UNITED NATIONS UNIVERSITY
UNU-WIDER
World Institute for Development Economics Research

Research Paper No. 2008/46

# Determinants of State Fragility and Implications for Aid Allocation

## An Assessment Based on the Country Indicators for Foreign Policy Project

David Carment, Stewart Prest, and Yiagadeesen Samy*

April 2008

**Abstract**

This paper is derived from our ongoing research on fragile states funded by the Canadian International Development Agency (CIDA) to help policymakers and analysts make decisions on where and how to allocate aid, especially in fragile state environments. In order for development assistance to have a measurable and positive impact on fragile states, it is necessary to understand both how and why they become fragile. First, we reconceptualize the meaning of state fragility with equal attention given to the authority, legitimacy and capacity of a state, collectively referred to as ALC. Measures of these ALC components corresponding to

…/.

Keywords: foreign aid, fragile states
JEL classification: F35, O10, O11



* The Norman Paterson School of International Affairs, Carleton University, Ottawa, emails: david_carment@carleton.ca (David Carment, corresponding author); yiagadeesen_samy@carleton.ca (Yiagadeesen Samy); stewartprest@gmail.com (Stewart Prest)

This is a revised version of a paper originally prepared for the UNU-WIDER conference on Fragile States–Fragile Groups, directed by Mark McGillivray and Wim Naudé. The conference was jointly organized by UNU-WIDER and UN-DESA, with a financial contribution from the Finnish Ministry for Foreign Affairs.

UNU-WIDER gratefully acknowledges the contributions to its project on Fragility and Development from the Australian Agency for International Development (AusAID), the Finnish Ministry for Foreign Affairs, and the UK Department for International Development—DFID. Programme contributions are also received from the governments of Denmark (Royal Ministry of Foreign Affairs), Norway (Royal Ministry of Foreign Affairs) and Sweden (Swedish International Development Cooperation Agency—Sida).

ISSN 1810-2611 ISBN 978-92-9230-094-4

six different categories of state performance—economics, governance, security and crime, human development, demographics, and the environment—are collected for all countries for the period 1999-2005. Initial testing of our fragility index shows that fragility is driven by a number of factors, of which the level of development seems to be more important. We complement this analysis by examining state fragility using the ALC framework. Overall, the approach presented has the distinct advantage of identifying country-specific patterns of fragility while at the same time allowing for broad strategically relevant measures of comparative performance that can be of use to policymakers regarding allocation of aid at the sectoral and programming level. Notwithstanding the fact that aid may be allocated for political and strategic reasons, and that fragile states are under funded, we argue that aid that does flow to fragile states could be better targeted. Specifically, it could strengthen the underlying determinants of fragility by addressing fragile states' distinct and country-specific weaknesses in authority, legitimacy and capacity. Finally, we discuss policy implications of our analysis and directions for future research.

## Acronyms

| | |
|---|---|
| ALC | authority, legitimacy and capacity |
| CIDA | Canadian International Development Agency |
| CIFP | Country Indicators for Fragility |
| DFID | Department for International Development |
| GDP | gross domestic product |
| GNI | gross national income |
| HDI | human development index |
| LICUS | low-income country under stress |
| OECD | Organization for Economic Cooperation and Development |
| PPP | purchasing power parity |



UNU World Institute for Development Economics Research (UNU-WIDER)
Katajanokanlaituri 6 B, 00160 Helsinki, Finland

Typescript prepared by Liisa Roponen at UNU-WIDER

## 1 Introduction: assessing fragility beyond conflict

This paper unfolds in five parts. In the first section we review extant theory and policy on fragility. In the second section we identify an alternative framework for assessing fragility. In the third section we specify a model of fragility using a lead indicator approach, and in the fourth we test the model against measures of aid effectiveness. The fifth and final section concludes with directions for future research and implications for policy.

Theory and policy on state fragility are poised to move beyond post-cold war 'first-generation' perspectives, which tended to equate failure with armed conflict and institutional breakdown that occur as a result of war and intrastate struggle. These first-generation approaches focused on mono-causal explanations of state performance by giving credence to claims that failure and collapse were a function of political discord, open conflict between groups and the failure of state, and in some cases international institutions, to regulate armed conflict. The security-failure nexus was and still is seen in some respects as justification for a more concerted international effort to address the problems of state weakness whether through development assistance or the deployment of third parties to shore up or rebuild weak security institutions. The US National Security Strategy is an example of a policy specifically tailored to the problems of the security-failure nexus (NSS 2002). 11 September 2001 was fundamental to this way of thinking. Disengagement disappeared as an option as western nations in general, and the US in particular, came to equate their own national security with stability and order in the world's poorest and poorest governed regions (McGillivray 2005). The goal would no longer be purely developmental, but also related to security at the local, regional, and global level as well. Further, first-generation analysis speaks of fragility as a process that conflict-ridden states either enter into as a result of institutional failure or emerge from, in those cases where a political accord has been reached and a peace process has been put in place.

Such perspectives and policies are understandable, since the 1990s were witness to a number of catastrophic failures, including Bosnia, Somalia, Liberia, and Sierra Leone to name the most notable. Indeed, because the empirical evidence of this relatively short period in the history of state development suggested that the formation and collapse of states were very much driven by large-scale organized violence, first-generation research on state failure almost exclusively tended to equate failure with armed conflict.

Not surprisingly, the policy options that emerged from this period tend to bifurcate into two camps. The first stresses the importance of the underlying or 'root causes' of state weakness as drivers of conflict, which in turn generate state failure; the second focuses on the competing agendas of state and non-state actors within the political and economic arena. In the former case, it has been suggested that poverty itself—defined in either absolute or relative terms—is a source of failure. In the latter case, the literature tends to focus on competing group agendas, whether driven by greed or legitimate grievances, as determinants of conflict.[1] Key proponents of these perspectives include

[1] As a result, since the end of the cold war, there have been several attempts to develop theoretical models (and empirical tests thereof) in order to explain state failure as a function of civil conflict. This literature has identified a number of causal mechanisms for civil wars including: environmental and demographic pressures (Homer-Dixon 1999; Diehl and Gleditsch 2001); greed versus grievance factors, where self-interest takes over justice-seeking behaviour; and the exploitation of natural

Ignatieff (2002) who characterizes weak and collapsing states as the chief source of human rights abuses in the post-cold war world and James Wolfensohn (2002: 18), formerly of the World Bank, who calls for a global strategy that includes measures designed to address 'the root causes of terrorism: those of economic exclusion, poverty and under-development'. The latter emphasizes the mutually reinforcing nature of poverty and state failure: weak governments deprive the poor of the basic means of survival even as the desperately poor are forced to engage in illicit conflictual activities such as drug production in order to survive (West 2005).

By the same token, poverty by itself is not a good measure of fragility. Poverty is usually a symptom of a host of more fundamental causal factors related to a state's authority, capacity and legitimacy. It is true that many failed and fragile states are poor but they also suffer from unequal distribution, poor service delivery,[2] and weak governance, among many other problems.[3] For example, the World Bank claims that a typical low-income country under stress (LICUS) has a GDP per capita roughly half that of a stable low income country.[4] Similarly, Chauvet and Collier (2005) point out the negative effect that fragile states have on neighbouring countries, again illustrating the need to ground analysis in both a comparative and regional context, and not just in absolute terms. State fragility has important implications for aid allocation as well; for example, McGillivray (2007) finds that growth in fragile states would have been lower in the absence of aid to them, that they face larger absorptive capacity problems relative to other countries, and that they are also under-aided. A focus on the security-instability nexus is legitimate, of course, if the underlying purpose is to develop policies on armed conflict in the most egregious cases of failure. However, on their own they do not necessarily enhance our understanding of the causes of fragility and vulnerability, nor do they help us develop more effective policies. We make this argument for several reasons.

First, when properly channelled, non-violent conflict is a normal facet of political and social life in all states. Organized large-scale violence, on the other hand, is a symptom rather than a cause of fragility. While it may be present in many failed and fragile states, not all of them experience large-scale violence. In fact, violent conflict is too narrow a lens through which to understand why states become fragile and why some fail. Further,

---

resources to finance conflict (Collier 2000; Collier and Hoeffler 2004). Others such as Easterly and Levine (1997) point out the role of high levels of ethnic and religious fragmentation while Van Hear (1998) finds diasporas to have a high impact in the onset and course of a war. Such analyses of conflict can, to some extent, be transposed to an analysis of fragility because both internal wars and fragility are likely to be affected by (and affect) the economic, political and social environments. Furthermore both conflict and fragility result (implicitly or explicitly) from human interactions.

2 Stewart and Brown (2007) employ the concept of 'progressive service delivery' as part of their definition of state fragility. In essence, states are considered fragile or failed if their service outcomes—rates of infant mortality, level of access to improved water, etc.—are substantially below the levels predicted by their income. Thus, some measure of country context is built into quantitative evaluation.

3 These and other challenges are listed in the World Bank definition of low-income countries under stress (LICUS). See World Bank (2002).

4 See for example, see World Bank's fragile states briefing document (2005).

from a policy perspective, when violence does occur it is usually too late to respond effectively except through costly operational responses such as military intervention.[5]

## 2 Towards policy-relevant assessment of fragility

Notwithstanding the fact that state fragility as a theoretical construct has now become an important part of the international political discourse, it nonetheless remains an elusive concept for both academics and policymakers.[6] There are a number of interpretations of state fragility, all of which appear to some extent in the international lexicon. Variously characterized as difficult partners (OECD 2001), difficult environments (Torres and Anderson (2004), collapsed states (Goldstone et al. 2000), LICUS (World Bank 2002), poor performers (AusAID 2002), weak performers (ADB 2004), failing and/or failed states (Rotberg 2004), and countries at risk of instability (PM's Strategy Unit), the concept encompasses a number of partially overlapping, yet analytically distinct concepts regarding vulnerability. Regarding definitional issues, the OECD, for instance, defines fragile states as 'countries where there is a lack of political commitment and insufficient capacity to develop and implement pro-poor policies' (Morcos 2005; Prest, Gazo and Carment 2005). The World Bank, on the other hand, focuses on some thirty LICUS that are characterized by very weak policies, institutions and governance and that comprise about half a billion inhabitants.

USAID (2005) reports that about a third of the world's population now lives in areas that are fragile. In order for interventions (through development assistance or otherwise) to have a measurable and positive impact on fragile states, it is first necessary to understand how states become fragile and why, and a first attempt at this would be in the form of a retrospective look at one particular point in time. This is in our view an important exercise given the recent findings by Chauvet and Collier (2005) that the cost of countries falling into LICUS status is extremely high, not only for themselves, but also for their neighbours. According to a French government report:

---

5 This is not to suggest that analysts and policy makers would be unwise to focus on the all important security dimensions. We know that fragile and failed states constitute a security risk in a number of important ways. First, they are a risk to their people because they lack capacity, resulting in a lack of basic security. They lack governance, resulting in the inefficient and inequitable distribution of public goods; and they lack control over violence within their territory, resulting in further division and weakness, and the diffusion of conflict into new jurisdictions. Failed and fragile states are also vectors for transnational threats and global problems: they lack capacity to prevent the transmission of diseases such as avian flu; they are unable to control the transmission of AIDS; they host base-camps for transnational criminal networks; their weak border control provides opportunities for human and drug trafficking, along with other forms of smuggling; and their internal conflicts create refugee flows that upset the demographic balance of neighbouring states. Finally, failed and fragile states are regional and international risks because they are more likely to engage in risky behaviour in violation of international laws, rules and principles; they provide support for the diffusion of weapons of mass destruction; they engage in hostile interactions with their neighbours; their weakness attracts foreign intervention; and their diaspora groups may become conduits of conflict diffusion and contagion.

