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Fragile States Indicators

A Supplement to the Country Analytical Template

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The views expressed herein do not necessarily reflect those of the United States Agency for International Development.

Sponsored by the Economic Growth office of USAID's Bureau of Economic Growth, Agriculture and Trade (EGAT), and implemented by Nathan Associates Inc. under Contract No. PCE-I-00-00-00013-00, Task Order 004, the Country Analytical Support (CAS) Project, 2004–2006, developed a standard methodology for producing analytical reports to provide a clear and concise evaluation of economic growth performance in designated host countries. Each report contains:

- A synthesis of data drawn from numerous sources, including World Bank publications and other international data sets used by USAID for economic growth analysis, as well as accessible host-country data sources;
- International benchmarking to assess country performance in comparison to the performance of similar countries and groups of countries;
- An easy-to-read analytic narrative that highlights areas in which a country's performance is particularly strong or weak, thereby assisting in the identification of future programming priorities.

The present report has been prepared at the request of USAID/EGAT as an adjunct to the standard CAS template. The objective is to identify a concise set of widely available indicators that can be used to evaluate state fragility.

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1. Introduction

The purpose of this paper is to identify a short list of pertinent indicators for assessing state fragility or vulnerability, which has become a major area of policy concern for USAID and the U.S. government as a whole. These fragile states indicators (FSI) are intended to supplement the country analytical template that has been developed under the Country Analytical Support (CAS) project for evaluating economic growth performance in particular countries. The FSI template can be integrated into future economic performance assessments as appropriate. In addition, the indicators can provide USAID/EGAT with guidance for an evidence-based assessment of state vulnerability that may be required to meet its responsibilities for monitoring economic performance or shaping programmatic priorities in countries where USAID operates.

The FSI identified in this paper draw on and complement the Conflict and Fragility Alert, Consultation, and Tracking System (C/FACTS), which is being developed by USAID/CMM. Even the FSI template overlaps with the C/FACTS framework but it is narrower and deeper. In keeping with the economic focus of the CAS project, the FSI template emphasizes indicators that are relevant for assessing growth performance, including closely associated social indicators, whereas the C/FACTS framework includes a broader set of social and political indicators. At the same time, the fragile states indicators can be used as a reference for designing and programming economic growth activities in ways that the C/FACTS framework cannot. By including fragility indicators in a standardized baseline evaluation of the host economy, missions can more easily identify issues associated with fragility that need to be addressed. This information may assist in the development of appropriate programmatic interventions to promote economic growth and reduce state vulnerability.

The selection of fragile states indicators is based on research findings in the literature on state failure and conflict.¹ We draw heavily on the work of Paul Collier and Anke Hoeffler on the causes of conflict and civil war, and other literature on greed and grievance models of conflict stemming from their work. We also draw on the seminal work of the University of Maryland's Center for International Development and Conflict Management State Failure Task Force (Goldstone et al 2000), which explicitly addresses state failure, as distinct from conflict. Our goal is to make sure that the FSI template covers these alternative perspectives.

¹ In this review we distinguish between conflict, state fragility, and state failure. A substantial component of research on fragile and failed states focuses on the causes of conflict and civil war. Although these are the two dominant causes of state failure, conflict and civil war are not equivalent to failure. Similarly, we distinguish between failure, where state capacity has virtually disappeared, and fragility, where state capacity is weak. Throughout this paper we use the term "state fragility," with the understanding that in extremis this translates into state failure.

Our selection of fragility indicators favors variables that satisfy two substantive criteria: first, they correspond to causal mechanisms identified in the conceptual literature; and second, they have been found to have statistically significant effects in empirical tests. Given the weakness of the empirical literature on state fragility, at this time, we also include indicators that do not meet the test of statistical significance, if they correspond to a conceptually important causal mechanism. We also include indicators that are commonly associated with country risk and the likelihood of a debt or balance-of-payments crisis, such as the ratio of total debt service to exports and the current account balance to GDP. Although the country risk measures are generally not discussed in the literature on state fragility, we consider them pertinent because they are related to the likelihood of a balance-of-payments crisis or macroeconomic instability, which, in turn, can contribute to provoking state failure. Finally, we have also considered indicators proposed by USAID regional bureaus, based on their field experience with state fragility, notably the work done by the Africa bureau to address fragility in its regional strategic plan.

Section 2 of the paper discusses the underlying methodology, including the analytical framework, for our approach to benchmarking, and the criteria for indicator selection. Section 3 presents each of the indicators that should be examined in the analysis of state fragility from an economic growth perspective.

2. Methodology

This section discusses three methodological building blocks for the FSI template: the analytical framework for assessing fragility from an economic growth perspective, the criteria for selecting indicators, and the methodology for comparative benchmarking to identify potential strategic priorities.

ANALYTICAL FRAMEWORK

The analytical framework for most work on state fragility has been a derivative of research on conflict in developing countries. Although conflict, or susceptibility to conflict, is not identical to state fragility or failure, there is a strong conceptual link between these phenomena. Furthermore, the empirical and analytical literature on conflict is more advanced, in part because conflict is easier to measure and define than fragility. In this paper we therefore rely heavily on the conflict literature, as well as the less-extensive research on state fragility as such.

Work on the economic causes of conflict has been pioneered by Paul Collier and Anke Hoeffler, beginning with a seminal paper in 1998 on civil wars. Their work distinguishes between two broad sources of conflict: greed (or opportunity) and grievance. In the greed model, conflict is based on rational actors weighing the costs and benefits of armed struggle. Potential costs include opportunity costs such as foregone income from nonviolent activities and the costs of acquiring weapons and funding the conflict. Benefits are measured by the potential gains from a successful conflict (e.g., gaining control over natural resources and associated rents), and the probabilities of success, such as whether the geography favors successful guerilla conflict.² In the greed model, conflict occurs when a sufficient group of actors perceive a net benefit to armed struggle or internal rebellion. Thus, a country is more likely to have conflict when employment and earnings opportunities for young men are poor, small arms are cheap and easily accessible, natural resources (such as diamonds) can be controlled if certain areas are controlled, and hilly or mountainous terrain provides cover for combatants.

In the grievance model, “[R]ebellion occurs when grievances are sufficiently acute that people will want to engage in violent protest” (Collier and Hoeffler 2004, 2). Grievances can range from political or economic inequality between particular identity groups³ to complaints about the

² Over time, Collier and Hoeffler’s articulation of the greed model became more sophisticated, separating the conditions that allow conflicts to be sustained from the gains and losses from winning or losing.

³ “Identity groups” refers to social groups that perceive themselves to have a common or joint identity. These can be ethnic, tribal, religious, social, or regional identities, which often overlap and are mutually reinforcing.

failure of the state to provide basic social services, deliver on promises of economic growth, or others.

Collier and Hoeffler originally favored the greed model, arguing that it was the dominant motivation for conflict. Over time, their work evolved to combine greed and grievance into an integrated model. In the past seven years, Collier and Hoeffler, and those who followed in their footsteps, have done extensive econometric work to test the integrated model empirically and identify which factors are most important.

Although the analytical framework and choice of indicators for the present paper derive mainly from the research that has been done on the greed-grievance model, we also adapt this work to definitions of state fragility drawn from the Fragile States Strategy paper published by USAID in January 2005 (USAID 2005a). Fragile states are those in which the government is “unable or unwilling to adequately assure the provision of security and basic services to significant portions of their populations and where the legitimacy of the government is in question. This includes states that are failing or recovering from crisis.” Thus, state fragility occurs when, to some degree, the state: (1) is unable to provide basic services,⁴ and (2) has lost its ability to provide domestic security and maintain the integrity of its borders. In terms of dynamics, the last sentence of the quotation indicates that the situation may be deteriorating or improving. USAID identified the causes of fragility and conflict as low levels of state effectiveness and legitimacy in security, politics, economics, and social conditions.

