

*Aid, Risk, and the Special Concerns
of Small States*

Paul Collier and David Dollar

*Development Research Group
The World Bank*

February, 1999

Views expressed are those of the authors and do not necessarily represent official views of the World Bank or its member countries. We would like to thank Charles Chang for excellent research assistance.

1. Introduction

Large-scale financial aid can help developing countries grow and reduce poverty, but only if they pursue sound economic policies – that is the main finding of the World Bank’s recent study, *Assessing Aid*. In this paper we look specifically at the issue of aid to small states, and ask to what extent the above message needs to be tailored to address their particular needs and concerns.

In the next section we look at the issue of policies and growth in small states, and show that the same broad policies that work for large countries also work for small ones. The details of specific policies (fiscal policy or exchange rate management) will differ, but the basic ingredients for successful growth are the same in small states and large.

Section 3 then revisits some of the main findings on aid, policies, and growth. There is no evidence that small states are different in this regard. The evidence is that aid only has a large effect on growth in a good policy environment. Where small states are somewhat different is in the allocation rule for providing assistance to them. In the case of large states, aid actually declines as one moves from mediocre to good policy (the opposite of what should happen if aid is efficiently targeted to poverty reduction). For small states, there is simply not much relationship at all between aid and policy. Poor policy countries and good policy countries get the same amount of aid on average, after controlling for poverty and population. Small states tend to get more aid per capita than large ones, and have not experienced a decline in aid in the 1990s, as have large states.

In section 4 we develop a new line of research, looking at the effect of aid on foreign direct investment. We distinguish between an indirect effect of aid on investors’ perception of riskiness, and a direct effect of aid on FDI after controlling for perceived risk.

This analysis is particularly relevant to small states. It turns out that perceived riskiness (using the *Institutional Investor* risk rating) reacts to policy fundamentals. After controlling for policy and other characteristics, small states are perceived to be far more risky than large ones. On the other hand, aid reduces perceived risk, but only in countries with good policy. Put simply, a small country with good policy and three percent of PPP GDP in aid has the same risk rating as a large country with similarly good policy and two percent of PPP GDP in aid. Thus, an extra percentage point of PPP GDP in aid offsets the disadvantage that small states face in attracting investors. Our interpretation is that the aid helps increase confidence in the good policies, and that this is particularly important for small countries.

We also estimate an equation for foreign direct investment. The risk rating is important because it actually influences flows. After controlling for risk, small states do not experience a significant disadvantage in attracting flows (their disadvantage is in their perceived riskiness). Also, after controlling for risk, aid increases FDI, especially in a good policy environment. Thus aid has both an indirect effect (through perceived risk) and a direct effect on foreign private flows.

This new work sheds some additional light on the main findings of *Assessing Aid*. One reason why donors may be giving less aid to countries with good policy is a sense that they can attract private flows. However, it is exactly in these environments that aid is important because it “crowds in” private investment. The effect is especially important for small states, because of their disadvantage in attracting private investment. Thus, aid has a particularly important role to play in small states, but it can only play that role effectively if countries are pursuing sound policies.

2. Growth and Policies in Small States

“Rates of growth of real per capita GNP are diverse, even over sustained periods. For 1960-80 we observe, for example: India, 1.4 percent per year; Egypt, 3.4 percent; South Korea, 7.0 percent... Between the 60s and 70s, Indonesia’s growth increased from 3.9 to 7.5...”

I do not see how one can look at figures like these without seeing them as representing possibilities. Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia’s? If so, what, exactly? The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else.”

*Robert E. Lucas, Jr.
“On the Mechanics of Economic Development”*

As noted in the quote from Robert Lucas above, growth rates of developing countries vary enormously. He cites examples of large countries, but one could make the same point with examples of small states. In the 1990s, for example, we observe Sao Tome and Principe and Comoros growing at about -2 percent per annum, while St. Lucia’s per capita income has expanded at about 3 percent per annum and Mauritius’s at 4. Sustained over a decade or more, such differences in growth rates lead to large differences in real per capita income and the standard of living.