6 Though we do use subgroups of the top 40 or top 60 fragile states as part of our empirical analysis, we do in general not focus on a set number of fragile states; instead we identify state fragility as being primarily a question of degree, rather than of kind. While some countries are in fact failing or failed, in general aspects of fragility can be identified in virtually all states.

> The situation of a 'fragile state' is assessed in negative terms, on the basis of two main criteria: (1) poor economic performance (the 46 fragile states listed in the paper are all low-income countries, and most of them are among the less developed countries [LDCs]); (2) the effective impotence of government (the DFID paper refers to the World Bank's Country Policy and Institutional Assessment [CPIA] ranking)[7]. Another approach to the same problem is to use the Millennium Development Goals (MDGs) as the point of reference, in order to underscore the fact that 'fragile states' are in fact those where the MDGs will not be achieved, or to highlight deficiencies in service delivery to the population. The degree of 'fragility' is defined according to a few simple criteria (the rule of law, control over the country's territory, respect for minorities, delivery of basic services), used exclusively within the national context. Such definitions pay little attention to the country's external vulnerability or the harmful consequences of certain policies of the developed countries or large private-sector firms. The 'fragile states' approach does, however, allow for the inclusion of the notion of preventive action, whereas previously the conceptual debate had been restricted to countries emerging from crisis or in post-conflict situations (Châtaigner and Gaulme 2006).

Focusing on development issues, the Organization for Economic Cooperation and Development (OECD) defines fragile states as 'countries where there is a lack of political commitment and insufficient capacity to develop and implement pro-poor policies' (Morcos 2005). The UK Department for International Development (DFID) defines state weakness in broadly similar terms, focusing on states in which 'the government cannot or will not deliver core functions to the majority of its people, including the poor' (DFID 2005).

As noted above, because of links being made between poverty, conflict and global terrorism, donors have in recent years paid more attention to fragile states; despite disagreements regarding what a fragile state is, recent research has provided a number of findings. First, there are many states that would qualify as 'fragile', 'failed', 'failing', or LICUS; attempts to draw up a specific list normally end up with between 30 and 50 countries. Second, as reported by Chauvet and Collier (2005), the cost of disengagement from such states can be extremely high, proving more harmful in the long term to international peace and security than continued engagement. Third, many donor governments now believe that outside involvement must be coordinated at the strategic level.[8]

Accordingly, there have been some attempts to reach a level of consensus on issues of vital importance to programming in failed and fragile states. The first area of consensus is that preliminary analyses must draw on the widest range of structural indicators (see Table 1A). To focus on a single factor such as governance, conflict or resources is to invite incomplete analysis of the problem, and ineffective engagement as a result.

---

7 The CPIA ranking is an aggregate quantitative indicator of the quality of macroeconomic management, of the government and public sector, and of structural and poverty-reduction policies. It is criticized, however, for its static nature, its failure to take structural handicaps into account and its connection with the Washington consensus (Severino and Charnoz 2005).

8 Such efforts received official support as part of the Paris Declaration, produced by the OECD in 2005. See OECD (2005)

Structural performance measures are necessary to provide a basis for cross-state comparison in order to monitor, gauge and evaluate state performance at the strategic level; such comparative tools are a prerequisite of informed and rational allocation of limited engagement resources.

Second, programming must be grounded in an ongoing process of risk assessment and monitoring. Such tools must be able to identify countries at risk and provide guidance as to the type of engagement required. Monitoring must provide a risk analysis to allow for policy deliberation and resource mobilization, vital prerequisites of timely and effective engagement. Even more than in other developing economies, a thorough understanding of context in fragile states is a prerequisite of effective and properly sequenced engagement; context is necessary to ensure that we understand the causal factors driving stakeholder behaviour, and changes in incentive structure necessary to produce positive outcomes.

One crucial assumption we make is that fragile states show strengths and vulnerabilities in one or more areas based on the idea that all states possess three fundamental components of 'stateness', namely authority, legitimacy and capacity (ALC) (Carment et al. 2006a). Weakness along one or more of these dimensions will impact on the overall fragility of a particular country. *Authority* refers to the ability of the state to enact binding legislation over its population and to provide the latter with a stable and safe environment. Legitimacy refers to the ability of the state to command public loyalty to the governing regime and to generate domestic support for government legislation being passed and policies being implemented. *Capacity* refers to the power of the state to mobilize public resources for productive uses (see Table 1A). As conceptualized in our research, capacity is in some ways similar to the focus on progressive service delivery suggested by Stewart and Brown (2007). However, the latter brings in elements of state authority, in that it attempts to capture not only the resources available to the state, but also the government's willingness to devote those resources to the delivery of essential services. In this sense, progressive service delivery as an evaluative concept is reminiscent of DFID's focus on state 'willingness' to pursue pro-poor outcomes, described in its fragile states strategy (DFID 2005).

Our argument is that, states become fragile and fail for different reasons. The capacity problems that beset the fragile states of Sub-Sahara Africa are distinct from the legitimacy and authority problems of the fragile states of Central and South Asia. For example, in our country rankings, Pakistan and Sri Lanka exhibit poor performance on measures of authority and legitimacy while middle performers in Africa such as Ghana, Kenya and Tanzania are faced with capacity problems (Table 1A). Of course those that show up repeatedly at the top of our rankings are those that face challenges in all three categories.

Since 2005 the Country Indicators for Fragility Project[9] has been conducting a second-generation analysis of fragile states, developing a methodology that combines dynamic event and stakeholder analysis with statistical information to produce context-rich country assessments that are nonetheless still comparable against the performance of

9 Since 1997, the CIFP project (together with the Canadian government, private sector and nongovernmental organizations) has collected statistical information on a range of issues related to the political, economic, social and cultural environments of countries around the world.

peers. The analysis begins with a structural profile of the country, a composite index that measures overall country fragility along six dimensions or clusters: governance, economics, security, human development, demography and environment. Each of these clusters is based on a number of indicators; for example, indicators under the 'economics cluster' include economic growth, gross domestic product (GDP), inflation and unemployment, among others. The data are further analysed to provide insight into relative state strength and weakness along the three dimensions of 'stateness' referred to above, namely authority, legitimacy, and capacity. This multidimensional assessment methodology is a direct response to the multicausal nature of fragility and failure; states can weaken in any number of ways, such that any attempt to attribute fragility to a single deterministic set of causal variables inevitably remains underdetermined, capturing only a limited subset of all fragile states. Instead, CIFP adopts a more inductive approach, identifying areas of relative strength and weakness across all measures of state performance. It is this inductive and multifaceted approach to fragility and failure that distinguishes CIFP's country database from conflict-driven first-generation projects such as the Fund for Peace failed states project.

Like its predecessor, the open-source CIFP conflict risk index (www.carleton.ca/cifp), the fragility index produced in collaboration with CIDA, employs a methodology of relative assessment. In ranking state performance on a given indicator, global scores are distributed across a nine-point index. The best performing state receives a score of one, the worst a score of nine, and the rest continuously distributed between these two extremes based on relative performance. As country performance for some types of data can vary significantly from year to year—as in the case of economic shocks, natural disasters, and other externalities—averages are taken for global rank scores over a 5-year time frame.

North Korea provides an intriguing example of how second-generation analysis can produce results that are both more intuitively satisfying and more useful to policymakers than those emerging from a simple indexing exercise. In the 2007 CIFP fragility index (see Tables 8A and 9A), North Korea is ranked 52nd overall. However, when fragility is measured on the any one of the ALC dimensions, a much more nuanced picture emerges. Balanced against middling rankings for both authority and capacity is an extremely weak legitimacy score; North Korea ranks as the third most fragile state in term of legitimacy. Given North Korea's current status as international pariah, such a finding has a high level of intuitive appeal. With its low level of legitimacy, the regime might be termed brittle—endowed with sufficient authority and capacity to maintain control of state borders and territory, but highly vulnerable to exogenous shocks. The result thus conveys more useful information than a simple rank ordering of states according to the level of development, or presence of conflict inducing factors, providing a springboard to further discussion of policy options available to the international community.

Table 1A in the Appendix provides a list of the top 40 fragile states based on data for the period 1999 to 2006, with Burundi being the most fragile state. The table provides data for the overall fragility score, scores along the ALC components, scores for the different indicator clusters, with gender as a cross-cutting theme. What is striking in examining the most fragile states is that though they appear in more than one category they rarely rank high on all three, an indication that fragility manifests itself in different forms that require different forms of intervention. When broken down in terms of the six indicator clusters (e.g., for the top 20 fragile states), none appear on all six and only

a few appear on four, again an indication that fragile states face different challenges which the one-size-fits-all approach is unlikely to resolve.

## 3 Methodology and empirical results

The lack of a clear and universally accepted definition of fragility speaks to its multifaceted nature. Despite the utility of the fragility matrix for programming purposes it stands to reason that not all indicators are necessary for econometric analysis. Thus, in this section, we seek to answer the question: of those indicators commonly associated with fragility which ones provide the best predictive power?

To answer this question, the fragility index, which will be our dependent variable in the empirical analysis, is a simple average of each of the six indicator clusters listed in Table 1A. The individual indicators used to calculate each indicator cluster are assigned a score on a 9-point scale (1 to 9). More precisely, the global sample of countries is ranked from highest to lowest level of performance, divided into nine equal groups, and then assigned scores ranging from 1 to 9 for each indicator based on their rank position within the sample. In general, a higher score (7 to 9) indicates that the country is performing poorly relative to others while a lower score (1 to 3) indicates that the country is performing well relative to other countries. Given that relative country performance can vary from one year to another, global rank scores are averaged over a few years (up to a maximum of five years, given data availability) to mitigate against picking an unrepresentative year. These global rank scores are further adjusted with modifiers in the form of trend and volatility scores. The trend score (based on short-term, 5-year, trends) is calculated from an ideal linear least squares regression line where the slope of the trend line (+1 for positive slope, -1 for negative slope, and 0 for zero slope) is used as a measure of the direction of change over time. Although trend scores are helpful in assessing whether an indicator is changing over the short term, they do not tell us anything about the degree of variation in country performance. A volatility score in the form of a qualitative assessment of the degree of volatility (deviation of actual trend from the ideal linear trend over a 5-year time period) is used to modify the base scale (adding a value of 2 to be base scale if volatility is high, 1 if volatility is moderate, and nothing if there is little or no volatility).

As a first step, we identified leading indicators from each of the indicator clusters listed in Table 1A through bivariate correlations in order to arrive at a parsimonious multivariate model of state fragility. For example, in the case of the economics cluster, we tested a number of indicators (GDP, GDP per capita, economic growth, inflation, inequality, unemployment, etc.) individually against the economics index, and chose the one with higher explanatory power, and also making sure not to choose independent variables that are highly correlated with each other (for example, GDP per capita and GDP). This 'leading indicator' approach was applied to each of the six clusters as well as the cross-cutting theme of gender in order to come up with a realistic model that would not exhaust too many degrees of freedom. This leading indicators approach allows us to estimate a baseline model that takes the following form:

$$fragility_i = \beta_0 + \beta_1 income_i + \beta_2 growth_i + \beta_3 demo_i + \beta_4 trade_i + \varepsilon_i \quad (1)$$

where the different variables are operationalized as follows:

– *fragility* is the CIFP fragility index described in the previous section, with only countries with a fragility score of 4 and above being considered. Excluded countries are essentially OECD countries as well as a few high-income countries such as Singapore and South Korea. This variable is further operationalized as a categorical variable in which countries considered fragile (top 40 or top 60, for example) are coded as '1' and the rest '0' in order to conduct logit estimation (more on this below). The independent variables include: 'income', which is captured by the logarithm of GDP per capita in purchasing power parity (PPP);

– *growth* refers to the growth of GDP per capita;

– *demo* refers to the level of democracy from the Polity IV dataset and it varies from strongly autocratic (-10) to strongly democratic (+10);

– *trade* refers to trade openness, namely the ratio of the sum of exports and imports to GDP. Subscript 'i' refers to countries and $\varepsilon_i$ is the normal disturbance or error term with the usual properties.