The respective frameworks presented in the greed-grievance model and in the USAID Fragile States Strategy are fundamentally consistent. A state that is effective and legitimate does not create sufficiently powerful grievances to drive its citizens to take up arms. Similarly, an effective and legitimate state creates a climate in which the opportunities for nonviolent economic activities outweigh the potential net gains of conflict. Clearly, greed and grievance are driven, in large part, by the effectiveness and legitimacy of the state in providing domestic security, a stable political system, economic growth, and steady gains in social welfare.

CRITERIA FOR INDICATOR SELECTION

This section describes the criteria used for selecting indicators for the FSI template. Because the CAS project focuses on economic growth and poverty, in selecting fragility indicators to incorporate in an economic performance assessment, we focus on economic effectiveness and legitimacy, and to a lesser extent on social effectiveness, which may serve as the underpinning for economic success.

⁴ This is characteristic of all low-income countries and many middle-income states as well, but the key is the question of degree. Failed states, or states that are at risk of failing, tend to provide even fewer services—lower in quality, quantity, and coverage—than other states. For example, in 1990, when Nigeria was nearly a failed state, it spent only 0.9 percent of GDP on education, whereas in the same year Burundi spent 3.9 percent of GDP on education.

Broad Categories

To translate the broad analytical framework into criteria for selecting indicators, we have looked at the criteria used in empirical research on state fragility and conflict, beginning with papers produced by USAID. In a paper on *Measuring Fragility: Indicators and Methods for Rating State Performance*, USAID adopts the following criterion for economic effectiveness: “Economic institutions that provide for economic growth (including jobs), shield the economy from external shocks, and ensure adaptability to economic change” (USAID 2005b). In line with this conceptual approach, we examine areas where the state needs to ensure effective institutions, and identify measures of structural variables and economic shocks that the institutions are meant to manage. For example, if an important capacity of a functioning state is macroeconomic management, we want to include indicators of macroeconomic stability—growth, inflation, and internal and external balances—to gauge whether the state is managing well or not. High levels of income and growth show an effective state. In contrast, high levels of poverty show an ineffective state.

The criterion for economic legitimacy in the *Measuring Fragility* paper is: “Equitable distribution of the benefits and costs of economic growth and change” (USAID 2005b). The components are government legitimacy, horizontal equity, and the business environment. A legitimate government is one that provides a supportive legal environment based on the rule of law. Horizontal equity is important in that the state needs to be seen as fair, rather than captured by one region or ethnic group; as a neutral arbiter, the state would ideally work to reduce horizontal inequality. Finally, a supportive environment for business includes a state’s legal and regulatory framework for doing business.

USAID defines social effectiveness as: “Provision of legal protections and social services, in particular to meet the special needs of vulnerable and minority groups” (USAID 2005b). These protections and services overlap with the requirements for growth: education, health, and employment. In regards to state fragility, the employment needs and opportunities of youth are particularly important; the literature indicates that grievances by this demographic group are the most likely to be expressed through violent means, if nonviolent political channels are not adequate or responsive.

The broad categories of indicators corresponding to these criteria for state fragility are summarized in Table 2.1.

Table 2.1
Broad Categories of Fragility Indicators

Economic Effectiveness	Economic Legitimacy	Social Effectiveness
Macroeconomic performance	Government effectiveness	Education and Health
External sector performance	Horizontal equity	Demography and employment
Poverty	Business environment	Military

Specific Criteria

To select suitable indicators of economic and social effectiveness and economic legitimacy, we applied three criteria: diagnostic utility, accessibility, and timeliness. These are consistent with the criteria used to select indicators for the standard CAS template.

Diagnostic utility relates to whether an indicator has been identified in scholarly research as a cause of state failure, large-scale violence, or country risk. We look for variables that are strongly correlated with, or have a clear causal connection with, state fragility or conflict, or both. In considering economic problems that can contribute to fragility, such as balance-of-payments crises or debt crises, we rely on indicators commonly associated with those types of problems.

Accessibility refers to data that are readily available either from the Agency's Economic and Social Database or publicly available Internet sites of organizations such as the World Bank and UNDP. Accessibility also takes into account coverage, timeliness, and quality. Preferred indicators are those that cover a large number of countries, are published and updated regularly, and are publicly available from a well-established and respected authority.

For some indicators that are particularly important to measuring fragility, we apply these criteria more loosely, because good data are hard to find. For example, measures of youth unemployment and of horizontal inequality (e.g., across regions or ethnic groups) do not exist for many countries, but are still included in the FSI template because they are very valuable when the information happens to be available. Similarly, number of refugees is not in USAID's standard database but is available from the Office of the United Nations High Commissioner for Refugees (UNHCR). Including this variable is important because refugees present a significant challenge for economic recovery and political stability.

In terms of timeliness, the purpose of the FSI template is to give a medium-term overview of state fragility rather than an up-to-the-minute prediction of possible state failure. We therefore do not require high-frequency data. For an indicator to be useful, it only needs to be recent enough to provide meaningful information about country conditions for strategic planning.

Finally, we identify only a limited set of indicators, to make the fragility analysis as accessible as possible to the general reader and to avoid measuring the same causal mechanism with more than one indicator.

BENCHMARKING METHODOLOGY

Comparative benchmarking is the main tool used to evaluate country performance in the standard CAS template. The approach employs four principal comparators: (1) the median for countries in the same income group as the host country; (2) the median for countries in the same income group and region; (3) two comparator countries, which can be selected either on the basis of similarity to or aspirations for the country under review; and (4) the results of a benchmarking

regression that controls for income level and region. For the fragility analysis, we propose focusing on benchmarks (2) and (4).⁵

In interpreting the indicators, one can examine the most recent values, the multiyear average, or trend rates of growth, using judgment to determine which type of data provides the clearest picture of the situation. Often, both the absolute level and the degree of change in an indicator are useful for evaluating where a country stands relative to others and whether the situation is improving or not. This approach is more flexible than the one used in the USAID *Measuring Fragility* paper (USAID 2005b). For example, *Measuring Fragility* focuses on the deviation from GDP-predicted infant mortality. Our approach is to examine the deviation from predicted values for all indicators for which sufficient data are available to run a reasonable regression, including infant mortality; in addition, we also use direct comparisons with other benchmark information, as noted above. Similarly, *Measuring Fragility* looks at the three-year average for inflation and for change in real GDP; our approach is to examine levels as well as multiyear averages and rates of change for any and all variables for which data are available.

⁵ In a separate paper for USAID/EGAT/EG, the CAS project team is exploring alternative methods for benchmarking the performance of fragile states in post-conflict settings. That paper will examine whether or not there are empirical regularities in economic trends as states emerge from failure.

3. Diagnostic Indicators

Our selection of indicators for the FSI template started with a review of USAID’s *Measuring Fragility* report, which also has served as the basis for the C/FACTS indicators. *Measuring Fragility* focuses on indicators of effectiveness and legitimacy, involving a mix of objective statistics and subjective judgments derived from polls and surveys. Overall, *Measuring Fragility* includes 33 outcome indicators, 16 effectiveness indicators, and 17 legitimacy indicators.

From the list of *Measuring Fragility* indicators, we focus here on measures that are most relevant to economic growth and poverty.⁶ Almost all the *Measuring Fragility* variables satisfy the selection criteria; indeed, most of them (or very similar substitutes) are already incorporated in the standard CAS template. This is not a surprise, because indicators of fragility and failure overlap with indicators of economic growth and poverty reduction; from either perspective, effectiveness and legitimacy are critical.

When a standard CAS template indicator and a *Measuring Fragility* indicator convey essentially the same information about country conditions, we generally choose the indicator already used in the standard CAS template to maintain consistency with our general framework for economic performance evaluation.⁷ However, if a *Measuring Fragility* indicator provides significantly better or different information, we include it instead of the standard CAS template indicator. For example, *Measuring Fragility* used the percentage of the population living on less than \$2 per day to measure poverty, whereas the standard CAS template uses \$1 per day. Although closely related, these two indicators often give a different picture of poverty conditions in a country, so we use the \$2-per-day for the FSI template, while retaining the \$1 per day measure for the standard CAS template, as a gauge of absolute poverty.

