50 percent greater risk compared to other countries?), where a calculation of the simple realized probability using the data from the study yielded a figure of 26 percent, and where the same authors of the original research study lowered the same risk statement to 23 percent four years later (prior to the public statements cited above).<sup>12</sup> Perhaps policy recommendations will not change if the risk of recurrence of civil war is 23 percent instead of 50 percent, but the dissemination of an exaggerated statistic is another example of how African negatives are sometimes exaggerated.

Another example of negative bias in the aid community on portraying Africa is the UN goal-setting exercise known as the Millennium Development Goals -- goals on poverty and social indicators to be reached by 2015. Statements by the UN, World Bank, and International Monetary Fund, as well as by Africa campaigners like Tony Blair and Jeffrey Sachs, frequently repeat that “Africa is the only region that will miss all the Millennium Development Goals.” Easterly (2008) shows that the design of the goals tends to miss out on some African achievements. On some indicators, Africa is doing well in terms of absolute changes in an indicator (which usually makes more sense in welfare terms), but the goal is set in terms of percentage changes (e.g. child mortality rates). On other indicators, Africa *is* doing well in terms of percentage changes (e.g. primary enrollment ratios, gender equality in education), but the goal is set as a level target rather than as a changes target. There is one case where Africa is doing well in terms of a percentage change in a positive indicator (percent WITH clean water), but the goal is set in terms of

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<sup>12</sup> The original study was Collier and Hoeffler (2002, JCR)

percentage change in a negative indicator (percent WITHOUT clean water). In two curious cases, maternal mortality and AIDS infection, Africa is said to be failing to meet trend goals even though there is no comparable time series data with which to estimate trends. This may all well be accidental rather than anything intentional, but it contributes to the same pattern of exaggerating Africans' image as allegedly helpless victims. This pattern could be consistent either with a benign attempt to get more effort and money for Africa, or a self-interested attempt by aid agencies to expand their own budgets. Whatever the origin of such bias portraying Africa, the bias tends to reinforce the demand for transformational approaches to Africa's problems, and to exaggerate the potential impact of Western actions relative to actions by the African "helpless victims."

Although the long run growth performance is poor, it is of some interest that recent per capita growth in Africa has been good (see figure 1 again). There have been some high-tech success stories like the explosion of cell phones (mostly supplied by local private entrepreneurs) and Internet connections. Private capital flows to Africa (both portfolio capital and foreign direct investment) have become important for the first time in Africa's history since the late 1990s; they are now roughly as large as foreign aid. Africa-Asia trade (mainly driven by China) surged from trivial levels to \$100 billion.<sup>13</sup> There are also some sectoral success stories, like the success of textile exporting from Lesotho to the US (although now facing stiff competition from Chinese textile exports liberated from international quotas) or the way Kenya has grabbed a third of the European market in cut flowers. It will be important in thinking about whether the West can save Africa to have a balanced view of Africa that neither covers up bad news nor indulges an extreme stereotype of the helpless victim.

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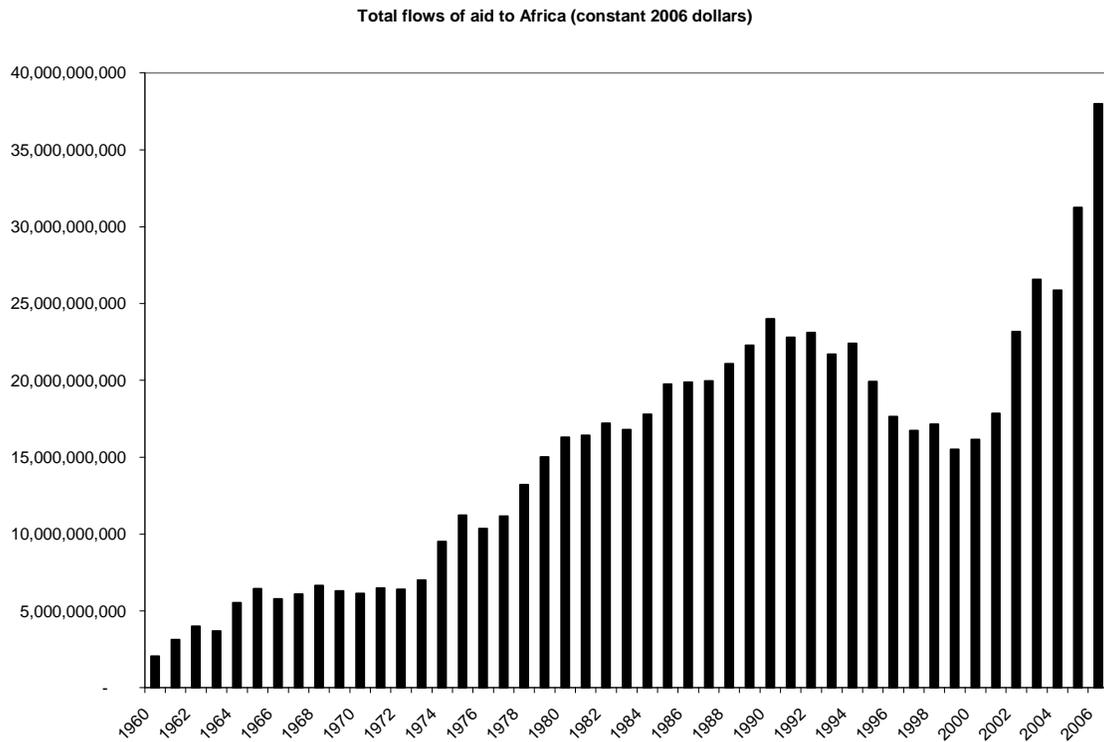
<sup>13</sup> Statistic from Miguel (2008), which also provides a nice balanced account of positive developments in Africa in the new millennium.

## *E. Aid to Africa*

### *i. Trends in aid to Africa*

The recent high profile of Africa in international policy discussions is matched by a surge in aid to Africa (figure 3). Aid to Africa grew steadily from independence to the early 1990s. There was then a decline in absolute volume of aid, possibly due to the competition of ex-Communist countries for attention after the fall of the Berlin Wall and “aid fatigue” after some of the disappointments of aid to Africa that this article will discuss below. Foreign aid seems to have returned to favor in rich country governments after 9/11, and Africa may have particularly benefited as a region that was seen as a potential breeding ground for terrorism. The success of anti-globalization protesters in focusing attention on world poverty, of which Africa was the poster child, seems to have merged with this anti-terrorism motive in creating support for increased aid to Africa. This potted history is admittedly speculative, but in any case, advocacy by development economists, celebrity activism, media attention, counter-terrorism efforts in Africa, and aid to Africa all increased together over the last few years. The surge in aid came on top of a high base, so the cumulative total of aid to Africa in today’s dollars from 1960 to 2006 is an impressive \$714 billion.

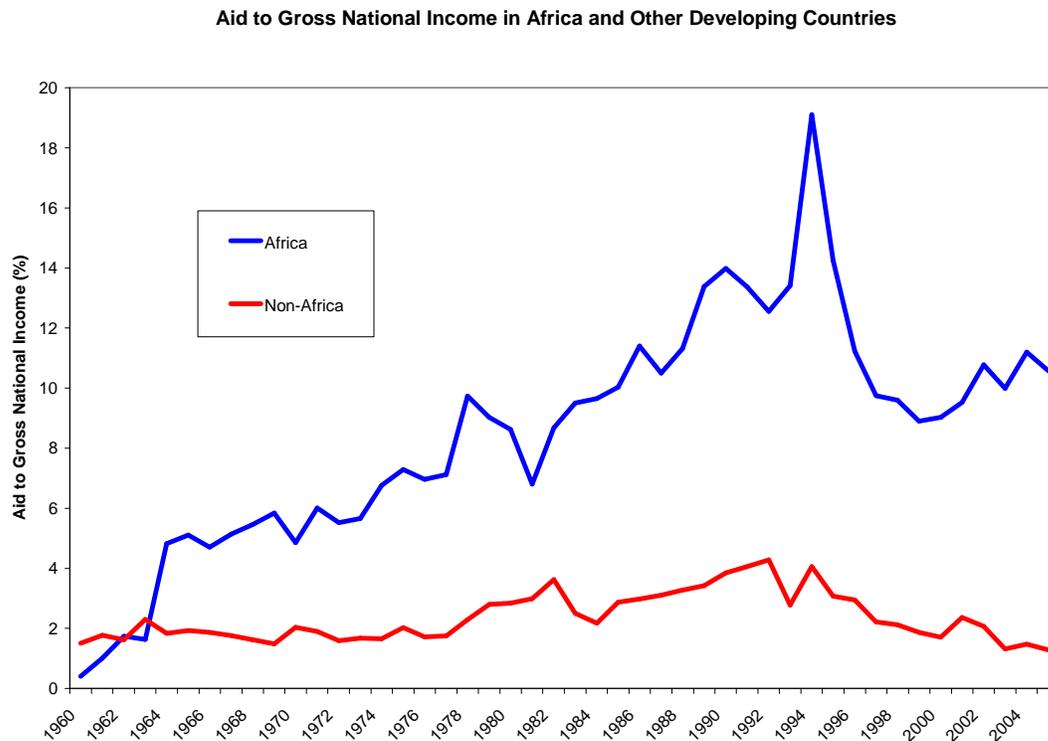
Figure 3: Aid to Africa



*ii. Aid compared to other regions*

Some of those who advocate further aid increases to Africa point out that aid to Africa is not that large measured in per capita recipient terms. However, this is misleading because there is a pronounced small country bias in aid. African nations with large populations get little aid as percent of GDP (notably Nigeria and South Africa), while many small African nations have large ratios of aid to national income. Hence, even prior to the recent surge in aid, the median African nation was already far more aid dependent than the median non-African developing nation (figure 4).

Figure 4: Aid to Africa in international perspective



Hence, the median African nation could serve as a laboratory of the effects of a large aid program relative to national income (a test of the “West as Savior” hypothesis), and we could evaluate progress or lack of progress accordingly. Of course, as already stated, there are huge problems testing transformational hypotheses. Specifically, there are serious problems with selection biases and reverse causality, an issue that has much preoccupied the literature. Aid to Africa is obviously high because of Africa’s problems, which means the correlation doesn’t tell us whether aid to Africa causes problems. Aid to Africa may further increase BECAUSE things get worse, rather than things getting worse because of aid. Still, big stylized facts may provide some bounds for intuition about counterfactuals. If there is a large aid to Africa program and things turn out miserably, to what extent is one ready to believe that they would have been even

worse without the large aid program? Conversely, if a particular sector in which aid donors are heavily involved shows a lot of improvement, casual intuition is more ready to believe in positive aid effects in this sector. Of course, there are also plenty of other factors influencing African outcomes besides aid. Theoretically, formal econometrics could control for third factors and resolve causality so as to resolve these issues, but we will see that the formal econometric literature on aid to Africa has not been conspicuously successful at this.

## **II. Theories and Evidence of the Effect of Western Assistance on Africa**

What would economic theory predict about the success of Western efforts to transform Africa? The models most often cited by those who predict large effects of Western efforts on Africa are models of poverty traps and multiple equilibria in which Africa's adverse initial conditions are both the explanation for African poverty and the potential lever by which Africa can be transformed, simply by making direct monetary transfers or by directly improving an input into development outcomes.

The alternative view is that of a unique equilibrium determined by adverse fundamentals. The latter view would require Western efforts to directly seek to improve the fundamentals, with a more modest payoff. Hence the "poverty trap" model goes with the "transformational" perspective, while the "fundamentals" approach goes with the "marginal" perspective..

### *A. The Attempt to Boost African Growth with Foreign Aid*

The simplest way that the "West could save Africa" would be if an injection of Western money (foreign aid) raised growth. Traditional development models of the 1950s and 1960s, which have now come back in favor in some policy circles, say that Africa is in a "poverty trap", in which a Big Push of aid to raise available funds for investment would permanently raise African growth (it is clear why this model is on the "transformational" side of the social change debate).

#### *a. Theoretical model of poverty traps*

A possible hypothesis of why Africa is poor is that it is in some version of a "poverty trap," which depends purely on initial conditions. The competing explanation is that Africa's poverty is

determined by fundamentals, regardless of initial conditions. To give a very general notion of a poverty trap, suppose there is some determinant  $X$  of per capita income  $y$  (we will call it “Factor  $X$ ”), which is itself a function of per capita income  $y$ . The shapes of the two relationships,  $y=f(\text{Factor } X)$  and  $\text{Factor } X=g(y)$ , will determine if poverty traps occur. Among the many possible candidates (not mutually exclusive) for Factor  $X$ , many of which will be considered below, are saving and investment, infrastructure, agricultural technology, education, health, policies, institutions, violent conflict, military coups, natural resource dependence, and “failed states”.<sup>14</sup> The poverty trap view would hold if the situation depicted in Figure 5 holds. If the slopes are as in Figure 6, then a “fundamentals” explanation for Africa’s poverty holds. In the first view, all countries have the same functional relationships, and only worse initial conditions have trapped Africa at the low equilibrium. In the fundamentals view, Africa has less of Factor  $X$  for every level of income, and it is this that determines its lower income.

As is obvious and already well known, although sometimes not always understood in aid policy circles, the simultaneity of factor  $X$  and income is not sufficient to generate “vicious circles” in which income and factor  $X$  get into a downward spiral on their way to the poverty trap. What is required is that BOTH Factor  $X$  and income have to be sufficiently sensitive to each other to generate the slopes shown in figure 5. For example, if  $\log y = a + b \log X$  and  $\log X = c + d \log y$ , then a poverty trap will be generated if  $bd > 1$ . In other words, if the multiplicative average of elasticities of  $y$  wrt  $X$  and  $X$  wrt  $y$  is greater than 1, then there will be “vicious circles” and “poverty traps.” Another simple prediction of the poverty trap model is that  $\Delta \log y$  (i.e. the per capita growth rate) is increasing in the level of the initial  $\log y$  (log per capita income).

This could be generalized to involve two Factor  $X$ ’s,  $X_1$  and  $X_2$ , which are simultaneously determined with each other and with income. Once again, we need the sensitivity of each endogenous variable to all the other endogenous variables to be sufficiently strong for a poverty trap to be possible. This would be the case if some combination of the following is

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<sup>14</sup> See Sachs (2005) and Collier (2007) for long lists of traps with many of these included.

sufficiently strong: the two Factor X's are strongly complementary to each other in their effect on income, each Factor X affects directly and strongly the level of the other Factor X, and there is feedback from income to both Factor X's. The poverty trap literature has historically stressed (and still stresses today) complementarities and linkages between different determinants of development (the schools will work better if there is electricity, the electricity system will run better if manned by educated workers, plus educated workers will produce more income when there are no power outages).

What is so critical about the difference between the two figures, and what makes the poverty trap model so appealing, is that either Factor X or income just needs to have a one-time increase to escape the poverty trap. One only needs to increase one of the two, because Factor X would endogenously increase in response to higher income, and income would increase with Factor X. In the fundamentals view, in contrast, an exogenous, temporary increase in income through aid would have no effect. A temporary increase in Factor X would also be unavailing. Moving Africa to a higher level of income would require some kind of direct intervention that would permanently shift Factor X up for every level of income.

The "poverty trap" depicted in Figure 5 seems to make the "West saving Africa" problem very simple. The solution to Africa's poverty just requires cash transfers to whoever is the agent short of money to pay for X (the government for public goods, and private citizens for private goods and for saving/investment).

Alternatively, outsiders could pay directly or implement a technological fix to raise X, and this would get the economy out of the poverty trap. The difference from the fundamentals approach to Factor X is that the increase in X need only be a one-time temporary increase in the poverty trap story, and the effects of an increase in X are much larger in the poverty trap story (transforming the country from poor to rich) than in the fundamentals story (a marginal increase in income).

Of course, there are strong caveats about the simple story of a poverty trap portrayed here. The income-causing-Factor X relationship depicted in figure (1) must hold for the specific type of income  $y_i$  that is alleged to break the poverty trap, dispensed to the relevant agent who will execute the spending. If Factor X is infrastructure (or health or education) and the aid is a transfer to a poor country government  $y_i$ , then the government must actually spend the money on infrastructure (or health or education) ( $\partial G_x / \partial y_i > 0$ ), and the spending must actually translate into better outcomes in infrastructure/health/education ( $\partial X / \partial G_x > 0$ ), in order for X to increase:

$$\frac{\partial X}{\partial y_i} = \frac{\partial G_x}{\partial y_i} \frac{\partial X}{\partial G_x}$$

That is, the causal relationship between income and Factor X must really be upward sloping; similarly, a direct attempt of donors to increase X must actually increase X. We will see below that both assumptions have been hotly debated in the aid literature, with the focus on the political economy incentives of politicians to spend the money on the right thing and to make sure the spending translates into better outcomes for Factor X. Also if some types of income increase Factor X, but aid receipts do not, then again aid would not work to escape the poverty trap even if it exists. For example, if X is institutions, we will see below that some studies argue that aid makes institutions worse (because aid increases the payoff to corruption, for example), even though we usually believe that higher income makes institutions better. Again, some poverty trap stories based on aid overlook the incentives faced by those who receive the aid when postulating that aid will have a positive effect on some particular Factor X.

