

# A Global Forecasting Model of Political Instability

Jack A. Goldstone, George Mason University  
[jgoldsto@gmu.edu](mailto:jgoldsto@gmu.edu)

Robert H. Bates, Harvard University  
[rbates@latte.harvard.edu](mailto:rbates@latte.harvard.edu)

Ted Robert Gurr, University of Maryland, College Park  
[trgurr@aol.com](mailto:trgurr@aol.com)

Michael Lustik, Science Applications International Corporation (SAIC)  
[michael.b.lustik@saic.com](mailto:michael.b.lustik@saic.com)

Monty G. Marshall, George Mason University  
[mmarsha5@gmu.edu](mailto:mmarsha5@gmu.edu)

Jay Ulfelder, Science Applications International Corporation (SAIC)  
[jay\\_ulfelder@stanfordalumni.org](mailto:jay_ulfelder@stanfordalumni.org)

Mark Woodward, Arizona State University  
[Mark.Woodward@asu.edu](mailto:Mark.Woodward@asu.edu)

Paper prepared for presentation at the Annual Meeting of the American Political Science Association, Washington, DC, September 1-4, 2005. Copyright of the American Political Science Association. The research described in this paper was funded by the U.S. Central Intelligence Agency's Directorate of Intelligence through a contract with Science Applications International Corporation (SAIC). The views expressed in this paper are solely those of the authors and do not necessarily represent the official views of the U.S. government, the intelligence community, or the CIA. Dr. Goldstone's work on this paper was also supported by a Peace and Security Writing Grant from the MacArthur Foundation.

## ABSTRACT

Prior studies of civil conflict using panel studies or econometric models have provided inconsistent results. This paper presents the results of a new study, using case-control methods, to identify risk factors for political instability two years prior to event onset. The models we derive are surprisingly simple, and yet are able to identify states that will or will not experience political instability two years hence with over 80% accuracy in the historical data across several random samples. Using global data from 1955 to 2003, we examine a wide range of political upheavals and demonstrate that regime type is overwhelmingly the dominant factor behind revolutions, ethnic wars, and adverse regime changes. However, the effect of regime type is not a simple function of the degree of democracy or autocracy. Rather, certain kinds of autocracies and democracies are much more vulnerable than others, depending on the patterns of executive recruitment and political participation under those regimes.

## 1. INTRODUCTION

In the interest of time, we cannot review here the excellent and outstanding recent work on civil conflict by Bates et al. (2002), Collier and Hoeffler (1998, 2001, 2002), Elbadawi and Sambanis (2000, 2003), Fearon and Laitin (2003), Regan and Norton (2005), and many others. Suffice to say that while there are major debates within this literature, dominant themes involve the role of state weakness in the onset of civil conflict, and the argument that different kinds of conflict have different causal character. There is also an assertion, originally by Collier and Hoeffler (1998), that internal wars may be motivated more by opportunity (or ‘greed’) than grievance, and thus substantially affected by the availability of lootable resources, such as diamonds or other high-value minerals. This would create a major difference between the causes of conflicts in Africa and less resource-rich areas, such as Eastern Europe or Latin America.

Our results challenge or modify all of these tenets, and, in our view, are based on a method that gives sounder results.

## 2. DATA AND METHODS

### *The Data*

This paper presents the findings of research conducted by the Political Instability Task Force (formerly known as the State Failure Task Force), a panel of scholars and methodologists who have collaborated since 1994 to collect and analyze data on political regimes and conflict around the world.<sup>1</sup> All data used by the Task Force were drawn from open sources (e.g. the U.S. Census Bureau, the World Bank, the U.N. and other similar agencies) or developed by Task

---

<sup>1</sup> The research described in this paper was funded by the U.S. Central Intelligence Agency’s Directorate of Intelligence through a contract with Science Applications International Corporation (SAIC). The views expressed in this paper are solely those of the authors and do not necessarily represent the official views of the U.S. government, the intelligence community, or the CIA. Dr. Goldstone’s work on this paper was also supported by a Peace and Security Writing Grant from the MacArthur Foundation.

Force members themselves, and the Task Force does not engage in any classified work nor make use of any classified data.<sup>2</sup>

The first step in the Task Force's research program was the development of a comprehensive list of all "major political instability events" from 1955 onward. Reflecting the diverse concerns of the project's sponsors, this list includes four types of severe political crises: Revolutionary Wars, Ethnic Wars, Adverse Regime Changes, and Genocides and Politicides.<sup>3</sup> As the list of historical events was developed, it was presented to various regional experts to ensure that no important events were omitted, and that all identified events were indeed credible as major instability events. Consequently, we believe this is the most complete listing of all kinds of major political instability events in this period. The resulting "problem set" includes 111 adverse regime changes, 74 ethnic wars, 62 revolutionary wars, and 40 genocides/politicides occurring during the period 1955-2003.