How to explain these widely differing growth performances? It was once thought that the key factor holding back poor countries was a lack of savings and foreign exchange for investment. Part of the initial rationale for foreign aid was to help countries overcome a “savings gap” to finance necessary investment and a “foreign exchange gap” so that imported machinery could be the cornerstone of that investment. Development agencies worked with a “two gap” model that made imports and investment in physical

capital the driving force of growth. The role of aid in promoting growth was clear, since aid can help fill both gaps.

The slow stagnation and sudden collapse of the Soviet system of central planning, which was the intellectual father of “gap thinking” and development planning, made clear that investment alone cannot guarantee growth. In the 1990s the focus of theoretical and empirical work on growth has gone deeper. Emphasis has shifted from investment to incentives. That is, from capital to the underlying institutions and policies that promote growth by encouraging efficient investment, by supporting human capital development, and by facilitating technological advance.

What are the conclusions of this new growth literature?

A stable macroeconomic climate is crucial. High inflation is bad for investment and growth (Fischer 1993). Similarly, large fiscal deficits hold back growth (Easterly and Rebelo 1993). An outward orientation and a reasonable environment for international engagement are essential: most trade liberalizations accelerate growth (Sachs and Warner 1995).¹ Fiscal, monetary, and trade policies show whether a country is well managed at the macroeconomic level; there is plenty of evidence that good macroeconomic management provides a fertile environment for growth.

Good institutions and economic management are also needed at the microeconomic level. The strength of private property rights and the rule of law and the quality of the civil service affect long-term growth (Knack and Keefer 1995). Similarly, corruption in the public bureaucracy is bad for growth (Mauro 1995). The empirical growth literature has also looked at the question of whether size matters, and has

¹ All three of these studies consider whether good policies bring about growth or growth spurs good policies, and conclude that policy reform leads to more growth.

generally found that growth rates are uncorrelated with population (Figure 1). Still, this leaves open the question of whether the fundamental determinants of growth are the same for small and large economies, the question to which we turn in this section.

For this purpose we use as a measure of the overall quality of the institutions and policies – in terms of providing incentives for efficient accumulation and growth – the Country Policy and Institutional Assessment (CPIA) of the World Bank. It rates countries on 20 specific aspects in four broad areas: (1) macroeconomic policy; (2) structural measures such as trade policy; (3) equity and safety net policies; and (4) public sector management and economic governance (including issues of corruption). This measure has the advantage of being available for a large number of countries.

Collier and Dollar (1999) have shown that this measure of policy is strongly related to growth in the 1990s. A similar picture emerges if we look at the relationship for large and small states separately. For much of the statistical work in this paper, we use as a cutoff for “small states” a population of five million or less. This cutoff leaves us with a large enough number of countries to do robust statistical analysis. For a number of the key results, we show that the results are the same if a lower cutoff of two million or one million is used. Simply regressing growth in the 1990s on the CPIA measure and regional dummies yields the relationship in columns (1) and (2) of Table 1. For both small and large countries separately, there is a positive relationship between CPIA and growth, and the coefficients for small countries and large countries are not statistically different. This simple approach allows us to get the maximum number of observations (in the case of small countries, 60), but it is not totally satisfying because there are other variables that one would want to put into the growth regression, and there

are also a number of large outliers with extremely high or low growth that may be driving the results. In columns (3) and (4) we add initial income (usually included in growth regressions), remove outliers with growth in the 1990s above 6 percent per annum or below -7 percent per annum (mostly crisis or war-torn countries), and also drop countries for which we do not have aid data (to maintain comparability with the regressions in the next section, in which we introduce aid).

What is striking in columns (3) and (4) is that the relationship between policy and growth is exactly the same for small countries and large countries, and in both cases the relationship is statistically significant. For all of the regressions in this paper, we scaled the policy variable to have zero mean and a standard deviation of one, so that the coefficients have a simple interpretation. A country that is one standard deviation above the mean in terms of policy will grow 1.6 percentage points per year faster, other things equal. This relationship is graphed in Figure 2, and some specific country examples highlighted. There are small countries with poor policy that have performed badly (Sao Tome and Principe); small countries with mediocre policies and performance (Western Samoa); and small countries with good policies and good performance (St. Lucia). The specific ingredients that go into “good fiscal policy” for small and large states may differ, but the basic recipe for successful development is the same for large states and small.