Figure 5: Poverty trap for Africa

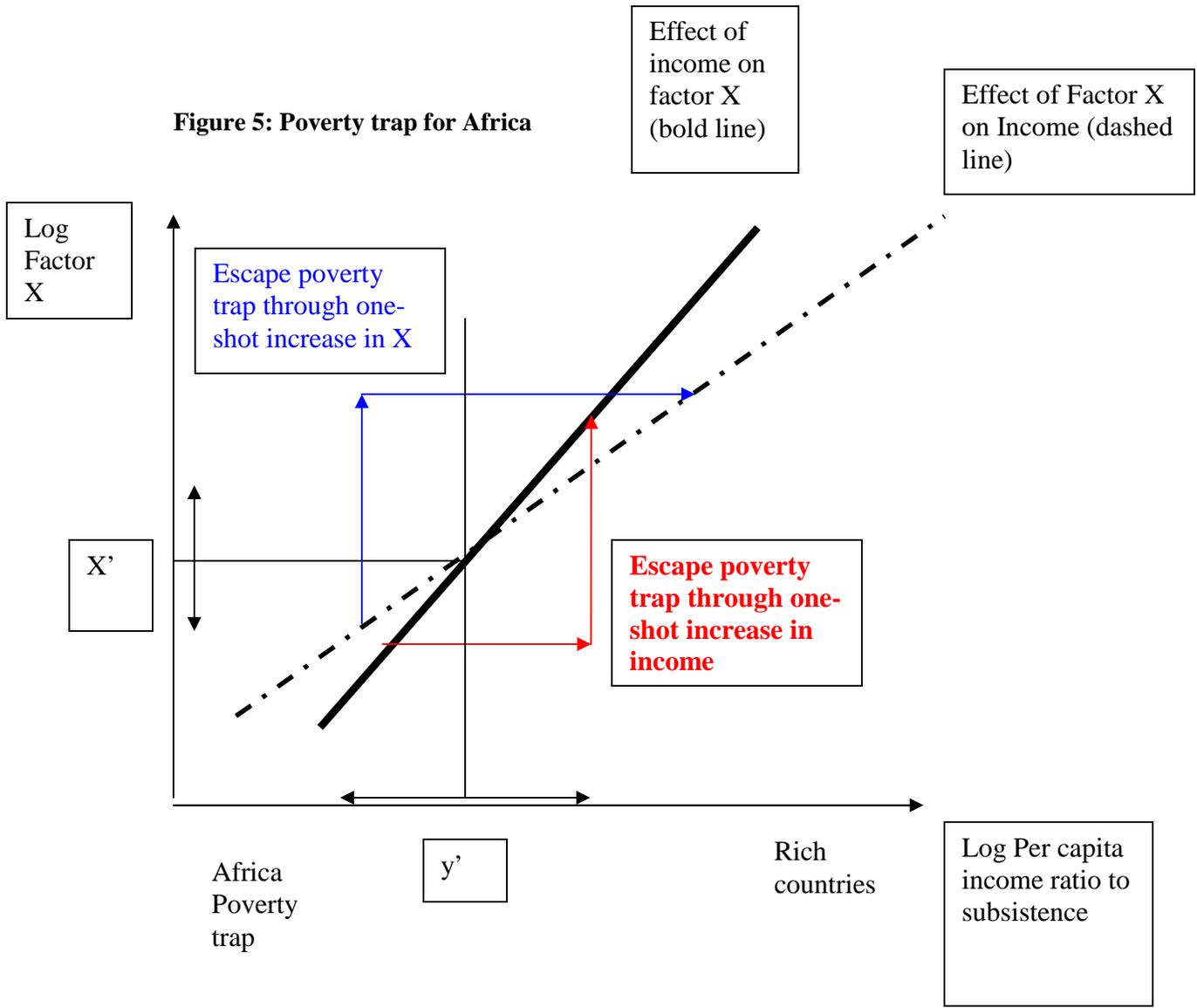
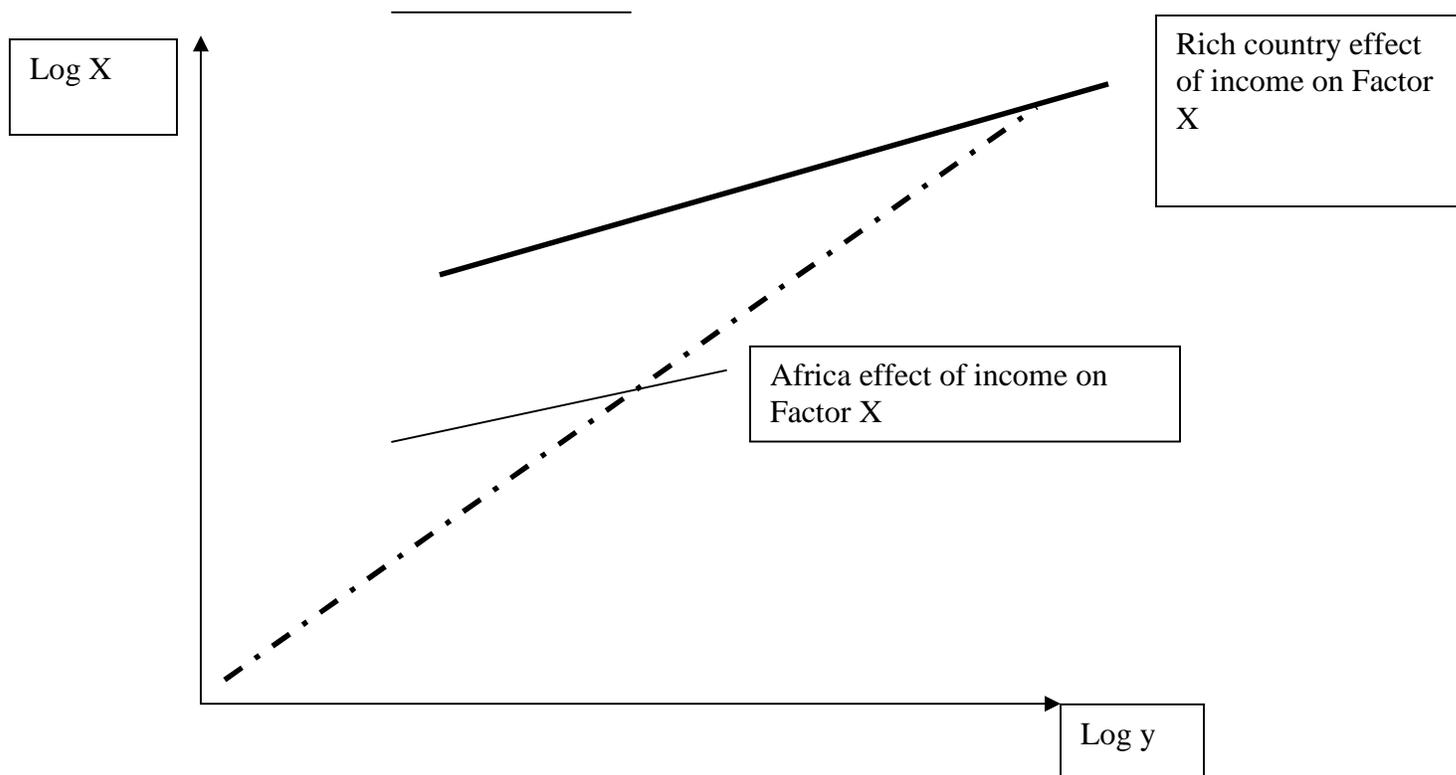


Figure 6: Fundamentals explanation for African poverty



The first and historically most oft cited mechanism for a poverty trap is that saving is very low for people who are very close to subsistence (as would be predicted by an intertemporal version of the Stone-Geary utility function). In a closed economy, saving is equal to investment, so investment is also low. In the Harrod-Domar model with the capital constraint binding, growth of GDP per capita is simply a linear function of the investment (=saving) rate minus the population growth rate and minus the depreciation rate. If saving is too low to keep up with population growth and the depreciation of capital, then per capita growth will be zero or negative. Early development economists in the 1950s and 1960s postulated a desirable per capita growth rate and calculated the “investment requirement” to meet this target – the distance between the low domestic saving rate and the “investment requirement” was called the “Financing Gap”. The role of aid was to fill the Financing Gap (Rostow 1960 and the “Two Gap Model” of Chenery and

Strout 1966). Thus, this model predicted a strong growth effect for foreign aid through its role in boosting domestic investment above what domestic saving would finance.

Although this model soon went out of favor in the academic literature on development (see Easterly 1999a for a discussion), it has come back strongly in the last few years in policy discussions, international organizations (where it always remained alive to some extent), and books for popular audiences. Current policy advocates for an increase in foreign aid to Africa have cited this model explicitly (Devarajan et al. 2002 at the World Bank, Blair Commission on Africa 2005, Sachs 2005, 2008, Collier 2007). One attraction of this model is that it allows a mechanical calculation of “aid requirements” to achieve growth targets for Africa.

The “Financing Gap” approach shows the lack of attention to incentives (particularly local incentives) that has plagued the aid literature. Even in a closed economy, saving depends not only on the distance from subsistence but also on the local incentive to save depending on the rate of return to saving and investment. In an open economy, investment is not determined by domestic saving, but depends on the rate of return to investment. Private foreign investors and bank lenders will invest in the economy if returns are attractive enough.<sup>15</sup> Domestic investors will also compare the returns to domestic and foreign investments, as shown by Africa’s extensive capital flight in which an estimated 39 percent of the stock of Africans’ capital is held outside the continent (Collier, Hoeffler, and Patillo 2001).

In the Solow model of a closed economy, a strong relationship between income and saving rates could generate multiple equilibria at low and high levels of capital stock, reopening the possibility of a poverty trap. Kraay and Raddatz 2005 have shown that the relationship between initial capital and saving must follow an S-shaped curve to generate a poverty trap.

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<sup>15</sup> The development economists of the 50s and 60s can be excused for neglecting this possibility given the underdeveloped international capital market of that era. There is much less excuse today, when many African countries have had some access to international capital markets beginning in the 1980s, and when those who today continue to lack access probably do more because of the investment risk than any market imperfection.

The other main mechanism to generate a poverty trap is some kind of nonconvexity in the production function in the Solow model. There may be strong external economies to investment, or there may be high fixed costs to investment projects such that a minimum threshold must be passed for investment to be productive (“you can’t build half a bridge”). This idea was part of the inspiration for the original article that first proposed a Big Push (Paul Rosenstein-Rodan in 1943). This strand has had a longer shelf-life in the academic literature than the “Financing Gap” model because of the great interest of theorists in models with multiple equilibria (see for example the article by Murphy, Shleifer, and Vishny 1989). Sachs 2005 also emphasizes such nonconvexities in suggesting that Africa is in a poverty trap.

*b. Empirical evidence on poverty traps*

*i. General sample*

It is not that easy to test for poverty traps in general, because they can take so many different forms and apply at so many different levels of aggregation. It is plausible that there WAS a poverty trap at the global level in the very long run (Galor 2005, Galor and Weil 2000), which may have inspired the idea of poverty traps in development.

It is somewhat easier to test some of the specific poverty trap mechanisms specified by early and recent development models. The savings- poverty trap model is testable by examining the shape of the savings function. Kraay and Raddatz 2007 failed to find evidence for the necessary S-shaped behavior of saving (they also failed to find technological nonconvexities in the production function, for good measure).

A more general test of the poverty trap is simply checking whether initially poor countries are more likely to have zero or lower growth than richer ones. The issue of growth differentials between rich and poor countries is the subject of a gigantic literature on convergence, the usual finding of which is that poor countries grow faster conditional on other fundamentals (“conditional convergence”). However, this is not the right test if the fundamentals are the factor X’s which may be responding to income in a way that creates a poverty trap. A simpler test is

whether poor countries unconditionally grow more slowly or are more likely to have zero per capita growth (recall the prediction of the poverty trap model that growth is increasing in initial income). Easterly 2006 failed to find evidence of this type for poverty traps at low initial income – the poorest quintile at the beginning of each period did not subsequently have significantly lower growth rates than higher income strata.<sup>16</sup>

*ii. Africa-specific poverty trap*

Some of the literature argues that Africa is caught in a poverty trap even if other regions are not (Sachs 2005, 2008), or more generally, that countries in the “Bottom Billion” are still in a poverty trap which other initially poor countries have managed to escape (Collier 2007). This latter story is close to making the poverty trap hypothesis non-falsifiable and tautological, in which any country still poor is in a poverty trap and any initially poor country that has grown richer is not. The existence of the Bottom Billion is implied to be evidence for a poverty trap, whereas by definition there will always be a Billion at the Bottom! Collier 2007 shows that the Bottom Billion have had poor growth, but this finding suffers from selection bias. Collier selected the poorest countries included in the Bottom Billion at the END of the period, thus biasing the sample towards countries that have had dismal growth performance over the preceding period.

An Africa-specific poverty trap seems to be ex-ante testable – the shapes of the Factor X and y curves could be different in Africa than elsewhere. For example, Africa’s disease environment could be worse than other regions, and the health poverty trap could hold if African health is more sensitive to income than in other regions.

However, if Africa’s poor economic growth is the motive for singling out Africa for testing for a region-specific poverty trap, then a selection bias still renders the Africa-specific poverty trap test invalid. It is suggestive, moreover, that a number of African members of the “Bottom Billion” were middle-income countries in earlier periods and then declined into the

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<sup>16</sup> Although poverty traps for countries in the recent postwar data do not seem consistent,

bottom (Cote d'Ivoire being the classic example: the "Ivorian miracle" of 1960-78 turned into one of the worst growth rates ever for the subsequent quarter-century.)

*c. Empirical evidence on aid and growth*

Another prediction of the poverty trap model is that aid will have a sizeable effect on economic growth, as it enables countries to break out of poverty and move towards higher income (the "transformational" view again).

*i. Most widely cited results*

The aid and growth prediction has been the subject of a vast empirical literature. The literature only really began to make progress when the severe problem of reverse causality was addressed with the use of political instrumental variables for aid flows, as well as population size (a promising instrument, since as already noted, there is an exogenous small-country bias in aid such that smaller countries get higher aid per capita and higher aid as a ratio to their income). Boone 1996 was among the first to use such instruments and found zero effects of aid on investment and growth.

Another widely-cited milestone in the literature was Burnside and Dollar 2000 (BD), which also found that aid had no effect on growth. However, they also tested an interaction term between aid and government policy, which was significantly positive in some of their regressions. Hence, they concluded that raised growth when the recipient had good policies (measured by the Sachs-Warner openness index, low inflation, and low budget deficits). This finding was extremely influential in the policy debate about aid at the time, and even contributed to the creation of a new US government aid agency (the Millennium Challenge Corporation) designed to give aid to countries with good policies.

What is notable given this strong policy influence is that the original results were both weak and fragile. BD used similar instruments as Boone for aid. Curiously, however, the significant positive effect of aid on growth (with "good policies") held only in their OLS regressions, not in 2SLS (they argued this was not a problem because they failed to reject

exogeneity of aid). And even for the OLS coefficients, the positive growth effect of aid was significant (under good policies) in just 2 out of the 4 regressions they presented. Furthermore Easterly, Levine, and Roodman 2003 (ELR) subsequently showed that the significance of the Burnside-Dollar aid-policy interaction term even in the OLS regressions where it was significant was not robust to some basic checks, such as adding new data that had become available since the original study. The distinguished academic panel led by Angus Deaton that reviewed World Bank research singled out the Burnside and Dollar results for criticism for lack of robustness and unconvincing identification strategy, and criticized the World Bank for overselling this particular result in its advocacy for more foreign aid (Deaton et al. (2006), pp. 52-57).

The other entries in this literature widely cited by the aid and growth policy discussion are Clemens, Radelet, and Bhavani 2004 (CRB), which finds positive effects of the “right type” of aid on growth, and Rajan and Subramanian 2007 (RS), which fails to confirm the CRB finding (or the BD finding) and in general finds a zero effect of aid on growth. A recent paper has even found a negative and significant effect of aid on growth (Djankov, Montalvo, and Reynal Querol 2006a) in many specifications, which the authors have link to increased corruption caused by aid (see Djankov, Montalvo, and Reynal Querol 2006b).

Of course, there are many more aid and growth papers than those mentioned in the above highlights, including some that argue for strong positive growth effects of aid. According to Doucouliagis and Paldam 2008, from 1968 to 2004, there were 1,025 reported regressions by 104 researchers in 97 published papers on aid and growth. Doucouliagis and Paldam did a meta-analysis of aid and growth studies and concluded that on balance the typical finding was a positive but insignificant relationship. ELR, CRB, and RS were not included, apparently because they were too recent.

*ii. Identification, Data mining, Robustness checks, and Magnitudes*

This survey does not make more of an effort to survey all corners of this gigantic literature because the quality of most articles is poor. Most aid and growth articles fail to have a convincing identification strategy.

While it was certainly progress to address identification in the articles cited above, that is not to say identification is easy to achieve. For example, does politically-motivated aid (such as aid to Egypt) have the same effects as altruistic aid? If not, the use of political motivations as instruments will address the effect of the first, but not the second. And political scientists might question whether political motivations of donors seeking poor country allies are truly exogenous to variables like income and growth.

Population size is another promising candidate for an instrument because of the exogenous and pronounced small country bias in aid. Of course, it may not satisfy the exclusion restriction as population size might directly affect growth. The growth regression literature has extensively looked for population scale effects and has generally failed to find them. This is not a valid test of the exclusion restriction, but it does give some important reduced form information. Given that aid received as a ratio to income *is* strongly affected by population size, then if aid affected growth, we would expect a negative reduced form relationship between population size and growth. This is not there in the data, which partly reflects the poor growth performance of many small Pacific and Caribbean islands and small African nations (all on average also very aid-intensive), so this is indirect evidence against a positive growth effect of aid.<sup>17</sup> Easterly and Kraay (2000) found no evidence that small population size affected growth performance on average.

Werker et al 2007 is a recent paper that seems to have a believable and original identification strategy (aid from OPEC members to their poor Muslim allies, with the instrument being the price of oil interacted with a Muslim dummy). They find a short-term effect of aid on output, but also

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<sup>17</sup> Unfortunately, there could be positive scale effects that small countries miss, offsetting the negative scale effects of getting more aid in small countries.

find a zero effect of aid on medium-term growth. There is still the doubt about this is whether it extrapolates to non-intra-Muslim aid.

The other problem with the aid and growth literature is data mining. The above statistics on number of studies and regressions highlight a problem that has plagued the cross-country growth literature in general – there are many more right-hand side variables than there are data points (the above statistics actually understate the problem, since empirical researchers typically run more regressions than they report, not to mention papers that never get published for lack of results). Durlauf, Johnson, and Temple 2005 discuss this problem for the growth literature as a whole, listing 145 variables that have been found to be significant in published growth studies (where the cross-country sample seldom exceeds 100 observations). Interestingly, aid does not even make their list. Nor did aid attract enough attention in the general growth literature to make the list of 32 variables whose robustness Doppelhoffer et al. 2003 examined, or the 59 variables Sala-i-Martin (1997a, 1997b) tested in running 2 or 4 million regressions.

There is no clear theory as to what other control variables should be included, which also weakens confidence in knowing what instruments satisfy the exclusion restriction. There is even doubt how the aid variable itself should be included (variants in the literature cited above have included quadratic terms for aid/GDP, the log of aid, separating out aid loan repayments as a linear term combined with a log aid term, interacting aid with other variables, and many others), there is a serious data mining problem. Control variables in the above literature have included such non-intuitive entries as Ethnic Fractionalization\* Assassinations (BD). With the literature in this condition, hypotheses about aid and growth are virtually non-falsifiable, since any one result can be contradicted with a different specification that is equally plausible as the original one. The constructive thing that one can say is that data mining would manifest itself as a lack of robustness of results – changes in

both the magnitude and significance of the aid coefficient -- which seems to be the case in the aid and growth literature. The failure of ELR to confirm BD, and the failure of RS to confirm CRB and BD, is suggestive of this lack of robustness.

I did a very simple exercise for this paper to describe the state of evidence on aid and growth; I mean this exercise to be illustrative rather than a new contribution on aid's effect on growth. To avoid the data mining problem, I went to the extreme of a simple bivariate regression of per capita growth 1961-2005 on the aid to Gross National Income ratio, 1961-2005, using the log of population in 1960 as an instrument for aid (as noted above, probably the best, albeit highly imperfect instrument for aid). There is a problem of omitted variables in the growth regression, but under the admittedly wildly heroic assumption that population does not affect the omitted variables, the IV procedure also corrects for omitted variable bias (the saving grace may also be that nothing much seems to be robust in growth regressions anyway). Table 4 shows the results. The first stage shows the initial log of population to be free of weak instrument problems. The second stage regression shows a slightly negative coefficient on aid in the growth regression. The confidence interval for the coefficient is [- .126, 0.047].