The dependent variable in our global analysis is the onset of an episode of political instability comprised of one or more of these events. Of course, such events often overlapped or followed each other in quick succession in the same country. For purposes of statistical analysis, whenever two or more events in the same country occurred without an intervening period of at least five years of stability (defined as five years with no new event onsets *and* no continuing events) those events were 'consolidated' into a single episode of instability with a single onset date, which was taken to mark the shift from a period of stability to instability. Thus, for

---

<sup>2</sup> In addition to the authors of this paper, other leading contributors to the work of the SFTF have included Robert Chen, Geoff Dabelko, Daniel Esty, Barbara Harff, Colin Kahl, Marc Levy, Tom Parris, Pamela Surko, and Alan Unger. In addition, many more scholars and government officials have contributed to the examination of particular topics and regions.

<sup>3</sup> Revolutionary Wars and Ethnic Wars involve at least 1,000 battle-related deaths due to conflict between organized challengers and government authorities; Adverse Regime Changes involve abrupt turns from a more democratic system to one that is more authoritarian (operationalized as a drop of six or more points on the Polity scale), revolutionary changes in political elites, or total or near-total collapses of central state authority; Genocides and Politicides involve government targeting of specific communal or political groups for destruction, with no precise death thresholds.

example, a country might have suffered an anti-democratic coup that was followed within three years by an outbreak of ethnic violence that continued for a dozen years. In our global analysis, all of this upheaval would be treated as a single episode of instability lasting 15 years, which included both an adverse regime change and an ethnic war. Applying these rules to our list of historical events, we identify 141 episodes of instability worldwide during the period 1955-2003.

As Figure 1 shows, the instability events we identify were distributed fairly evenly over time, although there was a slight peak in new event onsets in the late 1960s/early 1970s, and a decline in the years after 2000. It is too early to tell whether this latter is a statistical artifact or a reflection of real changes resulting from the end of the Cold War. It may also be the case that some low-level conflicts that are currently below the threshold of 1,000 total deaths as of 2003 may yet become instability events, which would add to the total in the last decade.<sup>4</sup>

[Figure 1 about here.]

Figure 2 shows that, as would be expected, the most unstable region during this period was sub-Saharan Africa, with 49 episodes of instability, representing 34.8% of the global total. This was followed by the Near East and South Asia with 32 (22.7%) episodes, Latin America and the Caribbean with 19 (13.5%), and East Asia with 18 (12.8%). We can also differentiate between Europe with 15 (10.6%) episodes and the Former Soviet Union with eight (5.7%) episodes, although Europe and FSU together produced more events than Latin America or East Asia.<sup>5</sup>

[Figure 2 about here.]

---

<sup>4</sup> The most recent update to the Task Force's list, which added internal wars in Guinea (2001-2002), Saudi Arabia (2004-), Thailand (2004-), and Yemen (2004-), suggest that this period of relative quiescence may not last.

<sup>5</sup> Due to statutory restrictions on the Task Force's U.S. government sponsors, the United States is excluded from our data and analysis.

To compile candidate independent variables, the Task Force invited experts in several distinct areas—economics and trade, politics and state conflict, demographic and social issues, and environment and natural resources—to suggest variables that were both likely to affect vulnerability to political stability and for which there was reasonable global data. Unfortunately, these conditions were difficult to meet, and often the data that was most desirable from the viewpoint of its impact on stability—such as inequality, unemployment, or urban pollution—simply were not available for periods prior to the 1970s, or for most countries of the developing world. Nevertheless, we compiled an initial list of 75 independent variables drawn from across these areas, including rates of growth, trade data, demographic and ethnic data, political characteristics, geographic characteristics, and many others.

Over the last decade, the Task Force has accumulated data for more than 1,000 variables—political, economic, demographic, geopolitical, social, and environmental—including items such as the longevity and character of leadership, density of roads, trade openness, income, population size and characteristics, regime type, and on and on. These variables have been repeatedly examined for their correlation and analytic power in a host of multivariate models. Obviously, we cannot list all of our negative results here. However, suffice it to say that we have tested literally hundreds of independent variables (and, in many instances, their interactions and rates of change) and found that they add little or no value to the models presented below.