Thirty-two indicators met the criteria for inclusion in the FSI template, and two additional indicators are used when they are available. Table 3.1 shows the indicators by their source of origin, topic, and subtopic.⁸ The table categorizes sources into three groups: *Measuring Fragility*,

⁶ Thus, two indicators for social effectiveness from the *Measuring Fragility* paper—cultural and religious freedom—are not included in the FSI because they are not germane to economic growth.

⁷ Some *Measuring Fragility* indicators are the same as CAS indicators but with a different transformation—for example, “deviance from GDP-predicted,” “three-year change in,” and “change in.” The standard CAS methodology subsumes these alternatives by assessing the levels, changes, and deviations from predicted values.

⁸ Some indicators could be classified under one of several headings.

the standard CAS template, and others. When similar indicators are drawn from two sources, both are listed, with the one proposed for the FSI template shaded.

Table 3-1

Indicators of State Fragility by Source FSI Template Selections Shown By Shading

No.	Measuring Fragility	CAS Template	Others
ECONOMIC EFFECTIVENESS			
Macroeconomic Performance			
1	Three-year change in real GDP (PPP) per capita	Growth in real GDP per capita (PPP)	
2		Level of GDP per capita (PPP)	
3	Three-year average inflation rate	Inflation rate	
4		Overall budget balance, including grants	
5		Share of gross fixed investment to GDP	
External Sector			
6	Change in FDI net inflows	FDI inflows, ratio to GDP	
7	Share of primary commodity exports in total exports	Composition of exports	
8		Total debt service-to-exports ratio	
9		Current account balance to GDP	
10		Trade openness	
ECONOMIC LEGITIMACY			
Poverty and Inequality			
11	Poverty rate: % of population living on < \$2 (PPP) per day	Poverty rate: % of population living on < \$1 (PPP) per day	
12			Arable land per person
13	% of population experiencing economic discrimination		
Government Legitimacy and Effectiveness			
14	Share of government revenues in GDP	Share of government revenues in GDP	
15	Control of corruption index	Corruption perception index	
16	Extent of rule of law/protection of property rights (Heritage Foundation)	Rule of Law Index (World Bank)	
17	Number of days to start a business (World Bank)	Doing Business composite index (World Bank)	

No.	Measuring Fragility	CAS Template	Others
SOCIAL EFFECTIVENESS AND LEGITIMACY			
Education			
18	Youth literacy rate	Youth literacy rate	
19	Deviance from GDP-predicted primary school completion rate	Persistence in school to grade 5	
20	Male–female literacy ratio	Male–female literacy ratio	
21			Male secondary school enrollment (net)
Demography and Labor Markets			
22			Youth population bulge
23		Urbanization	
24			Refugee population in country of asylum
25			Level of and change in refugee population by country or territory of origin
26			Youth unemployment
Health			
27	Change in % of population living with HIV/AIDS	HIV prevalence	
28	Male–female life expectancy ratio		
29	(Deviance from GDP-predicted) infant mortality	Life expectancy at birth	
30	% of population with access to improved water supplies	% of population with access to improved water supplies	
31	DPT and measles immunization rates	Child immunization rate	
Military			
32	Military spending to GDP		
OTHER VARIABLES (AS AVAILABLE)			
33			Economic benefits by ethnic group
34			Indigenous population as % of total population

For rule of law and ease of doing business, instead of the *Measuring Fragility* indicators, we adopt closely related indicators that provide a better measure of the underlying causal factor. In particular, we adopt the World Bank Institute’s Rule of Law index in lieu of the Heritage Foundation’s Extent of Rule of Law index. The reason for this is that the World Bank indicator has a broader scope, including issues such as crime, whereas the Heritage Foundation focuses more narrowly on the court system, property rights, and contracts. We also adopt the World Bank Composite Doing Business index rather than the Number of Days to Start a Business, for a

similar reason: the composite index is broader and more comprehensive, and thus more representative of a country's business climate.

For education, in place of the *Measuring Fragility* indicator of deviance from the primary school completion rate, the standard CAS template has a similar indicator—persistence to grade five. The reason for this choice is that the persistence rate is used by the United Nations as a Millennium Development Goal indicator. For present purposes, the two options convey essentially the same information, so the FSI template will be based on the persistence rate.

One indicator adopted from *Measuring Fragility* that did not have an analogous indicator in the standard CAS template is the percentage of the population experiencing economic discrimination. The literature shows that horizontal inequality in the form of economic discrimination (as opposed to vertical inequality) strongly correlates to state failure. This indicator is taken from the University of Maryland's Minorities at Risk project database; as explained below, we propose to use a slightly modified version, because the measure used in *Measuring Fragility* is not publicly available.

To fill out our analytical framework, we also include several indicators of structural economic sources of fragility that are not covered in *Measuring Fragility*: the level of GDP per capita and the ratio of investment to GDP. There is a high negative correlation between per capita income and state failure; most failed states are poor, though the causality is debated (see the technical notes below about level of GDP). The ratio of investment to GDP is a major indicator of a country's ability to respond effectively to economic shocks and ensure economic growth, as well as a broad measure of business confidence in political and economic conditions. We would have liked to include measures of infrastructure quality, but pertinent data are not usually available from standard data sources for fragile states.

Several indicators relating to the external sector are also added to understand a country's vulnerability to external shocks: the ratio of debt service to exports, the current account balance as a percentage of GDP, and trade openness (exports plus imports to GDP). These variables are either standard indicators of country risk or are significant in the literature on state failure. The overall government budget balance (including grants) is also included as a common indicator of both macroeconomic stability and government effectiveness.

We also add indicators that correlate with opportunities for employment, focusing on factors affecting the cost-benefit calculations of young men, whose decisions play a key role in creating or avoiding conflict and state failure. These factors are male secondary school net enrollment, the youth population bulge, urbanization, and youth unemployment. Unfortunately, data on youth unemployment are not widely available. We retain this indicator anyway, because for countries where it is available it is too important to omit. It will not be possible, however, to provide a benchmark for this indicator.

Finally we include two indicators for which we do not have standardized sources, but for which data may be available on a country-by-country basis—economic benefits by ethnic group and indigenous population as percentage of the total population. These indicators were added to the FSI template after consultation with USAID regional bureaus, to reflect the bureaus' understanding of fragility in specific regions.

The rest of this section briefly describes each indicator and the reasons for its inclusion.

ECONOMIC EFFECTIVENESS INDICATORS

Macroeconomic Performance and Stability

The indicators in this section serve several purposes. First, they track wealth and economic growth. Both are indicate state performance and correlate with state fragility. Second, several indicators are associated with macroeconomic stability: growth, inflation, and the fiscal deficit. Instability can be both a precursor to and trigger for state failure. Finally, we included investment as a measure of an economy's ability to adjust over time and of investors' confidence in the economy.

1. Growth in real GDP (PPP) per capita

Source: IMF World Economic Outlook online database

Time lag: Numbers updated twice a year; figures for 2005 are available for most countries, and projections for 2006 are available in April 2006.

Coverage: All countries

Description: This indicator converts local currency measures of per capita GDP into U.S. dollars using an estimate of the relative purchasing power of the respective currencies—the purchasing power parity (PPP) exchange rate—rather than the prevailing market exchange rate. This indicator measures the volume of production relative to the size of the population and provides a close approximation of per capita income. Because the PPP measure eliminates the effect of exchange rate movements, it is more informative than the previous indicator for gauging trends and for making cross-country comparisons of economic prosperity.