Sometimes the critics of aid-causes-growth models have been alleged to confuse "absence of evidence" with "evidence of absence" of a growth effect of aid. The predicted value for the aid coefficient under the "Two Gap Model" of the 1960s that expanded on the "Big Push" model of the 1950s was around 0.2 to 0.5, so this model is strongly rejected by the estimates in Table 4.<sup>18</sup> Any model that predicts a growth effect of aid larger than .047 percentage points of growth for every 1 percent of aid to GNI is also rejected.

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<sup>18</sup> The Two Gap model assumed that all aid went into investment, and that the coefficient on investment for predicting growth was 0.2 to 0.5 (reflecting what was called the Incremental Capital Output Ratio of between 2 and 5)

**Table 4: Simplest IV regression of per capita growth on aid**

First stage regression of aid on population

Dependent variable: average aid as share of GNI, 1961-2005

|                     | Coefficient | Std. Error | T-stat |
|---------------------|-------------|------------|--------|
| Log population 1960 | -0.020      | 0.005      | -4.33  |
| Constant            | 0.374       | 0.073      | 5.09   |
| R-squared           | 0.163       |            |        |
| F-stat              | 18.79       |            |        |
| Observations        | 161         |            |        |

|  | Statistic | P-value |
|--|-----------|---------|
| Cragg-Donald N*minEval stat.   | 31.29     | 0.00    |
| Ho: matrix of reduced form coefficients has rank=K-1 (underidentified) |           |         |
| Ha: matrix has rank>=K (identified)                                    |           |         |

IV Regression with Robust Standard Errors

Dependent variable: Per capita growth, 1961-2005

|  | Coefficient         | Std. Error | Z-stat | 95% Confidence Interval |             |
|--|---------------------|------------|--------|-------------------------|-------------|
|  |                     |            |        | Lower Bound             | Upper Bound |
| average aid as share of GNI, 1961-2005 | -0.040              | 0.044      | -0.90  | -0.126                  | 0.047       |
| Constant                               | 0.020               | 0.005      | 4.34   | 0.011                   | 0.029       |
| Observations                           | 161                 |            |        |                         |             |
| Instrument                             | Log population 1960 |            |        |                         |             |

In the end, despite vast effort, the literature has failed to produce a large positive causal effect of aid on growth that survives robustness checks, failing to confirm the prediction of the Big Push/Two Gap model. This resonates with the stylized fact that African growth outcomes have been uniquely poor, and yet Africa is the most aid-intensive continent. To believe in a positive growth effect of aid, one needs to believe in the counterfactual that African growth would have been even worse in the absence of aid (not impossible, but harder to believe than if growth had been respectable). Given the figures shown above where the median aid received since 1970 was around 10 percent of GDP (Figure 4) and the per capita

growth outcome was roughly zero percent (Figure 1), the implausible counterfactual implied by the “Big Push” coefficient of [0.2,0.5] is that the median African growth would have been -2 to -5 percent per capita in the absence of the aid “Big Push” from 1970 to 2005.

### *B. Project interventions*

Another approach to “saving Africa” is to try to deal directly with some of the root causes of Africa’s poverty (in other words, directly attack some Factor X’s). At first blush, it would seem to be easy for donors to finance some productive public goods – just pave the damn roads! Just drill some boreholes! Just give farmers fertilizer! In terms of the poverty trap and fundamentals model, the intervention to increase Factor X could either be motivated by an attempt to escape the poverty trap (the “transformational” case that the development impact of the increase in X is very large) or by an attempt to improve the fundamentals so as to shift income higher in Africa (with a more “marginal” payoff).

Indeed because the results are so tangible and visible, this survey will argue that aid to Africa has probably been more successful at achieving some project successes than it has been at other approaches to aid. However, the aid industry still felt that the results of the project approach were sufficiently disappointing (from a “transformational” viewpoint) that it shifted away from it strongly, beginning around 1980 (the beginning of “structural adjustment,” to be discussed below). We will see an interesting escalation in the literature and in policy, with the West first trying to fix those project-specific X’s that are more amenable to outside fixes, with at least some success but still a disappointing growth payoff (i.e. the results seemed to be marginal rather than transformational), followed by “transformational” attempts at more systemic changes to be discussed in the following section.

Most of the emphasis in project-specific efforts has been in addressing problems of illiteracy, disease, low agricultural productivity (possibly linked to land tenure practices, to be discussed more in the “institutions” section below), and poor social and physical infrastructure.

These efforts have a long history. In an extreme example of the recycling of aid ideas across generations, a 1938 survey of colonial Africa commissioned by the British covered some of the same problems and even proposed some of the same solutions as the 2005 UN Millennium Project that comprehensively surveyed aid interventions, as shown in Table 5 (perhaps colonial and foreign aid approaches to Africa are not as dramatically different as they are usually said to be!).

Table 5: The Similarity of Old and New Recommendations for Technical Interventions in Africa

| <i>African problem to be addressed</i> | <i>Committee of the African Research Survey, 1938 (headed by Lord Hailey)</i>  | <i>UN Millennium Project, 2005 (headed by Jeffrey Sachs)</i>  |
|--|--|---|
| Malaria                                | {Steps to control malaria in European homes include} mosquito screening, mosquito bed-nets, and the use of insecticidal sprays...in certain native areas...malaria control by the spraying of native huts with a preparation of pyrethrum (p. 1126)  | the public good will best be served by the free provision of insecticide-treated nets, application of residual insecticides, and provision of effective antimalarial medicines and diagnostics.... insecticides for indoor residual spraying (mainly DDT and pyrethroids) (p. xii, p. 6, Malaria task force report)   |
| Hunger and nutrition                   | Whether the African eats enough food and, if he does whether it is of the right kind, and whether the attack on poor nutrition may not be the most important factor in reducing disease...the African suffers from deficiency of Vitamin A (pp. 1122-1123)   | Chronic undernourishment is caused by a ... lack of access to food of sufficient quality and quantity.... It results in ... high child mortality brought about by associated diseases...Malnutrition {is also} caused by inadequate intake of ... {micronutrients such as} vitamin A (p.3 Hunger Task Force summary report,p. 128, Hunger Task Force full report)   |
| Soil fertility                         | “methods of improving soil fertility {such as} green manuring” (p. 962)  | “using green manure to improve soil fertility” (p. 107 Hunger Task force main report)   |
| Soil erosion and deforestation         | “soil erosion has become recognized as one of the major problems ...” (p. 1056) “Since the destruction of vegetal cover is the prime cause, the restoration of such cover is the obvious remedy.” (p. 1063) “The most ancient, universal and effective method of increasing absorption and reducing runoff on cultivated land is the use of terraces.” (p. 1064) | “severely degraded soils...often suffer from unchecked erosion... (p. 107, Hunger Task force main report) “the overharvesting of vegetation, stripping landscapes of their forest and plant cover and destroying riparian vegetation... increases the risks of ... erosion. (pp. 172-173) Contour terraces, necessary on sloping lands... when furnished with grasses and trees... {to avoid} soil erosion (p. 113) |
| Land tenure                            | “all discussions on the subject agree as to the value of giving security to the occupier of land... legal security against attack or disturbance can most effectively be guaranteed by registration.” (pp. 868, 876)   | “The rule of law involves security in private property and tenure rights ... upholding the rule of law requires institutions for government accountability... this requires a well functioning and adequately paid civil service and judiciary, proper information technology (for registration of property ...)” (pp. 31, 111)   |
| Clean drinking water                   | Description of sinking boreholes in various African countries (pp. 1033-1052)  | “Increase the share of boreholes to half the share of improved dug wells” (Water and Sanitation Task Force, p. 105)   |

a. *Overall record of projects*

i. *Old evidence from project rates of return*

Before turning to a discussion of the details of Western efforts in each sector, it is useful to survey the overall record of the project approach. The first kind of evidence is ex-post rates of return to aid projects, usually calculated by the aid agency or even the individual doing the project (and so probably biased upwards). In the first few decades of foreign aid, these rates of return were in the positive double-digit range. The literature discussed the “micro-macro” paradox, in which project returns to aid were high and yet as we have seen, the literature often failed to find an overall growth payoff to aid (see discussion in Doucouliagos and Paldam 2008). Later evidence on projects was not as favorable. The World Bank commissioned a study (known as “the Wapenhans report,” World Bank 1992) of World Bank project performance, as measured by the percent of projects classified as successful (again done by project managers and thus probably biased upward). Even with the probable upward bias, only 59 percent of projects in Africa were classified as “successful,” compared to 74 percent worldwide for World Bank projects.

ii. *New evidence of randomized controlled trials*

The calculation of project rates of return had a number of problems. The estimation of the benefits of the project were done in an ad-hoc way that left a lot of room for subjective judgments. This was particularly problematic because the aid agency (and sometimes the specific individual who had led the project effort) were the ones calculating rates of return, implying a possible conflict of interest that would bias rates of return upwards.

A much more rigorous way to assess aid-financed interventions has blossomed in the literature in recent years – the use of randomized evaluations. These measure the impact on some measure of well-being of an intervention in a randomly selected treatment group, as compared to the randomly selected control group. This literature has found many aid project interventions to have positive benefits and to be cost-effective (Banerjee 2008 and Duflo and Kremer 2008).

Based on this encouraging evidence, Banerjee has written positively about the potential of such aid in his book *Making Aid Work* (2007).

This literature is so well known that I don't attempt any broader survey here; this methodology may indeed be a major step forward in assessing aid's impact. However, its advocates may oversell it a bit. If an aid intervention works in one very small randomized trial, how confidently can we extrapolate that to other settings, vastly different in institutions, incentives, norms, human capital, initial conditions and many other local factors that affect outcomes? The extrapolation conditions seem to depend on a very dominant role for outside actors (this common theme surfaces again); if local actors are much more important, then extrapolation looks more problematic.

This methodology could work as an evaluation of whether THAT NGO or aid agency's project worked on THAT occasion, which could be useful for holding aid agencies accountable for results, although it is a costly methodology for this narrow purpose. It also seems an overstatement that this is the only valid evaluation method. Such methods are little used even by rich democratic governments that would seem to have strong incentives to prove results to voters, especially to specialized interest or advocacy groups. Lastly, this methodology does not address the general equilibrium effects of a marginal aid project, to be discussed next.

### *iii. General equilibrium effects*

The aid literature has worried about whether the evidence of positive project impacts is enough to suggest a significant positive impact of aid. Rajan and Subramanian 2008 pointed out that the micro-macro paradox still holds with the new randomized evaluation literature, with positive returns to micro projects yet apparently still zero macro growth payoff. I will consider more systemic approaches to aid below, but here I stay within the confines of the project approach to discuss two issues that are often raised in the literature: fungibility and implementation. Note that these arguments are often used to justify more sweeping

transformational approaches themselves, but whether they are valid concerns is a separate question than whether the transformational approach is the right one.

1. *Problem of fungibility,*

The fungibility concern recognizes that if the government receives an aid transfer for good purpose A, that transfer frees up the government's own money previously spent on A for some other (possibly bad) purpose B. In this case, the true effect of the aid is to finance the other increased spending B that would not have happened without aid to the donor-favored purpose A. As Paul Rosenstein-Rodan said colorfully way back in 1953, you might think you are financing a power plant when in fact you are financing a brothel. Fungibility has been explicitly tested in the aid to Africa literature. Swaroop and Devarajan 1998 and Feyzioglu, Swaroop, and Zhu 1998 both find significant but less than 100 percent aid fungibility across sectors. Even with partial fungibility, unfortunately, the rate of return to an aid-financed project is not the same as the general equilibrium rate of return to aid spending.

2. *interaction with incentives on implementation*

The second problem with evaluating the benefits of aid spending is one of implementation. If one shows positive results from a particular project or intervention that is executed, it does not follow that giving aid for that purpose will automatically result in project execution. How aid will be used depends on the incentives of project supervisors in the donor agency and, even more importantly, civil servants in the recipient government (if the recipient is a government as it usually is in official aid). Such effects may not show up in the pilot project but become problematic once the program is scaled up after a positive evaluation. Again, the dubious assumption is that local actors have a small impact on outcomes relative to outsiders.

Incentive problems have been a major theme of the literature on health and education in Africa (often called "systems issues," as in you cannot expect good health outcomes if the public

health *system* is dysfunctional). While educational enrollments have expanded rapidly, the quality of education is hampered by missing inputs like textbooks and other school materials, weak incentives for teachers to show up or teach effectively, corruption in education bureaucracies, appointment of unqualified teachers for patronage reasons, and disruption of schooling by political events (Filmer and Pritchett 1999). Donors have long recognized the quality problems in education (for example, World Bank WDR 1980), but these problems are remarkably persistent (World Bank WDR 2007 again stressed quality problems in education).

In health, corruption in the health system (studies in Guinea, Cameroon, Uganda, and Tanzania estimated that 30 to 70 percent of government drugs disappeared before reaching the patients), absenteeism of health workers, and sheer bureaucratic inefficiency are chronic problems. Some widely-cited regressions find no impact of health spending on health outcomes (Filmer, Hammer, and Pritchett 2000, Pritchett and Woolcock 2004).<sup>19</sup> With doubts about implementation, a research project studying a health or education intervention whose execution is guaranteed by the design of the research project tells us little about how effective will be health or education aid about achieving that execution.

We see similar themes in infrastructure. Since independence, there has been much road building and expansion of electric generating capacity and water supply, supporting the idea that aid is more productive when directed to specific, piecemeal interventions. However, the incentive problems appear in this sector as well. There has been a chronic underinvestment in maintenance of infrastructure. For example, donors (and the recipient governments) have the incentive to build highly visible new roads, but less incentive to provide invisible maintenance.

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<sup>19</sup> Sachs (2005, 2008) has argued that Africa's health is particularly disfavored by an ecology favorable to the most lethal kind of malaria. Skeptics wonder why donors and governments cannot respond by adopting fairly low-cost treatment and prevention of malaria. The colonial authorities controlled malaria successfully in some places and periods where there were strong incentives to do so. Utzinger, Tozan, and Singer 2002 discuss successful malaria control in the Zambian copper mining belt during the colonial period. Caldas de Castro et al. 2004 discuss a successful program to control malaria in Dar es Salaam before World War I.

The bias against operations and maintenance in infrastructure has been known for decades -- highlighted for example in World Bank (1981, 1988, 1994), with each succeeding report bewailing the failure to make progress since the previous report -- and it remains a problem today.<sup>20</sup> The results are chronically potholed and cratered donor-financed roads, for example, always being reconstructed and then deteriorating again. This is another example of inability to learn from past mistakes.

Kremer and Miguel 2007 suggest the problem is the donors' obsession with "sustainability," in which they envision the recipient government or local communities providing the financing of recurrent costs (operations and maintenance) after donors finance the capital costs of infrastructure, so that the project will be "sustained" once donor financing ends. This hope has turned out to be an illusion, as the failure to cover recurrent costs has been nearly universal. Kremer and Miguel suggest donors should be willing to permanently bear the recurrent costs of their projects if they really want those projects to be effective. This is again the conflict between the "transformational" view of projects, in which a project will lead to a permanent systemic improvement with "sustainability," versus the "marginal" view of Kremer and Miguel that the project should just be assured of having lasting positive benefits.

Of course, if Kremer and Miguel's analysis is extended into a proposal for the donors to take over completely all aspects of any public service that yields positive benefits, then once again one would have to worry about the fungibility question -- wouldn't the resulting equilibrium be that domestic government spending would be completely redirected to unproductive uses? Still, the fungibility question does not completely destroy the information content of finding positive project returns to aid projects. Fungibility is generally significantly less than 100 percent in empirical studies, so its effect is to scale down the positive effect of a project rather than to reverse or eliminate it. The only exception would be if fungibility allows an increase in government spending elsewhere that is positively harmful, such as spending on armed forces that

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<sup>20</sup> A nice survey on road maintenance is in Peterson (2008).

will harm the local population or neighbors (for example, Uganda was a donor favorite during the period its army participated in the civil war in the Congo).

Fungibility and implementation problems are often used to justify a movement towards a more transformational approach to project aid: namely the aid donor should review all public expenditure and reform the civil service and do “capacity-building” so as to create civil servants who had the capacity to spend money on the right things and implement things effectively. This kind of approach increasingly got bundled together with major economic policy reforms in the “structural adjustment” era after 1980 to be discussed below. The World Bank did 70 civil service reforms in Africa during 1987-97, and over a quarter of World Bank lending to Africa is currently devoted to “capacity-building.” Yet political scientists specializing in analyzing African states see little sign of effect of these Herculean efforts at making civil servants perform better, even seeing some signs of decline (Moss et al. 2008). The transformational response to fungibility and implementation problems was not so constructive.

*b. International collective action on outcomes affected by project aid*

An alternative approach to most of the social indicators affected by project aid was for the United Nations to announce targets for social indicators like primary enrollment and child mortality for some date 10-15 years in the future, such as the Millennium Development Goals set for 2015. This was supposed to induce greater effort by international aid agencies and poor country governments to improve these indicators (Sachs 2005, 2008). The goal-setting approach seems to fall in the “transformational” camp, as usually the goals imply a very large improvement in development outcomes, and the intention in improving the social indicators is to launch the country as a whole into self-sustained growth.

There is also an analogue to the Big Push/Two Gap approach to aid and growth in the MDG discussion, as increased aid is predicted to mechanically increase social indicators such that MDGs are attained, given minimum good government: “aid ‘will ensure that no country genuinely committed to poverty reduction, good governance and economic reform, will be denied

the chance to achieve the Millennium Goals through lack of finance.’’<sup>21</sup> The same mechanical approach shows up in exercises that calculate the “costs” of achieving the MDGs, and then leaps to the *non sequitur* that raising aid by an amount equal to those “costs” will in fact achieve the MDGs. A much quoted study by Devarajan et al. (2002) of such a costing exercise came up with a price tag of \$40-60 billion (which implied an increase in aid by the ubiquitous “double” factor noted above). Devarajan et al. themselves are too good and honest as economists to take their own estimates seriously – for example, they note about their cost calculation for the health and education MDGs that “empirical evidence from developing countries suggests only a weak link between public spending on education and school enrollments, or between health expenditures and mortality or disease.”

Taken literally, this approach was not successful as the goals were very seldom met, and the same goal was postponed to a later date for another international campaign. Education was a good example of this, with one of the goals of the Millennium Development Goal campaign to achieve universal primary enrollment by 2015, a goal that is most relevant to Africa since it is the main region still lagging behind on this indicator (despite the rapid progress noted above). Clemens (2004) notes about the education goal that “Roughly once every two decades since the Second World War, an international gathering of policymakers has solemnly promised to achieve universal primary education in developing countries by about twenty years thereafter.” A series of UNESCO conferences in the early 1960s set Universal Primary Enrollment as a goal for 1980. When that was not met, a series of new UN summits reset the goal for 2000. As 2000 came without such achievement, the UN’s Millennium Development Goals summit in that year made another promise to achieve universal enrollment by 2015. Similarly for infrastructure, a previous summit in 1977 set the goal of universal access to water and sanitation – 2015 targets for the

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<sup>21</sup>From a report by the Africa Progress Panel (2008), a taskforce headed by Kofi Annan and made up of prominent African and non-African leaders to follow up on the Blair Commission for Africa (2005). The statement was originally made at a G-8 summit in 2002.

