An Assessment of the Effects of Norwegian Development Assistance on Poverty Reduction and Conflict Prevention

A Report Commissioned by the Norwegian Ministry of Foreign Affairs and prepared by Paul Collier and David Dollar, Development Research Group of the World Bank

Foreword

The World Bank report, **Assessing Aid**, *has stimulated a healthy public discourse and additional research on how to make aid more effective in supporting poverty reduction. This analysis of the effectiveness of Norwegian aid, viewed in light of recent research results, was commissioned by the Norwegian Ministry of Foreign Affairs and written by Paul Collier and David Dollar of the Development Research Group of the World Bank. Views expressed are those of these authors. The report does not necessarily reflect official views of the Government of Norway or of the World Bank.*

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1. Overview

Recent research into aid effectiveness has established that development assistance can be a powerful force for poverty reduction in the developing world. It is most effective in this objective when it is targeted to countries that are very poor, and – among these poor countries – is focused on ones that have made substantial progress reforming economic institutions and policies. As for spurring policy change, aid normally does not play a leading role, though it can provide critical support to governments and societies in which there is a real movement for change ("ownership" of reform).

Using this framework, we are able to estimate the allocation of total development assistance that is "poverty efficient" – that is, gets the maximum poverty reduction impact from a given amount of assistance. We view this allocation as a benchmark that is a starting point for analysis, not as a rule to be followed mechanically. In using the framework to assess the impact of Norwegian assistance, our main findings are:

- Overall, the poverty efficiency of Norwegian assistance is high compared to typical ODA. (We can actually provide a specific numerical estimate: a dollar of aid from Norway has about 50% more poverty impact than a dollar of aid from the average DAC donor.) Norwegian assistance is relatively effective because it is sharply focused on very poor

[1] This report was prepared by Paul Collier and David Dollar of the Development Research Group of the World Bank, with useful inputs from Shanta Devarajan, Giuseppe Iarossi, and Dennis Tao.. The views expressed are those of the authors and do not necessarily reflect official views of the World Bank or the Government of Norway.

countries, and many of its priority countries have reasonably good policies and high aid effectiveness.

- The impact of Norwegian assistance could be enhanced further by some reallocation of resources among recipient countries. Of its twelve priority countries, Sri Lanka and Zimbabwe stand out as ones with relatively low aid effectiveness: Sri Lanka because it is not that poor a country, and Zimbabwe because it has very poor policies. Also, Norway tends to "over-finance" some moderate policy countries such as Tanzania and Zambia. Overall poverty impact would be increased if aid were reallocated from any of these countries to the priority countries with higher effectiveness: Uganda, Ethiopia, and Bangladesh. (One important caveat, however, is that our assessment of Ethiopia's policies comes from 1999, before the war with Eritrea escalated, and it is reasonable to mark down the policy ranking because of this issue that obviously worsens the environment for development and poverty reduction.) How exactly Norway might want to reallocate resources is more a political question than a scientific one: but as an illustration we analyze a modest reallocation among priority countries that would increase the total poverty impact by 20%.
- Beyond the priority countries and aid given for humanitarian purposes into crisis environments, Norway gives small amounts of assistance to 63 other developing countries. *A priori* it seems unlikely that spreading assistance so thinly is likely to have the maximum impact. In our analysis we find that most of the recipients on this list are not high aid effectiveness countries. There are a few notable exceptions (Ghana, India, Vietnam). We estimate that Norway's assistance to this list of 63 countries has the same mediocre poverty impact as typical ODA. For the resources in this category, the poverty impact could be

doubled by focusing on a smaller number of countries (either the ones on this non-priority list that have high effectiveness, or ones from the priority list that are under-funded).

- We introduce political economy considerations about aid and policy reform, and ask whether these considerations would alter any of the judgments. In most cases the political economy considerations reinforce the judgments: in countries such as Uganda, Ethiopia, Eritrea, and Bangladesh, assistance should have a direct poverty impact and increase the likelihood that reform programs will continue. In Zimbabwe, on the other hand, not only is aid likely to have little immediate impact, but the long-standing autocratic regime there is a very poor candidate for reform. The cases that require more consideration are Sri Lanka and South Africa. Neither country is especially poor, but each has a relatively new government that is trying to make changes.
- In the final section of the report we consider the objective of conflict prevention instead of poverty reduction. We apply a new model which estimates the risk of large-scale civil conflict. Aid can be effective in reducing conflict risk, but as with poverty reduction, its effectiveness depends upon the policy environment. Hence, as with poverty reduction, effective Norwegian intervention can only occur in environments where policy is already reasonable. While with the objective of poverty reduction a donor should target aid on those good-policy countries which have high poverty, when the objective is conflict prevention, aid should be targeted on those good-policy countries with a high risk of conflict. Two of Norway's current high-priority countries fall into this category and this potentially reinforces the case for their priority status.

2. General Analysis of the Allocation of Norwegian Assistance

Our analysis of the poverty-efficiency of Norwegian assistance is based on the research in *Assessing Aid* and the background papers for the report. This and other research established four important points about aid, growth, and poverty reduction:

- The impact of aid on growth depends on the quality of economic institutions and policy in the recipient country;
- Donors in general do not have a large effect on these institutions and policies (though there are important exceptions that we will treat below);
- There are diminishing returns to aid, so that in any one year there is a limit to how much aid even a "good performer" can absorb; and
- There is a close link between growth and poverty reduction in developing countries.

In this section we are going to assume that donors have no influence on recipient country policies at all, and examine how aid should be allocated in this context. This should be viewed as an initial benchmark. In later sections we will discuss how one might want to deviate from this benchmark in specific country cases where there are good indicators of impending policy reform.

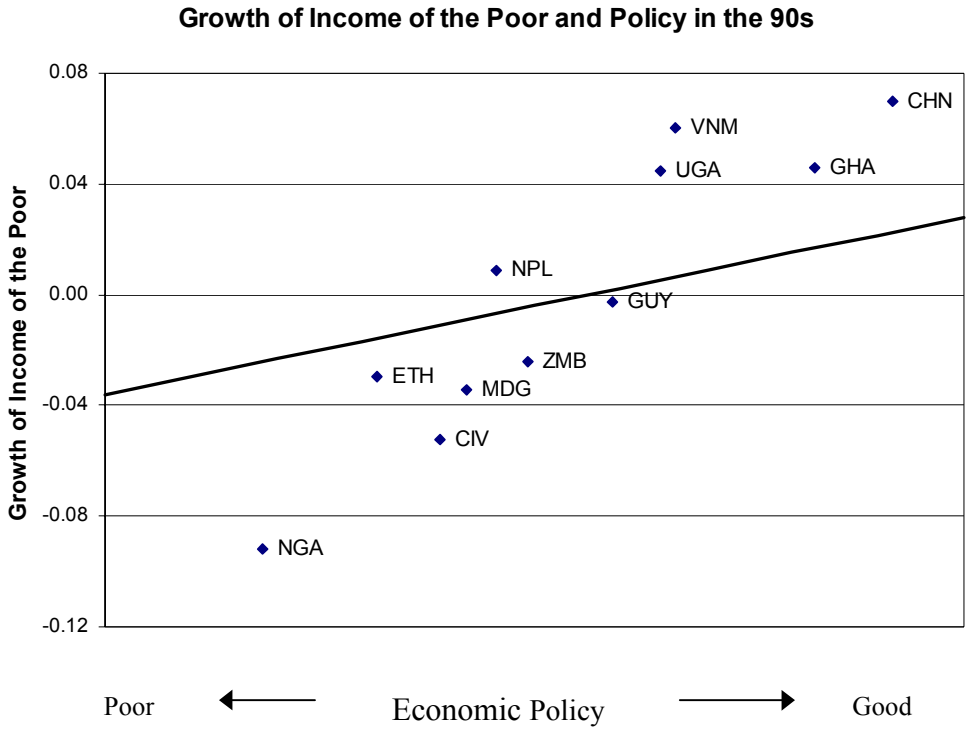
If we take recipient country policy as given, how should we allocate foreign aid in order to have the maximum effect on poverty reduction? The research results noted above provide the answer: aid should be allocated on the basis of how poor countries are and on the quality of their economic institutions and policies.

Box 1.What is good economic policy?

"Good economic policy," conceptually, measures the extent to which government policy creates an environment for broad-based growth and poverty reduction. The World Bank measures this through its Country Policy and Institutional Assessment (CPIA); it has 20 components which can be grouped into four categories:

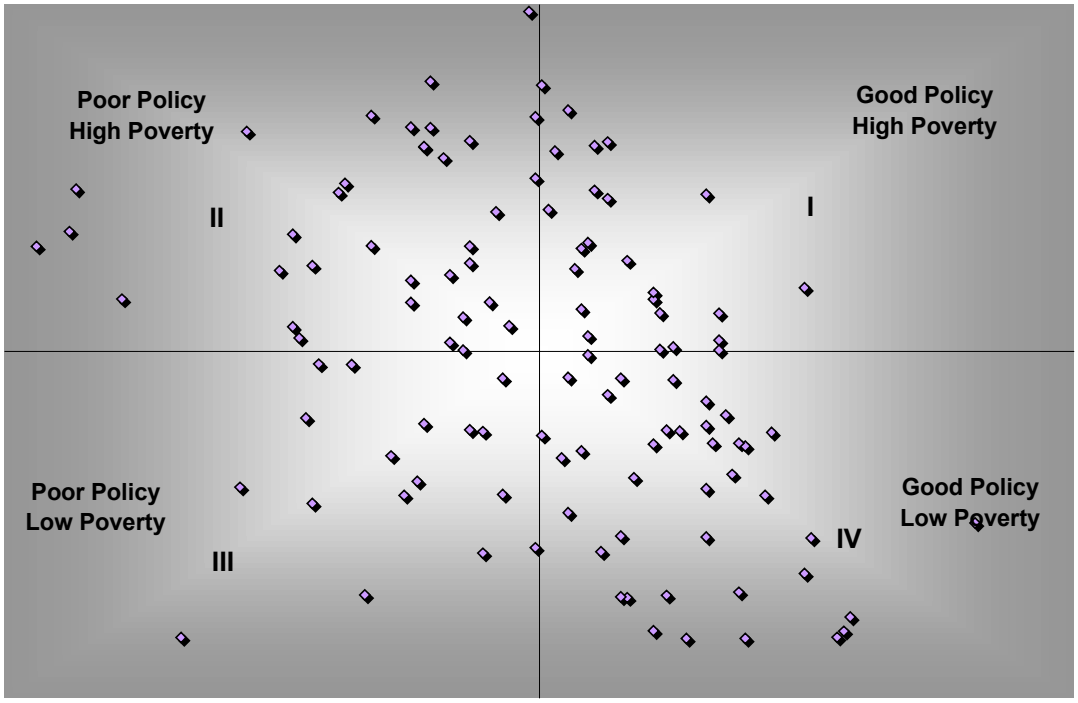
- ***Macroeconomic policies:*** whether fiscal, monetary, and exchange rate policies provide a stable environment for economic activity;
- ***Structural policies:*** the extent to which trade, tax, and sectoral policies create good incentives for production by households and firms;
- ***Public sector management:*** the extent to which public sector institutions effectively provide services complementary to private initiative, such as the rule of law (functioning of the judiciary, police), infrastructure, and social services;
- ***Social inclusion:*** the extent to which policy ensures the full participation of the society through social services that reach the poor and disadvantaged, including women and ethnic minorities.

