What are the preconditions for turnarounds in failing states?

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In this paper, we analyse the preconditions for sustained policy turnarounds in failing states. Our dependent variable is the probability of the commencement of a turnaround that eventually becomes both sustained and substantial. Among the explanatory variables we focus upon resource rents, education, and aid, distinguishing between finance and technical assistance. Overall, we find that these variables have significant and large effects on the duration of state failure. Appropriate donor intervention can radically shorten state failure, whereas additional finance, whether from aid or resource rents, has the opposite effect.

1. Introduction

A 'failing state' can be defined in various ways. In political science it has come to mean a state which is not able to maintain internal security. We give the term an economic meaning: a failing state is a low-income country in which economic policies, institutions and governance are so poor that growth is highly unlikely. The state is failing its citizens because even if there is peace they are stuck in poverty. The failure may well, however, be wider. Empirically the combination of poverty and stagnation substantially increase proneness to civil war (Miguel *et al*, 2004; Collier and Hoeffler, 2004a). Through various routes the state may become a hazard to its neighbours and conceivably to the world.

The international community recognizes that such states are a problem, but is unclear what to do about them. One strand of the aid effectiveness literature suggests that the absorptive capacity for aid might be limited in these environments (Burnside and Dollar, 2000; Collier and Dollar, 2002). The idea of more direct international replacement of the state, through trusteeships, is under active discussion (Fearon and Laitin, 2004; Krasner, 2004). The primary purpose of the present paper is to investigate empirically the conditions under which failing states decisively turn round, achieving and sustaining radically improved policies, institutions and governance. We investigate the preconditions for such turnarounds. We focus particularly upon aid, both money and technical assistance. Is aid of either form effective in promoting these transformations?

In Section 2 we define more precisely the concept of a sustained turnaround. In Section 3 we turn to the preconditions for such a turnaround. Section 4 provides a discussion of the implications for policy. Finally, Section 5 concludes.

2. Defining Sustained Turnaround

In general terms the phenomenon we wish to analyze is clear enough. However, we need both a measure of economic policies, institutions and governance, and precise definitions of what is meant by a failing state and by a sustained turnaround. As a measure of policy,

institutions and governance we will use the Country Policy and Institutional Assessment (CPIA) of the World Bank. This is an internal World Bank standardized subjective rating system done annually for all countries that are borrowers from the World Bank.[1] Twenty different aspects of policy, institutions and governance are rated using criteria that grade each of them on an ascending scale of 1-6 (see Appendix 1 for the definition of the CPIA). These are averaged by the Bank to form the rating which we use. The CPIA has the considerable advantage that it is the only such rating continuously available since 1977 which is explicitly designed to be comparable across countries. The major disadvantage is that it is a subjective index that incorporates judgments of World Bank economists. This has the potential for two types of error. First, some of the judgments reflect economic analysis which is professionally contentious. Fortunately for our purposes, the contentious judgments arise overwhelmingly in the higher reaches of the CPIA. To illustrate outside the range of rated countries, it is evident that there are significant differences between France, the USA, the UK and Japan, but there would be no professional consensus as to which of these countries had the 'better' policies, institutions and governance. Our focus on failing states takes us to the bottom end of the CPIA range. Here there is little controversy. There is an overwhelming professional consensus that countries such as Angola, Burundi and the Central African Republic have had bad policies, institutions and governance. A second potential for error is that despite the overview procedures, some changes in the CPIA may reflect nothing more than changes in staffing. We guard against this by devising criteria which are not dependent upon small changes in the score. Thus, for our purposes the CPIA is a reasonable index for the phenomenon we wish to classify. As with all continua, there will, however, be issues at the margin of what is, and what is not, a failing state. To specify a turnaround we need to answer the questions 'from what?' and 'to what?' It is to these issues that we now turn.