We also looked at the average quality of policy for countries with different populations (Table 2). The mean, median, and standard deviation of the CPIA measure is virtually identical for countries with population less than five million and those with population greater. There is a little more variation in the means if we distinguish finer groupings, but no clear relationship between size and policy. The 24 countries with

population below one million have an average CPIA of 3.14; the 11 countries with populations between one and two million, 3.88; and the 27 countries with population between two and five million, 3.29.

Thus, our first conclusion is that small and large states are similar in that some have good policy and some have poor, and these policies affect growth rates just as they do for large countries. In a related paper for this conference Easterly and Kraay show that small states have greater variance in their growth rates over time, suggesting that they are more susceptible to external shocks – an issue that we will return to later. Here our point is that the same policies that lead to long-term growth in large states by and large will do so as well in small states.

3. Aid and Growth in Small States

One of the main points in *Assessing Aid* is that financial assistance does have an impact on growth, poverty reduction, and improvements in social indicators in the developing world – but only when the developing country has good economic policy and institutions. Earlier work (Boone 1994) had found no relationship between aid and growth, but Burnside and Dollar (1997) found that the picture changed if one distinguished among aid recipients on the basis of the quality of their policies. This was evident if one simply divided countries on the basis of economic policy and looked at the relationship between aid and growth in the two groups separately. For countries with good policy, those with large amounts of aid grew significantly faster than those with small amounts of aid (Figure 3). Such was not the case for the poor policy countries – as evidenced both in cross sections and in time series of individual countries. Among

smaller states, Mauritania is an example of a country that received a large amount of aid but achieved virtually no increase in income (Easterly 1997). If aid were as effective in poor policy environments as in good policy ones (as predicted by the two-gap model), then Mauritania should have reached middle-income status, when in fact its per capita income has stagnated at the same level for a long time (Figure 4).

Here we examine whether there is any reason to think that the story is different for small states. Table 3 shows the cross-section growth regression with aid added to the picture. The equation includes policy, aid receipts relative to GDP, and aid interacted with policy. It is this latter interaction that captures the notion that the impact of aid depends on the quality of the policy environment. Across all countries in the sample there is a significant positive coefficient on the aid times policy term. When the sample is divided between small countries and large ones, the coefficient on the interactive term is about the same for small countries and for large ones. There is not much statistical significance to the estimate for small countries, which largely reflects the fact that there are only 36 countries in the regression. The important point is that there is no evidence to think that aid works irrespective of the policy environment in small countries.

In light of the findings on aid, policies, and growth, Collier and Dollar (1999) show that – under certain assumptions – the allocation of foreign aid that has the greatest impact on poverty reduction will depend on how poor a country is and the quality of its policies. Figure 5 categorizes countries on the basis of poverty (share of the population below a \$2 per day poverty line) and of the CPIA measure of policy. If we divide the countries into four quadrants, we can say that aid will have its greatest impact on poverty reduction in quadrant I: countries that have mass poverty and above-average policies for

the developing world. Because of a worldwide trend toward economic reform in the 1990s, there are 32 such countries. Nearly 75 percent of the world's poor live in countries in this quadrant. Nine of the countries in quadrant I are small (with populations less than 5 million): Maldives, Cape Verde, Guyana, Botswana, Namibia, Lesotho, Mauritania, Mongolia, and Kyrgyz Republic. (For some small countries with good policies – such as Slovenia, Grenada, Bhutan – we do not have good poverty data, so that there may be others that belong in this group.)

There are also countries with good policies, but relatively little poverty (quadrant IV). The evidence is that aid works in these environments, but there is less work for it to do. In quadrant II there are countries with lots of poverty but also with weak policy regimes. Clearly, there is a need to help these countries. However, in these environments providing large amounts of finance has not resulted in poverty reduction, so that the conclusion of *Assessing Aid* is that we need to try new approaches, focusing on policy reform, capacity building, and innovative techniques such as channeling aid through NGOs.