There is a very close relationship between this measure of policy and actual improvements in living standards of the poor. The figure below shows the average relationship between the CPIA and growth of income of the poor (defined as the bottom 20% of the income distribution) during the 1990s. The relationship is estimated across 80 countries; a few specific ones are identified as illustrations. Uganda, Vietnam, Ghana, and China all have good policy environments for low-income countries, and have had rapid growth of income of the poor. Zambia and Cote d'Ivoire would be examples of weaker policy environments in the 1990s, and Nigeria would be an example of a very poor policy environment. In these countries income of the poor declined during the 1990s.



As an illustration, Figure 1 provides a scatter plot of 130 developing countries with information from the late 1990s on the extent of poverty (share of the population living on less than $2 per day) and on the quality of institutions and policy. The specific measure used here is the World Bank's Country Policy and Institutional Assessment, which is described in detail in Box 1.

Figure 1. Poverty and Policy, 115 Developing Countries, 1999



In general, aid is going to be more effective in the countries in quadrant I. The relatively good policy here means that assistance will be used effectively. The high poverty in these countries means that growth spurred by aid will have a large effect on poverty reduction. In quadrant IV, aid will also be effective at promoting growth, but it is not efficient to give a lot of aid to these countries because poverty is relatively low. Chile or Thailand would be examples of countries with good policies but relatively low poverty.

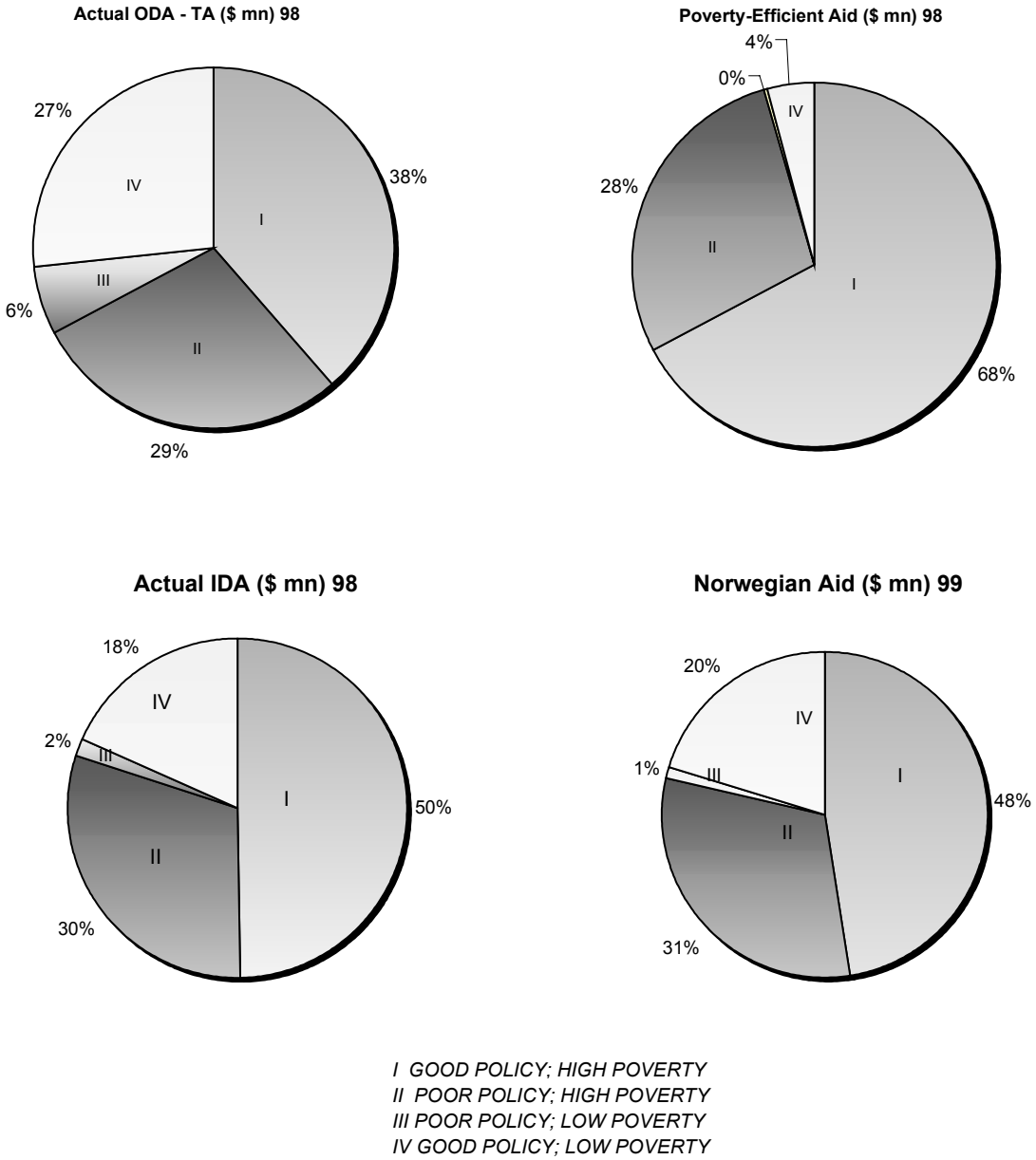
In quadrant II there are countries with severe poverty. However, the weak policies mean that aid is not that effective in generating growth and poverty reduction. The countries in quadrant III have poor policies and relatively low poverty (these are mostly transition economies such as Russia or Ukraine).

Figure 1 is useful as a heuristic device to emphasize that among poor countries there are large differences in economic policy and that aid will be more effective at reducing poverty in the countries that are in the upper right (high poverty, good policy). However, our model of efficient aid does *not* say that the moment you cross the line between quadrants II and I that aid suddenly becomes effective. Rather, the model says that aid becomes *more effective* as you move to the right in the figure. We have devised a specific algorithm for allocating aid to have the maximum effect on poverty, an algorithm in which the amount of aid that a country receives increases with the quality of policy and also increases with the extent of poverty (Collier and Dollar, 2000).

For this exercise we calculated a "poverty-efficient" allocation of the world's aid for 1998 (Table 1). (The year 1998 is the most recent one for which we have the data on the allocation of total world aid.) This provides a useful benchmark for looking at the efficiency of Norwegian assistance. Figure 2 shows how our "poverty-efficient" aid is allocated across the countries in the four quadrants. (Because China and India are so large and not very relevant for the Norwegian aid program, we left them out of this calculation.) In particular, 68% of assistance goes to the "good policy, high poverty countries." Note that the countries in the "high poverty, poor policy" group get 28% of the allocation. This drives home the point that our recommendation is *not* to give zero assistance to the poor policy countries. The main thrust of

our analysis is that donors should be giving more assistance to the good policy countries than to

Figure 2. Actual and Poverty-Efficient Aid Allocation



the poor policy ones. Up through the mid-1990s, donors were not doing this at all. In the past

two years, however, there has been a notable change in donor behavior, in the direction that we have advocated. Some poor policy countries such as Kenya have seen clear cuts in their aid receipts. Nevertheless, it can be seen in Figure 2 that the allocation of total ODA in 1998 was far from the "poverty-efficient" allocation. Countries in quadrant I received more assistance that those in quadrant II. However, donors in the aggregate continue to give a lot of assistance to middle-income countries in which aid is not likely to have much impact on poverty.

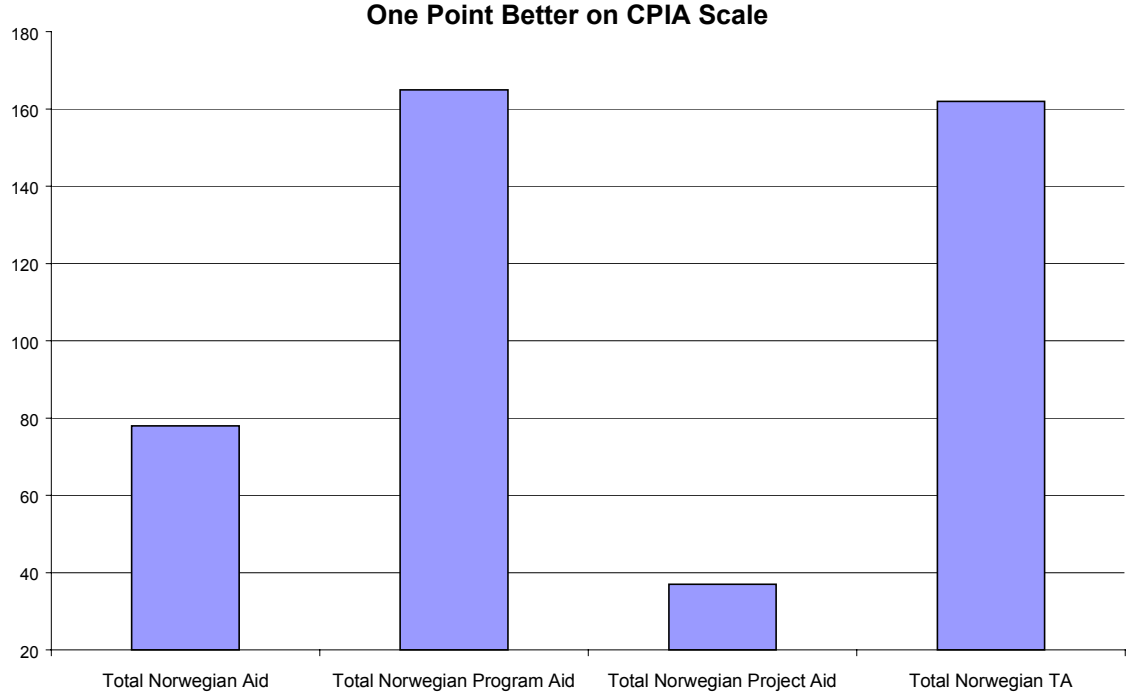
We make the same calculation in Figure 2 for Norway's 1999 aid. Norwegian assistance is more efficient that average ODA, by our criteria. Whereas 38% of ODA is allocated to the quadrant I countries, 48% of Norwegian aid goes to this group. About 21% of Norwegian assistance goes to the less poor countries, compared to 33% of total ODA. As a final reference point, the figure also includes the allocation of the World Bank's IDA concessional resources. There is slightly more IDA going to the quadrant I countries (50% of the total), but in general the allocation of IDA and the allocation of Norway's aid are similar. Both are more efficient that average ODA, but still somewhat far from the "poverty-efficient" allocation.

A second approach to analyzing the general efficiency of Norwegian aid is through regression analysis. The poverty efficient model says that aid should be allocated on the basis of a country's poverty and its policies. In appendix table 1 we regress Norwegian aid on per capita GDP, population, and the CPIA index. (Here we use all the data from the 1990s and create a panel.) After controlling for per capita income and population, there is a clear relationship between how much aid a country gets from Norway and its policy as measured by the CPIA. This relationship is summarized in Figure 3, which shows how much additional Norwegian assistance is associated with a one point increase in the CPIA. (One point is a fairly large change in the index; the standard deviation of the index is 0.7. One point is roughly the difference

between Kenya's policies and Uganda's policies.) One point better on the CPIA scale is associated with 78% more Norwegian assistance. The t-statistic on that coefficient is 4.92, so that the relationship is quite a significant one. It is interesting to carry out the same exercise for some of the different components of Norwegian assistance. The relationship with the CPIA is particularly strong for program aid (165% more for a one-point change in the index) and also for technical assistance (162% more). For project aid, one point on the CPIA is associated with 37% more aid, though that number is not statistically different from zero. These findings suggest that Norway uses its program aid and technical assistance to support poor countries that have reformed, while continuing to pursue projects in all types of policy environments.