Rationale: Economic growth is the primary indicator of a successful state and also measures the opportunity cost of undermining the state through resorting to violence, because it serves as a proxy for economic opportunities such as jobs and starting a business. Several studies (Miguel et al. 2004; Collier and Hoeffler 2000a; Collier, Hoeffler, and Sambanis 2004) found this variable statistically significant in reducing the probability of civil conflict.

2. Level of real GDP (PPP) per capita

Source: IMF World Economic Outlook online database

Time lag: Numbers updated twice a year; figures for 2005 are available for most countries, and projections for 2006 are available in April 2006.

Coverage: All countries

Description: This indicator converts local currency measures of per capita GDP into U.S. dollars using an estimate of the relative purchasing power of the respective currencies—the PPP exchange rate—rather than the prevailing market exchange rate. This indicator measures

the volume of production relative to the size of the population and provides a close approximation to per capita income. Because the PPP measure eliminates the effect of exchange rate movements, it is more informative than the previous indicator for gauging trends and for cross-country comparisons of economic prosperity.

Rationale: Many studies find a significant negative correlation between wealth, measured as per capita GDP, and conflict. There are several rationales for this finding. Collier and Hoeffler (1998, 2000) see GDP per capita as a proxy for the opportunity costs of going to war and find it to be negative and statistically significant. Other analysts see GDP per capita as a measure of state strength; wealthy societies have larger tax bases and have the incentives and the means to protect their assets, making rebellion less attractive (Homer-Dixon 1994; and Fearon and Laitin 2002 cited in Humphreys 2003). A third group of analysts argues that low income leads to migration, which can cause violence by provoking conflict between migrants and indigenous populations (Humphreys 2003).

3. Inflation rate

Source: IMF World Economic Outlook online database

Time lag: Numbers updated twice a year; figures for 2005 are available for most countries, and projections for 2006 are available in April 2006.

Coverage: Nearly all countries

Description: This basic performance indicator is defined as the annual percentage change in the period-average value of the consumer price index.

Rationale: Inflation is a basic indicator of macroeconomic stability. High and rising inflation destabilizes an economy, increasing economic risks and reducing growth and undermining confidence in the currency. If economic agents face uncertainty about the purchasing power of the national currency, they may lose confidence in policymakers' decisions, potentially leading to a decline in saving and investment, capital flight, exchange rate instability, and a diversion of scarce resources into inflation hedges. The result is lower growth potential, with particularly adverse effects on the poor, who are least capable of coping with rising prices and economic uncertainty. Inflation often occurs either because a state chooses to use it as a means of financing revenues (it functions as an implicit tax on the population) because it does not have the political or institutional capacity to raise taxes or because of monetary and fiscal mismanagement, or lack of institutional capacity. In any case, high inflation is an indicator of state fragility because it shows weak state capacity, macroeconomic instability, or both.

4. Fiscal deficit

Source: IMF Article IV Reviews or national data sources for latest country data; World Development Indicators for benchmarking data

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Nearly all countries

Description: The overall budget balance, or fiscal deficit, is the difference between total revenue plus grants and total expenditure. The WDI database reports the budget balance for central government only. The overall budget balance measures the extent of a central government's financing requirement, which must be met by borrowing from the domestic financial system or from foreign lenders. Analysts look at the medium-term trend, recent developments, and short-term projections to assess performance.

Rationale: Budget deficit is an important country risk indicator. Large and persistent budget deficits are linked to balance-of-payment crises, high and rising inflation, and other sources of macroeconomic instability that can contribute to state failure. Borrowing can crowd out financial resources for the private sector, stimulate inflationary growth of the money supply, and expand the external debt. A large persistent deficit, together with low revenue, is a sign of ineffectiveness in creating strong governing institutions and resolving competing claims on state resources.

5. Share of gross fixed investment in GDP, in current prices

Source: IMF Article IV Reviews or national data sources for latest country data; World Development Indicators for benchmarking data

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Nearly all countries

Description: Gross fixed investment is the total domestic expenditure on fixed assets (buildings, machinery, equipment, infrastructure), including replacement of depreciated assets, by both the private sector and the government.

Rationale: Fixed investment is essential for an economy to respond effectively to economic shocks and a changing economic environment, have the capacity to build needed infrastructure, and invest in new technology and productive capacity. By including both public and private investment, we measure both a government's capacity to finance infrastructure investment and the confidence of the domestic private sector in the economy. A gross investment rate below 20 percent is a sign that the economy is not capable of sustaining rapid economic growth; a rate much lower than 20 percent is cause for serious concern.

External Stability

Integration with the global economy carries risks as well as opportunities, principally the risk of balance-of-payments and external debt crises. Although country risk analysis is not central to USAID concerns in general, it is a central area of concern when it comes to assessing state fragility and vulnerability to state failure. A balance-of-payments crisis can undermine and even reverse good performance in other areas, and when combined with other factors, such as state ineffectiveness, can lead to state failure.

Several basic external sector and macroeconomic variables serve as country risk indicators: the current account balance, total debt service to exports, and the government budget deficit. Changes in foreign direct investment are a good proxy for foreigners' confidence in the growth prospects and stability of a domestic economy and should be evaluated along with a country's credit rating and ease-of-doing-business indicator. We include the ratio of fuel and mineral exports to total merchandise exports and trade openness because of significant findings in the state failure literature. The former is a proxy for both export concentration and heavy reliance on natural resources. Trade openness has been found to correlate with good governance and economic openness generally.

6. Foreign direct investment, net inflows

Source: World Development Indicators 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Burma, Iraq, Somalia, Turkmenistan, Vietnam, and West Bank/Gaza

Description: Foreign direct investment is a cross-border investment to acquire a lasting management interest in an enterprise. It includes the initial investment and reinvestment of earnings (but not repatriation of profits, which is a current account flow). This indicator is a net figure in that it takes flow—inward and outward FDI—into account and is represented as a percentage of GDP.

Rationale: Foreign direct investment is evidence of external investor confidence. It also serves as a source of additional financing to promote growth and can often be a conduit for technology transfer to promote transformational growth.

7. Primary commodity exports to total merchandise exports

Source: World Bank Development Indicators 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Angola, Azerbaijan, Belarus, Bosnia and Herzegovina, Botswana, Burma, Chad, Congo (B), Dominican Republic, Eritrea, Gabon, Gambia, Georgia, Guinea Bissau, Haiti, Iraq, Laos, Lesotho, Liberia, Malaysia, Mali, Namibia, Somalia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, Vietnam, West Bank/Gaza and Zambia

Description: This indicator represents an aggregate number that combines data on agricultural and raw materials, ores, metals and fuels export—all as a percentage of total merchandise exports. This variable gives an approximate estimation of the importance of fuel and minerals in the total exports for a given country and in the country's economy.

Rationale: The ratio of primary commodity exports—particularly fuel and mineral exports—to GDP is a proxy for the types of natural resources that are correlated with state fragility—oil, diamonds, and timber. We considered using the narrower category of fuel and mineral

exports, but this excludes timber and other raw materials. Primary commodity exports include agricultural exports, however, which dilutes the importance of key commodities.

The management and distribution of these resources appear particularly prone to poor governance, and these resources have been identified as one of the factors most significantly correlated with state failure and conflict. According to Collier and Hoeffler (1998, 2000), natural resource endowment increases the amount of lootable resources—both an incentive for rebellion to take control of the resource and a source of revenue for financing rebellion. The impact of primary exports to GDP, however, is non-monotonic: beyond a certain level primary resource exports provide enough revenue for effective government defense (tax revenue, and therefore military expenditures, rise), thus reducing both the likelihood and duration of civil war (Collier and Hoeffler 1998).

Robert Bates (2005) argues that natural resources that provide important government revenue reduce a government's incentive to provide security and public goods to a population whose tax revenue it no longer needs and reduce incentives for strong government institutions generally. Thus, in evaluating this variable, the shares of government revenue to GDP and tax revenue to GDP are important complementary indicators.