Millennium Development Goals -- for 1990.<sup>22</sup> So missing the goals did not seem to induce any change in behavior for those who favored this approach, since they simply repeated the exercise for a future date.

The international goals approach has some obvious theoretical flaws. It sets up an international collective action problem, with multiple agents who face a serious free rider problem, with the result that no one actor faced any consequences for failing to meet the goal. For a single agent, having multiple goals is like having multiple principals, which is well known to weaken incentives for the agent because principals' incentives for the agent to work on *their* goal cancel out each other. Finally, to make things even worse, even if there were only one agent and one goal, the Millennium Development Goals are broad outcome measures where it is very difficult to attribute social outcomes to aid efforts, since the outcomes also depend on many other things. Hence, the incentives for action created by international targets seem to be very weak indeed (and even then the action seems to be more oriented toward increasing total aid dollars rather than improving effectiveness of that spending to produce better outcomes).<sup>23</sup>

Defenders of these goal-setting exercises suggest they increase the aspirations of some or all of the aid agents, leading to positive results. They do seem to have recently been successful in contributing to the international advocacy for aid to Africa (as discussed in the introduction). However, given the repeated lack of success in attaining goals, the goals approach seems like another example of cyclical fashions, i.e. of failure to learn in the African aid effort. It is also another example of exaggerating the potential impact of outside actions.

In line with the theme of this paper, the Millennium Development Goals were very much a “transformational” exercise, in that they implicitly committed aid agencies to “do everything at

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<sup>22</sup> United Nations Habitat, *Water and Sanitation in the World's Cities*, 2003, <http://www.earthscan.co.uk/samplechapters/1844070042Intro.htm> and [http://portal.unesco.org/education/en/ev.php-URL\\_ID=37612&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/education/en/ev.php-URL_ID=37612&URL_DO=DO_TOPIC&URL_SECTION=201.html)

<sup>23</sup> Sachs (2005, 2008) places these international goals at the center of aid efforts, but does not address the collective action problem.

once,” to fix ALL the problems of poverty in one fell swoop. This reflects a shift in aid thinking towards more comprehensive approaches that began in the 1990s (reflected at the time in World Bank President James Wolfensohn’s “Comprehensive Development Framework”.) This was a shift towards an even more ambitious agenda (including almost every possible dimension of development such as “faith and development” and “women’s empowerment”) than the more modest transformational idea of aid creating economic growth.

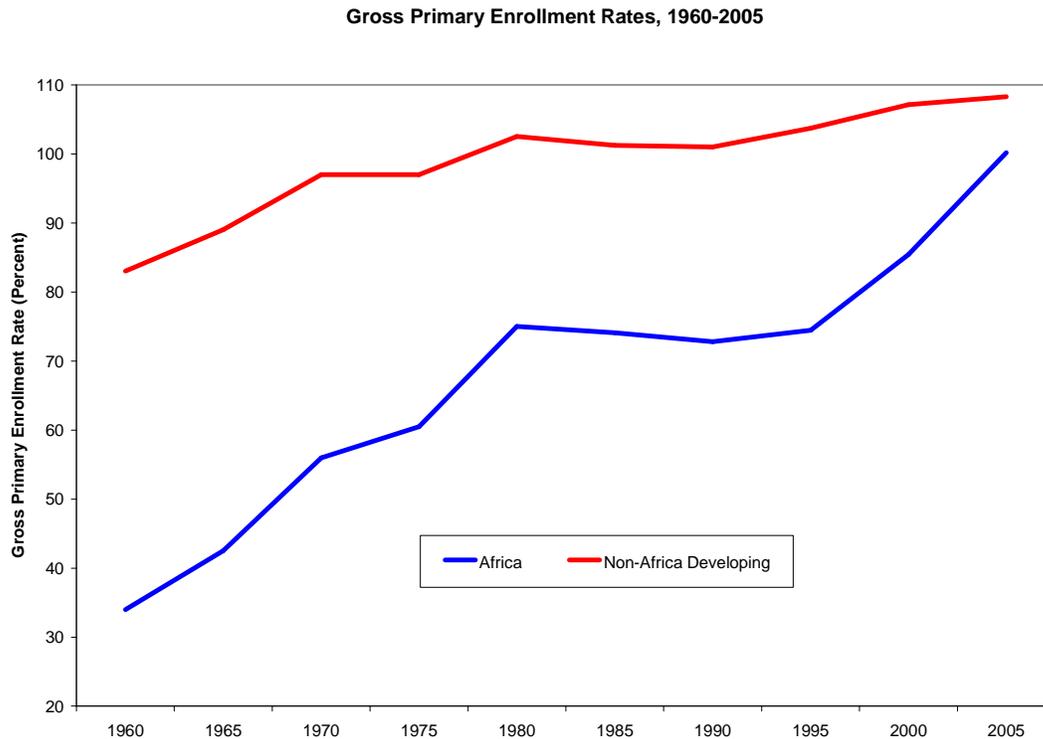
*d. Aid and social indicators*

*i. Education*

*1. Stylized fact on education improvements*

Despite the implementation problems stated above, education is a relative success story in Africa since independence. Primary enrollment started off very low and then rapidly caught up to other developing countries (figure 7). There was a lot of donor involvement in education – is this an area where aid helped shift a fundamental determinant of development in a way that helped “save Africa”? A pattern we will see recur is a global trend towards improvement of social indicators, which includes Africa (as pointed out by Kenny (2006)). Of course, aid to the poorest countries could have played a role in this improvement. There is an obvious long run global trend towards increasing enrollments (Kenny 2008c); developing countries since 1960 have raised enrollments faster than today’s rich countries did in their history (Clemens 2004). The time pattern of Figure 7 unfortunately does not match aid patterns very well, as the steep improvement in 1960-1980 was during a time of little aid, while enrollments stagnated during 1980-1995 when aid was much higher. However, the brute stylized fact is that donors intended to increase education with aid and education did increase, even if the evidence is far from definitive.

Figure 7: Relative Education Performance in Africa



## 2. *Results from education*

Despite Africa's success on raising primary enrollment, there has been disappointment that growth in education has not paid off in higher economic growth, as stressed in the work of Pritchett (2001, 2006). Education has its own micro-macro paradox, as Mincer regressions usually show a positive impact of an individual's educational attainment on their wages, but results from growth regressions and growth accounting suggest little or no aggregate payoff to society-wide education. This disappointment weakened the arguments of advocates of "marginal" project interventions and strengthened the case for "transformational" systemic changes, as we will see in the next section.

## *ii. Health*

### *1. Stylized facts on health in Africa*

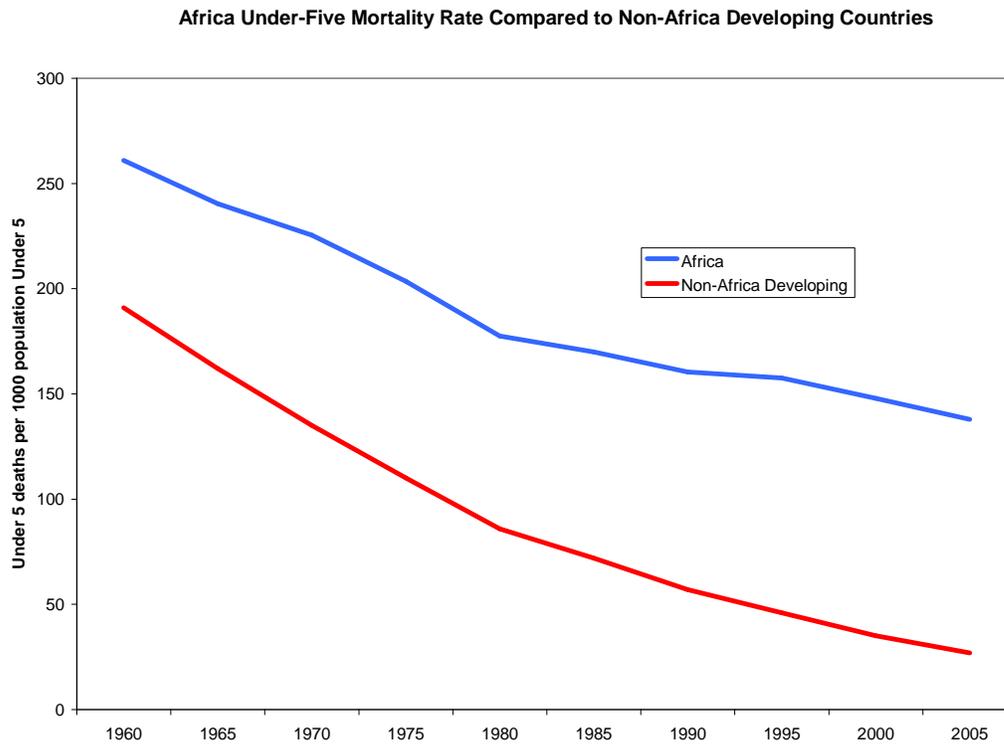
Health is another success story in Africa, as child mortality has improved dramatically over time (Figure 8). There are well known and striking donor success stories, like the elimination of smallpox, the near-eradication of river blindness and Guinea worm, the spread of oral rehydration therapy for treating infant diarrheal diseases, DDT campaigns against malarial mosquitoes, and the success of WHO vaccination programs against measles and other childhood diseases. The aid campaign against diseases in Africa (known as vertical health programs, see discussion below) is likely the single biggest success story in the history of aid to Africa (see Levine 2007).

In this case, the clear verdict of the case studies is probably a lot more helpful than the aggregate stylized facts or aggregate econometrics. Under-five mortality fell dramatically in Africa, but it fell by somewhat less than in other developing countries (figure 8 again). We ideally need multivariate regressions that would parcel out factors such as Africa's lower growth (although the effect of growth on health is controversial), different disease ecology (for example, malaria is much more of a problem in Africa than any other region), other factors, and aid, not to mention finding an identification strategy to assess causal effects of aid. Below I discuss what can be learned from those regressions that have been performed so far in the literature (not much, unfortunately). Until then, perhaps Africa's health performance is impressive after all given its lower growth and its more difficult disease ecology, which is consistent with the important role for aid shown by the case studies.

There is another sense in which the West had a major effect on health in Africa. The major technological breakthroughs in health – e.g. antibiotics, vaccines, the germ theory of disease, the identification of mosquito transmission of malaria, later the discovery of the AIDS virus – originated in the science of the West (see discussion in Cutler, Deaton, and Lleras-Muney 2006). The health improvements in Africa would have been impossible without Western science;

this is one important way in which Western outsiders did indeed “save Africa,” at least in one specific area.

Figure 8: Relative Health Performance in Africa



## *2. Approaches to improving health through foreign aid*

There has been throughout the history of foreign aid a tension between two alternative approaches to health. The “vertical” approach focuses on one disease at a time, marshalling a top-down mass campaign against the disease through targeted prevention measures, vaccination if applicable, and medicines for treatment. As just mentioned, it was extraordinarily effective in taking the initial strides against the target disease. However, the vertical programs were not sufficient to resolve Africa’s health crisis, because each program eventually reached some point of diminishing returns where there remained a segment of the population beyond its reach. In some sense, the health aid field has never figured out what to do next after diminishing returns to

vertical programs set in. Table 6 shows the gaps that still remain in health coverage in Sub-Saharan Africa (as well as the average for the comparator group of all low income countries, which does not appear to be significantly different).

Table 6: Most recent health indicators for Africa compared to all low income countries

|  | Africa | Low Income |
|--|--------|------------|
| Acute Respiratory Infection treatment (% of children under 5 taken to a health provider)*                  | 43     | 44         |
| Children with fever receiving antimalarial drugs (% of children under age 5 with fever)**                  | 38     | 23         |
| Diarrhea treatment (% of children under 5 with diarrhea receiving oral rehydration and continued feeding)* | 38     | 40         |
| Immunization, Diphtheria/Pertussis/Tetanus (% of children ages 12-23 months)**                             | 71     | 67         |
| Immunization, Measles (% of children ages 12-23 months)**  | 69     | 67         |
| Vitamin A supplementation coverage rate (% of children ages 6-59 months)**                                 | 79     | 76         |

\*median of all countries with data for 2000-2006

\*\*regional or income group average provided by World Development Indicators for 2005

The “horizontal” approach focused on making the health system work well to administer prevention and treatment to patients rather than diseases, whatever the patient’s disease may be. Horizontal advocates criticize the vertical programs for ignoring implementation problems with health projects in general, and for potentially crowding out less costly treatment for more widespread illnesses with more costly treatment for less common diseases. Defenders of the vertical programs can point to many of the health successes mentioned above; horizontal critics of vertical programs point to their severe diminishing returns, namely the continuation of high mortality rates in Africa from preventable and treatable diseases and the health gaps shown above. Another challenge for the horizontal approach is similar to that of “capacity-building” discussed above – changing the health civil service is no easier than changing the rest of the civil service.

The history of health aid is a cycling between these two alternatives. After the early “vertical” health successes described above ran into diminishing returns, there was a switch to the “horizontal” approach. By 1980, the World Bank had shifted towards recommending an

“integrated approach” in health (i.e. horizontal), which continued for the next two decades. The 1993 World Bank WDR on health, for example, stressed the health system problems described above as a critical bottleneck in improving health. In 1996, the WHO and UNICEF recommended a packaged approach of many cost-effective interventions for child mortality, called the Integrated Management of Childhood Illness (IMCI) – this was somewhere in between simply combining vertical interventions and some horizontal concern with “health systems.” In addition to the systems justification, they stressed the technical point that child mortality is often the result of a combination of illnesses rather than one illness alone.

By the new millennium, however, the prominent health crisis of AIDS in Africa induced a shift back towards vertical, disease-specific programs, such as the creation of the Global Fund to fight AIDS, TB, and Malaria (GFATM) in 2002, the US President’s Emergency Plan for AIDS Relief (PEPFAR) in 2003, the President’s Malaria Initiative (PMI) in 2005, and the Gates Foundation’s well-publicized efforts on these same diseases, which implied large increases in health aid but mainly in these vertical programs. There have been some successes from these programs, such as the life-saving treatment of more than 1 million HIV positive Africans (Sachs 2008). However, critics have complained that the concentration of foreign aid on AIDS, in particular, has crowded out more cost-effective approaches to more common diseases, not least because the AIDS initiatives have overwhelmed the still dysfunctional public health systems. For example, a group of health experts wrote in the prestigious medical journal the *Lancet* in July 2003 about how 5.5 million child deaths could have been prevented in 2003, lamenting that “child survival has lost its focus.” They blamed in part the “levels of attention and effort directed at preventing the small proportion of child deaths due to AIDS with a new, complex, and expensive intervention.” (Gareth Jones et al. 2003) England (2008) points out that while AIDS causes 3.7 percent of mortality, it gets 25 percent of international healthcare aid. Moreover, there are new efforts to increasing AIDS funding further – President George W. Bush in January 2008 called for an extension of his original 2003 five-year \$15 billion PEPFAR program for another

five years at \$30 billion. AIDS is a good example of how the vertical approach is vulnerable to capture by lobbies for particular diseases that are “fashionable” causes in rich countries but don’t necessarily match the aid recipient’s priorities.

The World Bank (2007) responded by again fervently advocating the horizontal approach. The large new vertical programs would not work unless there was an “urgent effort ... made to strengthen health systems” (p. 15). (As brave as this conclusion might sound in the face of the new vertical craze, the next sentence tried to diplomatically have it both ways by denying the “false dichotomy between focus on priority diseases and focus on system strengthening.”) The G8 Summit in July 2008 in its discussion of health in Africa stuck with vertical: “G8 members are determined to honor in full their specific commitments to fight infectious diseases, namely malaria, tuberculosis, polio and working towards the goal of universal access to HIV/AIDS prevention, treatment and care by 2010.”<sup>24</sup>

The debate between vertical and horizontal approaches does not map exactly into the debate between transformational vs. marginal approaches in foreign aid to Africa. There were both vertical and horizontal advocates who hoped for “transformational” results, while those with the marginal view could welcome either a vertical success against a disease or a horizontal improvement in patient care through health systems. However, if one of the dimensions of the transformational approach is unrealistically large ambitions, the vertical approach was guilty of this more than the horizontal advocates. The rhetoric of vertical programs often implied absolute and improbable goals without regards to cost-benefit analysis, such as wiping out a disease altogether (such as malaria) or providing universal access to treatment for that disease (such as AIDS). The cycling back and forth between vertical and horizontal approaches in health also seems to show the same lack of learning in aid stressed elsewhere in this survey.

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<sup>24</sup> 2008 G8 Summit Declaration, Development and Africa, July 8, 2008

*iii. Water and sanitation infrastructure*

I use water and sanitation as an example of aid's approach to financing infrastructure, since in this sector we have a clear welfare indicator linked to aid-financed infrastructure projects.

*1. Stylized facts on water and sanitation indicators*

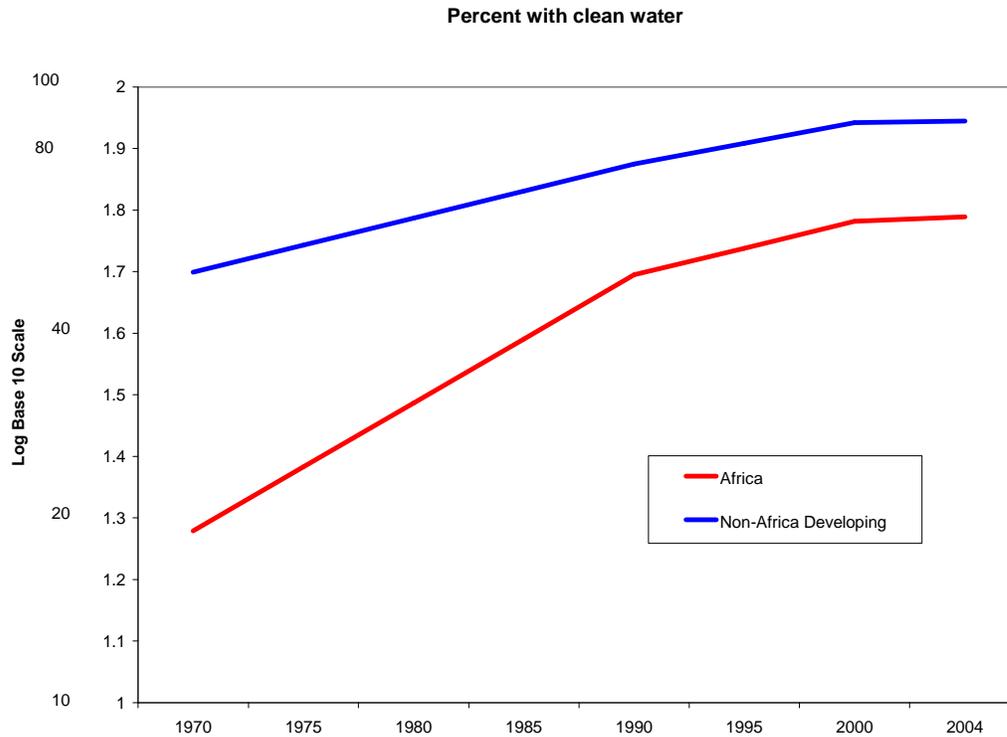
The stylized facts on water and sanitation in Africa are similar to those of the other social indicators. There has been success in increasing the percent of Africans with access to clean water, as in other developing countries.<sup>25</sup> The stylized facts could suggest some success of aid-financed water projects, or it could be consistent with a worldwide tendency for improvement in access to clean water in poor countries unrelated to amount of aid received in each country.