For our purposes, to be a failing state the country must have a low income. We use as an income cut-off that the country should have been classified as a LIC for at least one year

[1] Because it has been used to allocate the Bank's concessional lending (IDA), the details of the ratings have been kept confidential from the countries concerned, although it has been published in quintiles for some years. We understand that the Bank's Board has now decided to release the detailed information.

by the World Bank (World Development Reports, 1977-2002). Evidently, not all low-income countries are failing states. We adopt as a cut-off for weakness in policy, institutions and governance, a level of the CPIA no better than 2.5, which is a very low rating.

However, many countries occasionally meet these criteria and yet are not appropriate for the category of turnaround. This is because their period of difficulty reflects only a temporary crisis into which they plunge and from which they rapidly bounce back. A failing state is not simply a country in a brief spell of crisis. In particular, a country facing a crash in its policies, institutions and governance may be able to recover rapidly because expectations are not set, and because those political groups that benefit from the new situation have not yet mustered the power to prevent change. The concept of a failing state includes some notion that the problem of weak policies, institutions and governance is not just of the moment, but has some persistence. We therefore add the requirement that the CPIA should have been under the threshold of 2.5 for at least four consecutive years. Countries that meet the other criteria but not this one we refer to as 'recoveries' rather than failing states.

Thus defined, we have the pool of all country episodes from which a turnaround from being a failing state might potentially happen. From within this pool we now define what we mean by a turnaround.

Evidently, to be a turnaround, policies, institutions and governance must improve above the threshold for a failing state. However, this alone is clearly insufficient. A country whose CPIA improved from four consecutive years of being 2.49 to reach 2.51 would meet the letter of such a condition but would not have had a significant improvement. We introduce the additional requirement that the CPIA should attain at least 3.5. As a robustness check, we also test an alternative threshold requirement: the CPIA starts below 2.5 and reaches at least 3.

However, momentary improvements, however large, are evidently not sustained turnarounds. We therefore need criteria for sustainability. It may seem obvious that the criterion for sustainability is simply that the reform should have persisted to the present. However, this would be a poor criterion. To quote a famous African saying, 'no condition is permanent'. Taking a specific example, Indonesia had a dramatic turnaround from the late 1960s, at which time it was a classic failing state, to become a star performer of the 1980s. Yet, during the late 1990s it suffered a collapse along with much of East Asia. It seems to us unreasonable to see this crisis of the late 1990s as being the result of failures in the design of the turnaround. It is surely more reasonable to think of the turnaround as having been successful in producing sustained improvement, with the crisis of the late 1990s being attributable to some intervening event or process subsequent to the turnaround. By 'unsustained', we wish to capture only those turnarounds where the subsequent relapse was sufficiently close to the turnaround that the reasons for it could sensibly be attributed in large part to weaknesses in the turnaround itself. We therefore deem a turnaround to have been sustained if the CPIA remains above 3 for at least two years after the turnaround is achieved. A further reason for setting such a limit to the requirement of sustainability is that otherwise relatively recent turnarounds look much more successful than earlier turnarounds which have simply had more time to be reversed.

3. Preconditions for Sustained Turnaround

A substantial case study and econometric literature on donor conditionality has concluded that it was largely ineffective in inducing policy reform. A good example of the case study literature is Devarajan *et al.* (eds), 2001, which examined ten reform episodes to a common framework. The key econometric contribution is probably that of Dollar and Svensson (2000) who found that there was no significant causal relationship from aid programs onto the reform of governance and policy. The incentive effect of aid on reform is indeed highly doubtful. In economic terms any 'substitution effect', making reform more attractive for a government, is offset by an 'income effect' making it less necessary. Perhaps more important, in psychological terms, the infringement of freedom associated

with conditions induces 'reactance', whereby governments attempt to re-establish their freedom by doing the opposite of what the conditions require.

However, the incentive effect of aid on reform is by no means the only way in which aid can influence policy and institutions. Aid can build capacity, directly or indirectly. It can expose governments to new ideas. It can free up governments from crisis management, enabling them to think about longer term strategies. Such effects might be particularly important at the very bottom of the economic spectrum. Chauvet and Guillaumont (2004) estimate economic policy regressions and indeed find that when policies are initially very poor, aid has a positive impact on them. While the general result of Dollar and Svensson is surely robust, it is therefore worth investigating whether aid promotes policy and institutional reform within the range of failing states.