### *Data Analysis Methods*

The Political Instability Task Force has employed a wide range of methodological techniques to identify factors associated with the risk of political instability, including logistic regression, neural networks, Markov processes, and event history models. The work of the Task

Force has been guided throughout by two distinct but related goals: 1) to identify factors consistently associated with the onset of political instability, and 2) to develop models that can accurately assess the relative vulnerability of countries worldwide to the onset of instability. Our choice of methods was driven by these goals.

The analytic problem we faced involved studying extremely rare events; on average, out of roughly 150 countries in the world with populations larger than 500,000, there were only two or three new instability onset events in any given year. Alternatively, one could note that out of approximately 7,500 country-years in our time-span of observation, only 141 (1.88%) of those included our event of interest, the onset of instability in a previously stable country.

Bearing this in mind, our analysis has relied most heavily on the case-control method, a technique common in epidemiological analysis of risk factors for diseases that occur rarely and in diverse populations, such as cancer. According to this technique, subjects who are victims of a given disease are matched with a randomly drawn “control” set of disease-free individuals, and the two populations are then examined together to identify factors consistently associated with a higher risk of the illness (Rothman 1986; for suggestions of its applications in political science, see King and Zeng 2001a).

In similar fashion, the Task Force matched its list of historical episodes of instability onset by country-year with several control sets of country-years selected at random from among countries that were free of any instability events for at least a seven-year period – two years prior to and four years following the year of that country-year observation. The instability cases and matched control sets were then subjected to a conditional logistic regression analysis to identify factors consistently associated with a higher risk of instability onset. To ensure that observations on countries experiencing instability onset were not contaminated by changes associated with the

instability itself, and to enhance the utility of its models for forecasting, the cases of instability onset were profiled using data drawn from *two years prior* to the onset of instability, and the data for the matched control cases was similarly drawn from two years prior to the matching year. Thus for example, since Benin experienced an overthrow of democracy in 1963, data was drawn on conditions in that country in 1961. Three other countries in sub-Saharan Africa were then drawn at random from among those that were free of instability from 1961 through 1967, and data on conditions in those countries in 1961 was obtained. After following this procedure for all cases of instability, the pooled data was subjected to conditional logistic analysis. Moreover, the process of randomly drawing control cases and performing the analysis was performed two additional times to test for consistency of results across the random control sets.<sup>6</sup>

Since controls were matched by year and region, the distribution of control cases and instability cases across time was the same.<sup>7</sup> This design also ensured that the control set had the same proportion of cases from Latin America, East and South Asia, Europe, sub-Saharan Africa, and the North Africa/Middle East region as the instability set.<sup>8</sup>

---

<sup>6</sup> The Task Force also looked at data from one year before the onset of crisis events, and five years before. Identification of crisis events from data one year before onset was only slightly higher (3% more cases accurately identified). Identification from data five years prior was somewhat worse (10% fewer cases accurately identified) as this of course misses changes in data in the four years prior to the crisis. Still, the same causal pattern emerges with all three lag specifications. Also, it is important to note that when we say we look at data *two years prior* to a crisis onset, we do not mean only using data from that specific year. Rather, we mean using all information available up to two years prior to the crisis, such as for example changes in the rate of inflation or economic growth over the previous three to five years.

<sup>7</sup> The same country can appear in both the control sets and the roster of instability cases, and in both categories more than once, if it has experienced several separate instability events, or long stretches of stability. To ensure that subsequent episodes of instability were indeed distinct events and not merely the continuation of a prior crisis, second (or third) events in a given country had to be preceded by at least five stable years. In addition, to ensure that control cases reflected conditions in truly stable states, any country-year used as a source of data for the control set had to be preceded by at least two instability-free years and followed by at least four instability-free years. This ensured that no countries were chosen as controls that had either just emerged from, or were about to descend into, a crisis.

<sup>8</sup> For matching purposes, the FSU states were grouped with Europe, as was Canada (the alternative would be to group Canada with Latin America; but in terms of heritage and socio-economic conditions, it seemed more appropriate to group Canada with Europe. Australia and New Zealand, however, remained grouped with East and South Asia.)