We investigated whether this relationship between Norway's aid and the CPIA changed during the 1990s, and found that it has been a stable feature of Norwegian assistance throughout the decade.

Figure 3. Additional Norwegian Aid Associated with One Point Better on CPIA Scale



The evidence so far is that Norwegian assistance is more effective that ODA in general in promoting poverty reduction. A natural question to ask, then, is how much more effective? In our framework, we can estimate the impact of an additional dollar (or Kroner) of aid on poverty in each developing country. Poverty efficiency requires that aid be allocated so that these marginal impacts are equalized. (Otherwise, there would be efficiency gain from shifting aid from where its effect is low to where its effect is high.) In the real world, total ODA is far from efficient, so that the marginal effect of aid varies to a considerable extent across countries.

One way to estimate the efficiency of different donors' allocations of aid is through the following thought experiment. Suppose that there were an additional million dollars of aid, estimate its impact on poverty if it were allocated

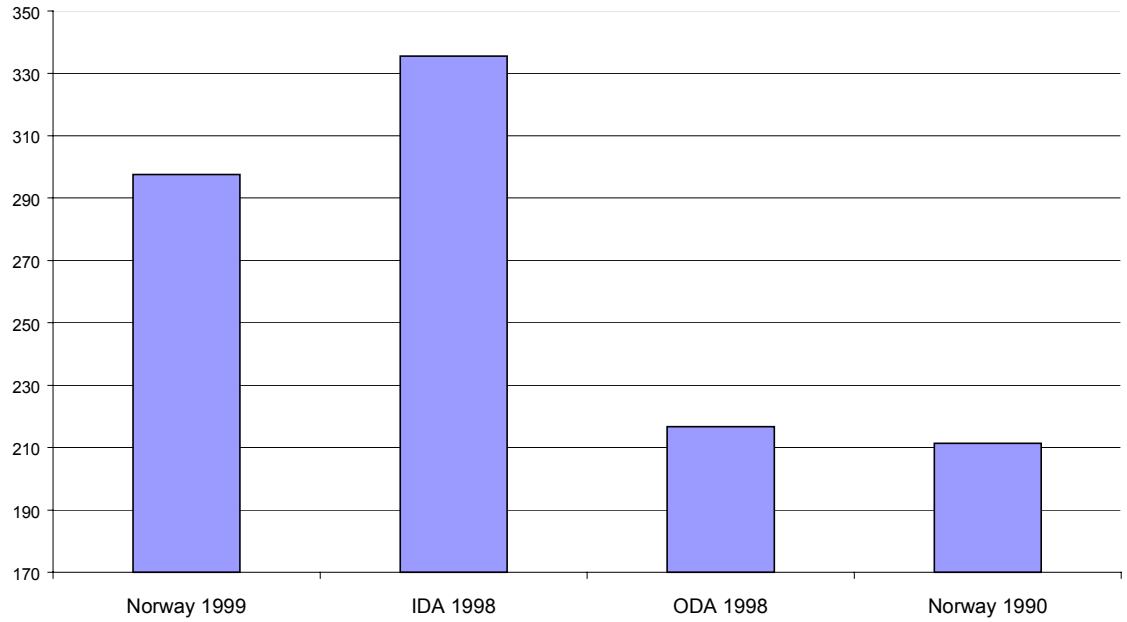
- Proportional to Norway's 1999 aid
- Proportional to 1998 IDA
- Proportional to 1998 ODA
- Proportional to Norway's 1990 aid.

Basically, we are asking what would happen if each of these aid programs had a small proportional increase. The answers tell us how well different aid programs are targeted to countries in which aid is effective.

We estimate that an additional million dollars of Norwegian aid would lift 298 people permanently out of poverty. One has to recognize that a specific point estimate like this has quite a bit of uncertainty around it. Nevertheless, it is a useful, broad estimate that is quite plausible. It says that it takes an investment of around $3,000 to permanently lift someone out of poverty. Figure 4 shows how this marginal efficiency of Norway's 1999 assistance compares to

other donor allocations. Norway's aid is about 50% more productive – in terms of poverty reduction – than average ODA. It is not quite as efficient as 1998 IDA, which has an estimated marginal productivity of 336 people per million dollars. Furthermore, the efficiency of Norway's assistance improved over the decade, from 211 people per million dollars in 1990. (In other work we estimated that the marginal productivity of ODA overall in 1990 was quite low, about 100 people per million dollars.) Thus, Norway's assistance is more poverty efficient than ODA in general and has improved over the decade. As noted, the specific point estimates should be treated with some caution. However, the basic finding that Norwegian aid is more productive than average ODA is quite robust.

Figure 4. Marginal Efficiency of Aid Allocations
(People Lifted Out of Poverty Per Million Dollars)



3. Potential Poverty Gains from Reallocating Aid among Norwegian Aid Recipients

The basic message that comes through in the previous section of this report is that Norwegian aid is *relatively* efficient at its objective of poverty reduction. However, the word "relatively" is important. One of the main findings of research into aid is that overall ODA is not very efficient. It is often given for political, strategic, or commercial reasons that have nothing to do with poverty reduction. So, while Norwegian aid is considerably better than much other ODA, it is reasonable to inquire whether it could be made more efficient through plausible reallocations. In this section we are going to focus first on Norway's twelve priority cooperation partners and examine what gains could be achieved by reallocating aid volumes among these countries. Then we will broaden the analysis to include all of the countries to which Norway gives development-oriented assistance.

Table 2 lists Norway's twelve priority development partners in descending order of aid receipts in 1999. The table also includes an estimate of poverty (population share living on less than $2 per day) and an assessment of policy, in one of four categories – very good, good, moderate, and poor. The total amount of assistance to these countries in 1999 was Kroner 2.1 billion (about $300 million). The table also shows a number of counterfactual reallocations of Norwegian aid, among these countries, holding the total amount constant. Reallocation (1) is proportional to the "poverty-efficient" allocation of aid that we have calculated.

In general, very populous countries such as Bangladesh and Ethiopia are under-funded in terms of aid. Thus, in the poverty-efficient allocation, Bangladesh would get about half the total, where in reality it gets about 13%. There are political reasons why donors may not want to concentrate too much assistance in any one country. In the cases of Bangladesh and Ethiopia, there are other factors as well. Reallocating a large amount of aid to Bangladesh would essentially mean taking it from African countries. And, in the case of Ethiopia, the recent war

with Eritrea is another consideration. The policy score used here is for 1999. Realistically, the war is a factor that increases military expenditure as a proportion of the budget, thereby probably reducing the poverty-efficiency of aid. Further, the recent war raises political considerations beyond the scope of our analysis but of legitimate concern to donors.

For these reasons we consider two other reallocations. In Reallocation (2) we constrain Bangladesh to its actual Norwegian aid receipts, and otherwise reallocate proportional to poverty-efficient aid. In Reallocation (3) we also constrain Ethiopia. Reallocation (3) is probably the most politically realistic. This reallocation would halt the aid to Zimbabwe and Sri Lanka, for somewhat different reasons. Sri Lanka has pretty good policy, but is simply not a very poor country. Hence it gets no aid in our poverty-efficient allocation. Zimbabwe is poorer than Sri Lanka, though not as poor as many other African countries. It has poor policy, and that is the primary reason that it gets no aid in the optimal allocation.

Reallocation (3) would also take modest amounts of assistance away from Tanzania, Mozambique, Nicaragua, and Zambia – all countries with moderate quality policies and large amounts of assistance from Norway. Uganda is the main country that gets additional aid in Reallocation (3), because it is a poor country with very good policy. Nepal also gets more aid, despite its poor policy; this emphasizes the fact our model does allocate some aid to truly poor countries, even with poor policies. Norway in 1999 gave a very small amount of aid to Nepal, so aid would have to be increased to be proportional to poverty-efficient aid.

What would be gained from reallocation? Recall that our estimate of the marginal impact of Norwegian aid was that it lifts 298 people out of poverty per million dollars. The figure for this subset of countries is somewhat higher – 340 people per million dollars – because in general this is a "good" list of countries: it includes several countries where the effectiveness of aid is

quite high. We estimate that reallocation (3) would increase poverty reduction to 410 people per million dollars. In other words, the roughly $300 million in Norwegian assistance to the priority countries lifts about 100,000 people per year out of poverty; the same volume of aid could lift about 20% more people out of poverty if it were allocated more efficiently. This gain arises from shifting funds from countries in which there is little impact of aid (Zimbabwe) to countries where there is a large impact (Uganda).

While it may be politically difficult to reallocate a large amount of aid to Ethiopia or Bangladesh, we should nevertheless report our estimates of the large gains that would arise from such reallocation. Reallocations (1) and (2) each yield estimated additional poverty reduction of about 57,000 people – raising the aid productivity by about 50% from its actual 1999 level. Keep in mind the caveat that the assessment of the environment in Ethiopia comes from 1999 and may not fully reflect the impact of war. Still, these estimates are indicative of what could be achieved if donors were more willing to give large amounts of assistance to highly populous countries.

Besides the twelve priority countries, Norway gives aid to a large number of other countries. Some of this is humanitarian assistance to countries involved in conflict, and we have been directed in the Terms of Reference for this project to separate that from our analysis, as our model of poverty efficient aid is not really relevant to humanitarian assistance given into a crisis environment. Appendix Table 2 lists these countries and their assistance from Norway in 1999. Leaving them aside, Norway gave development assistance to 63 other developing countries in 1999. Together with the twelve priority countries, this makes a total of 75 aid recipients – quite a large number given that Norway itself is not a very large country. Most of these 75 aid recipients received less than Kroner 30 million in 1999. Table 3 lists the 63 non-priority

countries receiving aid in 1999 and the amounts that they received. We have calculated for each the estimated marginal efficiency of a million dollars of aid in reducing poverty, and have listed the countries in descending order of aid efficiency. Some of the countries near the top are poor-policy countries where donors have cut total aid back quite substantially (for example, Kenya or Pakistan). Three countries are good policy countries that receive modest amounts of support – Ghana, India, and Vietnam.

For the majority of countries on this list, the marginal efficiency of aid is below the Norwegian average of about 300 people per million dollars, either because the country has poor policies and/or is simply not that poor. Any money reallocated from countries low on this list to ones near the top (or to the priority countries other than Sri Lanka or Zimbabwe) would increase the net poverty reduction effect of Norwegian assistance. For this group as a whole, the assistance in 1999 was Kroner 1.2 billion (about $170 million); because it is spread among high aid effectiveness and low aid effectiveness countries, the *average* productivity of this assistance was an estimated 208 people lifted out of poverty per million dollars. That productivity would essentially be doubled by concentrating the assistance in countries such as Ghana, India, or Vietnam.