This baseline model is thus controlling for economic (internal and external) factors and political factors as hypothesized in the theoretical literature. Since there are no direct formal models of state fragility, our approach is a purely statistical one in the sense that in identifying lead indicators we are trying to find the best statistical model to fit the available data (a procedure which is analogous to the Hendry School, or LSE/British Econometrics, where one 'tests down' in order to obtain a parsimonious model). This also allows us to move away from explanations or theories that rely on a single variable to a more realistic multivariate approach that controls for the effects of different variables. Obviously, in doing so, we are getting rid of several indicators that feed into our conceptualization of state fragility through the ALC framework but as a result we also obtain a parsimonious and testable model that can be helpful for policy implementation.

As mentioned above, in addition to using the fragility index in its 'raw form', we also operationalize it as a binary dependent variable ('fragility' versus 'no fragility') and this allows us to use logistic regression analysis. The sample of countries being analysed consists of a maximum of 156 countries with a five-year average of most recent data until 2005. In addition to the variables of our baseline model, squared terms for democracy and trade are included in different specifications of the baseline model to take into account nonlinearities uncovered in Carment et al. (2006b). Dummy variables

Table 1
Summary statistics

| Variable name | Description | No. of observations | Mean | Median | Standard deviation |
|---|---|---|---|---|---|
| ETHDIV* | Ethnic diversity | 128 | 0.39 | 0.42 | 0.26 |
| ETHRISK* | Risk of rebellion | 98 | 4.84 | 3.77 | 3.86 |
| FRG | Fragility index | 156 | 5.89 | 5.80 | 1.06 |
| GDPG | Economic growth | 148 | 3.46 | 3.56 | 3.11 |
| HDI | HDI | 148 | 0.65 | 0.72 | 0.16 |
| HREM | Human rights – empowerment | 154 | 5.32 | 6.00 | 3.07 |
| LDEM | Level of democracy | 129 | 1.77 | 4.00 | 6.40 |
| PPP | GDP per capita | 134 | 5031 | 3867 | 4552 |
| TRAD | Trade openness (% of GDP) | 141 | 83.18 | 75.38 | 37.71 |

Note: * single measures

for different regions were also added to the baseline model, as well as other variables that appear in the literature such as the human rights empowerment index, the human development index (HDI) and ethnic diversity and ethnic risk. Even though the latter variables did not show up as leading indicators, they are included in order to test some of the common causal factors identified in the conflict and fragility literature.

Table 1 provides summary statistics for the variables used in the empirical analysis, arranged in alphabetical order. We have data for more than 100 countries for most of the variables. The average value of the fragility index is within the range of countries performing around the median value. Except for GDP per capita, the mean and median values are not too different and the standard deviations are not too large for the other variables; in the case of GDP per capita, the log transform of the variable will be considered in the regression analysis in order to normalize the distribution.

Table 4A in the Appendix shows the results when the benchmark Equation (1), and different specifications based on the latter, are estimated using OLS for all countries with a fragility index of 4 and above. These different specifications provide tests of hypotheses regarding state fragility from the extant literature (as mentioned in the introduction) and also perform some sensitivity analysis by using different variables that capture similar effects. The level of development of a country, measured by the logarithm of GDP per capita is highly significant and with the expected sign in Column (1), which is the benchmark Equation (1); poorer countries tend to be more fragile than richer countries on average. In Column (6), we replaced the level of development with a broader measure of development, namely HDI and once again obtained the same result; different specifications did not change the result either as seen in the other columns of Table 4A.

The other variables, namely growth, the level of democracy and trade openness are also significant and with the expected signs. Over the estimated period, countries that grew faster tended to be less fragile, democratic countries displayed less fragility, and countries that are more open to trade also tended to be less fragile. The possibility that the relationships were non-linear (as alluded to in the *Briefing Note to the Canadian Government* by Carment et al. 2006b based on simple correlations) was also investigated by adding square terms for the level of democracy, trade openness and the human rights empowerment index. This relationship was confirmed in the case of the level of democracy only but not in the case of trade or human rights. More precisely, the inverted 'U' relationship that several authors have uncovered between conflict and regime type is confirmed in the case of our fragility index. In Column (4), when the human rights empowerment index is considered, it is highly significant with a negative sign when included on its own, indicating that countries with better human rights records tend to be less fragile. Finally, both variables for ethnic risk and ethnic diversity are significant and positively correlated with fragility (even though we have fewer observations in those cases). The overall fit of the estimated equations is greater than 80% in all cases, and the dummy variable for Africa was significant in most of the specifications (not surprisingly given that many of the fragile countries in our sample tend to be from that region- see Table 1A in the Appendix).

In order to see whether the results discussed in the previous paragraph hold for different samples, we restricted our sample to countries with fragility scores of 6 and above. The results are shown in Table 5A in the Appendix. Even though the overall fit of the equations was lower, the signs and significance of the independent variables did not

change very much. The level of development and the level of democracy remained highly significant and with the same signs as in Table 4A. The human development index remained significant when used instead of GDP per capita, and both ethnic risk and ethnic diversity remained significant and positive. The only major difference between these sets of results and the ones in Table 4A is that trade openness is no longer significant, reflecting the fact that the most fragile countries tend to trade less in general. It is also interesting to note that in some specifications using the new sample of countries with fragility scores of 6 and above that growth is not always significant. The fact that growth does not always have a positive impact on fragility in the most fragile countries could be due to a number of reasons, namely that fragile countries do not have high growth rates to begin with, that any growth that does occur is not being distributed throughout the economy, or that growth, due to its long-term nature, is not being reflected enough during the time period considered.

As discussed earlier, we also considered a dichotomized version of our dependent variable where countries are assigned a '1' if they are fragile and a '0' if they are not. We considered two versions of this variable, namely the top 40 and the top 60 fragile countries (where the latter were assigned '1' and the remaining countries '0' accordingly). While this may seem arbitrary, our objective was essentially to see whether the results reported and discussed above would be significantly different. Given that the dependent variable is dichotomous, logistic regression analysis using maximum likelihood estimation is used and results are reported in Tables 6A and 7A in the Appendix.[10] In the case where the top 40 fragile countries in our sample are coded as '1' (see Table 6A), the level of development measured by the logarithm of GDP per capita, the level of democracy, trade openness and growth remained significant in most of the regressions, confirming the results obtained earlier. The main difference, however, was that the non-linearity observed in the case of democracy, as well as the significance of ethnic diversity, both disappeared with logit estimates. The dummy variable for Africa was also not as significant as previously observed. When the top 60 fragile states in our sample are coded as '1' (see Table 7A), most of the results obtained in the previous tables were confirmed. The only major exception was the insignificance of the democracy variable reflecting the fact that the level of democracy matters more for the most fragile countries.

Problems with regressions such as the ones reported in Tables 4A and 5A (and making causal inferences from them) may be due to omitted variables, reverse causality (endogeneity) or measurement errors.[11] Given that we used leading indicators and that we are using the existing data at our disposal, we are already mitigating against the possibility of omitted variables or measurement errors. Reverse causality remains, however, a possibility that needs to be investigated further. Indeed, it is quite possible in our case that state fragility influences a country's GDP per capita, growth, its political (regime) type or even the degree to which it trades with the rest of the world. To mitigate against this problem, we regressed lagged values (by five years) of our independent variables on the fragility index and this did not change the results. However, the potential for reverse causality still remains and given that OLS estimates

---

10 In fact, both logit and probit estimation are possible but there is really no compelling argument for choosing one over the other (see, for example, Gujarati 2003 for a discussion).

11 All of these terms lead to the same econometric problem, namely that the independent variables are contemporaneously correlated with the error term.

are biased in its presence, the standard approach to deal with this problem is instrumental variable (IV) estimation.

The choice of good instruments is extremely important and must fulfil two conditions. First, they must be correlated with the independent variables; second, they must not be correlated with the error term. We used the five-year lagged values of the independent variables as instruments (when they were available) since there is no correlation between their lagged values and the error term. The main finding from IV estimation (results not reported here but available from the authors) was that the level of development remained a significant factor in explaining fragility, whereas the other independent variables did not. The quality of instruments used was also checked by regressing the residuals from Equation (1) on the instrumental variables, and none of the instruments was found to be significant. To summarize, therefore, the results from this section, based on OLS and MLE (logit) estimates, indicate that state fragility is the result of a myriad of factors, of which the level of development, measured by per capita GDP, seems to be more important (even when endogeneity is taken into account). Given the likelihood of endogeneity in our estimates, some of these factors might be symptoms as well as causes of fragility.

## 4 Aid policy and fragility

As important as it is to develop a clearer understanding of the determinants of fragility, it is only one part of the puzzle. Equally important is to develop an understanding of how fragility affects aid allocation and aid effectiveness. Having identified the lead indicators associated with fragility in the previous section, we turn now to the latter question of aid effectiveness in fragile states. As others have previously formally tested aid effectiveness in fragile states (as in for example, McGillivray 2007), we do not repeat such a procedure here. Instead, we use the insights gathered from the previous section (namely the identification of leading causes of fragility) together with the ALC framework and events-based monitoring developed by CIFP to discuss aid policy and state fragility. Prior to Burnside and Dollar's (1997, 2000) seminal (and controversial) contribution to the literature on aid and growth, a number of empirical studies find that aid did not contribute to growth (see, for example, Mosley 1980; Boone 1996). Bauer (1981) is even more critical, arguing that one could not force countries to grow by just injecting money when the right incentives and institutions were missing. What was also surprising was that while projects seemed to yield expected results, the macro evidence was not very positive, hence the so-called micro-macro paradox described by Mosley (1986). Burnside and Dollar (1997, 2000) show that aid works in good policy environments (meaning that it does not in fragile state ones) and their views continue to receive broad support despite attacks by Easterly (2003) that the Burnside-Dollar argument is not robust when new data or alternative definitions are considered. Other surveys of the literature by Hansen and Tarp (2000) for example, are more positive and argue that aid leads to increases in growth, regardless of the policy environment (see also Clemens, Radelet and Bhavnani 2004), effectively nullifying the micro-macro paradox of aid. Other than its impact (or lack thereof) on growth, critics of aid have also cited fungibility, lack of donor coordination, too much tying of aid, lack of absorptive capacity and the failure of conditionality to buy reforms, among other factors determining aid effectiveness.