Finally, heavy reliance on primary product exports makes an economy more vulnerable to economic instability because it increases susceptibility to external price shocks and the Dutch disease.⁹ Weak manufacturing and agriculture, which tend to be more labor intensive than natural resource extraction, can lead to employment problems.

Case studies indicate that some types of natural resources (gold, diamonds, and oil) increase the risk of rebellion more than others, although this does not always hold true. Miguel et. al (2004) find that being an oil-exporting country does not have a significant impact on civil war, whereas Collier, Hoeffler, and Sambanis (2004) did find an oil dummy highly significant. The location of resources also matters, because in countries where resources are regionally concentrated, inter-regional and/or interethnic conflicts can arise over control of the resources; the distribution of revenue creates grievances that rebellion is perceived to address. Evaluating this variable requires not only looking at the regional and ethnic implications, but also evaluating the governance structure for natural resource revenues in terms of how that structure, and its outcomes, affect horizontal inequality. In countries where governance is good and perceived to be legitimate, these resources can be an important source of financing for development and state expenditures.

8. Total debt service to exports

Source: World Development Indicators 2006

⁹ *Dutch disease* refers to the deindustrialization of a country's economy caused by a real exchange rate appreciation resulting from significant natural resource export earnings. The real exchange rate appreciation makes manufactured goods less competitive. Although usually applied to industrial products, the Dutch Disease can negatively affect domestic production of any traded good. The term originated in the Netherlands after the discovery of North Sea gas.

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Albania, Algeria, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo (K), Eritrea, Gabon, Gambia, Guinea-Bissau, Haiti, Iraq, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Namibia, Niger, Senegal, Serbia and Montenegro, Somalia, Turkmenistan, Ukraine, Uzbekistan, and West Bank/Gaza

Description: The debt service ratio is the sum of interest and principal payments due in a given year, expressed as percentage of exports of goods and services.

Rationale: This indicator measures the extent to which current export earnings are encumbered or offset by debt service obligations. Along with other country risk measures, such as the ratio of debt service obligations to government revenues, this indicator can be used to assess the sustainability of a country's debt position, the burden of debt on the balance of payments position, and the likelihood of a debt or balance-of-payments crisis.

9. Current account balance

Source: IMF Article IV Reviews or national data sources for latest country data; World Development Indicators for benchmarking data

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Nearly all countries

Description: The current account balance is the sum of net exports and imports of goods, services, net income, and net current transfers as a percentage of GDP.

Rationale: High current account deficits (relative to GDP) are a potential indicator of state fragility because the deficits may be the result of inadequate domestic savings— either government savings (high budget deficits) or private savings—or they may be the result of serious imbalances in the trade in goods-and-services-accounts due to supply-side problems and a lack of competitiveness. High deficits are not necessarily bad, however, and may be consistent with large capital inflows drawn by attractive investment opportunities, rapid growth, or both. Whether current account deficits are a cause for concern must be judged on a case-by-case basis, along with other indicators of macroeconomic performance.

When high current account deficits are caused by high trade deficits they can signal a moribund economy in which production does not respond to demand, an inappropriate foreign exchange rate policy, excessive stimulation of domestic demand, or other macroeconomic imbalances. If a large current account deficit persists, it may signal that current policies are unsustainable and external debt is accumulating rapidly.

10. Trade openness to GDP

Source: World Development Indicators 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Algeria, Burkina Faso, Cameroon, Central African Republic, Chad, Congo (B), Eritrea, Georgia, Iraq, Laos, Lebanon, Liberia, Mauritania, Serbia and Montenegro, Tajikistan, Turkmenistan, Uzbekistan, West Bank/Gaza, Zambia, and Zimbabwe

Description: This indicator is defined as the value of total imports plus exports (goods and services) as a percentage of GDP.

Rationale: This indicator is used to measure integration into the world economy. Caution is needed in interpreting the variable as an indicator of policy openness or competitiveness, because countries that are large or distant from major markets tend to have low trade-openness ratios, regardless of whether their policy regime is open or not. Similarly, small countries typically have a high trade ratio, even with protectionist policies. Countries with large exports of oil and other key commodity exports (e.g., gold, diamonds, bauxite) also often have high trade ratios, whatever the policy regime.

Trade openness was found to be highly significant in the University of Maryland State Failure Task Force Phase III model, which suggests that low levels of trade openness are likely to correlate with other causes of state failure: cronyism, corruption, lack of secure property rights, enforceable contracts and the rule of law, and the presence of rent seeking. Other researchers have found that high levels of trade correlate with stronger governance and suggest that trade brings more exposure to external ideas and institutions.

ECONOMIC LEGITIMACY

Economic legitimacy is the perception that the way that an economy runs and government policies in particular are balanced, fair, and equitable (which is not the same as equal). Economic opportunities are available to all regardless of ethnic or tribal origins or region, and government policies support private sector activity rather than functioning to extract rents.

Poverty

Poverty and inequality are important in the theoretical literature on state fragility for several reasons. They are sources of grievance for the poor or identity groups facing economic discrimination, they reflect the opportunity cost of forgoing current economic activities, and they also measure the effectiveness of government policy.

11. Poverty rate

Source: World Development Indicators 2006

Time lag: Data taken from country surveys that were completed between 1993 and 2002; numbers updated periodically as individual countries conduct new or revised surveys.

Coverage: Current data missing for Afghanistan, Angola, Bosnia and Herzegovina, Burma, Chad, Congo (B), Congo (K), Eritrea, Gabon, Guinea, Guinea Bissau, Iraq, Lebanon, Liberia, Papua New Guinea, Serbia and Montenegro, Somalia, Sudan, Swaziland, Turkmenistan, Uganda, Uzbekistan, Vietnam, and West Bank/Gaza

Description: The proportion of the population living on less than \$2 a day, at constant prices adjusted for purchasing power of the local currency.

Rationale: Econometric studies of state failure and civil war have not found measures of vertical inequality, such as Gini coefficients or ratios of upper- and lower-income groups, statistically significant. We include an absolute measure of poverty on theoretical grounds: poverty increases the probability of rebellion and civil unrest by making it easier to recruit disaffected people (whose opportunity cost of rebellion is low); it enhances grievances against the state if poverty is perceived to be the result of state policies; and it is a broad indicator of state failure to generate and sustain growth over the long term. It needs to be evaluated along with other measures of human development, such as infant mortality, that in fact have been highly correlated with large-scale conflict, as well as horizontal inequality.

12. Arable land per person

Source: Food and Agriculture Organization, Production Yearbook and data files

Time lag: 2003 numbers available for most countries; numbers updated annually.

Coverage: Nearly all relevant countries

Description: Arable land (hectares per person) includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Rationale: There are strong linkages to various measures of population pressures in both the theoretical and empirical literature (e.g., population density was found to be a significant though minor variable in the Fragile States Task Force report by the University of Maryland [Goldstone 2000]). Arable land per person serves as a proxy for population density, pressures in rural areas on economic livelihood, and indirectly, food insecurity. Low levels of arable land per person can indicate that rural populations are no longer able to support themselves adequately from agricultural activities, creating social and economic dissatisfaction and pressures for internal migration to urban areas. Through these mechanisms, low levels of arable land per person directly affect the opportunity cost of going to war insofar as it indicates that the general wealth of the population is declining or that a large share of the population does not have sufficient income-generating means. Taken with other measures, such as youth unemployment, this can create the basis for crime, violence, and social unrest and supply potential candidates for rebel groups. In countries where large portions of the population depend on agriculture for their livelihoods or where a large share of the domestic product comes from agriculture, this indicator, as well as changes in it, is particularly relevant.

13. Population experiencing economic discrimination (%)

Source: Minorities at Risk Project (2005) College Park, MD: Center for International Development and Conflict Management.