Again, it is informative to review stylized facts but they fall well short of the kind of detailed attribution evidence that would make it possible to evaluate aid agencies' efforts (which is a serious problem for campaigns like the UN Millennium Development Goals whose flawed idea of "accountability" is whether targets for endogenous social indicators are met).

Figure 9: Relative Infrastructure Performance in Africa

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<sup>25</sup> The definition of "clean water" is unfortunately rather fuzzy. While "clean water" is used as an easily recognizable shorthand, the data actually refer to "percent with access to an improved water source." The degree of improvement could fall short of producing what the reader might think of as "clean" water. These ambiguities contribute to the weak data situation on this indicator, where comparability over time and other sources of noise are more problematic than with other social indicators (not to imply the data are so good on the others either).



## *2. Changing fashions in infrastructure aid*

In the early days of aid, the emphasis in infrastructure aid was simply on increasing the quantity of physical infrastructure. By the time of the 1994 World Bank WDR on infrastructure, the emphasis had changed to emphasize problems like inadequate maintenance and allocation of scarce funds to “white elephants.” Despite this change in emphasis, there has not been much progress on improving maintenance, as described earlier. On “white elephants,” the Bank has used its Public Expenditure Reviews as its traditional tool to redirect aid away from unproductive boondoggles towards productive infrastructure. The problem of fungibility has meant that cutting off aid financing to a particular project does not necessarily succeed in killing the project, since the government can turn to other donors or use its own funds (famous white elephants include the new national capitals built in Cote d’Ivoire and Nigeria, the state-owned \$5 billion Ajaokuta steel

mill in Nigeria begun in 1979 that has yet to produce a bar of steel, and the building of an international airport in Eldoret, Kenya – the hometown of Kenya’s long-time autocrat Daniel Arap Moi). This last problem has become worse because of the influx of aid from China into Africa, much of it directed to infrastructure and with few conditions on allocation of spending. Recently, the focus on quantity of infrastructure spending has returned, with advocates of an increase in aid justifying it in part by the need to pay for better infrastructure for Africa (UN Millennium Project 2005, Blair Commission 2005, Sachs 2005, 2008, Collier 2007). The Blair Commission 2005, for example, said that Africa needed \$10-\$20 billion a year in additional Western aid for its infrastructure quantity needs (p. 49).<sup>26</sup>

Another cycle with infrastructure (also applicable to health and education) was the cycle between free public provision, public provision with user fees, and private provision. In health, education, and water, free public provision had been the default assumption in the beginning of foreign aid. The World Bank (and to some extent the IMF) began to point after 1980 to the advantages of user fees in having non-poor users of public services help raise revenue for these goods (which could then be used to subsidize the poor). About the same time, the potential role of the private sector began to seem more promising and there were privatizations of public utilities like water and electricity (and there was also gradually growing awareness that the private sector played an important role in providing health and education despite the existence of public services). All of this was sharply reversed after the late 1990s under pressure from NGO critics and globalization protesters who were scandalized that anybody should have to pay for basic necessities like medicines, bed nets, primary schools, water, etc. Hence, the cycle has swung back to free public provision, and not apparently because of any change in the evidence or economic intuition.

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<sup>26</sup> Although the Commission did suggest avoiding white elephants.

#### iv. Regression evidence on aid and social indicators

As noted earlier, ideally the literature should move beyond the stylized facts about aid and social indicators, and control for other factors that might influence social outcomes. There has been a regression literature on aid and social outcomes, but it has not been very satisfactory at resolving the causal effect of aid on social outcomes, controlling for other factors. One of the best studies is rather old: Boone 1996 instrumented for aid with population and strategic variables (as well as twice-lagged aid that seems more dubious as to be discussed below), as noted previously, and estimated the effect of aid on the log change in infant mortality, life expectancy, and educational enrollment. He found the relationships to be insignificant. One stubborn problem in this kind of regression is how to control for income per capita, where causation conceivably flows in both directions with both aid and social indicators. Boone includes growth per capita in his regressions but does not instrument for it, which is problematic.

I give several more examples of attempts to get at the aggregate social impact of aid. Filmer and Pritchett 1999 found that public spending on health had little or no causal effect on health outcomes, using defense spending of a country's neighbors as an instrument for the home country's health spending. Dreher et al. 2008 found more positive results for education, that: "Average aid given to the education sector of 0.33 percent of GDP among our sample countries does increase school enrolment by about 1.5 percentage points." They included per capita income as another (endogenous) determinant of school enrollment and used GMM panel methods to address reverse causality. The GMM methods use lags of the endogenous variables as instruments. This is not very satisfactory with aid regressions, as the exclusion restriction is very much in doubt – if aid does affect social outcomes, wouldn't it have lagged effects that would last many periods? Wouldn't income also have long lasting effects? Are the weak instrument problems created by instrumenting for multiple RHS variables resolved?

Fielding et al. 2006 also finds positive causal effects of aid on social outcomes (health, fertility, sanitation, although not education). They use the country's lagged ability to absorb aid as

an instrument for aid. They also have an income-like variable (“material assets”), which is instrumented by variables like fraction of the population Christian (Muslim), temperature, and malaria risk (which seems likely to have two-way causality with income, since it depends on sanitation among other things). Finally, they incorporate other social indicators as RHS variables for each of the other social indicators, to capture complementarities between things like fertility and education. They use 3SLS and enough exclusion restrictions involving other deep determinants of development (such as ethno-linguistic diversity) to identify the effects of these other social indicators. This study illustrates again the mostly intractable problems of regressions to resolve the aid-social indicator relationship. A lagged aid variable again is not plausibly excludable from the social indicator regression (or any other outcome regression), other exclusion restrictions seem arbitrary, and instrumenting for multiple RHS endogenous variables creates potentially difficult weak instrument problems that this study does not address. There are other studies along the same lines I could describe, but they do an even less satisfactory job on addressing these problems. Unfortunately, regression analysis has not made much progress resolving these complicated problems.

We are left with stylized facts and case studies. Since there were notable successes on social indicators in Africa, leaving aside the complications from differential growth performance (which some argue does not directly affect social indicators anyway), it is easier to believe in a counterfactual in which social outcomes would have been worse without aid. Detailed case studies showing aid actors involved in vaccination, school building, and sinking boreholes further reinforce this intuition. The case for beneficial aid to Africa is easiest to believe in the social sector, but (with the exception of the well documented success of the early vertical health programs) the evidence still falls short as either a device to hold aid agencies accountable for results or to allow them to learn in detail what is working and what is not.

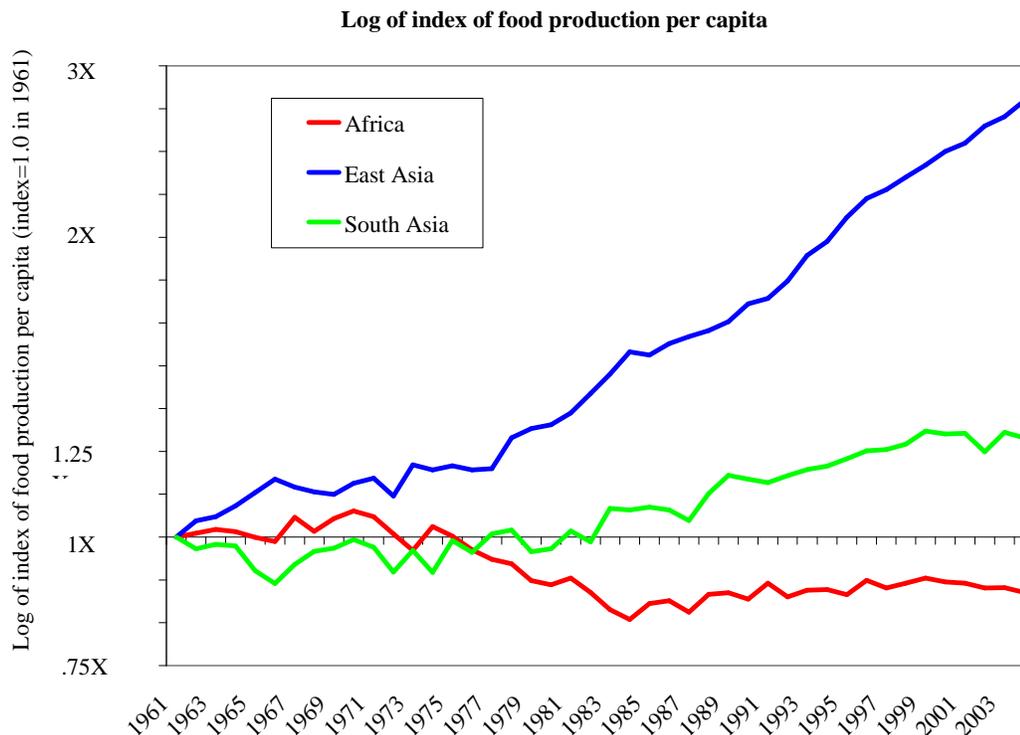
*e. Agriculture*

Agriculture is an area that has long attracted attention from those who want to help Africa (see the quotes from Lord Hailey 1938 above). The success of the “green revolution” in Asia in the 1970s was tantalizing to aid donors, who hoped for similar results in Africa. Yet African agricultural aid is also unusual in that virtually all those involved agree that it has been a failure, amidst much recrimination and finger-pointing. The stylized facts on food production per capita certainly influence this pessimism, with a decline in Africa contrasting with the general Asian rise (Figure 10).<sup>27</sup> Of course, there are the same problems with negative stylized facts as with positive stylized facts, that it is hard to resolve attribution of outcomes to aid vis-à-vis other factors such as policies followed by African governments, world market conditions, climate, etc.

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<sup>27</sup> One exception to the general gloom on African agriculture was the success of commercial maize production in southern Africa.

Figure 10: Failure of food production in Africa relative to Green Revolution in Asia



Eicher and Baker (1982) noted a quarter century ago that Africa was the only region that experienced declining food production per capita over the preceding two decades, a situation they labeled “Africa’s food crisis.” Periodic World Bank task forces tried to remedy the situation.

World Bank (1997) called for movement “From Vision to Action.” World Bank (2003) is the report of another task force called “Reaching the Rural Poor,” which noted

the agricultural development portfolio has not yet met the 80% satisfactory development outcome rating at completion, as targeted by “From Vision to Action.” The quality of the poverty focus, and the sustainability and quality of the institutional development still leave much to be desired. Reaching the Rural Poor will address these concerns.

The latest report, an internal evaluation of all World Bank work in agriculture over the period 1991-2006 (World Bank Independent Evaluation Group 2008), was again scathing about failure. The 2008 World Bank WDR (p. 15) in turn noted the stagnant cereal yields in Africa in

contrast to rising yields in all other regions.<sup>28</sup> WDR 2008 noted the existence of “‘agroskepticism’ of many donors” which “may well be related to their experience with past unsuccessful interventions in agriculture.” Similarly Eicher and Kane (2004) noted “The failure of past initiatives in agriculture led to a reduced confidence among donors in agriculture in the 1980s ...and many donors have since turned to other sectors.”

The UN system has followed a similar progression, with a World Food Summit in 1996 another installment in a long line of efforts to make progress on hunger in Africa through agricultural development. The FAO (2006) passed judgment on that effort: “Ten years later, we are confronted with the sad reality that virtually no progress has been made towards that objective.”

As far as the “green revolution” specifically, Eicher (1999) had already noted that:

Much energy has also been wasted in trying to replicate Asia’s Green Revolution model in Africa before the completion of pilot studies. Over the past decade, many instant experts on Africa have talked glibly about the ease of replicating Asia’s Green Revolution model in Africa. Many of these experts have overlooked Africa’s early stage of scientific development, falsely assuming that Africa had the requisite infrastructure, irrigated land, trained scientists, technology, and national and local institutions to replicate the Asian model.

The Wapenhans report (World Bank 1992) confirmed this picture, with only 40 percent of World Bank agriculture projects in Africa judged as successful (compared to 59 percent for all projects in Africa, and 72 percent for African education projects).

The attempt to jump-start African agriculture has involved many different interventions from subsidized fertilizer and heavy investment in agricultural R&D and extension services in the 1960s to “integrated rural development” (an attempt to deal with all the complementary inputs at once) in the 1970s, to a shift away from public support for farmers towards market forces in the 1980s and 1990s with “structural adjustment,” to renewed interest in the new millennium in more

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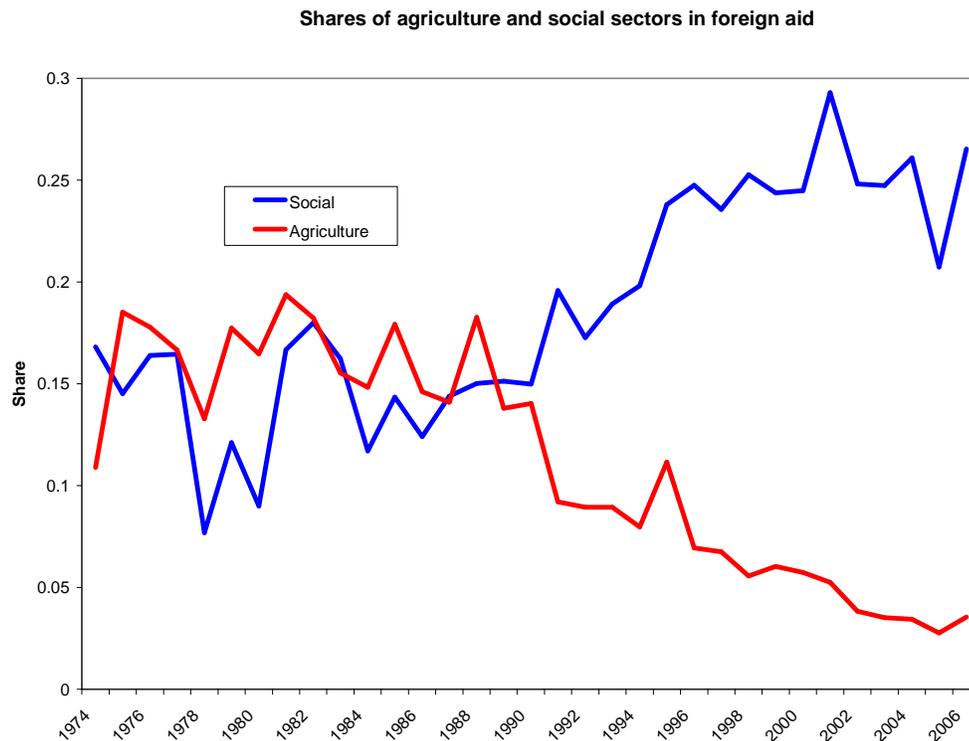
<sup>28</sup> Incentives to increase yields per hectare may be weaker in Africa than in other regions because of its greater land/population ratios.

agricultural R&D (again) and fixing “market failures” (again) in inputs such as fertilizer and improved seeds (the cyclical nature of aid ideas is again evident).

The pattern of actual aid to African agriculture has followed the Bank’s “agro-skepticism” description, with a sharply falling share in total aid to Africa (with the winner appearing to be the social sectors whose share has risen sharply). Agricultural scholars from American land-grant universities (who traditionally led the agricultural aid effort) have severely criticized donors like the World Bank and USAID for the diminished attention to agriculture in Africa, and have blamed international NGOs for lobbying for special causes (most of which imply more social spending in aid). There seems to be some special pleading on their own part here, such as when land grant college scholar Mellor 1998 lamented the trends that have “driven the land grant colleges largely out of the foreign assistance business.”

A more positive spin on the changing sectoral shares of aid is that the aid agencies are responding appropriately to areas of relative success and failure. We have seen that there is more ground for seeing some success in the social sectors, so the reallocation of aid to social sectors from the failing agricultural aid sector could be seen as a constructive move to maximize returns from aid. But once again, one should not forget the inside actors – local political elites or grassroots activists may have exerted pressure for aid to shift from agriculture to social sectors.

Figure 11: The shift out of agricultural aid into social sector aid



However, neglect of any high profile problem like African agriculture sooner or later results in countervailing pressures, so aid agencies and private foundations are now making renewed efforts to treat the ills of African agriculture. Reports from the UN Millennium Commission and Blair Commission on Africa in 2005, not to mention the World Bank's 2008 WDR on agriculture, put a lot of stress on solving problems of African agriculture. Sachs (2005, 2008) is promoting a package of complementary inputs for a few selected rural villages (Millennium Villages) in Africa, which is similar to the 1970s' "integrated rural development" (widely viewed at the time as a failure). Sachs has called again for a new Green Revolution in Africa, and the Bill and Melinda Gates Foundation (2006) recently announced a "Green Revolution" initiative towards that end (yet more examples of recycling of previously failed aid ideas). The crisis of sharply rising food prices in 2008 put even more pressure on donors to restart old agricultural development programs. International summits are again a preferred vehicle for

action, despite their ineffectual track record. At another World Food Summit sponsored by the FAO in response to the food crisis of 2008, donor agencies and 180 governments said in their joint statement: “We reaffirm the conclusions of the World Food Summit in 1996.”<sup>29</sup> The G-8 Summit in July 2008 said “we will reverse the overall decline of aid and investment in the agricultural sector” in Africa, as well as “promote more agricultural research and development,” and a “Green Revolution.”<sup>30</sup>

*f. Conclusions on Project interventions*

The project record on aid is mixed, with some suggestive evidence of success in social sectors, and nearly universal agreement on failure in agriculture. Micro evidence is also consistent with success of project interventions, at least in social sectors. This picture suggests that the marginal approach to fix one problem at a time or to assist individual Africans to get better health and education has a suggestive track record of success.

If this picture is accurate, an important research question that I cannot resolve here is why the results were so poor in agriculture compared to social sectors. I can’t resist throwing out some suggestive hypotheses however: Perhaps the different types of problems in different sectors led to the application of the marginal approach in social sectors and the transformational approach in agriculture. The marginal approach was more feasible in social sectors because the easier attribution of observable success or failure in individual social sector projects compared to agriculture made it more feasible to monitor aid agencies in the social sector, strengthening incentives for good performance and forcing a resort to marginal approaches.