The actual allocation of aid in 1996 was quite different from the allocation that is estimated to maximize poverty reduction. The “current allocation” line in Figure 6 controls for poverty level and for population: it answers the question, how did donors in 1996 treat countries that were the same in terms of poverty and population but differed in policies. The answer: aid increased as one moves from countries with terrible policies to ones with mediocre policies, and then tapers off as one moves into the truly good policy realms. That is, countries such as Uganda, Ghana, Vietnam, and Ethiopia get less aid per capita than otherwise comparable countries with weaker policies. The “poverty-

efficient” allocation has just the opposite relationship: it should increase between mediocre policies and good policies, other things equal.

In Table 4 we look at the allocation of aid in the 1990s for small states and large states separately; the dependent variable is aid receipts relative to real PPP GDP.² The allocation rules are broadly similar. Within each group, Aid/GDP declines with population and increases with poverty. (For small states there is significant curvature: as poverty increases, aid increases but at a diminishing rate.) Both small and large states evidence a quadratic relationship between aid and policy, which is best explained graphically (Figure 7). Controlling for poverty and population, Aid/GDP rises as one moves from poor policy to mediocre, and then declines. There are two important differences between the allocation of aid for small countries and that for large countries. First, a look at the regressions in Table 4 will reveal that the quadratic curvature for large countries is very significant statistically. As we move from mediocre to good policy realms, aid really has the “wrong” relationship with policy, and significantly so. In the case of small countries, on the other hand, there is no significant relationship between aid and policy. While there is some slight curvature in the figure, the main point for small countries is that there is no strong tendency to relate aid to the quality of policies. The second obvious point about the aid to small countries is that it is larger on average than the aid to the larger economies: For given policy and poverty, Aid/GDP is about 1 percentage point of PPP GDP higher for small countries, compared to large ones.

Table 5 shows annual aid flows, 1990-96, for a large number of countries, divided into population groups. This tendency to give more aid (per capita or relative to GDP) to

² The aid data come from Chang, Fernandez-Arias, and Serven 1998. The combine official grants with an estimate of the grant component of all official loans.

small countries is evident. What is also interesting is that the well-known overall decline in aid in the 1990s is concentrated almost exclusively in large countries. Between 1990 and 1996, total aid to countries with populations under five million increased from \$5.9 billion to \$7.2 billion; to countries with populations between five and 10 million, increased from \$6.7 billion to \$7.3 billion; to countries with populations between 10 and 20 million, increased from \$7.1 billion to \$7.9 billion; and to countries with populations over 20 million, decreased from \$28.4 billion to \$21.1 billion.

The last question that we turn to in this section is, why do donors continue to give a lot of money to countries with weak policies. Clearly, there is no single answer. To some extent donors are pursuing objectives other than poverty reduction, objectives such as maintaining ties to former colonies or supporting their strategic interests. Often these other objectives conflict with channeling aid to countries with good policy (Alesina and Dollar 1998). But another important reason is that donors hope that aid will induce policy reform. Unfortunately, money has proved to be quite ineffective in generating reform, and there is growing evidence to this effect (Collier 1997; Mosley, Harrigan, and Toye 1995; Dollar and Svensson 1998). Among smaller economies, Nicaragua is a good example. Foreign aid increased steadily – reaching 8 percent of real (purchasing power parity) GDP in the early 1990s. However, policy got worse throughout most of this period, only improving slightly at the end (Figure 8). Despite a series of structural adjustment loans from the World Bank and the IMF, there has been no substantial improvement in policy. Independent accounts confirm that aid to Nicaragua up through the mid-1990s neither generated policy reform nor led to much tangible improvement in development indicators (Lopez 1997). Like many other developing countries, Nicaragua

has had problems with political instability and civil war. It is not surprising that policies have remained weak. The point we are making here is that there are quite a few countries that received large amounts of aid for long periods of time, and yet institutions and policies remained weak. We cannot count on aid as traditionally managed to bring about strengthening of policies.