In summary, both for the priority countries and for the non-priority countries, Norwegian aid is spread among countries that have quite different aid effectiveness because of their differing levels of poverty and the fact that some have better policies than others. The overall impact of Norwegian aid could be increased significantly if the aid were concentrated on a smaller number of countries, focusing especially on the ones in which aid effectiveness is high. Reallocation (3) above concentrates the aid for priority countries on ten countries. If from the non-priority list, aid were concentrated in ten to twenty countries that are in the top half of this ranking in terms of

aid effectiveness, the overall productivity of Norwegian aid could be lifted to the range of about 400 people per million dollars, from the current level of about 300.

4. Political Economy of Aid and Reform

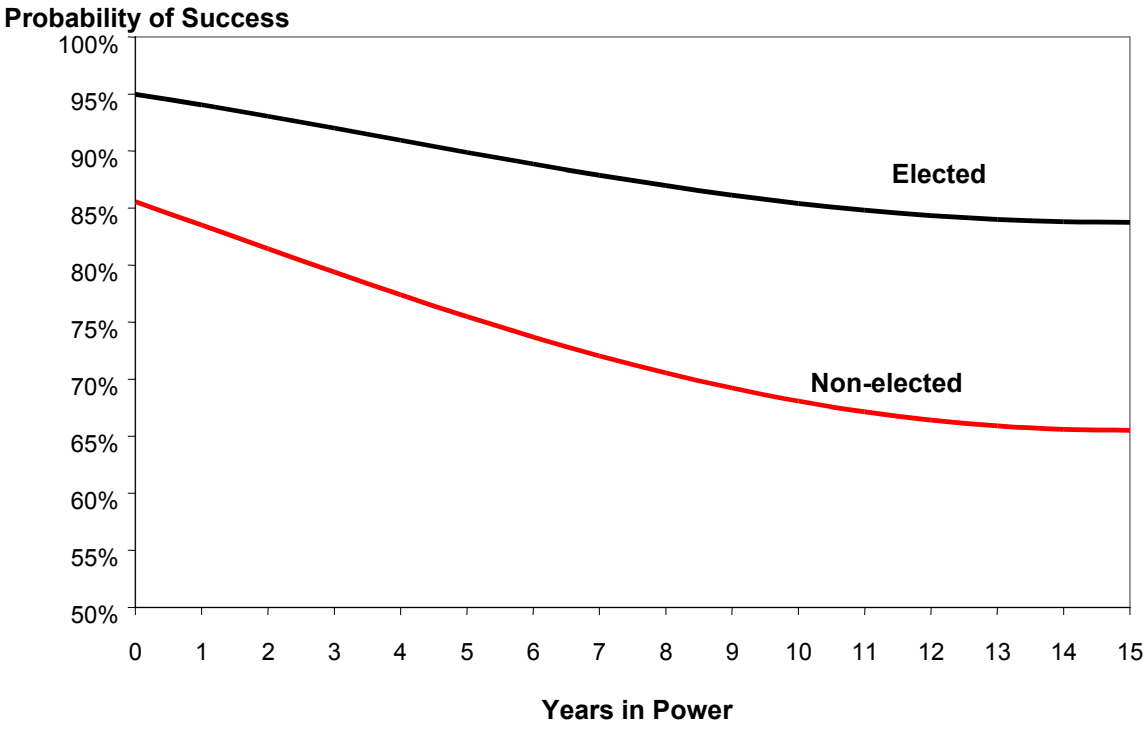
We emphasized that our model of poverty efficient aid takes as given the quality of institutions and policies in recipient countries. This is clearly an extreme assumption, as much assistance is aimed at improving institutions and policies. Nevertheless, much research inside and outside of the World Bank has established that donors in general have greatly exaggerated their influence over policy. Worse, the wrong type of aid in the wrong environment can actually make policy worse. Meaningful, sustained policy reform requires deep commitment and ownership from the societies and governments in question. So, it is useful for donors to begin by looking at aid effectiveness on the assumption that they have no influence on policy at all – which is what we have done in the previous sections. This provides an initial benchmark allocation of aid from which a rational donor might want to deviate for a variety of reasons. One of those reasons is that in some cases assistance can help build and sustain successful reform programs. Hence, in this section we will look at some political economy considerations that might alter the judgments made above.

A useful starting point is findings from recent research into aid and the political economy of reform – both cross-country econometric analysis and the case studies from the *Aid and Reform in Africa* project. Taking the cross-country work first: Dollar and Svensson (2000) look at 220 economic reform programs supported by the IMF and World Bank, mostly carried out in the 1980s and the very early 1990s, and ask: are there common features of successful programs and unsuccessful programs? The measure of success here comes from the World Bank's Operations Evaluation Department (OED), an outcome assessment of whether the targeted policy measures were carried out. (The paper shows that a successful outcome rating is highly correlated with better economic management – lower inflation, more sustainable fiscal situation -

- several years after reform, which suggests that the OED measure is a good one.) In their sample, about one-third of the reform programs had failed.

What Dollar and Svensson find is that the outcome of reform programs can be predicted quite well by information on the *recipient country's characteristics* that is available before the reform starts. For example, the success rate for new governments is far higher than the rate for governments in power for a long time. On top of that, the success rate was higher for democratically elected governments. These two findings are put in terms of the probability of success of a reform program in Figure 5: a new, democratically elected government has a 95% probability of success, compared to 67% for an authoritarian government in power for 12 years. This result makes intuitive sense. Countries that have poor policies over significant periods of time develop vested interests who benefit from the policies (distorted exchange and trade regimes, inefficient state enterprises, corruption more generally), and it is unlikely that an entrenched government is going to take on those vested interests.

Figure 5. Elections, Tenure, and Probability of Successful Reform



One of the positive findings in the Dollar and Svensson paper is that, after controlling for these characteristics, the success rate for low-income countries and middle-income ones is the same, as is the success rate in different regions. In other words, the low success rate of reform programs in poor countries or in certain regions (Africa) can be explained to a large extent by characteristics that can change.

In another study, Alesina and Dollar (2000) look at the relationship in general between official finance and policy reform. One aspect of their paper is quite relevant to aid and reform: they ask whether or not there is any tendency for increases in finance or decreases in finance to *lead* policy change. This is important because it gets at the timing of assistance and policy change. It is possible that even a failed adjustment program sets the stage for further policy reform, and success at a later date. If that were true, then donors should not be too concerned

about providing program aid in low probability environments. What Alesina and Dollar find, however, is that there is no tendency for surges in finance to lead policy reform. Specifically, they find more than 100 episodes in which there are "surges" in finance (defined as a change of at least one standard deviation relative to the country's own history of financing). Many of these are associated with Bank-Fund supported adjustment programs. In only a handful of cases does policy significantly improve in the following three to five years, and in just as many cases policy significantly worsens. The most striking fact here is that *in general policy is quite persistent.* Large changes in policy are the exception, not the rule.

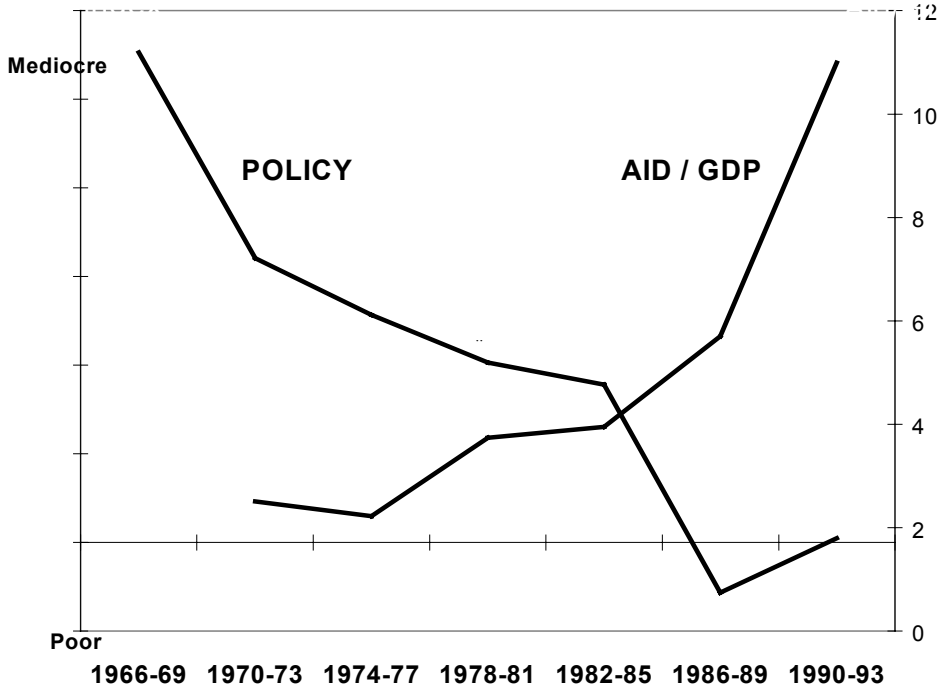
Alesina and Dollar also look at the converse question: are large changes in policy typically followed by surges in financing? They find that donors have responded quickly to democratization episodes (political reform), but that they have not responded consistently to large economic policy changes with significant increases in finance. That may seem surprising since in many of the well-known reform cases there are adjustment loans bringing finance. But when we look at the overall pattern of donor behavior, it has not been the case that changes in policy have been met by major changes in financing.

Finally, we should also mention the Burnside-Dollar paper, "Aid, Policies, and Growth," (2000). That paper is primarily about the effect of aid on growth (and it finds that the effect of aid on growth increases with the quality of policy). But it also considers the question of whether the amount of aid that countries received affected their policy. They found no evidence that the amount of aid *systematically* affected policy. In some cases, however, that finding has been misunderstood. First, the fact that there is no systematic relationship does not mean that aid could not have influenced policy in specific cases. If in some cases aid supported policy reform and in other cases it retarded reform, then what one would find in a large sample is no systematic

relationship. Second, research is always about the past, and in this case the research covers a period in which donors overall were not putting much weight on economic policy. That is true in a cross-section of countries: ones with better policy, after controlling for factors such as poverty level and population, did not receive more aid. And it is true in a time series: when a typical country reformed, it did not receive a significant increase in finance. Given that pattern of donor behavior, it cannot come as a surprise that there is no systematic evidence that more aid has led to better policy. And if donors change their behavior, then the past results are not an accurate predictor of what will happen.

While the econometric studies are useful for summarizing regularities in the data, they cannot have the richness of institutional and historical detail that one gets in a good case study. The World Bank research department followed up the econometric work described above with the project, "Aid and Reform in Africa," which carried out case studies of DR Congo, Cote d'Ivoire, Ethiopia, Ghana, Kenya, Mali, Nigeria, Tanzania, Uganda, and Zambia. The group is diverse in terms of policy reform, with Ghana and Uganda well known as relatively successful cases; Congo and Nigeria with very poor policies up through the mid-1990s; and the other countries in between. This project received financial support from a range of donor countries (France, Germany, the Netherlands, Norway, Sweden, and Switzerland). It was innovative in that all of the case studies involved the participation of African researchers and policy-makers. The risk with case studies is that there may not emerge any clear generalizations, but in this case there was consensus on a range of issues concerning aid and policy reform.