A related idea by Pritchett and Woolcock 2004 is that government services (and aid) perform the worst in areas that are both transaction-intensive and discretionary. So for example,

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<sup>29</sup> DECLARATION OF THE HIGH-LEVEL CONFERENCE ON WORLD FOOD SECURITY: THE CHALLENGES OF CLIMATE CHANGE AND BIOENERGY, Food and Agriculture Organization, Rome, 5 June 2008

<sup>30</sup> G8 Leaders Statement on Global Food Security, July 8, 2008

vaccination programs worked fairly well because they were not discretionary (even though they were transaction intensive), because the implementing agents were performing a routine action. Similarly, a massive school-building program to raise enrollment was transaction-intensive but not discretionary – the same school blueprint could be built everywhere. Agricultural extension, on the other hand, is both discretionary and transaction-intensive. The extension agent must deal with each individual farmer, and each farmer's problems are different, precluding a routine response. It was thus extremely difficult to monitor extension agent's performance, and incentives for good performance were weaker. The same logic could explain the areas of relative failure within health. The inability to make much project on strengthening health systems could be related to how highly discretionary and transaction-intensive are health systems. In terms of this paper, aid agencies are more likely to resort to transformational approaches in areas (or combinations of areas) that are both discretionary and transaction-intensive. The agencies will be rewarded for "big efforts" in these areas but it will not be feasible to assess the impact of aid agency actions (so that the transformational approach will persist whether it works or not).

Another contentious issue on projects is how do you define "success"? This again reflects the tension between the marginal and the transformational view of Western aid. If success is defined as improving the well-being of a significant number of poor individuals, the project evidence is suggestive that there have been achievements on this score in Africa. If success is defined as improving the "Factor X's" in such a strong fashion as to lift Africa out of poverty into steady growth towards prosperity, i.e. to "save Africa," then the record is not so encouraging. The aid agencies seemed to have the transformational definition of success in mind by the late 1970s, since disappointment with project interventions led them to engage in attempts to induce more systemic changes in African countries, beginning in the 1980s, as we will see now in the next section.

*F. The Beginning of Systemic interventions: Structural Adjustment*

The disappointment with the apparently low growth payoff to project aid to Africa led the Western aid policymakers to get ever more ambitious, with attempted interventions in remaking the economic, political, and social system in Africa. The disappointing results on growth made more compelling the general equilibrium argument that it does little good to get an individual project working when overall systemic incentives for growth and development are very negative. The targets for interventions began with economic policies, then institutions, and finally fixing failed states and resolving civil wars. This escalation was consistent with an adherence of aid agencies to the transformational view.

*a. Record on structural adjustment*

Structural adjustment loans (SALs) were created in 1980 by the International Monetary Fund and the World Bank. These were loans whose funds disbursed rapidly, conditional on the recipient “adjusting” their economic (“structural”) policies. In Africa, the conditions came to focus on correcting a number of distortions that were prevalent in Africa: (1) artificial official exchange rates that implied real overvaluation of the domestic currency and, (2) foreign exchange controls that led to a high black market premium on foreign currency given the artificial exchange rate in (1), (3) controls on interest rates that led to negative real interest rates, (4) restrictive tariffs and quotas that gave very high protection to domestic firms and/or led to consumer goods rationing, (5) prevalence of inefficient state enterprises that required government subsidies and delivered few benefits for the economy, (6) high budget and current account deficits. Correction of these distortions implied devaluation, liberalization, fiscal austerity, and privatization, a combination that became known in developing country policymaking as the “Washington Consensus” (a term coined by John Williamson). Although the Washington Consensus later became controversial as equivalent to dogmatic free market orthodoxy, most economists agreed then and now that Africa suffered from the above distortions. The argument for policy changes to supplement the project approach became stronger with a famous result shown by the 1991 World

Development Report of the World Bank (1991), that rates of returns to projects were lower with bad policies (specifically, high trade restrictions, high foreign exchange premiums, and high fiscal deficits) compared to good policies (low values of the above). This result was eventually published as Isham and Kaufmann (1999).

However, the poor growth outcomes in Africa in the 1980s and 1990s, and the perception that fiscal adjustment led to cuts in social services biased against the poor, caused much blame to be heaped on structural adjustment. The controversy became so intense, involving both academic economists and NGO advocates, that the IMF and World Bank retreated in 1999. In the new millennium, there was at the very least a renaming of the controversial SALs, and perhaps some change in policy, to *Poverty Reduction and Growth Facilities* in the IMF, and *Poverty Reduction Support Credits* in the World Bank.

#### *a. Effect on policies*

What actually happened on macroeconomic policy reform in Africa after the introduction of SALs, and how and why did it happen?

The literature's take on the effect of SALs on policies seems at first blush contradictory: (1) SALs were ineffective at changing economic policies, and (2) economic policies improved in Africa during the era of structural adjustment and afterwards. The resolution of the apparent contradiction is simply that there is a lot of variation within Africa as to who received SALs, and this variation was unrelated to the improvement in policies.

The variation consists of whether countries received SALs at all, and for those who did, how many they received. The biggest surprise in the way that SALs evolved was that many countries received an awful lot of them, topped by the 26 in Cote d'Ivoire over 1980-1999. There are two different ways to interpret the frequent repetition of adjustment lending to the same country: (1) policy dysfunction requires a gradual, multi-stage treatment, so each additional SAL was taking a salutary step in the right direction, or (2) previous SALs were ineffective at changing policies (or raising growth, to be discussed below), so new SALs tried again, which also

helped repay the previous ineffective SALs. In the view according to (2), over time a serious problem of moral hazard in adjustment lending developed.

The evidence seems inconsistent with (1), since Easterly (2005) found no evidence of policy improvements from one SAL to the next within countries. Collier et al. 1997 also pointed out the lack of evidence that SAL conditions were kept. World Bank 1998 (p. 51) pointed out that the same agricultural policy reform in Kenya was the subject of a condition in five different SALs, violated each time. The IMF's own evaluation office (Independent Evaluation Office (IEO) 2002) harshly criticized the IMF's repeat lending as counterproductive, apparently finding no evidence that it was part of a salutary multi-step process. The IEO 2007 confirmed the general failure of IMF SALs to change economic policies over 1995-2004 (a period including the successor instrument to SALs after 1999). IEO 2007 found that about half of structural conditions were not kept.

Yet Easterly 2005 found an exogenous trend in improvement in most of the policies described above, unrelated to the number of SALs received. It could be that the intellectual influence of the IMF and World Bank was important in convincing countries to improve their policies, but if so, this was not mediated through SALs.

Why were SALs ineffective at inducing policy change? Svensson (2003) argues that there was a problem of time inconsistency in conditionality. Since aid recipients knew that each country department in the World Bank, for example, was under pressure ex-post to fully disburse its budget, the threat of withholding disbursements if conditions were unmet was not credible ex-ante.<sup>31</sup> The donors also seemed to lack appreciation for internal political incentives to sometimes keep pursuing policies that benefited local elites. The weak incentives to change from donor conditions paled by comparison.

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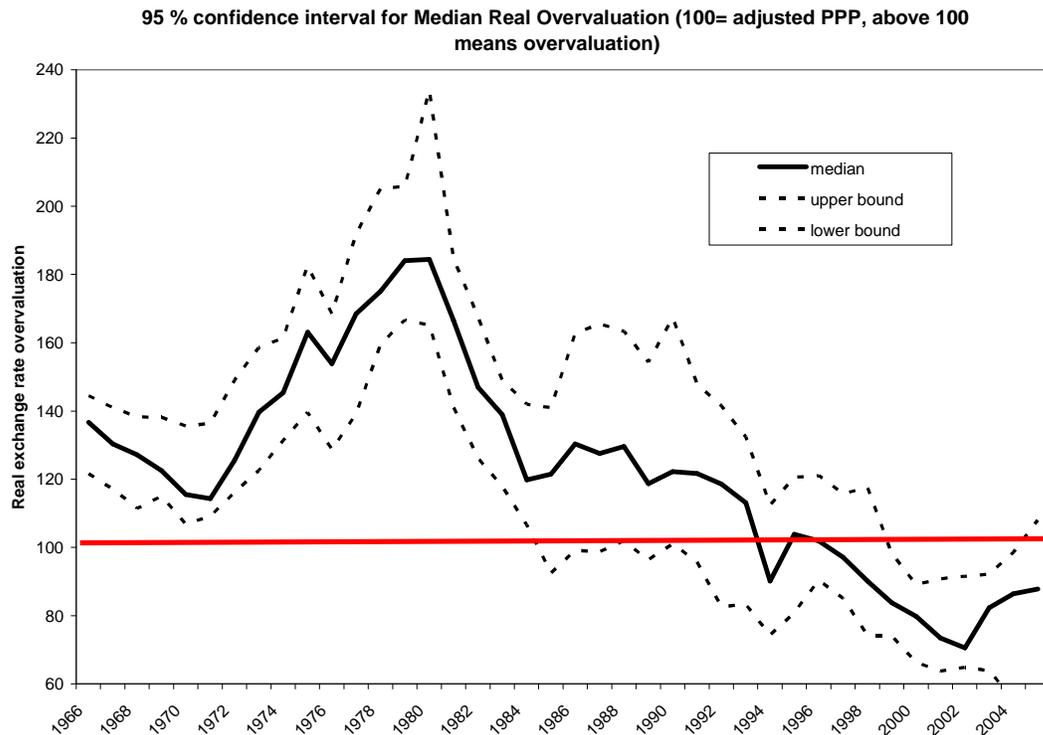
<sup>31</sup> Van de Walle 2001 also emphasizes this point in a rich political economy discussion of structural adjustment in Africa.

Even though the evidence is against SALs as an inducement to change, African governments did indeed correct some major distortions during the era of structural adjustment, consistent with the exogenous improvement orthogonal to SALs. Some of the worse distortions were the overvalued exchange rates. According to one estimate, the median African currency was 82 percent overvalued in PPP terms in 1980.<sup>32</sup> Over 1980-2001, there was a steady trend towards real devaluation (including a major devaluation of the French-supervised CFA Franc for most francophone countries in 1994), so that by the early 1990s, the currency in the median African country was at PPP parity, or even undervalued. The devaluation of the official exchange rate also sharply reduced the high black market premiums on foreign exchange that had previously been prevalent in Africa.

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<sup>32</sup> The measure of the benchmark real overvaluation is based on Dollar (1992), then extrapolated to other years with the usual real exchange rate index using domestic and US CPI and nominal exchange rate.

Figure 11: Real Currency Devaluation in Africa



The overall movement towards correcting other distortions is positive but not quite as impressive as with the exchange rate. Easterly (2005) defines a country as having a major macroeconomic distortion if any of the following hold: inflation is above 40 percent, the black market premium is above 40 percent, real overvaluation is more than 40 percent, or the real interest is less than -5 percent. Then the percent of SAL-intensive countries with major macroeconomic distortions declined steadily during the structural adjustment period 1980-1999, albeit still nearly half at the end.

#### *b. Effect on Growth*

The empirical literature on IMF/World Bank structural adjustment lending and growth outcomes faces many of the same issues as the aid and growth literature. There is an obvious selection bias in whom the World Bank/IMF treats with adjustment lending, just as there is a

selection bias in whom an emergency room treats. Some of the complaints by NGOs about SALs are based on correlations between SALs and outcomes that are the equivalent of the negative correlation between admission to an emergency room and a person's health, with the implication that the emergency room is bad for your health. Przeworski and Vreeland 2000 address this problem by doing a selection equation for entering an IMF program involving when a country is under pressure from low foreign exchange reserves, high budget deficits, and high debt service. Variables affecting the IMF's side of the loan decision are also significant, such as the balance of payments deficit, whether the government is a dictatorship (favorable for getting the IMF to give you a loan), and the number of loans the IMF is making to other countries. Controlling for selection bias, they find that an IMF program lowers growth by 1.5 percentage points.

Barro and Lee 2005 find that IMF "loans tend to be larger and more frequent when a country has a bigger quota and more professional staff at the IMF and when a country is more connected politically and economically to the United States and other major shareholding countries of the IMF." Using these variables as instruments, Barro and Lee find that IMF loans have a negative effect on growth. Easterly 2005 does an IV growth regression for the number of World Bank and IMF adjustment loans using as instruments strategic variables like a dummy for former French colonies, US military assistance, and log of population size; this regression finds a positive but insignificant effect of SALs on growth. Of course, the same concerns about identification assumptions (do SALs to Francophone countries have the same effects as others, for example), unclear specifications, and data mining could be leveled against this literature as much as the aid and growth literature. This literature differs from the aid literature, however, in that there are very few academic claims of positive effects of SALs on growth (although there are such claims in non-academic publications of the IMF and World Bank itself).

The repetition of the loans to the same country alleviates, but does not eliminate, the selection bias problem. If the same patient is re-admitted on a daily basis to the emergency room and fails to improve, one is inclined to think the emergency room is ineffective or the wrong form

of treatment. SALs were supposed to be “emergency” loans that enabled countries to correct problems over the life of the original loan – their repetition was not envisioned in their design. It could be designers of SALs did not realize that they needed to be a multi-stage process in which different loans would address different problems. However, as we have seen, the macroeconomic policies did not improve from one loan to the next.

Another indirect piece of evidence on the outcomes from SALs is that the loans ultimately were forgiven (the Multilateral Debt Relief Initiative created in 2005, bringing to an end over 20 years of incremental debt relief). Since SALs to Africa were heavily concessional (zero interest and 40 year maturity), the payoffs to the loans were not good enough to avoid a crippling debt crisis even with debt that was mostly a grant.<sup>33</sup> Of 18 IDA countries that received above average number of SALs, 17 became HIPCs.

#### *G. Aid, institutions, and development*

The disappointment with structural adjustment in Africa brought another escalation in attempted systemic reform. Under the plausible argument that returns to economic policy reform were low if property rights were weak and corrupt autocrats a perpetual threat to the private sector, the West shifted emphasis in the 1990s to institutions like corruption, democracy, and property rights. This occurred at the same time as the literature increasingly stressed institutions as being the fundamental determinant of development (see Acemoglu, Johnson and Robinson 2005).

Although this escalation may make some sense, it also makes possible a continual evasion of aid agencies for failed reform strategies. As Rodrik (2006) pointed out, the response of aid agencies to the failure of previous recommended reforms was to say that they had been “necessary but not sufficient,” and make ever longer the list of “necessary” reforms. As Rodrik (2006) also pointed out, this makes the hypothesis that the Western-recommended reforms were

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<sup>33</sup> Another possibility was unwillingness to repay, as opposed to inability to repay. However, the World Bank and IMF would have been less likely to forgive the loans if it had been too obviously the first.

the right ones almost non-falsifiable, since there is always some missing “necessary condition” that can be invoked to explain the failure. In the end, however, even this nearly tautological defense is unconvincing to those with the “marginal” view – they would point out that no real world reform has ever encompassed a nearly infinite list of “necessary reforms,” and so a choice always has to be made as to which reforms to include. Once this is recognized, one can reach a more unambiguous conclusion as to whether a particular package of reforms failed.

Those with the “marginal” view would also worry about to what extent the more systemic features of African societies are really amenable to fixes by outsiders. If even the attempt to change economic policies that could be changed by a few technocrats was a big disappointment, how much can one hope for outsiders to change more deep-rooted phenomena like corruption, democracy, and property rights?

Such institutions depend not only on top-down legal rules, but also on bottom-up social norms and conventions that may have evolved over a very long period (see Easterly 2008b for a discussion). Fisman and Miguel (2008) have a clever experiment on the effect of norms by showing large differences in unpaid UN parking tickets in Manhattan by national origin (which are correlated with corruption outcomes in the home countries). African UN diplomats get a lot of parking tickets compared with Scandinavians. Formal rules to implement institutions could be either a complement or a substitute for social norms. For example, Djankov, La Porta, Lopez de Silanes, and Shleifer 2008 devise a measure of rules on disclosure of assets by public officials, meant to be a tool for controlling corruption. This measure turns out to be *negatively* correlated with polling data averages from countries in the World Values Survey on whether citizens believe it is wrong to take a bribe, which is suggestive that the rules are introduced when the social sanctions on corruption are not sufficiently strong.

#### *a. Corruption*

Corruption used to be an unmentionable word in aid discourse, but that changed in the 1990s.

One benchmark turning point was a high profile speech condemning corruption that World Bank

president James Wolfensohn gave at the 1996 Annual Meetings of the Bank and IMF. The aid community had two levers available to try to induce decreases in corruption. It could withhold aid from corrupt governments, and it could use its technical advice to control corruption. However, using aid money as leverage was subject to the same time inconsistency problem as conditions on SALs, and did not turn out to be conspicuously effective.

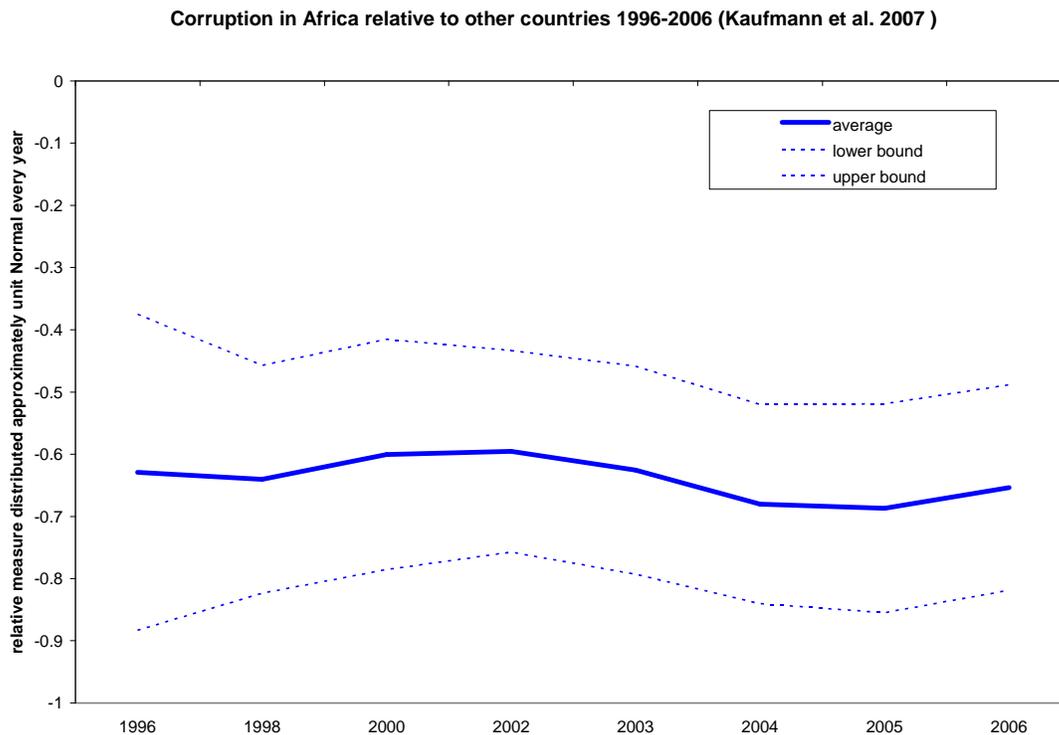
The second “technical” remedy could be useful if there was a domestic political shift in favor of cleaning up corruption, but local actors lacked knowledge of techniques to control corruption. However, in practice, aid agencies pushed “anti-corruption strategies” on countries almost universally, as if all corruption was a technical problem. The alternative to the “technical” view is that corruption is a political phenomenon where the faction of corrupt officials manages to triumph over the losers from corruption (again we see the lack of attention to incentives in aid, in this case political incentives). Perhaps the ultimate example of the technical approach was the suggestion by Sachs (2005) that corrupt governments should be given more aid money to implement anti-corruption strategies. At first blush, this seems analogous to giving grants to burglars in the hope that they will install alarm systems in homes before burgling them. In fairness to Sachs, he probably had in mind some incorruptible reformer within the corrupt government, who will get his corrupt colleagues under control with a well-financed anti-corruption effort (including such technical fixes as computers on which to track government spending). The question remains as to how to identify these incorruptible reformers, and the technical approach glosses over the political battle between corrupt insiders and anti-corruption reformers that will be determined by many factors besides aid and technology.