We now have precise criteria both for a country in a position potentially to have a turnaround, and for what constitutes a sustained turnaround. The issue we investigate in this Section is what preconditions significantly increase the prospects of such a turnaround. For this we will use probit regressions to estimate the probability of a turnaround, year by year, among all potential turnaround countries. We proceed in the following way. First we identify a robust baseline specification. Our approach is empirical: based on specification tests we identify what determines the start of sustained turnarounds in failing states. We are able to distinguish between two components of aid: technical assistance, and other aid, both being lagged. Our source for these data is the reporting system of the Development Assistance Committee (DAC) of the OECD. This reporting system leaves much to be desired. However, while it most certainly contains errors and inconsistencies, it may nevertheless have some informational content.

Then in a second step, we need to surmount the problem of the endogeneity of aid. Aid is allocated purposively. Donors seek out information so as to direct aid to those situations where it stands the best chance of being helpful. If donors try to target situations which are ripe for improvement, it is intrinsically difficult to determine the direction of causality. We overcome this problem by instrumenting for aid. However, the issue of

endogeneity is more likely to be an issue when turnarounds have already started (Chauvet and Collier, 2006). Indeed, it is very difficult for donors to anticipate turnarounds, and even if they have sometimes done so, they are unlikely to have differentiated between technical assistance and other aid.

3.1. The baseline specification

Our probit regression investigates the chances of a sustained turnaround from being a failing state. Since the issue of aid endogeneity will be tackled in a second step, we introduce aid and technical assistance lagged one-period. We start with annual observations: each year a failing state has some probability of starting an improvement in policies, institutions and governance that culminates in a sustained transformation. Once it has started on a sustained turnaround it drops from our sample since it cannot start a further turnaround.

In Table 1, we identify which explanatory variables are significant. All data and variables are presented in detail in Appendix 2. Three characteristics of the country seem to matter: the proportion of its population with secondary education, its population and the resource rent relative to its GDP. Countries with a higher proportion of their people who have secondary education, and countries with larger populations, are significantly more likely to achieve sustained reform. But countries benefiting from an important resource rent tend to be less likely to achieve sustained turnaround. This may be because resource rents offset the revenue consequences of economic failure, so that a government is saved from painful choices. Consistently with this result, aid in the form of financial assistance has a negative coefficient, although this is not significant. In contrast, technical assistance, lagged one period, is significantly positive.

Table 1 – *Determinants of the start of sustained turnarounds, probit estimations, annual data, 1973-2000.*

Start of a sustained turnaround (from 2.5 to 3.5)	(1)	(2)	(3)	(4)	(5)	(6)
Secondary schooling	0.161	0.152	0.162	0.162	0.163	0.194
	(2.50)**	(2.53)**	(2.47)**	(2.49)**	(2.58)***	(2.97)***
Resource rent (% GDP)	-4.565	-5.347	-4.750	-4.470	-4.568	-5.264
	(1.76)*	(1.74)*	(1.71)*	(1.71)*	(1.77)*	(1.85)*
Ln population	0.298	0.360	0.290	0.281	0.296	0.285
	(1.89)*	(1.86)*	(1.86)*	(1.77)*	(1.78)*	(1.81)*
Aid (% GDP), lagged	-0.058	-0.060	-0.066	-0.060*	-0.058	-0.047
	(1.62)	(1.61)	(1.62)	(1.69)	(1.59)	(1.55)
Tech. assist. (% GDP), lagged	0.219	0.238	0.233	0.235	0.218	0.234
	(1.72)*	(1.74)*	(1.73)*	(1.78)*	(1.70)*	(1.88)*
Ln real income p.c., lagged		0.249				
		(0.93)				
Post-conflict, years 1 to 4			0.499			
			(0.90)			
At war (dummy = 1)				0.222		
				(0.55)		
Duration leader in office					0.002	
					(0.12)	
Democracy (0-10)						-0.102
						(1.62)
Constant	-4.884	-7.218	-4.808	-4.787	-4.885	-4.805
	(3.19)**	(2.13)*	(3.14)**	(3.19)**	(3.18)**	(3.19)**
Observations	344	341	338	338	342	342
Number of sustained turnarounds	12	12	12	12	12	12

T-student corrected for heteroscedasticity in parentheses. *** : significant at 1% ; ** : significant at 5% ; * significant at 10%.