Figure 6. Zambia: Aid and Policy



First, the studies were clear that aid cannot bring about sustained policy changes to which the government is not committed. Zambia under the Kaunda regime is probably the best example of the impotence of policy-based assistance in the face of a non-reforming government. By objective measures, policy got continually worse in Zambia throughout most of Kaunda's tenure (Figure 6). During the period covered here, there were 18 adjustment loans from the IMF and the World Bank. In the case of the Bank, all of the loans fully disbursed, and yet there was no policy improvement. Partly as result of this adjustment lending, the total volume of assistance to Zambia continued to rise. Worse still, the Zambia, Tanzania, and Kenya case studies all argue that the large amount of finance to poor policy governments actually sustained bad policy:

> Does aid sometimes help defer reforms? It is probable that the heavy infusion of budgetary support which Kenya received during the 1980s assisted the government in financing the cost of civil service overmanning and public enterprise inefficiencies, thus permitting the government to defer reforms in these areas until the 1990s. **(Kenya case study, p. 27)**
>
> Initially aid probably delayed reforms by helping to finance schemes that would have been wholly unviable without aid backing… **(Tanzania case study, p. 44)**

Much of this assistance came in the form of adjustment loans. Without government commitment, the conditionality did not successfully lead to policy change:

> The reform experience in Zambia reiterates the importance of local ownership of the reform process: Conditionality is a relatively impotent tool in terms of bringing about policy change unless the reform measures are supported by the political leadership. **(Zambia case study, p. 17)**
>
> We would argue that at times of severe economic crisis, as in 1980-82 and 1993, the government's need for financial support was desperate and the promise of support did induce the government to come to agreement on far-reaching reform programs. However, these agreements were not always implemented. Sometimes the probability of successful implementation was low from the outset. Other times the lenders or donors may have aligned themselves with well-intentioned technocrats who wished to achieve the results contracted for but lacked the political support to do so. **(Kenya case study, p. 27)**

On a more positive note, the case studies of both Ghana and Uganda argue that foreign assistance helped with policy reform, and that specifically adjustment lending from IDA was helpful. There are several things different about Ghana and Uganda, compared to the other countries in the study. Both countries received very small amounts of aid during a period of poor policy in which their regimes were estranged from western governments. Regime changes led to new governments that were committed to making things better, but which were not initially committed to market-oriented reforms. (Incidentally, Vietnam -- another relatively successful reformer -- fits this pattern exactly: estranged from the west, new leaders came to power in the late-1980s searching for a new approach.)

Fig. 7. Aid and Policy in Successful Reformers

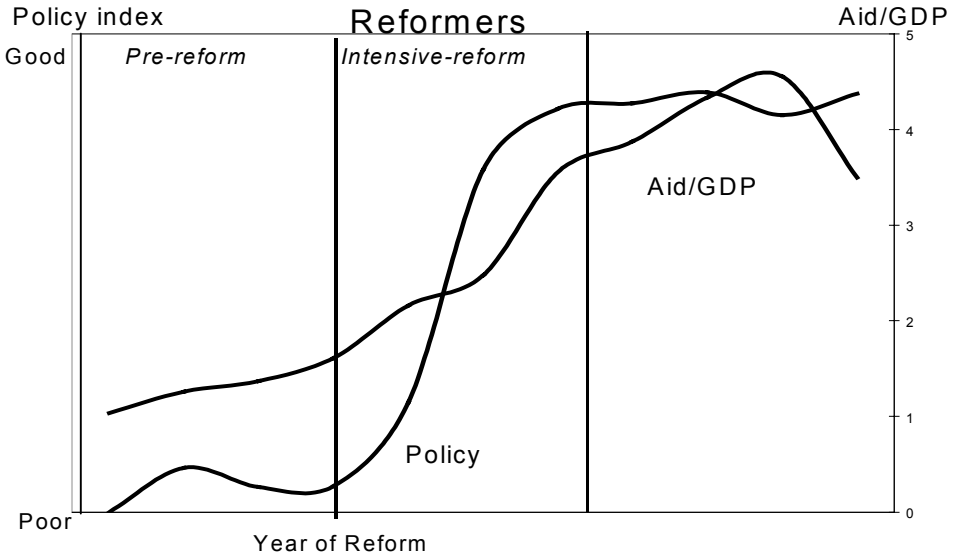


Figure 7 shows the pattern of aid and policy for the three successful low-income reformers, Ghana, Uganda, and Vietnam: small amounts of assistance (and no adjustment loans) when they had bad policy; and then sharply increasing finance associated with adjustment loans as they put in place major reforms. The Ghana and Uganda case studies argue that this pattern of assistance had several advantages. First, during the poor policy period assistance focused on policy dialogue and technical assistance. In this period, the governments were searching for their basic policy orientation, and they did some experimentation. It was useful in this case *not* to have adjustment loans tying the government to plans -- the government was still searching for its plans. Low level assistance without conditionality can help that learning process (which involves studying other countries and trial and error). Once Ghana and Uganda moved decisively to put policy reforms in place, it was important to have the increasing finance, which helped bring forth a strong response from the reform program: it is important that citizens see the

benefits of reform quickly, and aid increasing in lock-step with policy improvements helps in this way:

> [B]alance of Payments support "provided the government with the breathing space it required to contain domestic opposition to market-based reforms… [It] allowed imports that helped fill the shelves of supermarkets and other traders. The filled shelves provided a psychologically-induced breather for the government because …people saw this as a sign of better things to come." **(Ghana case study, p. 35)**

When countries actually reform, finance increases the benefits of those reforms. That is, the growth impact of a particular improvement in policy is enhanced by the flow of aid. There are two reasons for this. Aid increases confidence in the reform program and calls forth greater private investment. Also, it enables the government to provide public services that are complimentary to private investment. By increasing the benefits of reform, aid enhances the likelihood that they will be sustained. As the Ghana study notes,

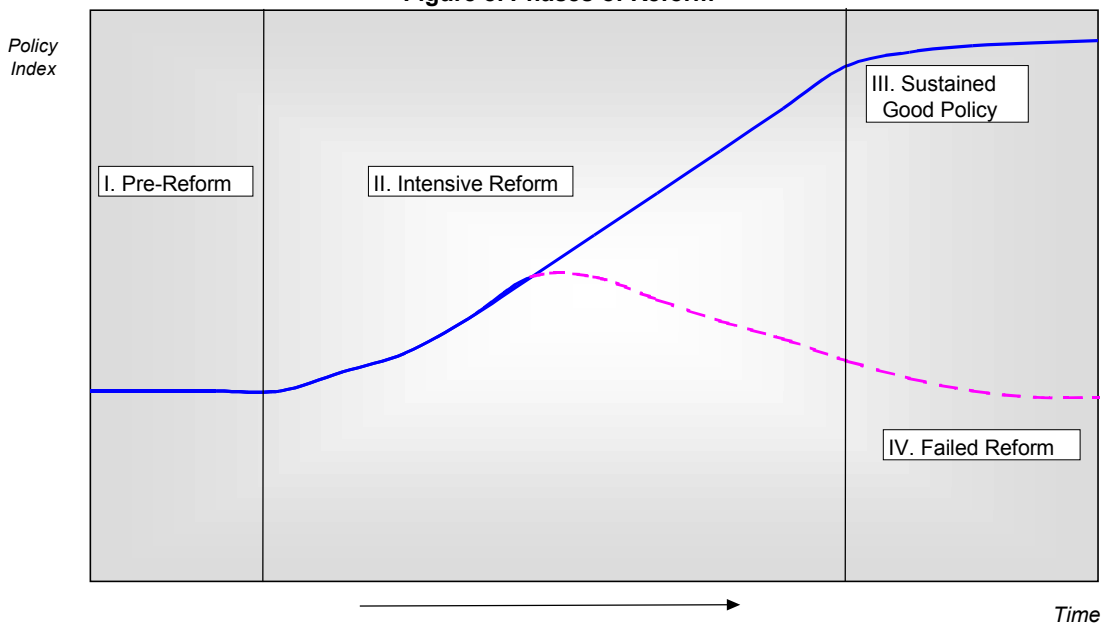
> Coming back to politics, ultimately economic reform was only politically sustainable because some results emerged quickly. **(Ghana case study, p 19)**

It is important to link this point back with the Burnside-Dollar finding that aid did not systematically affect policy. The two findings are not inconsistent. The Ghana and Uganda case studies argue that, because finance increased as policy improved, this financing help sustain the reforms (aid contributed to good policy). But, up through the mid-1990s, this pattern of aid giving was not typical donor behavior. So, when Burnside and Dollar ask, has aid typically supported good policies, the answer is "no." Another way to look at this issue, is that the positive role of aid in supporting reform in Ghana and Uganda was offset by its negative role in Kenya, Tanzania, and Zambia, so that on balance aid did not systematically lead to good policy.

5. Political Economy Considerations in Norway's Aid Recipients

The different findings from the political economy research can be summarized in Figure 8. If we go back twenty years, most of the countries that are low-income today had weak policies at that time. Poor policies produced poor results, and eventually economic and political crisis that has spurred attempts at reform. Virtually every developing country has initiated structural reforms one or more times in the past decade. Some countries have achieved sustained success, while others have attained limited success or backsliding. We can identify four phases in the figure. Phase I is pre-reform, of which there are only a few examples left in the developing world (Cuba would be an example). Phase II – which in reality is often spurred by crisis – is an intense period of attempted reform. In some cases this leads to sustained good policy (Phase III). But in other cases serious reform fails (Phase IV).

Figure 8. Phases of Reform



To support reform, donors need to concentrate their financial assistance on countries in Phase II or Phase III. In Phase I, history has shown that large amounts of finance will typically

stave off reform (dialogue and technical assistance are different matters). In Phase II, dialogue, technical assistance, and increasing finance as policies improve are all useful. In Phase III, finance is highly effective at promoting growth and reducing poverty – so that it directly meets poverty reduction objectives and helps sustain good policy by strengthening the impact of reform. The countries that fail to sustain reform and slide backwards (Phase IV) are essentially returning to a state like Phase I.

Now, placing actual countries into this framework requires some judgment. But the guides that we have are the actual state of policy and political economy factors such as how long the executive has been in power and how democratic the country is. Table 4 lists Norway's twelve priority countries and also eight others that are major recipients of Norway's assistance. For these twenty countries, the table shows how Norway's assistance has evolved over the 1990s, an assessment of current policy, and several political economy indicators (indices of voice or democracy, rule of law, and graft, and the length of time that the executive has been in power). Based on this information, we have tentatively placed the countries in the different phases as follows:

Phase III: Bangladesh, India, Ethiopia, Eritrea, Ghana, South Africa, Uganda, Vietnam

Phase II: Guatemala, Malawi, Mali, Sri Lanka, Tanzania

Phase IV: Angola, Kenya, Mozambique, Nepal, Nicaragua, Zambia, Zimbabwe

How do we combine this information with the results from the earlier analysis in which we took policies as given? First, the countries listed in Phase III are all ones previously identified as candidates for substantial amounts of aid on the basis of their being low-income countries with pretty good policies. This is the environment in which aid has a large effect on

poverty reduction, and accelerating poverty reduction will help these countries sustain good policy.

Some of the countries in the Phase II list would not receive a large amount of aid based on the current level of their policies and the extent of poverty in these countries, but they have relatively new governments – and all except Guatemala are relatively democratic. These are cases where support may help the achievement of good policies and hence have a larger effect than we estimate if we hold policies constant.