When considered together, the Burnside-Dollar argument that aid works in good policy environments and concurrent findings that neglecting fragile countries may in fact worsen poverty and lead to a further weakening of the state pose a dilemma for policymakers and analysts alike.[12] When making decisions on where and how to allocate aid, should they be sensitive to fragile state environments or not? Tables 2 and 3 show how the pattern of aid differs from fragile states and all aid recipients, based on OECD-DAC statistics. When measured in terms of aid per capita, our calculations based on data from the OEDC-DAC indicate that fragile states are under-funded relative to the overall sample and the volatility of aid flows has also increased over time. Furthermore, aid as a percentage of gross national income has not changed significantly (except for the period 1969-78), indicating that fragile countries continue to be aid dependent.[13]

Table 2
Aid allocation to fragile states based on ALC (aid per capita, US$)

| | 1969-78 | 1979-88 | 1989-93 | 1994-98 | 1999-03 |
|---|---|---|---|---|---|
| | All aid recipients | | | | |
| -average | 22.4 | 51.5 | 56.7 | 106.4 | 80.8 |
| -standard deviation | 30.4 | 64.9 | 70.7 | 518.9 | 202.5 |
| | Fragility index | | | | |
| Top 40 fragile states | | | | | |
| -average | 15.3 | 36.8 | 44.7 | 45.0 | 35.1 |
| -standard deviation | 23.8 | 42.2 | 46.1 | 44.6 | 47.8 |
| Top 20 fragile states | | | | | |
| -average | 8.3 | 22.4 | 29.8 | 37.2 | 37.7 |
| -standard deviation | 6.4 | 17.4 | 20.5 | 46.6 | 63.1 |
| | Authority | | | | |
| Top 40 fragile states | | | | | |
| -average | 8.6 | 21.0 | 28.2 | 38.8 | 35.8 |
| -standard deviation | 7.3 | 19.3 | 22.9 | 51.3 | 55.1 |
| Top 20 fragile states | | | | | |
| -average | 7.7 | 22.7 | 30.2 | 36.4 | 32.9 |
| -standard deviation | 6.3 | 22.9 | 27.9 | 51.2 | 64.3 |
| | Legitimacy | | | | |
| Top 40 fragile states | | | | | |
| -average | 12.1 | 28.7 | 30.4 | 28.6 | 29.5 |
| -standard deviation | 14.0 | 28.7 | 31.2 | 48.2 | 64.4 |
| Top 20 fragile states | | | | | |
| -average | 11.8 | 27.0 | 28.1 | 30.8 | 28.6 |
| -standard deviation | 14.5 | 32.1 | 34.0 | 39.2 | 48.3 |
| | Capacity | | | | |
| Top 40 fragile states | | | | | |
| -average | 20.6 | 51.2 | 69.1 | 78.9 | 72.4 |
| -standard deviation | 29.5 | 54.5 | 73.2 | 143.0 | 153.7 |
| Top 20 fragile states | | | | | |
| -average | 22.5 | 49.7 | 66.1 | 64.6 | 49.6 |
| -standard deviation | 32.6 | 51.1 | 73.9 | 79.7 | 48.2 |

Source: Authors' calculations based on OECD-DAC aid statistics, and the CIFP 2007 Fragile States Index.

[12] Chauvet and Collier (2005) estimate the cost of a country falling into LICUS status to be US$ 80 billion on average, where most of the cost is borne by neighbouring countries.

[13] It is important to realize that the table assumes that the top 40 or 20 fragile states were the same over the whole period but that the fragility index used to rank countries is for the last five years up until 2005. Further, McGillivray (2007) also finds that fragile states are under-aided.

Tables 2 and 3 also show how aid flows change when considering states with specific sources of weakness—namely, weakness in authority, legitimacy, or capacity. Though the general pattern still holds that fragile states receive reduced per capita funding when compared to all aid recipients, additional trends emerge. States with weak authority and legitimacy consistently received lower amounts of aid per capita than states lacking capacity. Even more interesting, the relative levels of aid to states lacking authority and legitimacy appeared to have shifted over time, a finding that holds for analyses done on both the top 20 and top 40 fragile states in each area. While states with weak authority received less aid per capita than states lacking legitimacy in the periods 1969-78 and 1979-88, flows approached parity during 1989-93; since then, states lacking in authority have received higher levels of aid than those lacking legitimacy. Indeed, aid flows to states lacking legitimacy have remained relatively stagnant since the early 1980s. Clearly, such findings are in large measure a reflection on global trends occurring during the period of observation. The end of the cold war and attempts to contain or control civil conflict throughout the 1990s likely both play a role in the evolution in development priorities; nonetheless, the findings are both striking and intuitively satisfying.

Table 3
Aid allocation to fragile states based on ALC (aid as a % of GNI)

| | 1969-78 | 1979-88 | 1989-93 | 1994-98 | 1999-03 |
|---|---|---|---|---|---|
| | All aid recipients | | | | |
| -average | 5.9 | 8.9 | 10.6 | 10.7 | 8.8 |
| -standard deviation | 6.8 | 10.5 | 14.7 | 16.7 | 11.9 |
| | Fragility index | | | | |
| Top 40 fragile states | | | | | |
| -average | 6.9 | 11.5 | 13.8 | 14.1 | 12.1 |
| -standard deviation | 6.9 | 12.6 | 12.6 | 11.5 | 10.1 |
| Top 20 fragile states | | | | | |
| -average | 4.6 | 9.2 | 11.9 | 11.9 | 13.7 |
| -standard deviation | 4.4 | 12.0 | 11.8 | 7.7 | 11.0 |
| | Authority | | | | |
| Top 40 fragile states | | | | | |
| -average | 4.7 | 8.3 | 10.7 | 12.4 | 10.5 |
| -standard deviation | 4.5 | 11.6 | 11.8 | 12.8 | 10.5 |
| Top 20 fragile states | | | | | |
| -average | 5.2 | 10.5 | 12.6 | 12.6 | 12.0 |
| -standard deviation | 5.2 | 15.4 | 16.1 | 14.6 | 11.4 |
| | Legitimacy | | | | |
| Top 40 fragile states | | | | | |
| -average | 4.6 | 8.2 | 8.6 | 7.6 | 7.7 |
| -standard deviation | 5.2 | 11.7 | 12.2 | 8.0 | 9.5 |
| Top 20 fragile states | | | | | |
| -average | 3.7 | 8.5 | 8.6 | 5.1 | 4.7 |
| -standard deviation | 5.2 | 15.9 | 15.0 | 6.6 | 9.0 |
| | Capacity | | | | |
| Top 40 fragile states | | | | | |
| -average | 8.1 | 15.5 | 25.0 | 23.6 | 19.5 |
| -standard deviation | 6.7 | 11.8 | 25.5 | 25.7 | 15.8 |
| Top 20 fragile states | | | | | |
| -average | 7.9 | 14.8 | 21.8 | 20.2 | 18.0 |
| -standard deviation | 5.5 | 11.5 | 20.2 | 20.9 | 15.6 |

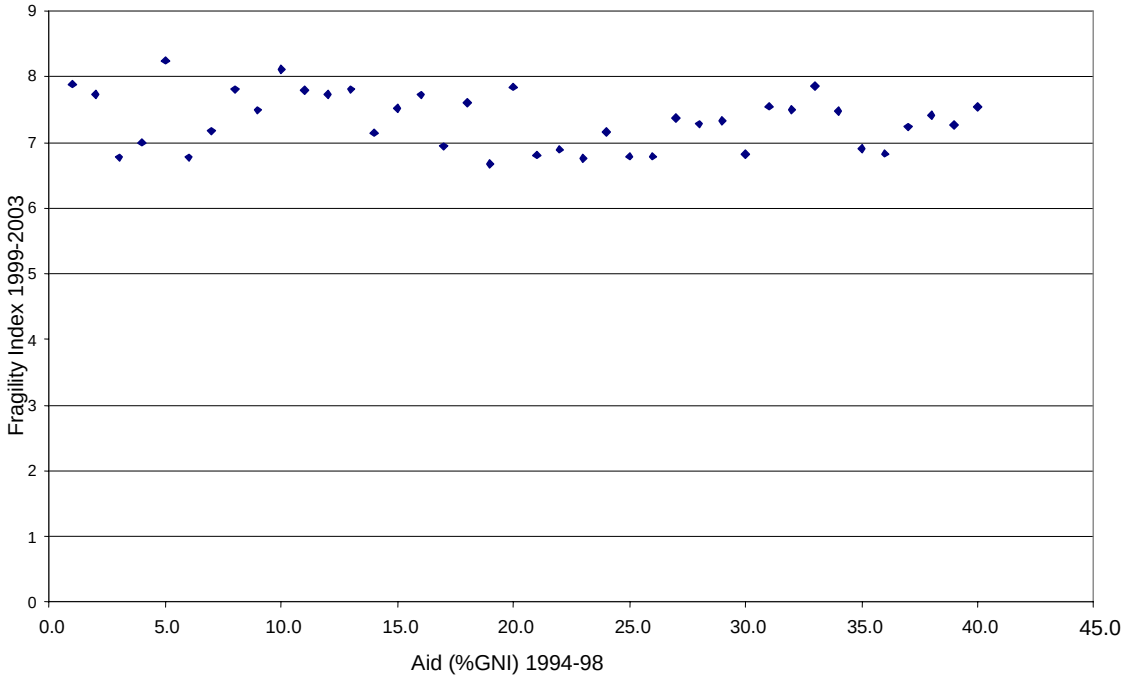
Source: Authors' calculations based on OECD-DAC aid statistics, and the CIFP 2007 Fragile States Index.

Table 3 highlights the variation in aid allocation as a percentage of state GNI. When compared with all aid recipients, fragile states on average remain more aid dependent than all aid recipients, though not significantly so. States lacking in capacity are considerably more aid dependent than other types of fragile states—in the latter three observation periods, low-capacity states on average relied on aid flows for more than 20 per cent of their GNI, a figure that held for both the top 20 and top 40 states.

If one were to follow selectivity (that is, rewarding countries with good policies with increased aid since they can presumably use it more effectively) this would work against fragile states which in all likelihood lack the right policies to begin with. The Collier-Dollar selectivity model (2002), which builds on the Burnside-Dollar result does just that, namely allocate aid to poor countries with good policies instead of funding reforms, with poverty reduction as the main criterion. Collier and Dollar (2002) derived poverty-efficient aid allocations, where aid is allocated in such a way as to maximize the number of people that are lifted out of poverty. According to their model, poverty-efficient aid will be higher when poverty is higher, per capita income is lower, and the policy environment is better. However, the main argument for aid selectivity rests on the idea that aid effectiveness depends on the policy environment, being based on Burnside and Dollar (1997, 2000), and it ignores other factors such as history of past conflicts, the level of democracy or political regime type. We have in fact seen in the previous section that many factors potentially impact on fragility. Once these factors are taken into account, fragile states might end up with more aid than the selectivity model in its purest form would provide them. Obviously, policymakers need to be also aware of diminishing returns to aid (or what is better known as limited absorptive capacities) as examined in several aid-growth empirical studies.

Even if we were to assume that aid can and does have a positive impact, one needs to think about the forms of intervention that can take place in fragile states, beyond just

Figure 1
Aid and fragility (top 40 fragile states)




Source: OECD-DAC aid statistics and CIFP Fragile States Index.

increasing funding. We believe that the ALC framework can serve as a point of departure to think about the types of intervention that need to take place (for example, programme versus project lending, targeting poverty versus governance, or looking at absorptive capacities, etc.). As argued earlier (see Table 1A in the Appendix), examining fragility in terms of the ALC framework (or the different indicator clusters) for, let us say, the top 20 fragile states, the latter do not always show up at the top of all these categories. The fact that the most fragile countries rank differently in terms of their ALC components, correlations among the elements notwithstanding, is an indication that certain areas need to be emphasized more than others. Lack of capacity on the part of the state, which is confirmed by the empirical investigation in section 3, seems to be important. However, to the extent that this may be correlated with the other components, namely authority and legitimacy, and given that the data show that some countries are more deficient in those sectors, aid focusing more directly on governance or corruption may be more helpful, for example, than direct attacks on poverty. It is also important to note that the general results (or shortcomings) from the literature and experience of the last 50 years as to why aid has not yielded expected results such as the lack of enforcement of conditionality, the failure of aid to 'buy' reforms, the volatility of aid flows, lack of absorptive capacity, and fungibility can all be examined using the ALC framework as a point of departure.