To the contrary, the best evidence is that policy reform is largely determined by domestic institutions and politics, with foreign aid at best playing an auxiliary role (Ranis 1995; Rodrik 1996; Williamson 1994). When countries get reform movements started, aid can be critical for consolidating these (Sachs 1994). But aid has not been successful in generating policy reform in unresponsive environments.

Another reason why donors may give relatively little aid to poor countries that have reformed is a sense that such countries can attract private foreign investment, obviating the need for official assistance. The issue of the relationship between aid and foreign investment is taken up in the next section.

4. Foreign Direct Investment and Riskiness in Small States

If poor countries that reform can easily attract foreign private investment, then there may not be much of a role for aid in such cases. The fact that we find a strong growth effect of aid in countries with good policies suggest that this is not so, but it is an important question to investigate. At the same time, we are interested in whether small states have any special problems when it comes to attracting foreign direct investment (FDI). We focus on FDI because it is the main form of foreign private finance for low-income countries. The portfolio flows mostly have gone to middle-income countries. Furthermore, the East Asian crisis has highlighted that portfolio flows have to been

managed very carefully and are not necessarily an unmitigated blessing for developing countries. FDI, on the other hand, clearly has been beneficial for many developing countries. Our focus here is on trying to explain FDI flows to the developing world.

For this purpose we have developed a new database with annual flows of net FDI to a large number of developing countries, over the period 1979-95. Through this approach we are able to get nearly 600 observations. In Table 6, column (1) we explain the flow of FDI relative to GDP. We included different policy measures (an index of macro policy, a measure of the rule of law, and the CPIA index) as well as the *Institutional Investor* risk assessment (where a higher number means less risk). In OLS regressions the risk measure has a strong relationship with FDI, whereas none of the policy measures is significant *after controlling for the risk assessment*. This finding is consistent with the view that rule of law and policies matter, but that investors' information about these is filtered through rating agencies such as *Institutional Investor*. We are going to treat the assessment of risk as an endogenous variable, so we will make the following identifying assumption: rule of law and the different policy measures belong in the Risk equation, but not directly in the FDI equation. This enables us to use them as instruments in a 2SLS estimation of the FDI equation, which is what we report in column (1).

We find that the Risk measure has a strong relationship with FDI flows. Furthermore, the share of the population with secondary education has a positive, but not significant relationship with FDI. It is interesting that after controlling for risk and human capital, there is still a strong positive relationship between per capita income and FDI flows. This may reflect that richer countries have other attractive features not

measured here (such as infrastructure); or a desire of foreign investors to be in larger markets; and/or simply a kind of prejudice against poorer countries, even after controlling for the characteristics that should matter (risk, human capital). The regression includes a dummy for countries with population below 5 million. This has a negative coefficient, but it is not statistically significant. Finally, the regression includes aid and aid times what we call “management” (which is an average of the rule of law, macro policy, CPIA, and secondary education measures). “Management” captures whether a country has a good environment for investment and production. We instrument for both aid and aid times management (to address potential endogeneity problems: that is, that some aid is deliberately given to countries in difficult situations that would deter private investment).³

Both Aid/GDP and aid times management have very strong, positive relationships with FDI. This indicates that in general aid creates a good environment for private foreign flows, *and that the effect is strongest in a good policy environment*. We noted at the end of the last section that donors may be reducing aid to poor countries with good policies on the assumption that they can attract private investment. However, good policies do not directly enter the FDI equation: they are mediated by the risk assessment, which we will turn to in a moment. Even controlling for the level of risk and human capital, poor countries tend to be discriminated against. Aid can help overcome this discrimination, and it does so particularly effectively in a good policy environment. This result helps us understand the strong effect of aid on growth in a good policy

³ Given that the indicator variable for small states is already in the equation, we establish that population has no additional explanatory power in either the risk or the DFI equations. Thus, we can use population as an instrument, as well as measures of colonial background, and the interaction of management with population and with colonial background.

environment: in such an environment aid is “crowding in” direct foreign investment. It could do this through increasing confidence in the policy environment and/or through enabling the government to provide services that are complementary to private investment (roads, schools).