The countries in the Phase IV list have weak policies and governments that have been in power a long time. We emphasize that there is an element of subjectivity in creating these lists. The executive in Zimbabwe has been in power for 20 years and the country has really poor policy; so too for Kenya (22 years, actually). We feel quite comfortable saying that these are low probability reforms and low aid effectiveness countries. In the cases of Zambia or Mozambique, on the other hand, the governments have been in power less long (9 years for Zambia and 14 for Mozambique) and policies are in the moderate range – not truly good, but better than those of Kenya or Zimbabwe. For both Mozambique and Zambia, Norway has reduced its aid as the decade has proceeded, and that seems a reasonable reaction to the slow progress with reform.

In most cases, considering the political economy impact of Norway's aid leads to the same allocation conclusions as the application of the "poverty efficient" aid model that takes policy as given. Among the priority countries, aid is going to be relatively effective in Uganda, Ethiopia, Eritrea, and Bangladesh and help sustain policy there. Countries such as Mozambique or Zambia are lagging reformers, and it makes sense to modestly reduce the support there – though not to zero. Zimbabwe is not a high aid effectiveness country nor a high probability

reformer. The political economy consideration would not change the conclusion that aid would be better utilized in other countries. For Sri Lanka, on the other hand, there is a relatively new government that has made progress with reform, so a different judgment is required.

6. Aid and Conflict Prevention

So far we have focused on the objective of poverty reduction. However, a second legitimate objective of aid is to reduce the risk of conflict. Recent research has begun to quantify the risk of civil war, and to analyze the effect of aid on this risk (Collier and Hoeffler, 2000, 2000a). We now briefly describe this research and apply it to Norway's current priority countries.

The Collier-Hoeffler model of civil war is based upon global data for the period 1960-99. The model predicts the risk of conflict during a five-year period, on the basis of characteristics prior to the period. Appendix Table 3 presents the results of the core logit regression. Collier and Hoeffler find that economic factors are highly significant in determining the risk of conflict, so that potentially both policy and aid can be effective in reducing risks. Three aspects of economic performance are directly important. A faster rate of economic growth directly reduces the risk of conflict. A higher level of per capita income directly reduces the risk of conflict. Reduced dependence upon primary commodity exports directly reduces the risk of conflict. Surprisingly, the obvious indicators of political grievance, notably poor political rights and high economic inequality, have no effect on the risk of conflict. Collier and Hoeffler suggest that perhaps most societies have groups who are willing to resort to violence for some cause, so that the determining factors in whether civil war occurs are not grievances but rather the financial and

military ability of such groups to engage in large-scale combat. Rapid growth and high per capita income make it more difficult for rebel organizations to escalate combat, whereas a high degree of dependence upon primary commodity exports offers rebels opportunities for financing their organization (as with alluvial diamonds in West Africa, drugs in South America, and timber in East Asia).

Aid potentially affects the risk of conflict through several different routes. First, it might directly affect risk through augmenting the government budget. This might enable the government to increase its military expenditure, or it might act as a lure to rebels seeking to capture the state. Collier and Hoeffler add aid into their regression of conflict risk. Aid is lagged by one five-year period to reduce problems of endogeneity: donors will evidently reduce funding in countries with a very high risk of conflict. They find that there is no significant direct effect. All the effects of aid work through the three economic variables noted above: the level, growth and structure of income.

The effect on the level of income evidently works by means of the cumulative effect of growth. The effect of aid on growth was central to the analysis of *Assessing Aid*, and so the same analysis now applies in the context of the reduction of conflict risk instead of poverty. The effect of aid on the structure of income works through two distinct routes. *A priori*, we would expect aid to cause `Dutch disease': the provision of foreign exchange through aid tends to appreciate the real exchange rate and so reduces the incentive to export. Collier and Hoeffler find that aid indeed directly reduces dependence upon primary commodity exports and Dutch disease is the most likely explanation. Additionally, to the extent that it raises income, aid further reduces primary commodity dependence. As economies grow they typically change their structure away from primary commodities.

To summarize, although there is no direct effect of aid on conflict risk, there are four indirect effects, all favorable. Three of these depend upon policy: with reasonable policy in place, aid raises growth. This directly reduces conflict risk, cumulatively raises income, which further reduces conflict risk, and gradually changes the structure of the economy away from primary commodity dependence, which also reduces conflict risk. Only the fourth effect, Dutch disease, does not depend upon policy.

In Appendix Table 4 we simulate the effect of a donor-government package of additional aid of $1 per capita per year, sustained for five years, and a one point improvement in economic policy as measured by the World Bank's Country Policy and Institutional Assessment, also sustained for five years. We take a hypothetical country which has the characteristics of the average aid recipient country. Initially, the conflict risk for such a country is 11.3%: that is, during a five year period there is approximately one chance in nine that a major civil conflict will be initiated, causing more than one thousand combat-related deaths. Sustained over five years, the aid and policy improvement package reduces this risk to 7.9%. Thus, the risk is reduced by around 30% in a relatively short period. With policy reform alone, that is, without the increase in aid, the risk would have been reduced to 8.6%. Hence, the relatively small increase in aid reduces the risk by around 10% and the (relatively large) improvement in policy reduces risk by around 20%. While these are simulations for a hypothetical country, they illustrate the orders of magnitude which donors might expect from aid used to prevent civil conflict.

In the above example we considered a representative aid recipient country. We now consider differences between countries so that aid for conflict prevention might be targeted where it is most effective. Where the objective of aid is poverty reduction, our previous argument has been that Norwegian aid should target countries with the combination of good

policies *and* high poverty. Just focusing on countries with good policy is wasteful, because many of these countries have little poverty, and just focusing on countries with high poverty is wasteful because many of these countries have policies which are too poor for aid to be effective. When the objective is conflict prevention there is an analogous need to target countries which have the combination of good policies and a high risk of conflict. Most countries with good policies do not have a high risk of conflict. Conversely, some of the countries with high conflict risk have policies which are too poor for aid to be effective in risk reduction.

We now turn to the Norwegian high priority countries. In Table 2 we have already noted the approximate policy rating. The remaining required information is on the rating of conflict risk. While our model of conflict can be used to assess conflict risk, such information must necessarily remain confidential. Of the priority countries, Sri Lanka is currently conflict-ridden. Sri Lanka has good policies and so aid should be effective in reducing conflict risk. Our model suggests that there are substantial differences in the risks among the other priority countries, with four standing out as having markedly higher risk than the rest. These are (in alphabetical order), Ethiopia, Mozambique, Nicaragua, and Zimbabwe. In generating this list, the model makes no use of either current political information or detailed country knowledge. It is based upon a few economic, social, geographic and historical characteristics which globally have some predictive power. There are many countries which the model mis-predicts: countries which have survived peacefully for long periods, despite unfavorable characteristics, and countries which have suffered conflict despite favorable characteristics. The countries identified by the model may therefore not, in fact, face relatively high risks of conflict and this must be a matter of judgement for country specialists. However, if for present purposes we accept the list, then consider the scope for policy to mitigate the risk. Of the four, Zimbabwe has poor policies and so aid is likely

to be ineffective in reducing conflict risk. Mozambique and Nicaragua have moderate policies so we might expect aid to be modestly effective. However, they are both very large recipients of aid, and given diminishing returns to aid, this reduces the effectiveness of additional aid. Hence, in these two countries there also seems no basis for expecting additional aid to reduce conflict risk significantly. Only Ethiopia has both good policies and a high risk of conflict. This constitutes a good case for aid to Ethiopia, in addition to the case based upon the high effectiveness of aid in reducing poverty. We should make it clear that the role of aid in conflict reduction refers only to internal conflicts. This analysis has no bearing upon the international war between Ethiopia and Eritrea. Although Eritrea was indeed formerly part of Ethiopia, the recent war was not a *civil* war. This is not merely a legal matter. The occurrence of civil wars depends upon very different processes from international wars, since civil wars require an informal rebel organization to become viable, whereas international wars are fought by governments which already have a secure tax base and the power of conscription. Hence, our analysis of conflict risk in Ethiopia concerns *internal* conflict, rather than renewed international hostilities with Eritrea. The case for aid to reduce the risk of internal conflict in Ethiopia faces precisely the same political difficulty as does the case for aid to reduce poverty, namely that the Ethiopian government has recently conducted an international war.

To summarize, among Norway's priority countries, Sri Lanka and Ethiopia stand out as facing either current conflict or a significant risk of conflict, and having policies which would make aid effective in reducing this risk. Sri Lanka would not be a priority country on the criterion of poverty-reduction, since it has relatively little poverty. Hence, whether it should remain a Norwegian priority might depend upon the relative weight of poverty reduction and

conflict prevention as Norwegian objectives. Ethiopia should be a high priority country on both the criteria of poverty reduction and conflict prevention.

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Table 1. Poverty-Efficient Aid Allocation 1998

Code	Country	Pop < $2 a day	Policy Rating	Poverty-Efficient Aid GDP(%) 98	Poverty-Efficient Aid ($ mn) 98
ETH	Ethiopia	89%	Good	6.66	2,342.7
MWI	Malawi	90+ %	Moderate	6.53	359.8
ERI	Eritrea	89%	Good	6.36	205.4
ZMB	Zambia	90+ %	Moderate	6.28	436.6
UGA	Uganda	90+ %	Very Good	6.16	1,382.7
MOZ	Mozambique	90+ %	Moderate	6.11	810.0
MLI	Mali	90+ %	Moderate	6.07	438.0
TZA	Tanzania	46%	Moderate	5.75	886.2
GNB	Guinea-Bissau	90+ %	Poor	5.49	39.3
BEN	Benin	80%	Moderate	5.43	280.2
BFA	Burkina Faso	86%	Poor	5.10	475.8
NER	Niger	90+ %	Poor	4.94	370.1
MDG	Madagascar	90+ %	Poor	4.89	539.4
SLE	Sierra Leone	77%	Poor	4.85	107.9
BGD	Bangladesh	88%	Good	4.77	8,157.7
TCD	Chad	85%	Poor	4.70	293.2
NGA	Nigeria	60%	Poor	4.55	4,365.4
SEN	Senegal	80%	Good	4.19	494.3
GHA	Ghana	68%	Good	4.11	1,314.6
BDI	Burundi	88%	Poor	4.04	150.6
PAK	Pakistan	57%	Moderate	3.83	8,636.4
YEM	Yemen	35%	Moderate	3.61	430.8
LSO	Lesotho	74%	Good	3.58	119.9
KEN	Kenya	78%	Poor	3.54	1,015.4
GMB	Gambia	74%	Moderate	3.38	59.6
VNM	Viet Nam	80%	Good	3.27	4,219.5
NPL	Nepal	87%	Poor	3.25	858.9
TGO	Togo	65%	Poor	2.95	180.5
MNG	Mongolia	57%	Good	2.89	115.0
LAO	Laos	83%	Poor	2.83	244.0
COG	Congo, Rep.	65%	Poor	2.81	77.9
CAF	Central African Rep.	70%	Poor	2.64	102.8
HTI	Haiti	68%	Poor	2.43	257.3
CMR	Cameroon	58%	Moderate	2.32	489.1
NIC	Nicaragua	75%	Moderate	2.10	215.8
TJK	Tajikistan	48%	Poor	1.82	115.5
CIV	Côte d'Ivoire	49%	Moderate	1.76	407.2
ZAR	Congo, Dem. Rep.	71%	Poor	1.59	631.5
COM	Comoros	64%	Poor	1.34	10.0
BOL	Bolivia	59%	Good	1.17	211.0
HND	Honduras	76%	Moderate	1.11	165.5
GIN	Guinea	50%	Poor	0.20	25.4
IND	***India***	89%	Good	***0.08***	1,594.6
DZA	Algeria	18%	Moderate	0	0
AGO	Angola	68%	Poor	0	0
ARG	Argentina	36%	Very Good	0	0
ARM	Armenia	33%	Good	0	0
AZE	Azerbaijan	36%	Moderate	0	0

Table 1. Poverty-Efficient Aid Allocation 1998, cont'd.