Table 2 – *Robustness tests: alternative dependent variable and estimation method (annual data, 1973-2000).*

Start of a sustained turnaround	Probit		Random effects probit	
	From 2.5 to 3.5 (1)	From 2 to 3 (2)	From 2.5 to 3.5 (3)	From 2 to 3 (4)
Secondary schooling	0.161	0.121	0.218	0.168
	(2.50)**	(1.70)*	(1.81)*	(1.56)
Resource rent (% GDP)	-4.565	-5.211	-6.004	-7.080
	(1.76)*	(1.90)*	(1.44)	(1.69)*
Ln population	0.298	0.390	0.384	0.520
	(1.89)*	(2.38)**	(1.86)*	(2.37)**
Aid (% GDP), lagged	-0.058	-0.038	-0.080	-0.047
	(1.62)	(1.05)	(1.35)	(0.80)
Technical assistance (% GDP), lagged	0.219	0.308	0.346	0.472
	(1.72)*	(2.16)**	(1.60) (p=0.11)	(2.26)**
Constant	-4.884	-5.797	-5.960	-7.335
	(3.19)***	(3.56)***	(2.79)***	(3.19)***
Observations	344	323	344	323
Number of countries	22	22	22	22
Number of sustained turnarounds	12	14	12	14
Significance of random effects [(1)]			0.115	0.075
Specification tests (p-value):				
Income	0.351	0.565	0.705	0.962
Post-conflict	0.369	0.229	0.445	0.277
Civil war	0.583	0.259	0.637	0.352
Democracy	0.104	0.506	0.175	0.506
Duration in power	0.907	0.420	0.504	0.878

T-student corrected for heteroscedasticity in parentheses. *** : significant at 1% ; ** : significant at 5% ; * significant at 10%. (1) Probability that the panel estimator is not different from the pooled estimator.

Table 3 – *Robustness tests: alternative dependent variable and estimation on 4-year sub-periods, 1974-2001.*

Start of a sustained turnaround	Probit		Random effects probit	
	From 2.5 to 3.5	From 2 to 3	From 2.5 to 3.5	From 2 to 3
	(1)	(2)	(4)	(5)
Secondary schooling	0.243	0.164	0.356	0.268
	(2.78)***	(1.83)*	(1.94)*	(1.64)*
Resource rent (% GDP)	-1.109	-0.403	-1.768	-0.951
	(1.28)	(0.45)	(0.98)	(0.59)
Ln population	0.432	0.484	0.550	0.654
	(2.38)**	(2.72)***	(2.04)**	(2.31)**
Aid (% GDP), lagged	-0.129	-0.070	-0.165	-0.086
	(2.04)**	(1.48)	(1.55)	(1.00)
Technical assistance (% GDP), lagged	0.390	0.424	0.587	0.673
	(1.66)*	(2.03)**	(1.69)*	(1.99)**
Constant	-5.755	-6.252	-7.319	-8.401
	(3.09)***	(3.39)***	(2.52)**	(2.72)***
Observations	108	103	108	103
Number of countries	24	24	24	24
Number of sustained turnarounds	14	16	14	16
Significance of random effects [(1)]			0.114	0.075
Specification tests (*p*-value)				
Income	0.448	0.935	0.610	0.954
Post-conflict	0.156	0.254	0.299	0.441
Civil war	0.818	0.528	0.952	0.696
Democracy	0.073	0.268	0.111	0.292
Duration in power	0.945	0.360	0.492	0.790

T-student corrected for heteroscedasticity in parentheses. *** : significant at 1% ; ** : significant at 5% ; * significant at 10%. (1) Probability that the panel estimator is not different from the pooled estimator.