Time lag: 2001–2003 numbers are available for most countries; numbers updated annually

Coverage: Nearly all relevant countries

Description: Horizontal inequality measures the inequality between ethnic and religious groups or, in principle, regions; these three groupings often overlap. Economic distribution is the percentage “of population experiencing economic discrimination” rated on a scale of 0 to 4, with 4 the highest levels of discrimination. The two highest levels of economic discrimination are defined as follows: 3—“group members experience substantial poverty and under-representation due to prevailing (deliberate) practice by dominant groups; formal public policies toward the group are neutral or, if positive, inadequate to offset active and widespread practices of discrimination”; 4—“public policies (formal exclusion or recurring repression or both) substantially restrict the group’s economic opportunities in contrast with other groups.”

The composite variable cited in *Measuring Fragility* and used in C/FACTS (DISPOS3), which is constructed by adding the proportion of each group in a particular state coded with a 3 or 4 on the economic discrimination variable in a particular year, is not publicly available. We therefore propose to measure economic discrimination in terms of none, low, medium, or high. Low is when groups are rated higher than zero but no group has been rated 3 or 4 on the economic discrimination indicator for any of the three most recent years. Medium is when one or more groups are rated 3 or 4 for any of the three most recent years. High is when one or more groups are rated 3 or 4 for any of the three most recent years and groups rated 3 or 4 are a significant proportion of the population.

Rationale: Although vertical income inequality has not been found to have a significant impact on conflict, horizontal inequality is a significant predictor of civil war (Gurr and Moore 1997, in Humphreys 2003). Case studies lend credence to horizontal income inequality as a factor encouraging social unrest, instability, and fragility. The birth of Nepal’s Maoist rebellion can be imputed in part to inequality in land, public service employment, and education between the higher and lower castes, which are regionally distributed (Bray 2003). In general, horizontal income inequality aggravates grievances if it is perceived to be the result of ethnic or group discrimination and if it is perceived that rebellion will put an end to unequal treatment.

Government Legitimacy and Effectiveness

Government legitimacy is the perception that government policies and programs are fair and balanced and are designed to address the social and economic needs of the entire population and the economy rather than the ruling class and the governing political party. Government effectiveness is when policies and programs are implemented efficiently, economically, and successfully. Government economic legitimacy hinges on the government’s ability to provide a framework or environment for private sector activity, including the rule of law, freedom from corruption, and a supportive, transparent regulatory environment.

14. Share of government revenues in GDP

Source: IMF Article IV Reviews or national data sources for latest country data; World Development Indicators for benchmarking data

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Nearly all countries

Description: This indicator includes tax revenue and other domestic revenue such as mineral royalties and fees.

Rationale: Unusually low revenue collection may be a sign of weak and corrupt institutions for economic governance or a lack of serious commitment to mobilizing resources for essential public services. Low levels of revenue collection limit the resources of the state and the state's ability to provide needed goods, services and infrastructure. Unusually high revenue figures, however, can also be a problem, reflecting an excessively intrusive state role in the economy or a heavy dependence on earnings from natural resources rather than tax revenues. High revenues from natural resources need to be examined in terms of the quality of governance.

15. Corruption perception index

Source: Transparency International

Time lag: 2005 numbers available for most countries; numbers updated annually

Coverage: Nearly all countries

Description: The corruption perception index is a subjective measure of perception of corruption, derived from surveys of businesspeople and country risk analysts. Survey results are aggregated and rated on a scale of 1 to 10 for each of the 145 countries in the analysis. A score of 10 is best and indicates the least perceived corruption. This indicator is the most widely used gauge of corruption but must be treated with caution in benchmarking because of its subjective nature. This indicator is drawn from Transparency International instead of the Corruption Index of the World Bank Institute, which C/FACT uses. The two measures convey virtually the same information—the simple correlation is well above 0.90—but the World Bank Institute measures are not updated every year and there are no 2005 observations. The World Bank Institute covers more countries than Transparency International, but only because it uses estimates based on a very small number of sources, so the extra coverage comes at the expense of less-reliable information.

Rationale: Corruption is a pervasive problem in many countries, with effects on all aspects of governance. Corruption can undermine reforms, institutions, regulatory frameworks, and most important, the legitimacy of government institutions and the rule of law, which is why this indicator is included under economic legitimacy.

16. Rule of Law Index

Source: World Bank Institute

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Nearly all countries

Description: The Rule of Law Index is a composite of various survey results on the extent to which the public has confidence in the rule of law, the incidence of crime, the reliability of the judicial system, and the enforceability of contracts. The indicator therefore represents a broad gauge of the effectiveness of the legal system and the rule of law. The index is defined on a scale of -2.5 to +2.5, with scores around the mean of 0.0 measured in standard deviations.

Rationale: The rule of law is essential for legitimacy because it addresses the fundamental fairness, reliability, and consistency of governmental institutions and rules of the game. It is essential for long-term economic activities and decision making, such as investment.

17. Ease of Doing Business

Source: World Bank, Doing Business 2006

Time lag: 2005 numbers available for most countries; numbers updated annually

Coverage: Nearly all countries

Description: The Ease of Doing Business index ranks economies from 1 to 155 according to the simple average of country percentile rankings on each of the 10 topics covered in Doing Business in 2006: starting a business, dealing with licenses, hiring and firing, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and closing a business.

Rationale: A low score on the composite index implies that a country has major problems in a variety of institutional factors affecting the business environment. This suggests that state institutions are not responsive to the needs of productive businesses, thus undermining state legitimacy.

SOCIAL EFFECTIVENESS AND LEGITIMACY

Social effectiveness is the ability of a state to deliver essential basic social services such as education and health care. Inability to deliver such services may be due to several reasons: weak state finances, weak state institutions, and lack of political will and desire to spend money on these services. We also include military spending as a share of GDP, which not only indicates the military strength of a state, but also whether social spending is a high priority and whether it is constrained by military spending. Although most low-income countries and many middle-income countries perform poorly in these areas, performance varies widely.

Education

Education indicators are important indicators of state fragility. In Collier and Hoeffler (2000), education serves as a measure of the opportunity cost of rebellion (an alternative activity for potential rebels, affecting future income-earning prospects).¹⁰ The correlation of education with civil war is negative and significant, for three main reasons. First, educated workers have higher current and future opportunity costs of abandoning the formal economy for informal activity or even joining an armed group or rebellion. Second, high education levels indicate that the state is successful in delivering essential social services. And third, an educated workforce is important for economic growth as well as intrinsically valuable to human development.

Yet civil war occurs despite high education levels (e.g., Georgia, Lebanon, Yugoslavia, Russia), which suggests that interpreting education variables is not straightforward. An educated population does not necessarily imply high opportunity costs and a low propensity for social unrest or rebellion if access to employment and opportunity facilitated by education is hampered by other factors such as discrimination on political, ethnolinguistic, or religious factors (Sambanis 2005) or high levels of under- and unemployment. Sometimes, education may actually reinforce ethnolinguistic or religious identities, exacerbating tensions and cleavages between various identity groups. Thus, education variables must be interpreted in concert with other indicators such as economic discrimination.

We have chosen multiple education indicators to allow for alternative indicators based on availability, although they overlap somewhat and measure similar things. Youth literacy and primary school completion are measures of basic education and a state's ability to deliver education. Male secondary school enrollment gives a measure of how many potential young combatants are in school, and presumably, see education as an economically valuable investment of time and effort. For this reason, we have chosen several indicators and do not provide specific rationales for each.

18. Youth literacy rate

Source: World Development Indicators 2006

Time lag: 2002 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Azerbaijan, Belarus, Burkina Faso, Cameroon, Egypt, Eritrea, Gabon, Gambia, Georgia, Guinea, Guinea Bissau, Iraq, Kyrgyzstan, Lebanon, Lesotho, Malawi, Mali, Somalia, South Africa, Turkmenistan, Vietnam, and Zambia

Description: The youth literacy rate is defined as the percentage of people between ages 15 and 24 who cannot read and write a simple statement about their everyday life. Youth illiteracy reflects the cumulative effect of a lack of educational attainment in prior years.