Code	Country	Pop < $2 a day	Policy Rating	Poverty-Efficient Aid GDP(%) 98	Poverty-Efficient Aid ($ mn) 98
BLR	Belarus	6%	Poor	0	0
BLZ	Belize	45%	Moderate	0	0
BWA	Botswana	61%	Very Good	0	0
BRA	Brazil	44%	Very Good	0	0
BGR	Bulgaria	8%	Poor	0	0
CPV	Cape Verde	57%	Very Good	0	0
CHL	Chile	39%	Very Good	0	0
CHN	China	51%	Very Good	0	0
COL	Colombia	22%	Very Good	0	0
CRI	Costa Rica	44%	Very Good	0	0
CZE	Czech Republic	55%	Very Good	0	0
DMA	Dominica	48%	Poor	0	0
DOM	Dominican Republic	48%	Moderate	0	0
ECU	Ecuador	66%	Poor	0	0
EGY	Egypt	52%	Good	0	0
SLV	El Salvador	52%	Very Good	0	0
EST	Estonia	18%	Very Good	0	0
FJI	Fiji	37%	Poor	0	0
GAB	Gabon	54%	Moderate	0	0
GEO	Georgia	32%	Moderate	0	0
GTM	Guatemala	77%	Good	0	0
GUY	Guyana	60%	Very Good	0	0
HUN	Hungary	11%	Very Good	0	0
IDN	Indonesia	59%	Poor	0	0
JAM	Jamaica	25%	Moderate	0	0
JOR	Jordan	24%	Good	0	0
KAZ	Kazakstan	12%	Good	0	0
KOR	Korea, Rep.	0%	Very Good	0	0
KGZ	Kyrgyz Republic	18%	Very Good	0	0
LVA	Latvia	8%	Very Good	0	0
LTU	Lithuania	8%	Very Good	0	0
MYS	Malaysia	27%	Very Good	0	0
MDV	Maldives	57%	Very Good	0	0
MRT	Mauritania	68%	Moderate	0	0
MUS	Mauritius	34%	Very Good	0	0
MEX	Mexico	40%	Good	0	0
MDA	Moldova	32%	Poor	0	0
MAR	Morocco	20%	Good	0	0
NAM	Namibia	50%	Very Good	0	0
PAN	Panama	25%	Very Good	0	0
PNG	Papua New Guinea	58%	Poor	0	0
PRY	Paraguay	41%	Poor	0	0
PER	Peru	50%	Very Good	0	0
PHL	Philippines	65%	Very Good	0	0
POL	Poland	2%	Very Good	0	0
ROM	Romania	28%	Poor	0	0
RUS	Russia	25%	Poor	0	0

Table 1. Poverty-Efficient Aid Allocation 1998, cont'd.

Code	Country	Pop < $2 a day	Policy Rating	Poverty-Efficient Aid GDP(%) 98	Poverty-Efficient Aid ($ mn) 98
SVK	Slovak Republic	2%	Very Good	0	0
SVN	Slovenia	1%	Very Good	0	0
SLB	Solomon Islands	54%	Poor	0	0
ZAF	South Africa	50%	Very Good	0	0
LKA	Sri Lanka	41%	Good	0	0
KNA	St. Kitts-Nevis	36%	Very Good	0	0
LCA	St. Lucia	34%	Very Good	0	0
VCT	St. Vincent and Gr.	36%	Very Good	0	0
SWZ	Swaziland	56%	Poor	0	0
THA	Thailand	24%	Good	0	0
TTO	Trinidad & Tobago	39%	Very Good	0	0
TUN	Tunisia	23%	Very Good	0	0
TUR	Turkey	18%	Good	0	0
UKR	Ukraine	24%	Poor	0	0
URY	Uruguay	34%	Very Good	0	0
UZB	Uzbekistan	27%	Poor	0	0
VUT	Vanuatu	52%	Poor	0	0
VEN	Venezuela	32%	Poor	0	0
ZWE	Zimbabwe	68%	Poor	0	0

Table 2. Actual and Counterfactual Aid Allocation for Priority Countries

				Actual and Counterfactual Allocation of Aid				Marginal Effect of Counterfactual Allocation		
Code	Country	Pop < $2 a day	Policy Rating	Actual Aid 99 (000' kr)	Prop To Opt Alloc (1)	Constrain BGD (2)	Constrain BGD, ETH (3)	Gain from Alloc (1)	Gain from Alloc (2)	Gain from Alloc (3)
TZA	Tanzania	46%	Moderate	387,688	118,664	216,267	282,475	-5,492	-3,500	-2,148
MOZ	Mozambique	90+%	Moderate	285,903	108,460	197,671	258,186	0	0	0
BGD	Bangladesh	88%	Good	**266,477**	1,092,291	**266,477**	**266,477**	59,138	0	0
ZMB	Zambia	90+%	Moderate	213,241	58,457	106,539	139,155	-9,054	-6,242	-4,334
UGA	Uganda	90+%	Very Good	198,421	185,147	337,433	440,735	-1,056	11,054	19,268
ETH	Ethiopia	89%	Good	**186,540**	313,688	571,702	**186,540**	17,738	53,732	0
NIC	Nicaragua	75%	Moderate	132,175	28,898	52,668	68,792	-1,275	-981	-782
LKA	Sri Lanka	41%	Good	109,301	0	0	0	-2,130	-2,130	-2,130
ZWE	Zimbabwe	68%	Poor	103,945	0	0	0	-2,743	-2,743	-2,743
MWI	Malawi	90+%	Moderate	96,932	48,182	87,813	114,696	0	0	0
ERI	Eritrea	89%	Good	58,005	27,506	50,129	65,476	-1,645	-425	403
NPL	Nepal	87%	Poor	57,670	115,005	209,598	273,765	2,945	7,803	11,099
				2,096,297	2,096,297	2,096,297	2,096,297	56,426	56,568	18,633

Table 3. Actual Aid Allocation and Marginal Efficiency for Non-Priority Countries

Code	Country	Pop < $2 a day	Policy Rating	Actual Aid 99 (000' Kr)	Marg eff (people/$ mn)
TCD	Chad	85%	Poor	1,120	504.5
PAK	Pakistan	57%	Moderate	36,253	463.7
MLI	Mali	90+ %	Moderate	67,517	457.2
IND	India	89%	Good	76,780	444.9
KEN	Kenya	78%	Poor	19,320	402.9
NER	Niger	90+ %	Poor	12,129	399.5
VNM	Vietnam	80%	Good	55,600	397.8
ZAR	Dem. Rep. Of Congo	71%	Poor	19,344	386.5
GHA	Ghana	68%	Good	8,411	369.7
BFA	Burkina Faso	86%	Poor	12,446	356.4
LSO	Lesotho	74%	Good	2,919	332.7
GMB	Gambia	74%	Moderate	-1,153	327.2
YEM	Yemen	35%	Moderate	118	310.5
MDG	Madagascar	90+ %	Poor	26,957	309.0
COG	Congo	65%	Poor	4,084	287.7
CMR	Cameroon	58%	Moderate	6,545	263.3
SEN	Senegal	80%	Good	9,211	243.0
LAO	Laos	83%	Poor	51,121	220.3
IDN	Indonesia	59%	Poor	66,941	212.1
CAF	Central Afric. Repu	70%	Poor	184	210.7
GTM	Guatemala	77%	Good	102,801	171.1
EGY	Egypt	52%	Good	12,224	159.3
HTI	Haiti	68%	Poor	8,948	155.2
GIN	Guinea	50%	Poor	504	150.5
AZE	Azerbaijan	36%	Moderate	17,351	150.2
SLV	El Salvador	52%	Very Good	16,085	139.3
PHL	Philippines	65%	Very Good	18,404	139.2
MNG	Mongolia	57%	Good	4,779	137.2
ARM	Armenia	33%	Good	16,565	135.9
GUY	Guyana	60%	Very Good	617	128.5
ECU	Ecuador	66%	Poor	19,797	119.3
MDV	Maldives	57%	Very Good	817	119.0
SWZ	Swaziland	56%	Poor	559	114.4
BWA	Botswana	61%	Very Good	32,053	111.2
PER	Peru	50%	Very Good	15,548	108.5
PNG	Papua New-Guinea	58%	Poor	1,772	104.5
AGO	Angola	68%	Poor	153,966	98.5
GEO	Georgia	32%	Moderate	17,179	92.2
NAM	Namibia	50%	Very Good	41,724	80.8
GAB	Gabon	54%	Moderate	104	74.9
JAM	Jamaica	25%	Moderate	2,574	72.9

Table 3. Actual Aid Allocation and Marginal Efficiency for Non-Priority Countries, cont'd.

Code	Country	Pop < $2 a day	Policy Rating	Actual Aid 99 (000' Kr)	Marg eff (people/$ mn)
ZAF	South Africa	50%	Very Good	123,649	69.2
MRT	Mauritania	68%	Moderate	2,071	62.7
PRY	Paraguay	41%	Poor	6,513	62.5
MEX	Mexico	40%	Good	7,342	59.7
BRA	Brazil	44%	Very Good	16,071	58.6
VEN	Venezuela	32%	Poor	30	57.7
THA	Thailand	24%	Good	12,033	57.3
MYS	Malaysia	27%	Very Good	1,566	52.0
CRI	Costa Rica	44%	Very Good	2,634	50.8
URY	Uruguay	34%	Very Good	299	49.8
MUS	Mauritius	34%	Very Good	172	48.5
KAZ	Kazakhstan	12%	Good	660	40.2
ARG	Argentina	36%	Very Good	4	38.2
KNA	St. Kits & Nevis	36%	Very Good	377	35.2
CHL	Chile	39%	Very Good	8,431	34.0
DOM	Dominica Repu.	48%	Moderate	5,792	33.5
DZA	Algeria	18%	Moderate	11,039	28.3
TUN	Tunisia	23%	Very Good	1,845	27.0
MAR	Morocco	20%	Good	654	23.2
JOR	Jordan	24%	Good	11,248	15.4
CPV	Cape Verde	57%	Very Good	783	0.0
GNB	Guinea-Bissau	90+ %	Poor	2,386	0.0
				1,175,821	

Table 4. Major Recipient Countries of Norwegian Aid

Country	Year	Norwegian Aid ('000 Kroner)	Voice	Rulelaw	Graft	Duration of Effective Executive in Power	Policy Rating
Angola	1991	50,576					
Angola	1992	35,741					
Angola	1993	62,962					
Angola	1995	182,221					
Angola	1996	162,893					
Angola	1997	173,182					
Angola	1998	174,566					
Angola	1999	153,966	-1.00	-1.23	-0.86	21	Poor
Bangladesh	1991	273,246					
Bangladesh	1992	235,441					
Bangladesh	1993	236,325					
Bangladesh	1995	261,108					
Bangladesh	1996	255,766					
Bangladesh	1997	228,886					
Bangladesh	1998	225,400					
Bangladesh	1999	266,477	-0.01	-0.93	-0.29	9	Good
Eritrea	1991	..					
Eritrea	1992	49,390					
Eritrea	1993	48,176					
Eritrea	1995	89,530					
Eritrea	1996	86,638					
Eritrea	1997	62,312					
Eritrea	1998	40,631					Good
Eritrea	1999	58,005	-0.59	..	..	7	
Ethiopia	1991	168,155					
Ethiopia	1992	117,789					
Ethiopia	1993	70,030					
Ethiopia	1995	155,938					
Ethiopia	1996	138,063					
Ethiopia	1997	201,015					
Ethiopia	1998	201,621					
Ethiopia	1999	186,540	-0.50	0.27	-0.44	9	Good
Ghana	1991	82,632					
Ghana	1992	10,014					
Ghana	1993	4,472					
Ghana	1995	2,765					
Ghana	1996	10,194					
Ghana	1997	8,016					
Ghana	1998	8,346					
Ghana	1999	8,411	-0.43	-0.01	-0.30	16	Good

Table 4. Major Recipient Countries of Norwegian Aid, cont'd.