We perform specification tests using several political and economic variables: income per capita, democracy, civil war, post-conflict situations. None of them is significant. In Table 2, we test the robustness of our baseline specification using an alternative dependent variable (a threshold from 2.5 to 3 instead of 2.5 to 3.5). We also test for robustness by controlling for country random effects. The results are stable. Finally, in Table 3, we test the robustness of our baseline specification to the use of 4-year averages instead of annual data. Once again, the results are reasonably stable.

3.2. The endogeneity of aid and technical assistance

We adopt a set of instruments pioneered by Tavares (2003) and now common in the literature. Essentially, the idea is that a substantial component of a country's aid receipts is determined not by its own current circumstances but by the characteristics of donors. For example, Ethiopia is likely to get relatively a lot of aid from Italy, and Cote d'Ivoire is likely to get relatively a lot of aid from France. If the Italian aid budget goes up and the French aid budget goes down, Ethiopia is likely to get an increase in its aid receipts relative to Cote d'Ivoire. So we use as instruments the total aid budget of the main bilateral donors, as well as some measures of cultural distance between these donors and the recipients: dummy variables equal to one when recipient and donor countries share a common language, dummy variables equal to one if 30% or more of the population belong to a religious group in the donor and in the recipient country. We investigate a set of around 20 instruments (and 15 more when we include interactions between distance variables and total aid budgets). We keep only a few of them, those which are significant: the total budget of aid of Japan (does not vary across countries), a dummy for the catholic religion, and a dummy for being English speaking (these evidently not varying across time). We supplement these instruments with aid and technical assistance lagged twice. Table 4 presents the results using both annual data and 4-year averages. The last three rows of Table 4 provide tests for the validity of the instruments (obtained from TSLS estimations): Hansen over-identification test and partial R-squared of excluded instruments.

Table 4 – *Instrumentation of aid and technical assistance: estimation on 4-year sub-periods and annual data, 1973-2001.*

IV Probit Maximum Likelihood Estimation	Annual data			4-year averages		
	Start of a ST	ODA	TA	Start of a ST	ODA	TA
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-5.162	1.181	2.655	-4.757	1.491	3.171
	(3.63)***	(0.54)	(4.65)***	(3.37)***	(0.29)	(3.41)***
Secondary schooling	0.153	-0.427	-0.079	0.156	-0.967	-0.189
	(2.56)**	(2.40)**	(2.61)***	(1.91)*	(1.97)**	(2.61)***
Resource rent (% GDP)	-5.074	-6.846	-1.349	-4.250	7.886	-2.779
	(1.84)*	(2.51)**	(1.90)*	(1.72)*	(1.39)	(2.05)**
Ln population	0.342	0.0004	-0.218	0.403	0.306	-0.241
	(2.30)**	(0.00)	(4.33)***	(2.94)***	(0.56)	(2.75)***
Aid (% GDP)	-0.094			-0.186		
	(2.67)***			(4.37)***		
Technical assistance (% GDP)	0.321			0.589		
	(1.98)**			(4.12)***		
Excluded instruments						
Aid (% GDP), lagged twice		0.707	0.059		0.359	0.036
		(6.87)***	(2.65)***		(2.67)***	(0.95)
Technical assistance (% GDP), lagged twice		-0.127	0.466		0.088	0.268
		(0.38)	(5.07)***		(0.19)	(2.28)**
Same religion as France		0.716	-0.369		1.891	-0.250
		(1.06)	(2.77)***		(1.30)	(0.94)
Same language as UK		-0.882	-0.573		-1.233	-0.924
		(1.42)	(3.91)***		(1.08)	(4.27)***
Total budget of aid of Japan		0.0005	0.0001		0.001	0.0002
		(3.01)***	(3.21)***		(2.25)***	(3.34)***
Observations	343			104		
Number of countries (sustained turnarounds)	22 (12)			24 (14)		
Wald test (p-value)	0.012			0.000		
Log pseudolikelihood	-1515.5			-483.5		
Test of exogeneity (p-value)[(1)]	0.147			0.004		
Hansen J statistics [(2)]	0.956			0.576		
Partial R^2 of excluded instruments (ODA) [(2)]	0.59			0.34		
Partial R^2 of excluded instruments (TA) [(2)]	0.62			0.47		

Estimations using ivprobit routine of Stata. Start of ST defined as improvement in the CPIA from 2.5 to 3.5. T-student corrected for heteroscedasticity in parentheses. *** : significant at 1% ; ** : significant at 5% ; * significant at 10%. (1) Probability that aid and technical assistance are exogenous. (2) Obtained from TSLS regressions.