In the second column of Table 6 we attempt to explain the *Institutional Investor* risk assessment. First, this measure is strongly related to economic institutions and policy. It has a strong positive relationship to the rule of law and to the CPIA assessment. It is interesting that, after controlling for these, its relationship to an index of macro policies is actually negative. We do not have a simple explanation for this. The CPIA also includes macro policy. By putting a negative coefficient on the macro policy index and a positive one on the CPIA, the data seem to be singling out the non-macro parts of the CPIA: structural policies, economic governance, social investments. Furthermore, the rule of law comes through very clearly. The general point seems to be that the more micro/institutional aspects of policy reform are critical for attracting FDI.

It is also interesting that after controlling for these and for human capital, there is no relationship between per capita income and Risk. However, here the “small states” indicator variable has a very significant role: with the same policies and human capital, small states are perceived to be 28% more risky, with high statistical significance (Figure 9). We experimented with other dummy variables to see if there was a differentiation among population below one million, or below two million, and found that these smaller states are perceived to be the same – in terms of risk – as the states with populations between two and five million.

What is also important for our story is that aid reduces the perceived riskiness of developing countries, *but only if they have good policy*. We have scaled the management index to have zero mean and a standard deviation of one, for ease of interpretation. At the mean of management, the interactive term is zero; and the coefficient on Aid/GDP is not statistically different from zero. Thus, at the average quality of management, aid has no effect on perceived riskiness. In a good management environment, on the other hand, aid reduces perceived risk (Figure 10). In fact, one percent of PPP GDP in aid almost exactly offsets the disadvantage faced by smaller states, in terms of perceived riskiness.

Because we are treating FDI and Risk as a system, it is useful to summarize what we learn from the two equations together. Small states are perceived to be riskier, controlling for other fundamentals. This risk perception affects actual flows of FDI. So, while the small states indicator does not show up as significant in the FDI equation, small states have a harder time attracting investment because they are perceived to be riskier. In the same vein, good institutions and policies are important, but they do not show up directly in the FDI equation. Rather, they affect risk perception, which in turn influences private flows. Finally, aid plays a role in both equations. In a good policy environment, aid reduces perceived risk, while in a poor policy environment it actually leads to higher perceived risk. In this way aid indirectly affects private flows. After controlling for risk, aid also directly affects FDI, again with a stronger effect in a good policy environment. The total effect of aid on FDI depends on the indirect and direct effects combined. This combined “crowding in” effect of \$1 of aid is 60 cents in a good policy environment, 32 cents in an average policy environment, and 4 cents in a poor policy environment (Figure 11).

5. Conclusions

Much of the analysis of *Assessing Aid* is directly relevant to small states, but there are some important nuances to the message that emerge from this analysis. What we have found is that:

1. Small states on average have the same growth rates and the same quality of policies that we observe in large states. Furthermore, policies are key to good performance.
2. The effect of aid on growth depends on the quality of policies, and is only large in countries that have pretty good policies.
3. The allocation of aid – after controlling for poverty and population – pays little attention to policy. In the case of large countries, this takes the form of a somewhat perverse relationship between aid and policy: aid increases as policy goes from poor to mediocre, and then declines for truly good policy countries. In the case of small countries this curvature is less pronounced. There simply is not much relationship between how much aid countries get and the quality of their policies.
4. It is well known that aid has declined overall in the 1990s. Between 1990 and 1996 this decline was concentrated exclusively in large countries. There was a modest increase in aid to small states. On average small states get about one percent of PPP GDP more in aid than large states.
5. The strong effect of aid on growth can be partly explained through the effect of aid on private capital flows. It turns out that in a good policy environment aid and FDI are complementary. There is both an indirect effect and a direct effect of aid. The indirect effect comes through investors' perception of the riskiness of countries. The *Institutional Investor* risk ratings are positively affected by aid flows, but only in a good policy

environment. These ratings in turn have a significant effect on FDI flows. This suggests that in a good policy environment aid increases the confidence of investors in the persistence of the good policy.