¹⁰ This was reconfirmed in the later study by Collier, Hoeffler and Sambanis (2005), where this variable is highly significant in a combined greed-grievance model.

19. Primary School Persistence to Grade 5

Source: World Development Indicators, 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Angola, Bosnia and Herzegovina, Central African Republic, Congo (B), Gambia, Haiti, Liberia, Pakistan, Russian Federation, Sierra Leone, Somalia, Sri Lanka, Turkey, Turkmenistan

Description: This indicator reflects the percentage of students who complete the last year of primary school, defined as fifth grade. This indicator is calculated by taking the total students in the last grade of primary school, subtracting the number of repeaters in that grade, and dividing by the total number of children of graduation age.

20. Male/female literacy ratio

Source: UNDP, Human Development Indicators 2005

Time lag: 2003 numbers available for most countries; numbers updated annually

Coverage: Nearly all USAID countries

Description: This indicator is defined as the ratio of adult male literacy to adult female literacy. In virtually every developing country, the ratio is greater than one, and in some cases greater than two.

21. Male Secondary School Net Enrollment

Source: UNESCO Institute for Statistics (www.uis.unesco.org)

Time lag: 2002/2003 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Angola, Bosnia and Herzegovina, Cameroon, Central African Republic, Congo (B), Cote d'Ivoire, Equatorial Guinea, Gabon, Guinea Bissau, Haiti, Honduras, Iraq, Kyrgyzstan, Liberia, Madagascar, Mali, Mauritania, Nepal, Pakistan, Russian Federation, Rwanda, Senegal, Serbia and Montenegro, Sierra Leone, Somalia, Sri Lanka, Sudan, Timor Leste, Turkey, Turkmenistan, Tanzania, Uzbekistan, Vietnam, and Yemen

Description: This variable measures the percentage of males of secondary school age (13–18) who are enrolled in a secondary education program.

Demography and Labor Markets

Numerous studies have found demographic and labor market factors to have an important correlation with state failure. In all the Collier and Hoeffler papers, population size is positively correlated with conflict, and density negatively correlated, and this result holds up in the University of Maryland State Failure Task Force work as well. We do not include these variables because they change so slowly over time and therefore are not amenable to policy intervention in

the normal USAID time frame of three to five years. We include a measure of urbanization, however, that does change in the medium term and that the State Failure Task Force found to be important, particularly in Sub-Saharan Africa. This variable must be interpreted with care. If interpreted on its own, it serves as a proxy for population density or dispersion, in which case it is negatively correlated with state failure. The State Failure Task Force found that when combined with relatively low GDP per capita, in what it referred to as “unbalanced development,” then it is correlated positively and strongly with state failure.

The primary focus of this section is to obtain proxies for the supply and demand for labor, because a lack of opportunity for earnings and employment, particularly among young men, is a primary factor in crime and violence and the primary source of members for rebellion. We have included the youth population bulge and youth unemployment as fragile states indicators.

22. Youth population bulge

Source: UN Population Division Statistics (<http://esa.un.org/unpp/index.asp?panel=2>)

Time lag: 2005 numbers available for most countries; numbers updated annually

Coverage: All countries

Description: This variable measures the percentage of a country’s population that is between the ages of 15 and 24.

Rationale: The population of a state between ages 15 and 24 must be provided with education, health, and employment opportunities. A high percentage can put pressure on the government and the economy and can indicate that education and health indicators are poor. A high percentage of youth between 15 and 24 also means youth unemployment is likely to be high.

23. Urbanization

Source: World Development Indicators 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan and West Bank/Gaza

Description: This variable is defined as the proportion of a country’s total population living in cities and other designated urban areas.

Rationale: Urbanization is generally associated with a lower probability of conflict and failure, because it generally correlates directly with higher income and development. High levels of urbanization with low levels of income, however, points to a lack of opportunity in traditional occupations, which can lead to instability. Thus this variable will be interpreted jointly with income levels, and when income is low and urbanization high, suggests a greater propensity for state fragility.

24. Refugee population by country or territory of asylum

Source: United Nations High Commissioner for Refugees (UNHCR), Statistical Yearbook.

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Nearly all USAID countries

Description: Data from this source are based on several precise legal definitions of what is an officially recognized refugee: the 1951 Convention Relating to the Status of Refugees or its 1967 Protocol, the 1969 Organization of African Unity Convention Governing the Specific Aspects of Refugee Problems in Africa, or people recognized as refugees in accordance with UNHCR statute.

Rationale: A country with a large number of refugees can face pressures on land and fiscal resources as well as spillover effects from conflicts in neighboring countries. This can also create or aggravate tensions between identity groups, especially when the refugees are located in areas where an indigenous population of that same identity group is already present.

25. Change in refugee population by country or territory of origin

Source: UNHCR, Statistical Yearbook.

Time lag: 2003 numbers available for most countries; numbers updated annually

Coverage: Nearly all relevant countries

Description: Data from this source are based on several precise legal definitions of what is an officially recognized refugees: the 1951 Convention Relating to the Status of Refugees or its 1967 Protocol, the 1969 Organization of African Unity Convention Governing the Specific Aspects of Refugee Problems in Africa, or people recognized as refugees in accordance with UNHCR statute.

Rationale: Although total investment and foreign direct investment indicate investor confidence in an economy, the inflows and outflows of refugees signal a population's confidence in a country, and labor's confidence in particular (i.e., "voting with their feet"). A country for whom a large share of its population is made up of refugees or is seeking refugee status is generally a sign of war, genocide, disease, or a natural catastrophe in the refugees' country of origin. Although refugee flows tend to be a concurrent or lagging indicator of state fragility, we include them as a sign of state failure.

26. Youth unemployment (or unemployment)

Source: World Bank Development Indicators 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Youth unemployment figures are not widely available for a number of USAID countries, especially in Sub-Saharan Africa, but when the data can be obtained, the indicator

is too important to leave out of the analysis. A lack of data may preclude benchmarking, so analysis will be based on absolute values rather than relative standards. When youth unemployment is not available, we will use overall unemployment, though this too is frequently unavailable or unreliable. In either case, we will attempt to obtain national sources of data for these indicators.

Description: This indicator measures the percentage of people aged 15 to 24 who are without work but are available for and seeking employment. Technical details for this variable are country specific, but the standard definition of the unemployment rate is the percentage of workers in the labor force who do not have work and are actively seeking employment. In very poor countries, the unemployment rate is often low, either because the informal sector is large or because few workers can afford the luxury of not having at least an informal job while seeking employment. In this case, a low rate may not indicate a strong labor market.

Rationale: Unemployment serves as a proxy for the demand for labor and the economic opportunities, particularly for youth, in the formal economy. Case studies point to the significance of unemployment as a factor of rebellion and civil war in the same way that poverty rates do.

Health

Good health is an input to a healthy workforce necessary for economic growth as well as an intrinsic measure of human development. States that fail to ensure adequate health for their citizens are less likely to grow. Poor health indicators thus measure low levels of state effectiveness, in parallel with low levels of per capita GDP and high levels of absolute poverty. This is particularly true of high or increasing levels of HIV/AIDS infection, especially among the economically active population. High infection rates are a substantial drag on economic growth by both weakening the labor force and increasing demands on the healthy to serve as caregivers.

We include health measures because they capture a broader measure of state effectiveness than simple income measures do. The University of Maryland Task Force on State Failure found that

[A] country's infant mortality rate provides a sensitive indicator of broader changes in economic development and material well-being. The forces to which infant mortality rates appear to be sensitive include the quality of a country's medical and public health systems, levels of maternal and infant nutrition, access to shelter and clean drinking water, and levels of education and literacy. Only when all of these indicators move together—as they generally do in our data—would we expect to find changes in the incidence of state failure.