Consistent with the probit results, we find that technical assistance prior to turnaround has a significantly positive effect on the prospects of turnaround: providing advice and implementation capacity seems to matter in failing states. The effect of aid other than technical assistance is quite different. We find that aid as finance has significantly adverse effects on the chances of a sustained turnaround. Whereas aid was not significant in probit estimations, it becomes significant once instrumented.

4. Policy Simulations

From the first regression of Table 2, we can compute the average probability of a failing state having a sustained turnaround. Overall, we find that the probability of a sustained turnaround starting in any year is very low, at 1.85%. Countries are therefore likely to stay as failing states for a very long time. Indeed, given the probability, the mathematical expectation of the duration is 54 years. Note that this may slightly exaggerate the duration because it considers only exits due to improvement in policies, institutions and governance. A country can also exit being a failing state because of a rise in income that takes it above the low-income threshold. While on average, very poor policies, institutions and governance makes such a rise in income unlikely, sometimes countries have good fortune. For example, Equatorial Guinea is not, on our criteria, currently a failing state because its income level is too high due to an oil discovery. While our estimate of persistence abstracts from such occurrences, growth in the presence of failing state-type policies, institutions and governance is unlikely to be significantly poverty-reducing, as indeed is indicated by Equatorial Guinea.

4.1. Extra Technical Assistance Prior to Reform

We first consider a small increase in technical assistance delivered prior to an incipient turnaround. On average, failing states have received technical assistance equal to 2.1 percent of their GPD. We therefore simulate the effect of increasing this by one percentage point to 3.1%. The effect it to raise the annual probability of achieving a sustained turnaround from 1.85% per year to 3.1% per year. So even if the average

probability is still very low, it is almost doubled when technical assistance is increased by 1%. This substantially shortens the expected delay in decisively exiting the category of failing state, from 54 years to 32 years.

4.2. An Expansion in Secondary Education prior to Reform

We next simulate the effect of increasing the proportion of the population with secondary education from the mean found in failing states, 2.13%, to 3.13%. This would raise the probability of reform from 1.8% per year to 2.7% per year. This also substantially reduces the expected duration of state failure, from 54 years to 37 years. If the policy of expanded secondary education is combined with that of enhanced technical assistance, the period of state failure is shortened dramatically, from 54 years to only 23 years, the annual probability of exit now rising to 4.4%.

4.3. Increases in External Finance

Finally, we consider two forms of additional external finance, rents on resource exports and aid other than technical assistance. An expansion in the natural resource rent is detrimental to reform. When resource rent increase from 5.6% of GDP to 6.6% of GDP, the average probability goes from 1.8 to 1.65%. During the present commodity boom resource rents have increased very substantially, and so we also investigate the consequence of a doubling of these rents. In response to a doubling of rents, the duration of state failure also virtually doubles to 104 years. An expansion in aid as finance has a very similar impact on the probability of reform as an increase in resource rent. When aid increases from 6.94% of GDP (the average of the sample) to 7.94 % of GDP, the average probability goes from 1.8 to 1.59%, extending the period of state failure by nearly a decade to 63 years. While each of these effects is only marginally significant, the fact that these two different sources of government finance have the same chilling effect on the impetus to reform increases our confidence in the results.

5. Conclusion

In this paper we have proposed an economic definition of a failing state: a low-income country with very weak economic policies, institutions and governance. We have found such conditions to be highly persistent: with mean characteristics, the mathematical expectation of the time until a decisive change is well-established is around 54 years.