6. There is also a direct effect of aid on FDI, after controlling for perceived risk. This effect is strongest in a good policy environment. This finding is consistent with the notion that aid supports the government in providing services complementary to private investment (roads, schools), and that the value of this is particularly large where policies are also good. Thus, while donors tend to give less aid to countries with good policy, the evidence is that it is exactly in these environments that aid is critical for providing supporting services and increasing confidence.

7. Small states are at a disadvantage in attracting foreign investment. Even when they have good policies and other characteristics, they are rated to be significantly more risky. To some extent this may reflect real greater underlying riskiness of the economy. But it is also likely to reflect the weaker incentives that risk agencies and investors have to do their homework and learn about small states.

8. Aid can be used to some extent to offset the greater perceived riskiness of small states, but only if they are pursuing sound policies. In a weak policy environment, aid does not reduce perceived riskiness; in fact, it is estimated to increase the perception of risk. This means that for small states with good policy, there is some justification for the practice of giving small countries larger amounts of aid per capita. In fact, the average additional aid for small countries of one percent of PPP GDP almost exactly offsets the disadvantage that their smallness creates in terms of perceived riskiness.

Thus, the basic message that large-scale financial assistance works for developing countries – but that the effect is only strong in countries with good policy – is true for both small states and large. In fact, the message is more important for small countries than for large ones. In general, developing countries that reform have trouble attracting private foreign investment, and the poorer they are, the more acute the problem. In these reformed environments, aid can help by increasing confidence and by financing complementary public services. Other things equal, small states have an especially hard time influencing investor perceptions and actual flows, so that the combination of good policy and significant flows of foreign aid is particularly potent for them.

References

- Alesina, Alberto, and David Dollar, 1998, "Who Gives Aid to Whom and Why?" NBER Working Paper, no. 6612.
- Boone, Peter. 1994. "The Impact of Foreign Aid on Savings and Growth." London School of Economics, mimeo.
- Burnside, C. and D. Dollar, 1997, "Aid, Policies, and Growth," Policy Research Working Paper, no. 1777, The World Bank.
- Chang, Charles, Eduardo Fernandez-Arias and Luis Servén, 1998, "Measuring Aid Flows, A New Approach," Inter-American Development Bank, Working Paper no. 387.
- Collier, Paul, 1997, "The Failure of Conditionality," in C. Gwin and J. Nelson, eds., *Perspectives on Aid and Development*, Washington, DC: Overseas Development Council.
- Collier, P. and D. Dollar, 1998, "Aid Allocation and Poverty Reduction," Policy Research Working Paper, no. 2041, The World Bank.
- Dollar, David and Jakob Svensson, 1998, "What Explains the Success or Failure of Structural Adjustment Programs?" Policy Research Working Paper, no. 1938.
- Easterly, William, 1997, "The Ghost of Financing Gap," Policy Research Working Paper No. 1807.
- Easterly, William, and Aart Kraay, 1999, "Small States, Small Problems?" World Bank mimeo.
- Easterly, William R., and Sergio T. Rebelo. 1993. "Fiscal Policy and Economic Growth: An Empirical Investigation." *Journal of Monetary Economics* 32(3): 417-58.
- Fischer, Stanley. 1993. "The Role of Macroeconomic Factors in Growth." *Journal of Monetary Economics* 32(3): 485-512.
- Knack, Stephen, and Phillip Keefer. 1995. "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures." *Economics and Politics* 7 (3): 207-227.
- Lopez, Cecilia, 1997, *Impacto de la Ayuda Externa en America Latina - 1972-1992*, Bogota: Tercer Mundo.