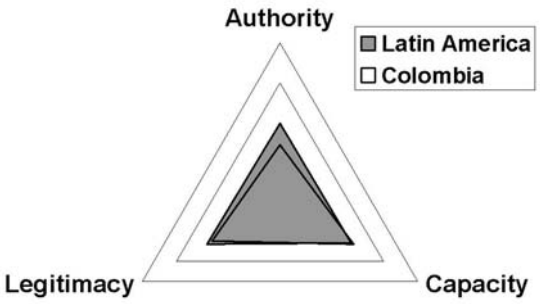
To provide sectoral and operational guidance, CIFP adds further dynamic elements to the analysis, thereby providing the contextual component necessary for true 'second generation' fragile state analysis. Events data, external and internal stakeholder analysis, and scenario generation all combine to provide context necessary to understand the dynamic elements of state performance. Such analysis would seek to uncover and highlight for policymakers the emergent trends within a given state (both positive and negative), identify how actors and stakeholders might react to such developments, and provide an evaluation of the possible consequences for policy and programming initiatives in the country. These dynamic data, when combined with initial structural findings, provide an assessment of both the underlying conditions and recent developments in a given country, thereby informing a more nuanced and ultimately more policy-relevant analysis of state fragility.

The following figures provide examples of the type of output that CIFP produces as part of its fragile state analysis, both taken from a recent fragility report on Colombia (Wyjad 2007). Figure 2 compares Colombia's ALC footprint to the regional average; as one might expect, the country suffers a gap in its level of authority as a result of long running conflict and the government's inability to exercise control over its territory and borders. State legitimacy and capacity remain comparable to regional averages however, providing numerous entry points to international actors.

Figure 3 combines structural and event data at the sectoral level. The overall level of risk is determined using CIFP's structural database, while the event barometers are produced using observations collected over a six month period extending from September 2006 to February 2007. As part of its events analysis, CIFP observes and analyses all events reported on a given country from a variety of information sources—both domestic and international—over a given period, and uses that information to further the understanding of emerging trends in the country. The barometer indicates both the average score of events during the period, both aggregately and broken down by sector, as well as the event trend line for each cluster, defined as the slope of the ordinary least squares regression line of the weekly event average over the full

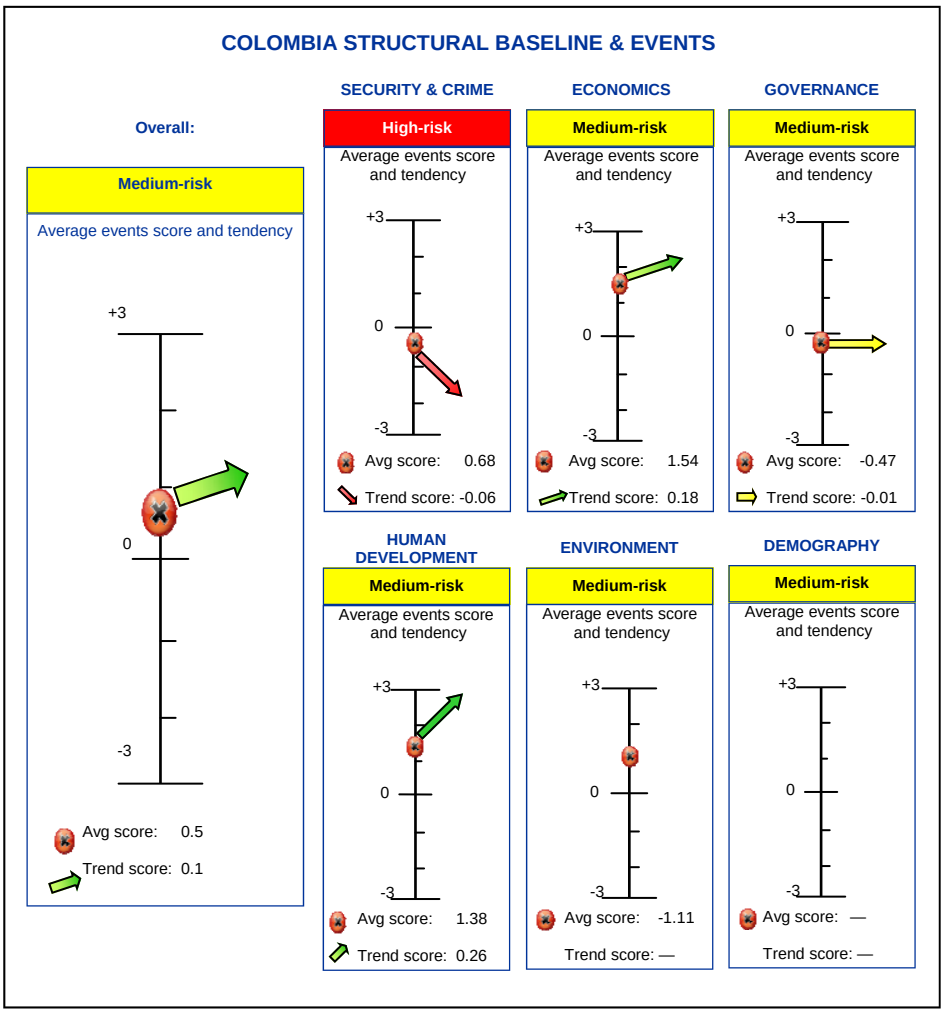
observation period. Put simply, the arrow indicates whether events tended to become increasingly stabilizing or destabilizing over the period observed. In the case of security and crime, the news was bad and getting worse; in economics and human development the news was good and getting better; while in governance the status quo persisted. When combined with structural data, the resulting analysis provides a generally comparable, yet contextualized portrait of a given state's fragility.

Figure 2
ALC comparative rank at a glance




Source: Wyjad (2007).

Figure 3
Baseline and dynamic analysis




Source: Wyjad (2007).

Once analysis is complete, the CIFP state fragility assessment framework feeds into policy analysis at both the strategic and operational level. Strategically, such assessments allow policymakers to evaluate the strengths and weaknesses of a given state, specify entry points where the international community might profitably direct its energy and resources, and provide a metric with which to measure fragile state performance over time in comparison to itself and others. 'second-generation' analysis thus seeks to answer the following questions for policymakers:

- What are the priority countries?
- Where can the international community respond most effectively?
- Which department(s) should lead/contribute to the response? How should resources be allocated?

At the operational level, second-generation analysis provides a monitoring capability that informs operational goal-setting and measure policy effectiveness. Typical questions at the operational level include:

- Where/what are the primary sources of instability?
- How do recent events/trends affect policy formation and implementation?
- Are policies having an impact?

Though both sets of questions may be answered using the same basic data, they require substantively different approaches to analysis.

## 5 Conclusion and policy recommendations

After more than 50 years of development assistance and experience, there is now an abundance of literature that has examined the effectiveness of development assistance at the macro level for all aid recipients. The literature on aid effectiveness in fragile states, and on the determinants of fragility, is comparatively much smaller, and deserves, in our view, further scrutiny. In this paper we examined the determinants of state fragility by redefining the latter term around the notions of authority, legitimacy and capacity of states. While the cross-sectional analysis undertaken in this paper yields interesting results, it is our view that the search for better instruments to account for endogeneity, as well as the use of panel data (controlling for country effects and the time dimension) will shed further light on this issue. As far as the estimates reported in this paper are concerned, it appears that the main drivers of fragility are a combination of a myriad of factors (both economic and political) beyond conflict and economic dimensions. We also examined the question of aid allocation to fragile states, basing ourselves on the empirical findings, the literature on aid selectivity, and the ALC framework, arguing that the latter could serve as a point of departure for policymakers and analysts by identifying country-specific patterns. The main issue is how to make aid more effective in fragile states.

**Bibliography**


ADB (Asian Development Bank) (2004). 'ADB's Approach to Weakly-Performing Developing Member Countries'. Paper prepared for the Asian Development Fund (ADF) IX Donors' Meeting, March. Available at: www.adb.org/Documents/Reports/ ADF/IX/weakly_performing.pdf>

AusAID (2002). 'Australian Aid: Investing in Growth, Stability and Prosperity'. Available at: www.ausaid.gov.au/publications/pubout.cfm? Id=6624_6294 _3682_ 4822_1275.

Bauer, P. (1981). *Equality: The Third World and Economic Delusion*. London: Weidenfeld.

Boone, P. (1996). 'Politics and the Effectiveness of Aid'. *European Economic Review*, 40 (2): 289-329.

Burnside, C., and D. Dollar (1997). 'Aid, Policies and Growth'. WB Policy Research Working Paper 1777. Washington, DC: World Bank.

Burnside, C., and D. Dollar (2000). 'Aid, Policies and Growth'. *American Economic Review*, 90 (4): 847-68.

Carment, D., S. El-Achkar, S. Prest, and Y. Samy (2006a). 'The 2006 Country Indicators for Foreign Policy: Opportunities and Challenges for Canada'. *Canadian Foreign Policy*, 13 (1): 1-35.

Carment, D., S. El-Achkar, J. Gazo, S. Prest, and Y. Samy (2006b). 'Failed and Fragile States: A Briefing Note to the Canadian Government'. Country Indicators for Foreign Policy, Failed and Fragile States Project, Carleton University.

Châtaigner, J.-M., and F. Gaulme (2006). 'Beyond the Fragile State: Taking Action to Assist Fragile Actors and Societies'. Document de Travail, No. 4. Paris: Agence Française de Développement.

Chauvet, L., and P. Collier (2005). 'Development Effectiveness in Fragile States: Spillovers and Turnarounds'. Oxford: Centre for the Study of African Economics, Oxford University. Mimeo.

Clemens, M., S. Radelet, and R. Bhavnani (2004). 'Counting Chickens when They Hatch: The Short-term Effect of Aid on Growth'. CGD Working Paper 44. Washington, DC: Center for Global Development.

Collier, P. (2000). 'Economic Causes of Civil Conflict and Their Implications for Policy'. Washington, DC: World Bank.

Collier, P., and D. Dollar (2002). 'Aid Allocation and Poverty Reduction'. *European Economic Review*, 46 (8): 1475-500.

Collier, P., and A. Hoeffler (2004). 'Greed and Grievance in Civil War'. *Oxford Economic Papers*, 56 (4): 563-95.

DFID (2005) 'Why We Need to Work More Effectively in Fragile States'. London: Department for International Development. Available at: www.dfid.gov.uk /pubs /files/fragilestates-paper.pdf>.

Diehl, P. F., and N. P. Gleditsch (2001). *Environmental Conflict*. Boulder: Westview.

Easterly, W. (2003). 'Can Foreign Aid Buy Growth?'. *Journal of Economic Perspectives*, 17 (3): 23-48.

Easterly, W., and R. Levine (1997). 'Africa's Growth Tragedy: Policies and Ethnic Divisions'. *Quarterly Journal of Economics*, 112 (4): 1203-50.

Goldstone, J. et al. (2000) 'State Failure Task Force Report: Phase III Findings'. McLean, VA: Science Applications International Corporation. Available at: www.cidcm.umd.edu/inscr/stfail/.

Gujarati, D. N. (2003). *Basic Econometrics*. New York: McGraw-Hill Irwin.

Hansen, H., and F. Tarp (2000). 'Aid Effectiveness Disputed'. *Journal of International Development*, 12 (3): 375-98.

Homer-Dixon, T. F. (1999). *Environment, Scarcity, and Violence*. Princeton. Princeton University Press.

Ignatieff, M. (2002). 'Intervention and State Failure'. *Dissent*, 49 (1): 115-23.

McGillivray, M. (2005). 'Aid Allocation and Fragile States'. Background paper for the Senior Level Forum on Development Effectiveness in Fragile States, 13-14 January. London. Available at: www.oecd.org/dataoecd/32/43/34256890.pdf.