*i. Stylized facts on corruption*

The stylized facts are that corruption in Africa relative to the rest of the world was unchanged over 1996-2006. This conclusion is derived from the measure of Kaufmann, Kraay, and Mastruzzi 2007 (KKM), who do a sophisticated averaging over all available corruption indicators, correcting for selection bias and other problems. The KKM measure is relative each

year, standardized as a Normal (0,1). African countries on average are a little over 0.6 standard deviations worse than the world average on corruption, a measure that showed little change over 1996-2006 (especially considering the wide confidence intervals). The stylized facts on the relative measure seem most relevant to the aid-corruption question when comparing a region above average in aid-intensity to the rest of the world in making progress against corruption.

*Figure 12: Corruption in Africa in International Perspective*



### *ii. Empirical evidence on aid and corruption*

What about more formal empirics on the relationship between aid and corruption? Unfortunately, the results vary. One of the most well-known regression studies finds that aid worsens corruption for ethnically diverse countries – which includes most African countries (Svensson 2000). Knack 2001 found that aid unconditionally worsened “governance,” an average of ratings of corruption, bureaucratic quality, and rule of law. Svensson and Knack instrumented for aid with the usual population size, initial need, and strategic variables. However, Tavares 2003 finds that aid

decreases corruption, using a similar IV specification for aid. It is rather frustrating that later authors did not themselves try to relate disparate results to previous studies. Of course, these aggregate studies are subject to the same critiques as with the aid and growth literature, with unclear specification of other control variables and identifying assumptions that are always somewhat problematic for aggregate outcomes in which most factors are endogenous.

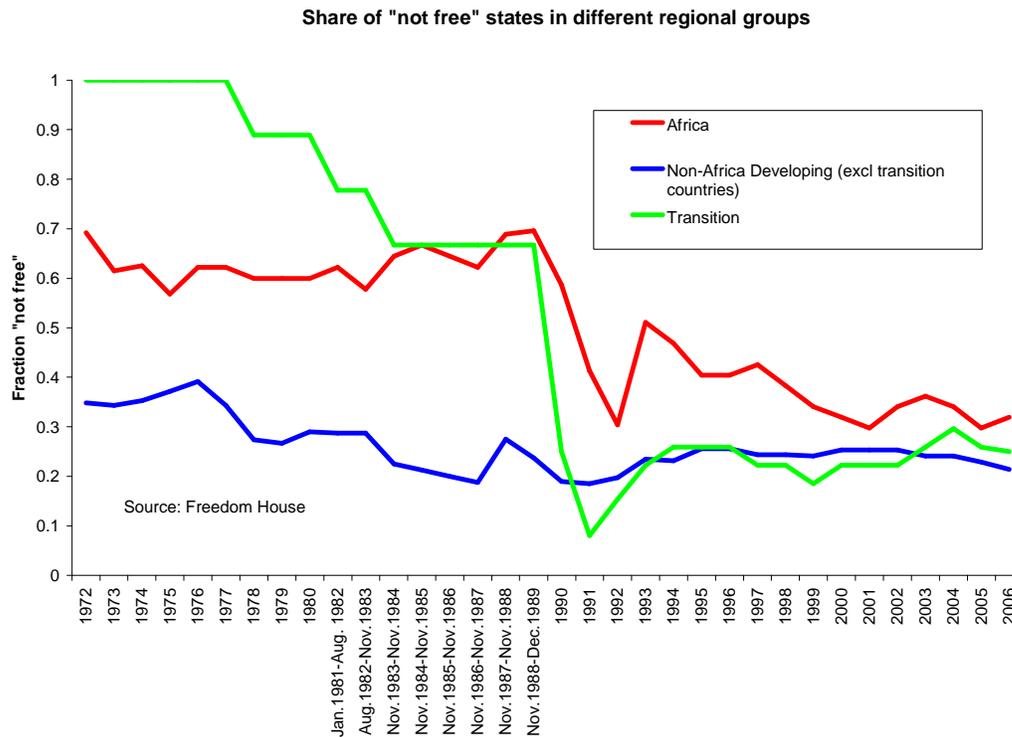
*b. Democracy*

Aid to promote democracy became fashionable about the same time as aid to combat corruption, with democracy promotion linked especially to the end of the Cold War and the early 1990s “end of history” view that the whole world was in transition to democratic capitalism (see Carothers 1999, 2004 for an extended discussion). The levers for democracy are the same as those for corruption – donors being selective on degree of democracy as an incentive to follow democratic practices, and technical advice (how to hold an election, etc.) Again, the outside actors seemed to assume an exaggerated sense of their own importance, not recognizing the dependence of democracy on many bottom-up social norms and associations not amenable to outside manipulation.

*i. Stylized facts on democratization*

Africa had more of a democratic transition than other developing countries, at about the same time (but not quite to the same degree) as ex-Communist countries moved away from autocracy. However, Africa’s democratic transition preceded the heyday of democracy promotion efforts by donors, so it would be hard to attribute the former to the latter (although general aid may still have played some role).

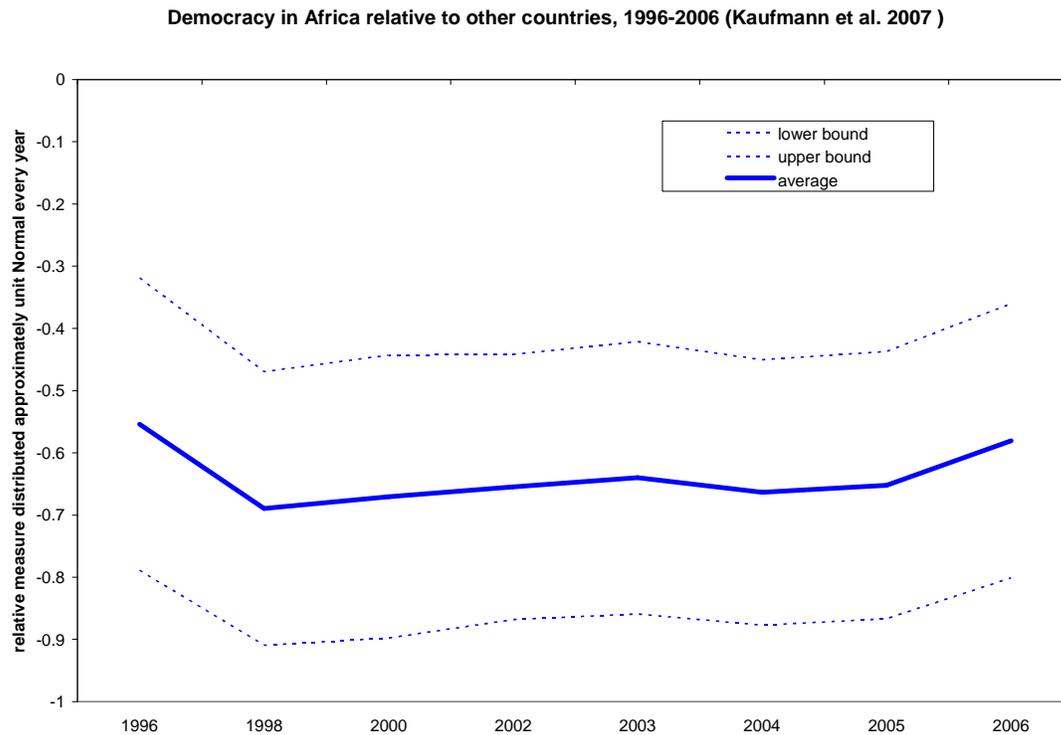
Figure 13: Democratization in Africa in International Perspective



The KKM governance indicator on African democracy relative to the rest of the world is available only for the decade 1996-2006 (which would correspond more closely to the timing of democracy promotion efforts). There has been little sign of Africa converging to the rest of the world on the KKM democracy measure.

This is an area where case studies may be useful. Donors were certainly involved in internationally-supervised elections in formerly war-torn societies like Liberia and Democratic Republic of the Congo. Donors also applied pressure to Kenya to conform to democratic principles after the long-time autocrat Daniel Arap Moi left office, and again in 2007-2008 when there was a seriously flawed election. However, other flawed elections happened with little donor complaint (such as Nigeria in 2007). Conversely, some democratic transitions in Africa were based on indigenous mass movements that forced autocrats to hold fair elections, with little donor involvement, such as Zambia (Ottaway 2000).

Figure 14: Recent democracy trends in Africa relative to other countries



Case studies can also assess some of the tools donors have used to try to promote democracy. A widespread aid fashion in the 1990s was for donors to try to strengthen “civil society,” voluntary citizens’ associations which were thought to be a way to promote political participation and holding governments accountable. Unfortunately, it was very unclear what qualified as civil society, or whether all civil society was such a good thing, since voluntary membership groups in society could include anything from gangs to the Mafia to extremist Islamic organizations (Carothers 2004). In Africa, the uncomfortable reality was that many voluntary groups formed along ethnic lines, which politicians often exploited at election time in a way that increased ethnic animosity. Even aside from the ethnic issue, other voluntary groups in Africa were economic self-help organizations that were relatively apolitical. Donors’ attempts to fund Western-style NGOs that promoted political participation and issue lobbying often created artificial NGOs with few roots in the community, which would immediately collapse if donor support was withdrawn

(Ottaway 2000). We see again the theme of the good intentions of donors' top-down "transformational" schemes being frustrated by messy bottom-up realities.

*ii. Empirical evidence on aid and democracy*

A small cross-country regression literature has analyzed the effect of aid on democracy. Knack 2004 finds no association between aid and the change in democracy from 1975 to 2000, including when he instruments for aid. Djankov, Montalvo and Reynal-Querol (2006a,b) found a causal negative relationship from aid to the change in democracy, using the usual suspects as instruments for aid. They labeled this the "aid curse," in which aid is as bad for democracy as oil is in the well-known "oil curse." The intuition is similar: more money available to those who control the state will make them less likely to permit any democratic threat to their stay in power. Moss et al. 2008 provide further intuition for such results when they argue that states beholden to donors for most of their revenues have less incentive to be accountable to their own citizens compared to states dependent on domestic tax revenue. Their argument is most relevant for Africa, since the median African country got aid equal to 37 percent of government expenditures over 1990-2006 (compared to 4 percent for non-African aid recipients). They also argue that goods provided by donors such as four-wheel drive vehicles or "sitting fees" for attending donor seminars (which can exceed monthly salaries of civil servants) can become objects of political patronage, reinforcing the "patrimonial state" and further undermining the prospects for democracy.

*c. Property rights: land titling*

The third institutional area suggested by research and that has attracted much interest from donors is property rights. In Africa's agricultural economies, the main asset is land, so there has been much focus on reforming land titling so as to implement individual property rights in land. De Soto (2000) made an influential statement about the potentially large payoffs from converting land with insecure rights ("dead capital" in De Soto's language) into formal title. This has not only the obvious benefit of improving incentives for farmers to invest in land quality (recall that

crop yields and soil quality are comparatively poor in Africa, as discussed in the agriculture section above), but also unlocking access to formal credit using titled land as collateral. The simplest view of how aid donors could improve property rights in land would be to give money and advice to implement an effective system of formal paper titles for land. This was a classic top-down view of how to achieve institutional reform that seems akin to the “transformational” view of what outsiders can accomplish.

The theme of land titles improving incentives is an old one in Africa, as apparent from the 1938 statement cited in Table 5 (Lord Hailey 1938, pp. 868, 876). The World Bank (2003b) expressed pretty much the same viewpoint, as if very little had changed in 65 years:

{Land} arrangements found in many countries are often not optimal from either an economic or a social perspective. For example, in Africa, the vast majority of the land area is operated under customary tenure arrangements that, until very recently, were not even recognized by the state and therefore remained outside the realm of the law. (p. xviii)

Despite decades of attempts to register land titles, during both the colonial and independence eras, today only about 1 percent of land in Africa is registered under the formal system (Blair Commission for Africa 2005, p. 231). In Africa, there has been a long historical evolution of customary rights to land, which are often quite complex in giving different parts of the “bundle of rights” implied by land ownership to different parties at different times during the harvest cycle. Outside donors paid little heed to the pre-existing local arrangements. Under these circumstances, issuing a land title to yet another party can increase rather than decrease uncertainty about who has what rights to the land.

Indeed, a number of empirical studies show little effect of outsider-directed formal land titles on the incentive to invest. In Kenya, the British introduced an ambitious plan to introduce land titles even before independence (the Swynnerton Plan of 1954). However, much subsequent research showed little constructive effect of land titling. For example, Migot-Adholla and Place (1998) showed a weak effect of land titles in Kenya on perceived land rights of farmers, credit use, and land yields (a measure of investment in the land).

Other studies throughout Africa bear out the picture of ineffective land titling. A study of land titles in Burkina Faso (Brasselle, Gaspart, and Platteau 2002) found no effect of land titles on incentives to invest in the land. Firmin-Sellers and Sellers (1999) found that a land titling program in Cameroon was not successful in consolidating individual property rights, although it had some other benefits. Jacoby and Minten 2007 found no effect of land titles on plot-specific investment in rice fields in Madagascar. Deininger and Jin 2006 have recently summarized the literature on land titles in Africa as showing little or no effect of titles on investment or access to credit, although they found evidence that a more general measure of “tenure security” in Ethiopia (not dependent on titles, which did not exist) fostered land investments.

Why was the payoff to formal land titling so disappointing? Perhaps because it ignored the bottom-up indigenous evolution of property rights (a less publicized part of de Soto’s book discusses how bottom-up evolution of land rights was also a common pattern in the history of today’s rich countries.) Migot-Adholla et al. 1991 long ago presented evidence that indigenous property systems in Africa, far from being static, have themselves spontaneously evolved towards more individualized land rights in response to increased population pressure. They argued therefore that the indigenous systems do not constrain investments in increased land productivity. Platteau 1996 also argued that there is little evidence of any benefit of formal land rights compared to indigenous systems. Cotula 2007 and Boudreaux and Aligica 2007 provide more recent statements of this same view, albeit with some variations and cautionary notes that indigenous evolution of land rights is not a panacea for optimal outcomes.

Despite all this research and experience, the aid donors today remain stuck on some kind of idealized comprehensive (outsider-induced, top-down) government reform that would somehow make formal registration of land titles “optimal”. The United Nations Millennium Project 2005 said for example: “The rule of law involves security in private property and tenure rights ... upholding the rule of law requires institutions for government accountability... this

requires a well functioning and adequately paid civil service and judiciary, proper information technology (for registration of property ...)" (pp. 31, 111)

The bottom line is that aid agencies' outside efforts to implement formal paper titles are not very effective because of the complexity of bottom up property rights arrangements. This is another apparent failure of the "transformational" approach by donors, and a key example of how outsiders exaggerated their own importance. Perhaps further research can find a way to gradually build formal institutions on top of indigenous institutions in a way that preserves their benefits while adding some advantages of formality.

#### H. Civil war and failed states

Whether because of domestic factors or the failure of previous aid efforts, some African states broke down altogether and the societies descended into civil war, regional warlords, and the nearly complete breakdown of public services (e.g. Somalia, Sierra Leone, Liberia, Democratic Republic of the Congo). Other societies experienced bursts of violence against civilians or outright genocide (e.g. Rwanda in 1994, Darfur in the new millennium), and preventing or resolving civil wars, and halting attacks on civilians and genocide understandably became part of international aid advocacy on Africa in the new millennium.

Rich country governments and international organizations responded with plans to combine outside military intervention and traditional aid work to take on tasks like ex-ante prevention of civil war and genocide or ex-post "post-conflict reconstruction." Secretary of State Condoleeza Rice in a speech at Georgetown on February 12, 2008 described the creation of a Civilian Response Corps, including economists, public administrators, public health officials, agronomists, and city planners. Rice painted a picture where this Response Corp could:

deploy with the 82nd Airborne within 48 hours of a country falling into conflict. These first responders would be able to summon the skills of hundreds of civilian experts across our federal government, as well as thousands of private volunteers.<sup>34</sup>

The State Department established in 2004 a new office called the Coordinator for Reconstruction and Stabilization (S/CRS). The S/CRS published in 2005 a checklist on how to move from an autocratic, poor, war-torn society to a democratic, prosperous, peaceful one. There were 1,179 concrete steps along the way, ranging from “maintain positive relations with indigenous populations” to “identify and dismantle organized crime networks”, to “assess needs for prosthetic limbs in population,” and to “improve drainage during road construction to reduce excessive runoff.”<sup>35</sup>

The British aid arm, the Department for International Development (DFID 2006), said that “the growing awareness of the linkages between conflict prevention and poverty reduction ... and the importance attached to helping rebuild countries emerging from conflict all serve to emphasise the need for DFID to work effectively with the military.”

In this area policy is outrunning research, but economists, aid consultants, and other social scientists have been trying to catch up with analysis of how to achieve this marriage of aid agencies and armies.<sup>36</sup> Here once again, we see the theme of escalation, since now the list of aid tools has grown to include Western or UN armies and the task list now includes “reconstructing” a war-torn society practically from scratch, which is far beyond what the aid industry would have previously contemplated. Is this the ultimate *reductio ad absurdum* of the West’s transformational

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<sup>34</sup>Secretary Condoleezza Rice, Remarks on Transformational Diplomacy, Gaston Hall, Georgetown University, Washington, DC, February 12, 2008. See also “Briefing on Civilian Stabilization Initiative,” Ambassador John E. Herbst, Coordinator for the Office of Reconstruction and Stabilization, Washington, DC, February 14, 2008

<sup>35</sup> Office of the Coordinator for Reconstruction and Stabilization, United States Department of State, “Post-Conflict Reconstruction: ESSENTIAL TASKS,” April 2005

<sup>36</sup> There has been a large outpouring of reports on this theme from task forces including economists and political scientists, usually sponsored by Washington think tanks, as well as frequent articles in *Foreign Affairs*, which I do not attempt to list here.

approach? Indeed Secretary Rice called the State Department approach to combine military force with foreign aid “transformational diplomacy.”

The World Bank’s economists suggested in a prominent 2003 report called “Breaking the Conflict Trap” how “international action” including military intervention and foreign aid could achieve both peace and economic development:

Our new understanding of the causes and consequences of civil wars provides a compelling basis for international action. ...Increased {foreign} aid and changes in allocation and administration could make such assistance more effective in preventing conflict... International action ... could avert untold suffering, spur poverty reduction, and help to protect people around the world from ... drug-trafficking, disease, and terrorism.