- Lucas, Robert, 1988, "On the Mechanics of Economic Development," *Journal of Monetary Economics* 22(1):3-42.
- Mauro, Paul, 1995, "Corruption and Growth," *Quarterly Journal of Economics* 110: 681-712.
- Mosley, P., J. Harrigan and J. Toye, 1995, *Aid and power*, Vol. 1, Second edition, Routledge, London.
- Ranis, Gustav, 1995, "On Fast-Disbursing Policy-Based Loans," mimeo.
- Rodrik, D., 1996, Understanding Economic Policy Reform, *Journal of Economic Literature*, XXXIV.
- Sachs, Jeffrey, 1994, in Williamson (1994).
- Sachs, Jeffrey D. and Andrew Warner. 1995. "Economic Reform and the Process of Global Integration." *Brookings Papers on Economic Activity* (1):1-118.
- Summers, R. and A. Heston, 1991, "The Penn World Table, Version V," *Quarterly Journal of Economics*, 106: 1-45.
- Williamson, J. (ed.), 1994, *The political economy of policy reform*, Institute for International Economics, Washington, DC.
- World Bank, 1998, *Assessing Aid: What Works, What Doesn't, and Why*, Policy Research Report.

Table 1
Dependent variable: Growth rate of per capita GNP

	(1)	(2)	(3)	(4)
Method	OLS Cross Section	OLS Cross Section	OLS Cross Section	OLS Cross Section
Time Period	1990-96	1990-96	1990-96	1990-96
Initial Income	--	--	.12 (.13)	-.74 (1.27)
Policy	1.2 (1.51)	1.8* (4.02)	1.6** (2.62)	1.6* (5.01)
N	60	74	36	56
R ²	.52	.55	.53	.56

*Significant at the 1 percent level.

**Significant at the 5 percent level.

Note: t-statistics in parentheses. Regional dummies included.

Table 2
Policy Index

	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>	<i>N</i>
Pop. < 1m	3.14	3.03	.67	24
1m < Pop. < 2m	3.88	3.88	.53	11
2m < Pop. < 5m	3.29	3.50	.76	27
Pop. < 5m	3.34	3.38	.73	62
Pop. > 5m	3.35	3.45	.72	74

Table 3
Dependent variable: Growth rate of per capita GNP

	(1) <i>Full Sample</i>	(2) <i>Pop. < 5m</i>	(3) <i>Pop. > 5m</i>
Method	OLS Cross Section	OLS Cross Section	OLS Cross Section
Time Period	1990-96	1990-96	1990-96
Initial Income	-.52 (1.30)	.60 (.34)	-1.47** (2.54)
Policy	1.06* (3.73)	.97 (1.41)	1.42* (4.08)
Aid/GDP	-.28** (1.71)	.13 (.28)	-.49** (2.43)
(Aid/GDP) x Policy	.45* (2.66)	.31 (.97)	.39** (2.32)
N	92	36	56
R ²	.54	.55	.66

*Significant at the 1 percent level.

**Significant at the 5 percent level.

Note: t-statistics in parentheses. Regional dummies included.

Table 4
Allocation of Aid in the 1990s to Small and Large States

	(1) <i>Pop. < 5m</i>	(2) <i>Pop. > 5m</i>
Ln Population	-.57* (2.97)	-.44* (4.30)
Poverty	112* (5.04)	39* (3.06)
Poverty ²	-.522* (3.82)	-.33 (.34)
Policy	.10 (.53)	.26** (2.12)
Policy ²	-.08 (.46)	-.13*** (1.70)
N	38	64
R ²	.62	.73

*Significant at the 1 percent level.

**Significant at the 5 percent level.

***Significant at the 10 percent level.

Table 6
Explaining FDI and Risk

	(1) <i>FDI/GDP</i>	(2) <i>Risk</i>
Method	2SLS Panel 1979-95	2SLS Panel 1979-95
Initial Income	.80** (2.46)	-.06 (.56)
Risk	.03** (2.03)	--
Pop. < 5m	-.24 (1.06)	-.28* (2.95)
Secondary Education	.23 (.91)	.02 (.19)
Aid/GDP	.89* (5.76)	.07 (.67)
Aid x Management	.41* (3.70)	.28* (3.08)
Rule of Law	--	.07** (2.27)
Macro Policy	--	-.11** (2.00)
CPIA	--	.15* (3.15)
N	519	560

*Significant at the 1 percent level.

**Significant at the 5 percent level.

Note: t-statistics in parentheses.