McGillivray, M. (2007). 'State Fragility and Aid Effectiveness: Classification Implications'. Paper presented at the UNU-WIDER Conference on Fragile States-Fragile Groups, 15-16 June. Helsinki.

Morcos, K. (2005). 'Chair's Summary'. Remarks presented at the Senior Level Forum on Development Effectiveness in Fragile States, 13-14 January. London. Available at: www.oecd.org/dataoecd/32/43/34256890.pdf.

Mosley, P. (1980). 'Aid, Savings and Growth Revisited'. *Oxford Bulletin of Economics and Statistics*, 42 (2): 79-95.

Mosley, P. (1986). 'Aid Effectiveness: The Micro-Macro Paradox'. *Institute of Development Studies Bulletin*, 17: 214-25.

NSS (2002). 'The National Security Strategy of the United States of America'. Available at http://www.whitehouse.gov/nsc/nss/2002/nss.pdf

OECD (2001). 'Poor Performers: Basic Approaches for Supporting Development in Difficult Partnerships—Note by the Secretariat'. Paris: OECD-DAC. Available at: www.oecd.org/dataoecd/26/56/21684456.pdf.

OECD (2005). 'Paris Declaration on Aid Effectiveness: Ownership, Harmonisation, Alignment, Results'. Presented at the High Level Forum, 28 February-2 March. Paris. Available at: www.oecd.org/dataoecd/11/41/34428351.pdf.

Prest, S., J. Gazo, and D. Carment (2005). 'Working out Strategies for Strengthening Fragile States - the British, American and German Experience'. Paper presented at the Fragile, Failed and Dangerous States Conference: Implementing Canada's International Policy Statement, 25-27 November. Victoria.

Prime Minister's Strategy Unit (2005). 'Investing in Prevention: An International Strategy to Manage Risks of Instability and Improve Crisis Response'. A Prime Minister's Strategy Unit Report to the Government of the UK. Available at: www.strategy.gov.uk/work_areas/ countries_at_risk/index.asp.

Rotberg, R. (ed.) (2004). *When States Fail: Causes and Consequences*. Princeton: Princeton University Press.

Severino, J.-M., and O. Charnoz (2005). 'Les Mutations Impromptues: état des Lieux de l'Aide Publique au Développement: Synthèse'. *Afrique contemporaine*, 213.

Stewart, F., and G. Brown (2007). 'State Fragility: Towards a Conceptual and Methodological Framework'. Paper presented at the UNU-WIDER Conference on Fragile States-Fragile Groups, 15-16 June. Helsinki.

Torres, M. M., and M. Anderson (2004). 'Fragile States: Defining Difficult Environments for Poverty Reduction'. PRDE Working Paper 1. London: DFID. Available at: www.oecd.org/dataoecd/26/56/21684456.pdf.

United States Government (2002). *The National Security Strategy of the United States of America*. Washington, DC: The White House. Available at: www.whitehouse.gov/nsc/nss.html.

Van Hear, N. (1998). *New Diasporas: The Mass Exodus, Dispersal and Regrouping of Migrant Communities*. Seattle: University of Washington Press.

West, J. (2005). 'Concept Paper: Fragile States and Poverty'. Ottawa: CIDA. Mimeo.

Wolfensohn, J. (2002). 'Making the World a Better and Safer Place: The Time for Action is Now'. *Politics*, 22 (2): 118.

World Bank (2002). 'World Bank Group Work in Low Income Countries Under Stress: A Task Force Report'. Washington, DC: World Bank. Available at: www.worldbank.org/operations/licus/doments/licus.pdf

World Bank (2005). 'Fragile States: The LICUS Initiative'. Washington, DC: World Bank. Available at: www.worldbank.org/servlets /ECR?content MDK=20313429 &site PK=388759.

Wyjad, K. (2007). 'Fragile States Brief: Colombia'. CIFP Fragile States Brief 1. May.

## Appendix

Table 1A
CIFP's top 40 fragile states, 2006 ranking

| | ALC scores | | | | Cross-cutting themes | Indicator clusters | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | Fragility index | Authority | Legitimacy | Capacity | Gender | Governance | Economics | Security | Human development | Demography | Environment |
| Burundi | 8.25 | 8.04 | 7.58 | 8.65 | 7.42 | 7.18 | 8.08 | 9.17 | 8.89 | 7.25 | 8.00 |
| Congo (Kinshasa) | 8.11 | 7.93 | 7.58 | 8.49 | 7.72 | 7.67 | 6.93 | 9.15 | 9.70 | 7.35 | 5.47 |
| Afghanistan | 7.89 | 9.06 | 8.42 | 6.68 | – | 9.56 | 6.00 | 9.53 | 7.78 | 7.57 | 4.33 |
| Somalia | 7.86 | 7.53 | 8.41 | 7.82 | – | 8.90 | 8.42 | 7.18 | 8.51 | 7.34 | 7.13 |
| Liberia | 7.84 | 6.18 | 8.82 | 8.64 | 8.52 | 9.22 | 7.58 | 7.20 | 8.91 | 6.78 | 5.40 |
| Chad | 7.81 | 6.79 | 8.13 | 8.43 | 9.33 | 7.96 | 7.04 | 6.89 | 9.83 | 7.57 | 4.87 |
| Ethiopia | 7.81 | 7.58 | 7.14 | 8.31 | 7.47 | 6.59 | 7.44 | 8.07 | 8.83 | 8.35 | 6.40 |
| Côte d'Ivoire | 7.79 | 7.74 | 7.89 | 7.79 | 8.51 | 7.83 | 7.09 | 7.46 | 8.64 | 8.15 | 6.40 |
| Angola | 7.73 | 7.98 | 7.66 | 7.55 | 6.62 | 7.62 | 7.21 | 7.88 | 9.28 | 7.58 | 4.00 |
| Eritrea | 7.73 | 7.04 | 7.91 | 8.14 | 7.00 | 6.93 | 7.45 | 7.68 | 9.02 | 7.49 | 6.07 |
| Haiti | 7.72 | 6.81 | 8.53 | 7.94 | 7.27 | 8.32 | 7.24 | 8.05 | 7.95 | 6.90 | 7.67 |
| Kenya | 7.60 | 7.46 | 7.68 | 7.66 | 8.60 | 7.32 | 7.25 | 6.98 | 8.40 | 8.30 | 6.67 |
| Rwanda | 7.55 | 6.27 | 7.47 | 8.51 | 6.42 | 6.93 | 6.74 | 6.47 | 8.69 | 8.43 | 8.20 |
| Zimbabwe | 7.54 | 6.77 | 8.33 | 7.76 | 7.62 | 7.49 | 8.21 | 6.79 | 8.40 | 6.05 | 6.27 |
| Guinea-Bissau | 7.52 | 6.66 | 7.42 | 8.25 | 8.38 | 6.93 | 8.11 | 5.43 | 8.60 | 8.40 | 4.67 |
| Sierra Leone | 7.50 | 6.55 | 7.22 | 8.46 | 7.60 | 7.38 | 8.18 | 5.70 | 8.46 | 7.33 | 6.00 |
| Congo (Braz.) | 7.49 | 6.70 | 7.57 | 8.02 | 7.06 | 7.68 | 7.47 | 6.69 | 8.17 | 8.23 | 4.20 |
| Sudan | 7.48 | 7.83 | 7.58 | 7.21 | 7.82 | 7.13 | 6.38 | 9.22 | 8.22 | 6.95 | 6.00 |
| West Bank/Gaza | 7.41 | 6.69 | 10.33 | 7.50 | 8.30 | 6.85 | 9.08 | 8.16 | 4.78 | 7.00 | 9.00 |
| Nepal | 7.37 | 6.58 | 7.76 | 7.71 | 7.42 | 7.63 | 6.69 | 8.28 | 7.73 | 7.34 | 6.00 |
| Nigeria | 7.33 | 7.19 | 7.46 | 7.37 | 7.64 | 7.19 | 6.65 | 7.02 | 8.08 | 8.30 | 6.67 |
| Niger | 7.28 | 5.61 | 7.09 | 8.63 | 9.07 | 6.92 | 7.58 | 3.22 | 9.16 | 7.70 | 6.67 |
| Yemen | 7.27 | 6.59 | 8.32 | 7.31 | 8.93 | 8.00 | 6.56 | 7.44 | 7.20 | 7.63 | 8.33 |
| Uganda | 7.24 | 7.38 | 6.50 | 7.51 | 5.33 | 6.51 | 6.11 | 7.38 | 8.27 | 8.95 | 6.67 |
| Central Afr. Rep. | 7.17 | 5.47 | 8.19 | 7.97 | 8.33 | 7.91 | 7.49 | 4.96 | 8.58 | 7.23 | 2.67 |
| Mauritania | 7.16 | 5.99 | 7.81 | 7.69 | 9.34 | 7.64 | 6.89 | 5.67 | 8.23 | 6.68 | 6.93 |
| Guinea | 7.15 | 5.97 | 7.56 | 7.92 | 7.40 | 7.40 | 7.36 | 4.87 | 8.94 | 6.90 | 4.93 |
| Burkina Faso | 7.00 | 5.50 | 6.39 | 8.28 | 7.90 | 5.61 | 7.16 | 3.25 | 8.94 | 8.40 | 5.00 |
| Iraq | 6.94 | 7.52 | 7.50 | 6.15 | 6.42 | 7.60 | 7.80 | 9.38 | 5.53 | 6.30 | 4.33 |
| Tanzania | 6.90 | 6.48 | 6.14 | 7.61 | 6.74 | 5.99 | 6.23 | 5.85 | 9.16 | 7.28 | 5.33 |
| Malawi | 6.89 | 5.87 | 6.29 | 7.90 | 7.42 | 5.78 | 7.84 | 3.52 | 8.45 | 8.43 | 7.00 |
| Togo | 6.83 | 5.50 | 7.54 | 7.48 | 8.17 | 7.56 | 6.56 | 4.26 | 8.21 | 6.98 | 6.33 |
| Pakistan | 6.82 | 7.08 | 6.43 | 6.83 | 6.11 | 6.47 | 6.01 | 8.58 | 6.44 | 7.34 | 6.73 |
| Madagascar | 6.81 | 5.06 | 7.24 | 7.83 | 7.94 | 6.68 | 6.88 | 4.89 | 8.15 | 7.74 | 5.00 |
| Mozambique | 6.79 | 5.53 | 6.12 | 8.05 | 6.80 | 5.05 | 7.23 | 5.05 | 9.20 | 7.15 | 3.67 |
| Myanmar | 6.79 | 6.96 | 7.15 | 6.47 | 6.25 | 6.75 | 6.96 | 8.81 | 6.75 | 5.20 | 4.73 |
| Bangladesh | 6.77 | 6.25 | 7.68 | 6.72 | 7.76 | 8.25 | 5.77 | 7.68 | 6.48 | 7.03 | 4.33 |
| Cameroon | 6.77 | 6.02 | 7.06 | 7.23 | 6.60 | 7.28 | 6.52 | 5.56 | 7.81 | 7.48 | 4.33 |
| Mali | 6.76 | 5.40 | 6.34 | 8.01 | 9.02 | 5.73 | 7.13 | 4.14 | 9.34 | 7.20 | 4.33 |
| Laos | 6.67 | 5.83 | 7.05 | 7.15 | 6.16 | 5.93 | 7.11 | 6.41 | 7.14 | 7.00 | 3.67 |

Table 2A
Fragility index scoring scale

| Score | Description |
|---|---|
| 1-3.5 | Country performing well relative to others |
| 3.5-6.5 | Country performing at or around the median |
| 6.5+ | Country performing poorly relative to others |
| Highest 5% | Country among worst global performers |