We include several alternative measures of health, paralleling the *Measuring Fragility* treatment of the topic. Because of this, we do not provide rationales for individual indicators of health.

27. HIV prevalence

Source: UNAIDS, 2004 Report on the Global HIV/AIDS Epidemic

Time lag: 2003 numbers available for most countries; numbers updated every two years

Coverage: Nearly all Sub-Saharan African countries, but not South Asia and Latin America

Description: This variable measures the percentage of people that are infected with HIV and those suffering from AIDS.

28. Male/female life expectancy ratio

Source: UNDP, Human Development Indicators 2005

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Nearly all countries

Description: This indicator is defined as the male-to-female ratio of life expectancy at birth. In every country with a high level of human development, females have longer life expectancy than males, often by five years or more. Thus, in countries with greater gender equity, the ratio is greater than one. In many developing countries, however, the relationship is reversed and the gender ratio is less than one. This a clear sign of serious disadvantages faced by women in obtaining health care, economic opportunities, and social empowerment.

29. Infant mortality

Source: World Development Indicators 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Iraq, and West Bank/Gaza

Description: The infant mortality rate is defined as the number of newborn children who will die before reaching age one, per 1,000 live births, if current age-specific mortality rates remain unchanged. Almost half of these deaths are a result of diarrhea and respiratory illness, exacerbated by malnutrition. A drastic worsening of the infant mortality rate can be caused by economic or political shocks.

30. Population with access to improved water supplies and sanitation

Source: World Development Indicators 2006

Time lag: 2002 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Argentina, Belarus, Croatia, Macedonia, and Sri Lanka

Description: These two indicators measure (1) the percentage of a population that has access to an adequate amount of water from an improved source (protected well or spring, borehole, household access) and (2) the percentage of a population that has access to waste disposal facilities that prevent human, animal, and insect contact with human biological waste.

31. Child immunization rate

Source: World Development Indicators 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for West Bank/Gaza

Description: This indicator measures the percentage of children under one year old who receive vaccination for measles and DPT (diphtheria, pertussis [whooping cough], and tetanus). Immunization programs are essential to the reduction of morbidity and mortality from major childhood infectious diseases.

Military Spending

32. Military spending

Source: World Development Indicators 2006

Time lag: 2004 numbers available for most countries; numbers updated annually

Coverage: Current data missing for Afghanistan, Benin, Burma, Congo (B), Costa Rica, Dominican Republic, Gabon, Guinea-Bissau, Haiti, Iraq, Jamaica, Laos, Madagascar, Malawi, Panama, Somalia, Swaziland, Turkmenistan, Vietnam, West Bank/Gaza and Zambia.

Description: This indicator measures all expenditures related to supporting and maintaining the military or conducting military-related activities as a percentage of GDP.

Rationale: High military spending reflects a government's priorities in allocating budget funds. Military spending makes fewer resources available for social programs and other human or economic development activities and therefore is correlated with higher state fragility. However, care must be taken in interpreting this variable because high military spending may also be a sign of a state facing substantial current external threats (regional instability) or a legacy of external threats. Moreover, because state fragility is defined partly as the loss of a monopoly of violence, high military spending may correlate with a state's ability to provide for internal and external security and stability, though not necessarily legitimacy derived from popular support, and a state's ability to provide social services and a business-enabling environment.

Bibliography

- Bates, R.H. 2005. Political Insecurity and State Failure in Contemporary Africa. CID Working Paper 115.
- Bray, J. et al. 2003. *Nepal: Economic Drivers of the Maoist Insurgency*. In Ballentine and Sherman, eds. 2003. *The Political Economy of Armed Conflict: Beyond Greed and Grievance*. Rienner.
- Collier, P. and A. Hoeffler. 1998. On the Economic Causes of Civil War. *Oxford Economic Papers*. Oct 1998, 50, 4.
- Collier, P. and A. Hoeffler. 2000a. *Greed and Grievance in Civil War*. World Bank Policy Research Working Paper 2355
- Collier, P. and A. Hoeffler. 2000b. *On the Incidence of Civil War in Africa*. World Bank Policy Research Working Paper
- Collier, P., Hoeffler, A. and N. Sambanis. 2005. *The Collier-Hoeffler Model of Civil War Onset and the Case Study Project Research Design*. In Collier and Sambanis, Eds. 2005. *Understanding Civil War: Evidence and Analysis (Volume 2)*. Washington, The World Bank.
- Collier, P., and N. Sambanis. Eds. 2005. *Understanding Civil War: Evidence and Analysis (Volumes 1 and 2)*. Washington, World Bank.
- Makdisi, S, and R. Sadaka. 2005. *The Lebanese Civil War: 1975–1990*. In Collier and Sambanis, Eds. 2005. *Understanding Civil War: Evidence and Analysis (Volume 2)*. Washington, World Bank.
- Elbadawi, I. and N. Sambanis. 2000. Why Are There So Many Civil Wars in Africa? *Journal of African Economies*. Vol. 9(3), p. 244.
- Goldstone, Jack A. Ted Robert Gurr, Barbara Harff, Marc A. Levy, Monty G. Marshall, Robert H. Bates, David L. Epstein, Colin H. Kahl, Pamela T. Surko, John C. Ulfelder, Jr., and Alan N. Unger. (2000) *State Failure Task Force Report: Phase III Findings*. McLean, VA: Science Applications International Corporation (SAIC), September 30,.
- Humphreys, M. 2003. *Economics and Violent Conflict*. Unpublished paper. Harvard - - -

- Makdisi, S, and R. Sadaka. 2005. *The Lebanese Civil War: 1975-1990*. In Collier and Sambanis, Eds. 2005. *Understanding Civil War: Evidence and Analysis (Volume 2)*. Washington, World Bank.
- Miguel, E., Et. Al. 2004. Economic Shocks and Civil Conflicts: an Instrumental Variables Approach. *The Journal of Political Economy*. Vol 112, iss. 4.
- Minorities at Risk Project (2005) College Park, MD: Center for International Development and Conflict Management. <http://www.cidcm.umd.edu/inscr/mar/> Minorities at Risk. File DISGROUP2003, discrimination by group
- Ngaruko, F., and J.D. Nkurunziza. 2000. An Economic Interpretation of Conflict in Burundi. *Journal of African Economies*. Vol 9(3), pp. 370-409.
- Ross, M. L. 2005. *Resources and Conflict in Aceh, Indonesia*. In Collier and Sambanis, Eds. 2005. *Understanding Civil War: Evidence and Analysis (Volume 2)*. Washington, The World Bank.
- Sambanis, N. 2002. A Review of Recent Advances and Future Directions in the Quantitative Literature on Civil War. *Defence and Peace Economics*. Vol. 13(3), pp. 215-243.
- Sambanis, N. 2004. Using Case Studies to Expand Economic Models of Civil War. *Perspectives in Politics*. Vol. 2(2), pp. 259-279.
- Sanchez, et. Al. 2005. *Conflict, Violence, and Crime in Colombia*. In Collier and Sambanis, Eds. 2005. *Understanding Civil War: Evidence and Analysis (Volume 2)*. Washington, World Bank.
- USAID. 2005a. *Fragile States Strategy*. PD-ACA-999. January. http://www.usaid.gov/policy/2005_fragile_states_strategy.pdf
- USAID. 2005b. *Measuring Fragility. Indicators and Methods for Rating State Performance*. Produced for review by the United States Agency for International Development by ARD, Inc. June. http://pdf.dec.org/pdf_docs/PNADD462.pdf
- Woodwell, D. 2005. *The "Troubles" of Northern Ireland: Civil Conflict in an Economically Well-Developed State*. In Collier and Sambanis, Eds. 2005. *Understanding Civil War: Evidence and Analysis (Volume 2)*. Washington, The World Bank.