The report estimates that a specific package of international military peacekeeping forces, reforms, and foreign aid halves the probability of a civil war breaking out in a poor country from 44 percent to 22 percent.<sup>37</sup>

A large-scale World Bank research project lay behind the 2003 report, and continued afterward. The research made valuable contributions in bringing to economists’ attention the possible economic dimensions of civil war. The research may however, have suffered, from being excessively oriented towards findings that fit with the World Bank’s or other donor agencies’ feasible actions. In their introduction to the World Bank research findings, Collier and Sambanis (2002) state:

Because the World Bank is a financial institution, the instruments over which it has influence are primarily economic. One focus of the project has therefore been to investigate the extent to which civil war might have economic causes, as well as the more evident economic consequences.

The famous finding stressed in the World Bank report that “greed” rather than “grievance” motivated rebels fulfilled this ambition neatly (although we cannot really know what motivated the authors of the research, just as establishing what motivates rebels is not so easy either). The key finding was that primary commodity export dependence was associated with civil war. Subsequent scholars have criticized this result on the grounds of endogeneity (war might cause natural resource dependence by wiping out everything else, or both war and natural resource

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<sup>37</sup>World Bank (2003c), p. 168

dependence could be the endogenous outcomes of a third variable such as poor institutions) and lack of robustness (more on this below).<sup>38</sup> To be fair, Collier and Hoeffler recognized some of these problems: “primary commodities are associated with other characteristics that may cause civil war, such as poor public service provision, corruption and economic mismanagement” (Collier and Hoeffler 2004b). However, these caveats were lost as the research was translated into aid agency publications and policy statements and actions, such as the great international effort to restrict trade in “conflict diamonds” (ironically, diamond revenues were not included in the primary commodities export variable in Collier and Hoeffler (2002, 2004b) as pointed out by Fearon 2005).

In his book for general audiences summarizing this research, Collier 2007 gives precise recommendations for donor agencies (as well as military agencies):

So what seems to show up is a sequence. Aid is not very effective in inducing a turnaround in a failing state; you have to wait for a political opportunity. When it arises, pour in the technical assistance as quickly as possible to help implement reform. Then, after a few years, start pouring in the money for the government to spend.” (p. 116)

I want to persuade you that external military intervention has an important place in helping societies of the bottom billion, and that these countries’ own military forces are more often part of the problem than a substitute for external military forces. (p. 124)

Coups such as the one that destabilized Cote d’Ivoire are still a problem for the bottom billion. Remember, they are driven by much the same factors as rebellions are: poverty and stagnation. And yet it would be relatively easy to make coups history. We just need a credible military guarantee of external intervention. (p. 131)

Security in postconflict societies will normally require an external military presence, both sending and recipient governments should expect this presence to last for around a decade, and must commit to it. Much less than a decade and domestic politicians are likely to play a waiting game rather than building the peace... Much more than a decade and citizens are likely to get restive for foreign troops to leave the country. (p. 177)

Where does this precision come from? A look at the underlying papers listed by Collier (2007) – the same ones that emanated from the World Bank project -- shows that they are based on cross-country regressions, where the list of variables to be explained now includes civil war onset, peace onset, civil war duration, economic growth, military spending, and commodity export dependence, and the right hand side variables often include some of the other LHS

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<sup>38</sup> See Kalyvas 2007, Ross 2006, Fearon 2005.

variables on the RHS side of any equation not explaining that particular LHS variables, plus other endogenous variables such as aid, UN peacekeeping expenditures, and timing of elections (see paper citations below). Unfortunately, even though the list of endogenous variables is even longer and more ambitious than in other cross-country literatures, there is either no attempt or a seriously inadequate attempt to find instruments or establish causal effects. Endogenous variables swap places between LHS and RHS in different articles or different parts of the same article. The Deaton et al. (2006) report on the World Bank's research efforts severely criticized the civil war research on these grounds (while praising the research for addressing interesting issues). Daron Acemoglu (2006) contributed these comments to the Deaton report:

The econometric framework is very deficient. It has a number of serious conceptual and methodological problems. First of all, at the end the regression is one of endogenous variables on endogenous variables. But all of the results are interpreted as causal effects... Contrary to the claims in the paper, the regression evidence does not test any well-specified hypothesis, and the correlations that are interpreted as causal effects are really no more than correlations.... It is too early to jump to policy conclusions.<sup>39</sup>

When the World Bank project authors do recognize causality problems, they usually address it by lagging the endogenous RHS variable in a panel regression. The reasons why this is inadequate are well known – the dubious exclusion restriction, serial correlation, permanent country factors, and so on. Some starkly endogenous variables such as UN peacekeeping expenditures are simply used without instruments, although the endogeneity problem is acknowledged. In fairness to the authors, it would be difficult to imagine a successful identification strategy for some of the big aid policy questions involved in civil war and state failure in Africa. One does not have to start out with the presumption of a “transformational” aid policy agenda on civil war to determine the research questions, however. For example, Miguel, Satyanath, and Sergenti 2004 showed in a widely-cited paper that negative growth shocks cause increased likelihood of civil war, using rainfall shocks as a clever and plausible instrument for growth shocks (although as usual the

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<sup>39</sup> Acemoglu was commenting upon Collier and Sambanis 2003, a 2 volume publication that contained the above-mentioned findings.

excludability assumption, that rainfall does not affect war, is a little problematic). This is very useful to know, even it does not lead to any obvious aid policy (aid agencies presumably already wanted to prevent negative growth shocks before this finding, and aid bureaucrats have even less effect on rainfall than they do on other variables). For the effects going from war to development, Miguel and Roland 2006 examined the long-run impact on development of intensity of bombing during the Vietnam War across districts in Vietnam, using geographic determinants of bombing patterns as an instrument. These studies suggest that it is possible to address causality between such aggregates as output and war in a more rigorous way than was done in the World Bank project.

The other defense of aggregate work like the World Bank's could be that, even if they cannot be used to justify confident policy interventions, correlations can be a useful guide to thinking: it does force one to think about which direction of causality is more likely to explain a given correlation, or if there is a third factor that makes two variables move together, which points toward some theories and rules out others.

However, even establishing correlation is not so easy in multivariate analysis. The data mining problem also seems particularly severe with civil war and state failure regressions, since there is not enough political economy theory available to guide the specification of control variables (and existing theory is little utilized in any case). Indeed, Collier, Hoeffler, and Soderblom 2004 seem to embrace data mining as a methodology:

Table 3 presents our preferred 'baseline' model of conflict duration, reached after a series of iterations in which insignificant variables are deleted and variants of the economic, social, geographic and historical explanatory variables are then tested in turn.

Similar statements are mad<sup>40</sup> in the other papers listed above (e.g. Collier and Hoeffler 2002: "insignificant variables are then dropped in a process of stepwise elimination") without addressing the invalidity of the usual tests of statistical significance with this method.

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<sup>40</sup> This was originally a typo for "made" but one commentator on this paper suggested "mad" was also appropriate.

As usual, data mining will show up as a failure to pass robustness tests. Fearon 2005 found this with the famous “greed” conclusion that primary commodity revenues motivated rebels to try to capture the loot:

Collier and Hoeffler {2004b} reported that countries with a higher percentage of national income from primary commodity exports have been more prone to civil war...The author shows that this result is quite fragile, even using Collier and Hoeffler’s data. Minor changes in the sample framing and the recovery of missing data undermine it.

Hegre and Sambanis 2006 performed a sensitivity analysis of civil war regressions similar to Sala-i-Martin’s (1997) Bayesian model averaging exercise for growth regressions. They found only a few civil war correlates to be robust (and primary commodity dependence was not among them.)

To make things even worse, sample sizes are very small. For example, Collier and Hoeffler 2004a base one key policy recommendation (on the timing of aid after the end of a conflict) on “the crucial result of a temporary growth spurt in the middle of the decade {after the end of a conflict}” which “rests upon only 13 observations from 11 countries.” They interpret this result as showing that aid is unusually effective at that time (based on other regressions), although they give the caveat that because of the small sample “our results, even when statistically significant, must be treated with due caution.” Unfortunately, in the Collier 2007 book, the same conclusion is repeated without the caveat. Similarly, the British aid agency (Department for International Development, DFID) 2005 cites this specific result for the conclusion that “in post-conflict states {donors} tend to decrease aid precisely when it could become more effective,” and based on this and other World Bank findings DFID determined its actual policy: “DFID made a ten-year commitment to support the government of Sierra Leone in 2002. Similar commitments are in place for Afghanistan, Rwanda, and Ethiopia.”

There are other areas where it is not clear what research forms the basis of policy recommendations. Collier 2007 also passes judgment on the likely military success of foreign intervention in African civil wars (and thus recommends such intervention as quoted above). He points to the ease with which British military intervention halted Sierra Leone’s civil war as “the

future of military intervention,” dismissing counter-examples such as Somalia or Iraq, and argues that a modest military intervention could have prevented the Rwanda genocide (a common view, but not without strongly contrarian views like Kuperman (2001)). It is not clear on what basis economists involved in discussing military intervention make judgments on such strictly military topics as ease of pacification.<sup>41</sup>

I thought it might be an interesting experiment to contrast economists’ views with that of a real military analyst (admittedly only one possibly unrepresentative opinion). A 2008 email to Colonel Michael Meese, the head of the social science department at West Point, generated the following response from him (along with an explanation that there was little formal military analysis of the subject):

If someone were to say “preventing genocide in Rwanda could have been done with a very small military force” or that genocide in Darfur could be stopped equally easily, my response would be that statement belies everything that any knowledgeable observer knows about the nature, conduct, and character of war. Genocide is the result of such severe economic or political motivations that people are driven to conduct the most inhumane and un-human actions. To stop such barbarism is a political act. Warfare is, by definition, an extension of politics by other means. It is never easy or costless and, as authors as far back as Clausewitz or Sun Tsu said, it is dominated by fog and friction. That implies that it never works out the way you want because it is strategic--i.e. the enemy gets a vote. And, as Clausewitz said, that is why you should never start a war without knowing where it will end.<sup>42</sup>

Intervention to rescue civilians from genocide is certainly appealing. But there are tough questions: even if the intervention proceeds from humanitarian motives, does it actually have humanitarian consequences? There has been a lot of writing by other social scientists and humanitarian workers on these questions that seems more insightful than some economist writings. Although these writings lack academic rigor, they do suggest interesting hypotheses or caveats that could be tested with more systematic research. Some writers argue humanitarian war to protect civilians is not necessarily going to save civilian lives. The guarantee of international protection may cause civilians at risk to let down their guard, and then tragedy ensues when the

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<sup>41</sup> This section places more emphasis on the research by Collier and co-authors than by other authors only because the former have been far more influential in aid policy discussions. For a more general scholarly review of the civil war literature, see Blattman and Miguel (2008).

<sup>42</sup> April 10, 2008 email from MICHAEL J. MEESE, Ph.D., Colonel, U.S. Army, Professor and Head, Department of Social Sciences, U.S. Military Academy, West Point, NY 10996.

guarantee turns out to be an empty one (as arguably occurred in massacres in Srebrenica, Bosnia and in Rwanda). The hope of international intervention may embolden rebels to undertake military action that will inevitably catch many civilians in the cross-fire between the rebels and the government before the interveners arrive (Kuperman (2005) and Crawford and Kuperman (2008)). Exactly this scenario played out with the Kosovo Liberation Army (KLA), who said in interviews with Kuperman that their violence against Serbs starting in 1997 was motivated by hopes of foreign intervention (it's rather embarrassing that the problem of moral hazard was recognized more by non-economists than by economists in this area).

Rescuing civilians from large-scale violence may require an equally large scale foreign intervention. Yet a large scale foreign military intervention may lead to an escalation of violence on all sides and much more loss of civilian life. As Columbia Professor of Government Mahmood Mamdani (2007) wonders "Why should an intervention in Darfur not turn out to be a trigger that escalates rather than reduces the level of violence as intervention in Iraq has done?" University of Chicago Law Professor Eric Posner (2006) points out that a smart tyrant or warlord can foil a humanitarian invasion by using civilians as human shields, forcing the invaders to kill those they are trying to save (as arguably occurred in Somalia). Of course, there are arguments for the other side from enthusiastic proponents of humanitarian intervention, but the above points are suggestive of some of the complexity of the issue that has not been addressed adequately in economists' writings.

The related area where policy seems to be running ahead of research is in "re-building failed states" (most "failed states" are in Africa). Western concern about "failed states" surged because of the example of Afghanistan providing a haven for the terrorist attacks of 9/11, and aid agencies have responded accordingly. Aid agencies did reports on this (DFID 2005, World Bank 2002, USAID 2005), and are mounting major efforts for these "failed states" (which are also known in aid jargon as "low income countries under stress," "fragile states," and "post-conflict societies"). There has also been a slew of books and reports on "failed states" from Washington

think tanks and in international relations magazines like *Foreign Policy* and *Foreign Affairs*, too numerous to be listed here. However, I have not been able to find much in the way of academic research on how or whether aid agencies can move a state out of “failure.” Perhaps the phenomenon of recovery from “state failure” is too recent to be studied yet (e.g. in Liberia and Sierra Leone). But even when more observations become available, part of the difficulty for doing any research seems to be the vagueness of defining which states “failed,” when they did so, and if and when they “un-failed”. Although there are a small number of cases where everyone agrees there has been state failure (Somalia), aid agencies have typically applied “rebuilding failed states” policy to a much larger group. For this larger group, aid agencies employ a remarkably diverse set of criteria for defining state failures, including the last 3 years per capita growth (USAID 2005, p. 20) to the state’s “ability to protect and support the ways in which the poorest people sustain themselves” (DFID 2005, p. 7) to “an unfriendly environment for private sector activity” (World Bank 2002, p.4). Since all of these variables have long been studied in their own right in development economics, it is not clear to what extent “state failure” is just “very low development” by another name.

There are two interesting research papers that argue against the whole mindset behind the exercise. Weinstein (2005) questions both the assumption that outside intervention is helpful in rebuilding failed states and the fundamental assumption that states cannot recover on their own (giving examples of “autonomous recovery” like Uganda, Eritrea, and Somaliland). Englebert and Tull (2008) dispute three prevailing assumptions: (1) that Western institutions can be automatically transferred to Africa, (2) that external and internal actors share the diagnosis of “failure”, and (3) that external actors have the ability to rebuild failed states. The hubris of the outsiders that they can cleanly resolve complex conflicts and fix failed states is perhaps the single strongest example of the tendency of the West to exaggerate the benevolent importance of outside actors relative to inside actors.

Out of fairness, shouldn't one say that even if one cannot establish within the limits of aggregate econometrics a positive effect of programs that combine peacekeeping and aid, neither can one establish a negative effect with these same tools? This is correct, of course, but surely the burden of proof for any large-scale intervention combining armed force and outside aid and policy advice should be on the proponents of the intervention, since it could have large negative effects.

One might think that a marginal approach is not even possible with civil war and post-conflict questions, but some good recent research suggests otherwise. I give three examples of useful empirical research that makes much more progress than aggregate studies on identification. Blattman and Annan (2007) tested the effect of soldiering on children in Uganda using the quasi-randomized variation across children induced by kidnappings of children into the Lord's Resistance Army. One could use such research to ask what aid programs might help rehabilitate former child soldiers. Bellows and Miguel (2008) found a positive effect of wartime victimization on subsequent political participation in Sierra Leone, an unexpectedly hopeful result for post-conflict recovery. Paluck (2007) found that a radio program promoting tolerance in post-conflict Rwanda had some effect on perceived social norms about behaviors affecting ethnic conflict, compared to a randomly selected group listening to a radio program with no content on post-conflict issues. Although each study of this kind addresses only a narrow issue, a large collection of such studies could be useful to guide aid donors in taking many useful "marginal" steps to facilitate recovery from civil war.

### III. Conclusions

There are several themes that emerge from this survey of Western efforts to "save Africa." Among more tangential findings, there is little evidence of learning over time within the aid to Africa industry. Instead, within each area of effort, there has been a cycling of aid ideas, with a particular approach going out of fashion to be replaced by a new fashion, only to have the old fashion come back and once again replace the new fashion. The quantity of the literature on aid to

Africa is unfortunately offset by low average quality, without enough attention to such basics as the role of incentives in theorizing about aid intervention to resolving causality and data mining issues in aggregate regression work.

The biggest theme is the conflict between what I have called the “marginal” and the “transformational” approaches to the overall enterprise of African development. Occasional swings to the more modest “marginal” approach quickly result in a countervailing swing to the more ambitious “transformational” approach, which has particularly dominated the policymaking community in aid in recent years. I have argued that it is difficult to resolve econometrically what the effects of the more ambitious programs are, but this argues even more for caution in applying large scale outside interventions that could have unintended negative effects. The more measurable effect of “marginal” approaches is another argument in their favor. Rigorous randomized trials have found positive effects of aid interventions, and case studies and stylized facts are suggestive of beneficial aid projects in the social sector (such as the great success of the early programs in health).

Although the evidence has not been (and perhaps can never be) definitive on transformational approaches, there has been widespread disappointment with each successive transformational approach. Unfortunately, far from retreating from the transformational approach, this disappointment has led to an escalation of outside intervention, from the project approach to improve sectoral outcomes, to Filling the Financing Gap with aid, to structural adjustment conditions on economic policies, to attempts to modify institutions such as corruption, democracy, and property rights, and finally, most ambitiously to prevent civil war and reconstruct failed states, including outside military intervention.

The dangers of the transformational approach, such as the one that wishes to “save Africa”, are captured well by a famous quote from Adam Smith’s *Theory of Moral Sentiments*:

The man of system, on the contrary, is apt to be very wise in his own conceit; and is often so enamoured with the supposed beauty of his own ideal plan of government, that he cannot suffer the smallest deviation from any part of it. He goes on to establish it completely and in all its parts,

without any regard either to the great interests, or to the strong prejudices which may oppose it. He seems to imagine that he can arrange the different members of a great society with as much ease as the hand arranges the different pieces upon a chess-board. He does not consider that the pieces upon the chess-board have no other principle of motion besides that which the hand impresses upon them; but that, in the great chess-board of human society, every single piece has a principle of motion of its own, altogether different from that which the legislature might chuse to impress upon it. If those two principles coincide and act in the same direction, the game of human society will go on easily and harmoniously, and is very likely to be happy and successful. If they are opposite or different, the game will go on miserably, and the society must be at all times in the highest degree of disorder.

“The game going on miserably” with the “highest degree of disorder” may be an apt description of the current disarray in aid to Africa. One can only hope that the record of the past will chasten outsiders to be more modest and humble about what they can do for Africa. Far from a counsel of despair, such a correction of expectations may make possible a sizeable expansion of programs that deliver substantial benefits to poor Africans under the “marginal” approach.

As far as the “transformational” approach, its ambitions are certainly understandable given the realities of poverty and suffering in Africa. But these ambitions seem to have created an intellectual bias that exaggerates the importance and potential for benevolent action of outside actors. It is suggestive that most sustained surges in GDP per capita (notably Botswana and Mauritius in Africa, as well as the East Asian success stories elsewhere) have been homegrown rather than the result of ambitious outside aid and intervention.<sup>43</sup> Consistent with this record, perhaps the ones most likely to “save Africa” are Africans themselves.

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<sup>43</sup> See discussion in Easterly (2006).

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