Table 3A
Correlation matrix

| | ETHDIV | ETHRISK | FRG | GDPG | HDI | HREM | LDEM | LPPP | TRAD |
|---|---|---|---|---|---|---|---|---|---|
| ETHDIV | 1.00 | | | | | | | | |
| ETHRISK | 0.13 | 1.00 | | | | | | | |
| FRG | 0.41 | -0.01 | 1.00 | | | | | | |
| GDPG | 0.05 | 0.14 | -0.12 | 1.00 | | | | | |
| HDI | -0.38 | 0.13 | **-0.89** | 0.04 | 1.00 | | | | |
| HREM | 0.00 | -0.04 | -0.35 | -0.35 | 0.24 | 1.00 | | | |
| LDEM | 0.07 | 0.24 | -0.33 | -0.32 | 0.28 | **0.85** | 1.00 | | |
| LPPP | -0.34 | 0.13 | **-0.82** | -0.08 | 0.85 | 0.32 | 0.35 | 1.00 | |
| TRAD | 0.04 | -0.25 | -0.34 | 0.21 | 0.21 | 0.05 | -0.05 | 0.17 | 1.00 |

Table 4A
Determinants of fragility

Dependent variable: fragility index, 4 and above

| Explanatory variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| *Constant* | 11.71** (24.04) | 11.28** (22.22) | 11.80** (23.52) | 12.00** (25.86) | 11.72** (24.67) | 9.62** (38.43) | 11.11** (20.76) | 10.96** (19.43) |
| *Log(GDPPC)* | -0.66** (-12.26) | -0.59** (-9.60) | -0.66** (-12.14) | -0.66** (-12.01) | -0.64** (-11.70) | – | -0.64** (-11.08) | -0.60** (-9.54) |
| *Growth* | -0.05** (-2.96) | -0.04** (-2.69) | -0.05** (-2.78) | -0.04** (-3.44) | -0.04** (-3.27) | -0.05** (-2.67) | -0.05** (-2.98) | -0.05** (-2.70) |
| *Demo* | -0.04** (-4.41) | -0.03** (-4.03) | -0.04** (-4.33) | – | – | -0.03** (-3.07) | -0.03** (-3.70) | -0.04** (-4.09) |
| *Demo*Demo* | – | -0.01** (-1.97) | – | – | – | -0.01** (-3.21) | – | – |
| *Trade* | -0.01** (-3.38) | -0.01** (-3.62) | -0.01* (-1.74) | -0.01** (-3.59) | -0.01** (-3.51) | -0.01** (-2.82) | -0.01** (-2.20) | -0.01** (-3.43) |
| *Trade*Trade* | – | – | 0.01 (0.64) | – | – | – | – | – |
| *Hrem* | – | – | – | -0.10** (-5.77) | -0.02 (-0.44) | – | – | – |
| *Hrem*Hrem* | – | – | – | – | -0.01 (-1.55) | – | – | – |
| *HDI* | – | – | – | – | – | -4.63** (-11.68) | – | – |
| *Ethrisk* | – | – | – | – | – | – | 0.05** (3.68) | – |
| *Ethdiv* | – | – | – | – | – | – | – | 0.50** (3.08) |
| *Afr* | 0.60** (4.62) | 0.59** (4.74) | 0.61** (4.62) | 0.70** (6.00) | 0.71** (6.08) | -0.03 (-0.25) | 0.87** (6.02) | 0.68** (4.82) |
| *Lata* | 0.21 (1.54) | 0.22** (1.64) | 0.20 (1.48) | 0.29** (2.40) | 0.33** (2.58) | 0.10 (0.76) | 0.28** (1.95) | 0.21 (1.48) |
| *Mena* | 0.07 (0.39) | 0.02 (0.12) | 0.08 (0.46) | 0.02 (0.11) | 0.03 (0.19) | -0.22 (-1.39) | 0.17 (1.34) | 0.07 (0.43) |
| N | 116 | 116 | 116 | 129 | 129 | 118 | 89 | 101 |
| Adj. $R^2$ | 0.81 | 0.81 | 0.81 | 0.83 | 0.83 | 0.83 | 0.85 | 0.82 |

Note: Except where indicated otherwise, the figures in parentheses are the t-values. Standard errors are White-robust. *(**) indicates 10(5) % level of significance.

Table 5A
Determinants of fragility

Dependent variable: fragility index, 6 and above

| Explanatory variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| *Constant* | 10.86** (14.50) | 10.64** (14.09) | 11.51** (14.39) | 11.24** (17.63) | 10.94** (15.33) | 8.82** (25.27) | 9.99** (11.11) | 9.97** (11.26) |
| *Log(GDPPC)* | -0.53** (-5.94) | -0.48** (-4.82) | -0.56** (-6.35) | -0.55** (-7.33) | -0.53** (-6.53) | – | -0.49** (-4.55) | -0.44** (-4.51) |
| *Growth* | -0.04 (-1.67) | -0.04 (-1.64) | -0.05** (-2.00) | -0.03* (-1.93) | -0.03* (-1.81) | -0.05** (-2.29) | -0.03 (-1.28) | -0.07** (-2.64) |
| *Demo* | -0.04** (-3.14) | -0.04** (-3.28) | -0.03** (-2.57) | – | – | -0.03** (-3.55) | -0.04** (-2.52) | -0.04** (-2.54) |
| *Demo*Demo* | – | -0.01** (-1.94) | – | – | – | -0.01** (-2.58) | – | - |
| *Trade* | -0.01 (-0.73) | -0.01 (-0.23) | -0.01 (-1.48) | 0.01 (0.01) | 0.01 (0.02) | -0.01 (-0.70) | -0.01 (-0.06) | -0.01 (-0.61) |
| *Trade*Trade* | – | – | 0.01** (1.17) | – | – | – | – | – |
| *Hrem* | – | – | – | -0.12** (-5.38) | -0.01 (-0.08) | – | – | – |
| *Hrem*Hrem* | – | – | – | – | -0.01 (-1.24) | – | – | – |
| *HDI* | – | – | – | – | – | -3.02** (-4.88) | – | – |
| *Ethrisk* | – | – | – | – | – | – | 0.06 (2.53) | – |
| *Ethdiv* | – | – | – | – | – | – | – | 0.39* (1.90) |
| *Afr* | 0.30** (1.64) | 0.18 (1.21) | 0.27 (1.55) | 0.43** (2.67) | 0.43** (2.86) | 0.01 (0.08) | 0.63** (3.41) | 0.52** (2.33) |
| *Lata* | 0.30 (1.27) | 0.24 (1.16) | 0.26 (1.15) | 0.56** (2.35) | 0.57** (2.40) | 0.26 (1.55) | 0.31 (1.31) | 0.40 (1.26) |
| *Mena* | 0.11 (0.46) | -0.15 (-0.60) | 0.13 (0.54) | -0.15 (-0.75) | -0.11 (-0.50) | -0.21 (-0.64) | -0.08 (-0.62) | 0.13 (0.40) |
| N | 55 | 55 | 55 | 57 | 57 | 56 | 38 | 42 |
| Adj. $R^2$ | 0.51 | 0.56 | 0.52 | 0.64 | 0.65 | 0.58 | 0.67 | 0.57 |

Note: Except where indicated otherwise, the figures in parentheses are the t-values. Standard errors are White-robust. *(**) indicates 10(5) per cent level of significance.

Table 6A
Logit results (top 40 fragile countries coded as '1')

| Explanatory variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| *Constant* | 28.25** (4.06) | 26.30** (3.97) | 32.03** (4.08) | 34.94** (4.05) | 34.50** (4.01) | 19.19** (4.41) | 21.96** (2.41) | 21.31** (2.43) |
| *Log(GDPPC)* | -3.61** (-4.30) | -3.25** (-3.91) | -3.80** (-4.32) | -4.20** (-4.13) | -4.38** (-3.97) | – | -3.15** (-2.83) | -3.27** (-2.79) |
| *Growth* | -0.16** (-1.35) | -0.12** (-0.99) | -0.20 (-1.45) | -0.10** (-0.90) | 0.01 (0.10) | -0.35** (-2.26) | -0.13 (-1.04) | -0.07 (-0.32) |
| *Demo* | -0.20** (-2.32) | -0.21** (-2.52) | -0.20** (-2.44) | – | – | -0.22** (-2.55) | -0.27** (-1.95) | -0.37** (-2.29) |
| *Demo*Demo* | – | -0.02 (-1.15) | – | – | – | -0.02 (-1.10) | – | – |
| *Trade* | -0.02** (-1.53) | -0.03** (-1.69) | -0.09 (-1.65) | -0.02* (-1.71) | -0.03** (-2.02) | -0.03** (-2.11) | -0.02 (-1.15) | -0.02** (-2.09) |
| *Trade*Trade* | – | – | 0.01 (1.35) | – | – | – | – | – |
| *Hrem* | – | – | – | -0.75** (-3.15) | 0.51 (0.60) | – | – | – |
| *Hrem*Hrem* | – | – | – | – | -0.15 (-1.60) | – | – | – |
| *HDI* | – | – | – | – | – | -28.57** (-4.26) | – | – |
| *Ethrisk* | – | – | – | – | – | – | 0.26** (1.88) | – |
| *Ethdiv* | – | – | – | – | – | – | – | 2.49 (1.20) |
| *Afr* | 1.43 (1.40) | 1.39 (1.38) | 1.56 (1.54) | 2.65** (2.23) | 3.14** (2.43) | -1.20 (-1.16) | 3.78** (2.52) | 4.58** (2.32) |
| *Lata* | 0.68 (0.48) | 0.72 (0.51) | 0.53 (0.39) | 3.22* (1.75) | 4.45** (2.35) | -0.76 (0.63) | – | 4.71 (1.76) |
| *Mena* | -0.86 (-0.80) | -1.05 (-1.09) | -0.54 (0.49) | -1.65 (-1.31) | -0.97 (-0.94) | -2.41 (-1.62) | – | – |
| N | 116 | 116 | 116 | 129 | 129 | 118 | 89 | 101 |
| LR Statistic | 96.91 | 98.29 | 98.08 | 112.53 | 115.63 | 106.68 | 76.43 | 86.06 |
| Pseudo $R^2$ | 0.70 | 0.71 | 0.71 | 0.76 | 0.78 | 0.76 | 0.77 | 0.78 |

Note: Except where indicated otherwise, the figures in parentheses are the t-values. Standard errors are White-robust. *(**) indicates 10(5) per cent level of significance.