Country	Year	Norwegian Aid ('000 Kroner)	Voice	Rulelaw	Graft	Duration of Effective Executive in Power	Policy Rating
Guatemala	1991	16,904					
Guatemala	1992	21,487					
Guatemala	1993	29,194					
Guatemala	1995	74,682					
Guatemala	1996	97,585					
Guatemala	1997	107,623					
Guatemala	1998	86,714					
Guatemala	1999	102,801	-0.56	-1.11	-0.82	7	Good
India	1991	137,789					
India	1992	123,526					
India	1993	97,402					
India	1995	51,972					
India	1996	86,490					
India	1997	97,670					
India	1998	83,394					
India	1999	76,780	0.50	0.16	-0.31	9	Good
Kenya	1991	33,688					
Kenya	1992	16,128					
Kenya	1993	16,542					
Kenya	1995	14,138					
Kenya	1996	17,144					
Kenya	1997	19,879					
Kenya	1998	19,170					
Kenya	1999	19,320	-0.70	-1.22	-0.65	22	Poor
Malawi	1991	24,174					
Malawi	1992	28,039					
Malawi	1993	21,117					
Malawi	1995	35,936					
Malawi	1996	29,022					
Malawi	1997	32,169					
Malawi	1998	107,886					
Malawi	1999	96,932	0.06	-0.41	-0.19	6	Moderate
Mali	1991	59,332					
Mali	1992	46,577					
Mali	1993	63,058					
Mali	1995	56,813					
Mali	1996	63,875					
Mali	1997	56,817					
Mali	1998	61,118					
Mali	1999	67,517	0.42	-0.47	-0.48	8	Moderate
Mozambique	1991	446,313					
Mozambique	1992	454,335					
Mozambique	1993	419,309					
Mozambique	1995	331,008					
Mozambique	1996	334,412					
Mozambique	1997	387,071					
Mozambique	1998	373,435					
Mozambique	1999	285,903	-0.17	-1.05	-0.53	14	Moderate

Table 4. Major Recipient Countries of Norwegian Aid, cont'd.

Country	Year	Norwegian Aid ('000 Kroner)	Voice	Rulelaw	Graft	Duration of Effective Executive in Power	Policy Rating
Nepal	1991	37,739					
Nepal	1992	53,332					
Nepal	1993	50,326					
Nepal	1995	23,804					
Nepal	1996	72,288					
Nepal	1997	54,253					
Nepal	1998	66,435					
Nepal	1999	57,670	0.05	-0.56	..	49	Poor
Nicaragua	1991	174,815					
Nicaragua	1992	162,376					
Nicaragua	1993	124,385					
Nicaragua	1995	176,386					
Nicaragua	1996	155,051					
Nicaragua	1997	136,995					
Nicaragua	1998	126,548					
Nicaragua	1999	132,175	0.07	-0.73	-0.84	10	Moderate
South Africa	1991	..					
South Africa	1992	..					
South Africa	1993	..					
South Africa	1995	126,959					
South Africa	1996	88,294					
South Africa	1997	139,960					
South Africa	1998	165,895					
South Africa	1999	123,649	0.99	-0.35	0.30	6	Very Good
Sri Lanka	1991	85,271					
Sri Lanka	1992	85,241					
Sri Lanka	1993	86,030					
Sri Lanka	1995	90,218					
Sri Lanka	1996	204,926					
Sri Lanka	1997	112,757					
Sri Lanka	1998	99,628					
Sri Lanka	1999	109,301	-0.16	-0.36	-0.12	6	Good
Tanzania	1991	554,637					
Tanzania	1992	510,149					
Tanzania	1993	486,659					
Tanzania	1995	330,779					
Tanzania	1996	351,159					
Tanzania	1997	360,290					
Tanzania	1998	336,312					
Tanzania	1999	387,688	-0.28	0.16	-0.92	5	Moderate

Table 4. Major Recipient Countries of Norwegian Aid, cont'd.

Country	Year	Norwegian Aid ('000 Kroner)	Voice	Rulelaw	Graft	Duration of Effective Executive in Power	Policy Rating
Uganda	1991	33,692					
Uganda	1992	61,503					
Uganda	1993	94,336					
Uganda	1995	129,803					
Uganda	1996	136,958					
Uganda	1997	196,692					
Uganda	1998	236,073					
Uganda	1999	198,421	-0.52	-0.01	-0.47	14	Very Good
Vietnam	1991	5,071					
Vietnam	1992	2,841					
Vietnam	1993	5,403					
Vietnam	1995	43,374					
Vietnam	1996	26,962					
Vietnam	1997	45,837					
Vietnam	1998	59,678					
Vietnam	1999	55,600	-1.42	-0.44	-0.33	9	Good
Zambia	1991	334,269					
Zambia	1992	312,941					
Zambia	1993	235,470					
Zambia	1995	222,652					
Zambia	1996	197,386					
Zambia	1997	263,216					
Zambia	1998	240,240					
Zambia	1999	213,241	-0.05	-0.40	-0.61	9	Moderate
Zimbabwe	1991	140,688					
Zimbabwe	1992	171,378					
Zimbabwe	1993	107,113					
Zimbabwe	1995	114,757					
Zimbabwe	1996	125,991					
Zimbabwe	1997	112,239					
Zimbabwe	1998	104,404					
Zimbabwe	1999	103,945	-0.67	-0.15	-0.32	20	Poor

Appendix Table 1.

Explaining the Allocation of Norwegian Aid
1991-1998

	(1) Total Aid	*(2) Project Aid*	*(3) Program Aid*	*(4) Technical Assistance*
Log (GDP p.c.)	-100.74	-106.59	-204.52	-192.60
	(-3.87)	(-2.21)	(-2.93)	(-3.26)
$[\text{Log (GDP p.c.)}]^2$	13.28	14.25	26.29	25.20
	(3.83)	(2.21)	(2.90)	(3.22)
$[\text{Log (GDP p.c.)}]^3$	-0.59	-0.64	-1.13	-1.10
	(-3.84)	(-2.23)	(-2.90)	(-3.20)
Log (pop)	-6.00	-9.40	-5.19	-1.57
	(-1.22)	(-0.88)	(-0.31)	(-0.15)
$[\text{Log (pop)}]^2$	0.40	0.72	0.33	0.15
	(1.33)	(1.08)	(0.31)	(0.22)
$[\text{Log (pop)}]^3$	-0.01	-0.02	-0.01	-0.00
	(-1.34)	(-1.21)	(-0.28)	(-0.22)
CPIA	0.78	0.37	1.65	1.62
	(4.92)	(1.29)	(3.75)	(4.55)
R2	0.32	0.24	0.18	0.15
No. of Obs.	556	562	561	561

t-statistics in parentheses

Appendix 2. Countries Omitted from the Analysis

Code	Country	Pop < $2 a day	Actual Aid 99 (000' Kr)
AFG	Afghanistan	..	55,564
ALB	Albania	..	49,444
ATG	Antigua	..	374
BEN	Benin	80%	-8,679
BTN	Bhutan	..	20,107
BOL	Bolivia	59%	30,399
BIH	Bosnia-Herzegovina	..	246,136
BDI	Burundi	88%	49,824
KHM	Cambodia	..	49,453
COL	Colombia	22%	51,046
HRV	Croatia	..	112,449
CUB	Cuba	..	6,657
DJI	Djibouti	..	389
GNQ	Equatorial Guinea	78%	214
HND	Honduras	76%	35,423
IRN	Iran	..	6,888
IRQ	Iraq	..	172,989
LBN	Lebanon	..	35,432
LBR	Liberia	..	33,999
LBY	Libya	..	71
MKD	Macedonia	..	29,826
NGA	Nigeria	60%	1,697
PRK	North Korea	..	33,207
PAL	Palestinske omr	..	216,833
RWA	Rwanda	89%	37,723
SYC	Seychelles	..	26
SLE	Sierra Leone	77%	48,144
SOM	Somalia	..	81,149
SDN	Sudan	..	110,964
SYR	Syria	..	7,759

Appendix Table 3

The Collier-Hoeffler Logit Model of Conflict Risk

(dependent variable is ln(p/(1-p)); where p is the probability of civil conflict during a five year period.)

ln GDP per capita	-1.007
	(0.281)***
(GDP growth - 3*population growth) t-1	-0.103
	(0.035)***
Primary commodity exports/GDP	22.983
	(6.806)***
(primary commodity exports/GDP)^2	-39.293
	(14.505)***
ln population	0.625
	(0.148)***
Social fractionalization	-0.0004
	(0.0001)***
Ethnic dominance (dummy variable = 1 if largest	0.623
ethnic group is 45-90% of population)	(0.348)*
Geographic dispersion	-1.851
	(1.006)*
Peace duration (months since previous conflict)	-0.004
	(0.001)***
N (number of five-year episodes analyzed)	747
no of wars	47
Pseudo R^2	0.27
log likelihood	-128.71

Notes: All regressions include a constant. Standard errors in parentheses. ***, **, * indicate significance at the 1, 5 and 10 percent level, respectively.

Appendix Table 4: Aid, Policy and the Risk of Conflict: a Simulation of the Effects of Increased Aid and Improved Policy for the Mean and Recipient Country

Variable	Mean of X	Coeff of G&G var	at mean	Improved Policy	Increased Aid	Improved Policy and Increased Aid
ln GDP per capita	3.390	-1.007	-7.863	-7.926	-7.877	-7.948
(GDP growth - 3*population growth) t-1	-6.404	-0.103	0.660	0.531	0.633	0.485
primary commodity exports/GDP	0.178	22.983	4.091	3.808	4.043	3.754
(primary commodity exports/GDP)^2		-39.293	-1.244	-1.079	-1.216	-1.048
ln population	7.465	0.625	10.7	10.740	10.740	10.740
social fractionalization	2113	-0.0004	-0.761	-0.761	-0.761	-0.761
ethnic dominance (45-90%)	0.456	0.623	0.284	0.284	0.284	0.284
geographic dispersion	0.593	-1.851	-1.097	-1.097	-1.097	-1.097
peace duration	338	-0.004	-1.385	-1.385	-1.385	-1.385
Constant		-5.482	-5.482	-5.482	-5.482	-5.482
$X * \hat{\beta}$			-2.059	-2.367	-2.118	-2.459
Probability			0.113	0.086	0.107	0.079