Although failing states arouse concern, there is a degree of pessimism as to what can be done about them. The high costs and controversy surrounding US military intervention in Iraq and Afghanistan raise doubts as to the future viability of military solutions. A recent political literature is flirting with the revival of international trusteeship, or colonialism mark 2. Aid tends to be dismissed as being not up to the task, or even as part of the problem. In part, this reflects current thinking that aid is most effective where policies and institutions are already reasonable, while past attempts to improve policies through donor conditionality are judged to have failed. Consistent with these priors, we have found some evidence that windfall external finance prior to reform, whether from additional rents on resource exports, or aid, significantly retards reform. However, more targeted forms of aid can be effective in promoting policy turnarounds. Technical assistance significantly and substantially promotes reform, and, subject to the problem of fungibility, aid for the expansion of secondary education also promotes reform.

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Appendix 1 – *Definition of the Country Policy and Institutional Assessment (CPIA)*.

A. Macroeconomic management and sustainability of reforms

1. General macroeconomic performance
2. Fiscal policy
3. Management of external debt
4. Macroeconomic management capacity
5. Sustainability of structural reforms

B. Structural policies for sustainable and equitable growth

1. Trade policy
2. Foreign exchange regime
3. Financial stability and depth
4. Banking sector efficiency and resource mobilization
5. Property rights and rule-based governance
6. Competitive environment for the private sector
7. Factor and product markets
8. Environmental policies and regulations

C. Policies for social inclusion

1. Poverty monitoring and analysis
2. Pro-poor targeting and programs
3. Safety nets

D. Public sector management

1. Quality of budget and public investment process
2. Efficiency and equity of revenue mobilization
3. Efficiency and equity of public expenditures
4. Accountability of the public service

Each of the twenty components of the CPIA is rated on a scale of 1–6.

Appendix 2 – Data and variables

Technical assistance and other aid
Aid is defined as net disbursements of official development assistance, minus technical assistance. ODA disbursements and technical assistance data is from OECD, and was divided by the Gross National Product (GNI) from World Development Indicators of the World Bank (2001).

Instruments for aid

Same language as donor i : dummy taking the value of one if the donor country and the recipient country share a common language [from Collier, Hoeffler and Pattillo (2004), source : CIA factbook (2003)].

Same religion as donor i : dummy variable taking the value of one if 30 percent or more of the population belong to one religious group in the donor as well as in the recipient country [from Collier, Hoeffler and Pattillo (2004), source : Barrett (1982)].

Total aid budget of donor i : total net disbursements of ODA by donors *i*, in constant prices 2001 (OECD).

CPIA
Country Policy and Institutional Assessment (World Bank). It has 20 equally weighted components, divided into four categories : (1) Macroeconomic management and sustainability of reforms ; (2) Structural policies for sustainable and equitable growth ; (3) Policies for social inclusion ; (4) Public sector management.

Income per capita
Real gross domestic product *per capita* ($ in 1996 constant prices), Penn World Tables 6.1.

Post-conflict years 1 to 4
Dummy variable equals to one in years one to four after the ending year of a civil war (Collier and Hoeffler, 2004b).

Secondary education
Barro R. and J.W. Lee (2000) dataset. Percentage of the population who completed secondary education (population aged 25 and above).

Population
World Development Indicators of the World Bank (2001).

Democracy
Polity IV score for democracy. Ranges from 0 to 10 (0 = low; 10 = high). Measures the general openness of political institutions. The 11-point Democracy scale is constructed

additively. The operational indicator is derived from coding of different authority characteristics.

Years spent in office
Years the national leader had been in office. '0' indicates transition year, *i.e.* a year of change in leadership. Source: State Failure Task Force (2003) (http://globalpolicy.gmu.edu/pitf/) and Bienen and van de Walle (1991).

Resource Rents
Natural resource rents (% of GDP). Resource Rents are calculated by summing the total value of rents for all extractive (i.e. non agricultural) resources. These values are in current US$ and are then divided by GDP in current US$. Source: Collier and Hoeffler (2006).