Table 7A
Logit results (top 60 fragile countries coded as '1')

| Explanatory variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| *Constant* | 29.96** (3.99) | 29.56** (3.80) | 32.62** (3.92) | 30.95** (4.30) | 29.36** (4.03) | 27.61** (3.61) | 29.39** (3.48) | 21.12** (3.05) |
| *Log(GDPPC)* | -3.58** (-3.97) | -3.39** (-3.64) | -3.70** (-3.92) | -3.52** (-4.13) | -3.40** (-4.00) | – | -3.59** (-3.51) | -2.90** (-3.38) |
| *Growth* | -0.37* (-1.83) | -0.42** (-1.93) | -0.39* (-1.87) | -0.44** (-2.24) | -0.44** (-2.22) | -0.55* (-1.87) | -0.44* (-1.78) | -0.19 (-0.72) |
| *Demo* | 0.03 (0.36) | 0.04 (0.55) | 0.04 (0.56) | – | – | 0.03 (0.30) | 0.04 (0.47) | -0.05 (-0.57) |
| *Demo*Demo* | – | -0.02 (-1.20) | – | – | – | -0.04* (-1.85) | – | – |
| *Trade* | -0.02** (-2.03) | -0.02** (-1.96) | -0.07 (-1.61) | -0.02* (-1.89) | -0.02* (-1.75) | -0.01 (-1.11) | -0.02 (-1.30) | -0.01 (-1.05) |
| *Trade*Trade* | – | – | 0.01 (1.15) | – | – | – | – | – |
| *Hrem* | – | – | – | -0.25 (-1.45) | 0.16 (0.29) | – | – | – |
| *Hrem*Hrem* | – | – | – | – | -0.05 (-0.79) | – | – | – |
| *HDI* | – | – | – | – | – | -35.45** (-3.71) | – | – |
| *Ethrisk* | – | – | – | – | – | – | 0.11 (0.94) | – |
| *Ethdiv* | – | – | – | – | – | – | – | 3.07 (1.45) |
| *Afr* | 4.05** (3.03) | 3.84** (2.88) | 4.19** (3.04) | 3.93** (3.23) | 3.96** (3.24) | -1.63 (-0.99) | 3.76** (2.74) | 4.95** (3.13) |
| *Lata* | 0.60 (0.52) | 0.38 (0.33) | 0.45 (0.39) | 1.21 (0.98) | 1.43 (1.10) | 0.54 (0.37) | 0.56 (0.46) | 1.82 (1.19) |
| *Mena* | 1.34 (1.01) | 0.92 (0.67) | 1.59 (1.17) | 0.13 (0.10) | 0.08 (0.06) | -1.28 (-0.72) | 1.61 (1.11) | 2.31 (1.50) |
| N | 116 | 116 | 116 | 129 | 129 | 118 | 89 | 101 |
| LR Statistic | 105.21 | 106.72 | 106.38 | 120.39 | 121.04 | 126.56 | 73.04 | 91.08 |
| Pseudo $R^2$ | 0.66 | 0.67 | 0.67 | 0.69 | 0.70 | 0.78 | 0.62 | 0.68 |

Note: Except where indicated otherwise, the figures in parentheses are the t-values. Standard errors are White-robust. *(**) indicates 10(5) per cent level of significance.

Table 8A
CIFP 2007 fragility index

| Country | Fragility index | Country | Fragility index | Country | Fragility index | Country | Fragility index |
|---|---|---|---|---|---|---|---|
| Sudan | 6.79 | Tanzania | 5.64 | Armenia | 4.99 | Argentina | 4.09 |
| Somalia | 6.77 | Mali | 5.61 | Ukraine | 4.97 | Greece | 3.93 |
| Afghanistan | 6.69 | Senegal | 5.60 | Mongolia | 4.96 | St Kitts and Nevis | 3.92 |
| Burundi | 6.67 | Guatemala | 5.60 | El Salvador | 4.92 | Poland | 3.91 |
| Iraq | 6.55 | Uzbekistan | 5.59 | Peru | 4.90 | Dominica | 3.90 |
| DRC | 6.50 | Zambia | 5.58 | Maldives | 4.89 | Bahamas | 3.88 |
| Yemen | 6.46 | Papua New Guinea | 5.55 | Jordan | 4.86 | Mauritius | 3.87 |
| Haiti | 6.45 | Sao Tome & Principe | 5.53 | Macedonia | 4.84 | Costa Rica | 3.87 |
| Liberia | 6.39 | Azerbaijan | 5.49 | South Africa | 4.84 | Latvia | 3.85 |
| Ethiopia | 6.38 | Georgia | 5.48 | Jamaica | 4.84 | South Korea | 3.82 |
| Angola | 6.35 | Indonesia | 5.46 | Paraguay | 4.82 | Slovakia | 3.81 |
| Palestinian Territories | 6.35 | Lebanon | 5.45 | Tonga | 4.80 | Estonia | 3.79 |
| Côte d'Ivoire | 6.35 | Ghana | 5.44 | Qatar | 4.80 | Cyprus | 3.76 |
| Eritrea | 6.32 | Solomon Islands | 5.43 | Micronesia | 4.77 | Hungary | 3.74 |
| Nigeria | 6.31 | Mozambique | 5.42 | Cuba | 4.75 | Chile | 3.73 |
| Chad | 6.27 | Kyrgyzstan | 5.42 | Namibia | 4.74 | Italy | 3.73 |
| Sierra Leone | 6.25 | Madagascar | 5.42 | Cape Verde | 4.73 | Singapore | 3.68 |
| Pakistan | 6.18 | Honduras | 5.41 | Albania | 4.70 | Spain | 3.67 |
| Guinea | 6.18 | Algeria | 5.37 | Mexico | 4.68 | Uruguay | 3.67 |
| Nepal | 6.15 | Nicaragua | 5.36 | Belize | 4.66 | Czech Republic | 3.62 |
| Mauritania | 6.14 | Syria | 5.35 | Brazil | 4.63 | France | 3.62 |
| Guinea-Bissau | 6.14 | Saudi Arabia | 5.35 | UAE | 4.62 | United States | 3.61 |
| CAR | 6.12 | Lesotho | 5.35 | Tunisia | 4.61 | United Kingdom | 3.55 |
| Uganda | 6.11 | Timor-Leste | 5.33 | Thailand | 4.60 | Lithuania | 3.54 |
| Togo | 6.10 | Bhutan | 5.32 | Fiji | 4.59 | Malta | 3.54 |
| Eq. Guinea | 6.10 | Egypt | 5.32 | Bahrain | 4.58 | Portugal | 3.53 |
| Kenya | 6.06 | Turkmenistan | 5.31 | Samoa | 4.57 | Netherlands | 3.41 |
| Congo, Rep. | 6.05 | Serbia-Montenegro | 5.30 | Oman | 4.57 | Belgium | 3.38 |
| Djibouti | 6.03 | Sri Lanka | 5.29 | Trinidad & Tobago | 4.57 | Japan | 3.35 |
| Rwanda | 5.95 | Colombia | 5.24 | St Vincent | 4.51 | Barbados | 3.35 |
| Niger | 5.92 | Turkey | 5.20 | & the Grenadines | | Germany | 3.34 |
| Zimbabwe | 5.92 | Ecuador | 5.18 | Romania | 4.51 | Slovenia | 3.33 |
| Myanmar (Burma) | 5.90 | Vanuatu | 5.15 | Belarus | 4.50 | Ireland | 3.17 |
| Laos | 5.88 | Bosnia-Herzegovina | 5.14 | Panama | 4.47 | Australia | 3.16 |
| North Korea | 5.88 | Bolivia | 5.13 | Kiribati | 4.46 | Luxembourg | 3.13 |
| Iran | 5.85 | Gabon | 5.13 | Suriname | 4.46 | Austria | 3.09 |
| Cameroon | 5.85 | Venezuela | 5.13 | Antigua & Barbuda | 4.45 | New Zealand | 3.07 |
| Swaziland | 5.84 | Morocco | 5.12 | Kuwait | 4.44 | Switzerland | 3.03 |
| Comoros | 5.84 | Vietnam | 5.11 | Malaysia | 4.41 | Canada | 3.02 |
| Bangladesh | 5.79 | Philippines | 5.10 | Botswana | 4.40 | Denmark | 2.81 |
| Tajikistan | 5.78 | Guyana | 5.09 | Bulgaria | 4.36 | Finland | 2.69 |
| Burkina Faso | 5.76 | Moldova | 5.06 | Grenada | 4.31 | Sweden | 2.68 |
| India | 5.71 | China | 5.06 | Seychelles | 4.27 | Hong Kong | 2.66 |
| Benin | 5.68 | Russia | 5.04 | Israel | 4.25 | Norway | 2.63 |
| Gambia | 5.68 | Dominican Rep. | 5.02 | St Lucia | 4.16 | Iceland | 2.56 |
| Cambodia | 5.66 | Kazakhstan | 5.00 | Brunei | 4.13 | | |
| Malawi | 5.65 | Libya | 4.99 | Croatia | 4.13 | | |

Table 9A
CIFP 2007 top 40 countries broken down by authority, legitimacy, and capacity

| Country | Authority index | Country | Legitimacy index | Country | Capacity index |
|---|---|---|---|---|---|
| Sudan | 7.20 | Saudi Arabia | 7.41 | Burundi | 6.85 |
| Afghanistan | 7.01 | Libya | 7.17 | Djibouti | 6.84 |
| Iraq | 6.96 | North Korea | 7.14 | Ethiopia | 6.81 |
| DRC | 6.91 | Yemen | 7.06 | Mauritania | 6.78 |
| Palestinian Territories | 6.79 | Somalia | 7.00 | Niger | 6.76 |
| Burundi | 6.77 | Iraq | 6.96 | Somalia | 6.75 |
| Côte d'Ivoire | 6.76 | United Arab Emirates | 6.92 | Sierra Leone | 6.73 |
| Angola | 6.75 | Turkmenistan | 6.89 | Sudan | 6.69 |
| Nigeria | 6.70 | Equatorial Guinea | 6.79 | Eritrea | 6.62 |
| Somalia | 6.62 | Iran | 6.76 | Burkina Faso | 6.62 |
| Liberia | 6.59 | Syria | 6.70 | Mali | 6.61 |
| Haiti | 6.58 | Belarus | 6.67 | Haiti | 6.60 |
| Myanmar (Burma) | 6.43 | Uzbekistan | 6.66 | Mozambique | 6.60 |
| Nepal | 6.42 | Qatar | 6.66 | Benin | 6.59 |
| Pakistan | 6.32 | Palestinian Territories | 6.60 | Sao Tome and Principe | 6.57 |
| Guinea-Bissau | 6.31 | Lebanon | 6.57 | Yemen | 6.57 |
| Indonesia | 6.27 | Bahrain | 6.51 | Afghanistan | 6.55 |
| Iran | 6.25 | Egypt | 6.48 | Zambia | 6.53 |
| Ethiopia | 6.22 | Eritrea | 6.47 | Guinea | 6.50 |
| Central African Rep. | 6.17 | Zimbabwe | 6.46 | Chad | 6.49 |
| Serbia-Montenegro | 6.16 | Nigeria | 6.40 | Comoros | 6.48 |
| India | 6.16 | Brunei Darussalam | 6.39 | Rwanda | 6.47 |
| Congo, Rep. | 6.15 | Côte d'Ivoire | 6.38 | Uganda | 6.40 |
| Uganda | 6.11 | Swaziland | 6.38 | Togo | 6.39 |
| Colombia | 6.10 | Mauritania | 6.37 | Malawi | 6.38 |
| Kenya | 6.08 | Tajikistan | 6.35 | Senegal | 6.35 |
| Chad | 6.05 | Afghanistan | 6.35 | Equatorial Guinea | 6.35 |
| Sierra Leone | 5.96 | Kazakhstan | 6.34 | Tanzania | 6.34 |
| Yemen | 5.94 | Sudan | 6.32 | DRC | 6.33 |
| Russia | 5.94 | Cuba | 6.31 | Swaziland | 6.33 |
| Bangladesh | 5.89 | Bhutan | 6.30 | Liberia | 6.33 |
| Venezuela | 5.79 | Guinea | 6.28 | Lesotho | 6.32 |
| Togo | 5.78 | Cameroon | 6.28 | Guinea-Bissau | 6.30 |
| Eritrea | 5.78 | Azerbaijan | 6.26 | Micronesia | 6.23 |
| Bosnia-Herzegovina | 5.72 | Russia | 6.24 | Vanuatu | 6.17 |
| Philippines | 5.71 | Central African Rep. | 6.22 | Timor-Leste | 6.16 |
| Guinea | 5.70 | Algeria | 6.19 | Madagascar | 6.15 |
| Laos | 5.69 | Chad | 6.17 | Kenya | 6.15 |
| Cameroon | 5.67 | Liberia | 6.16 | Nepal | 6.14 |
| Zimbabwe | 5.66 | DRC | 6.15 | Pakistan | 6.13 |