Because some countries in which conflicts were observed were newly emerging countries, and the origins of their crises lay in colonial conditions prior to their independence, we found we could not reliably connect such conflicts to conditions two years prior to event onset. Even in cases where instability clearly began after formal independence, the country-year structure of most social science data sets does not allow us to reliably observe conditions prior to the onset of many crises in newly independent countries. Thus we only included in our samples for model estimation those cases of instability onset where it was possible to measure conditions in that same independent country two years prior to the onset of conflict.<sup>9</sup> Similarly, because we did not collect data for years prior to 1955, we did not have data regarding conditions prior to onset for conflicts that were either ongoing or began just after our observation period. So events that were evident after 1955, but whose onset occurred in 1956 or earlier, were excluded from our analysis. We thus excluded a total of 24 of our consolidated episodes on the grounds that we could not obtain data that was clearly antecedent to the event onset, either because the country was not independent or because the episode of instability began before our period of observation.<sup>10</sup>

In addition, we should note that for many nations and time periods, we must rely on estimated, smoothed, or interpolated data. The Task Force has invested heavily in screening data, cross-checking data from various sources, and subjecting data to expert review, in order to obtain the most complete and reliable country-year data that it is possible to obtain.

Acknowledging these issues, we have tried to identify models that are parsimonious, robust, and highly significant.

---

<sup>9</sup> A sensitivity analysis using samples including and excluding these new-country cases suggests that this decision has little effect on the mix of variables and magnitude of coefficients in our models.

<sup>10</sup> Regrettably, these exclusions include a number of cases of great historical interest, including the Cuban Revolution (start date 1956), and the Algerian Revolution (colonial event).

### **3. EARLY SURPRISES**

The Task Force has tested literally hundreds of variables to see if they have any association with vulnerability to political instability. Because the onset of instability is a complex process with diverse causal pathways, we originally expected that no simple model would have much success in identifying the factors associated with the onset of such crises. Rather, we expected that we would need to develop widely different models to identify the factors associated with instability onset for different regions, and for different kinds of events. Moreover, we assumed these models would have to be complex, relying on many independent variables, reflecting both their levels and rates of change, and their interaction in varied combinations.

It was to our considerable surprise that these expectations turned out to be wrong. The Task Force's analysis has identified some differences across regions and types of instability, but these differences have generally proved minor. Even more surprising, we have found that relatively simple models, involving just a handful of variables and no complex interactions, accurately classify 80% or more of the instability onsets and stable countries in the historical data. This is perhaps the most significant general finding of the Task Force's research: relatively simple models can identify the factors associated with a broad range of political violence and instability events around the world.

This result is surprising, in part, because country and area experts have plausibly and often convincingly identified a host of factors as key drivers of instability in specific historical cases—factors such as sudden jumps in inflation, excessive government debts, poor economic performance, excessive military spending, or ethnic heterogeneity. None of these factors, however, seems to underlie political stability or instability across the board. In fact, we believe

the origins of political crises can best be understood by turning the problem on its head, asking what factors are necessary for a state to sustain *stability* despite the various problems—economic, political, social—it might encounter (Goldstone 2001). The parsimony and generality of the Task Force models seems best explained by assuming they are identifying factors associated with stability or resilience; absent those factors a host of particular incidents or conditions can trigger violent political crises. One might take this as a generalization of Tolstoy’s homily about families to nations: All stable nations resemble one another; each unstable nation is unstable in its own way.<sup>11</sup>

The Task Force initially used two main analytic methods: stepwise regression (in which variables were added sequentially to base models to see if they added any net explanatory power in the logistic regression model) and neural network analysis (in which a cluster of independent variables was used as the basis for training numerical function algorithms over multiple iterations, to find the best functional form for predicting instability onsets). We had expected that the stepwise regression would merely help identify promising independent variables, but that the neural network analysis (which can develop much more complex non-linear and interactive model specifications) would be the prime method for building useful models of actual instability conditions. During the first three years of our project, we therefore invested heavily in testing a large number of neural network models—a computing-intensive task at the time—with diverse clusters of independent variables, certain that this would yield our main payoff.

We were wrong. Despite our best efforts (and considerable expense!), the neural networks never yielded better predictions of instability onsets than our simpler regression models. To give but one example, we found early on that lower-income countries showed a

---

<sup>11</sup> The original is from *Anna Karenina*: “All happy families resemble one another; each unhappy family is unhappy in its own way.”

higher risk of instability. This is one of the best-established results in the conflict literature, of course, so we sought to improve on it. We not only tried substituting such other standard of living indicators as infant mortality, calories consumed per capita, nutritional status, percent living in poverty, life expectancy, and others for real per capita income, we also tried using a basket of quality-of-life indicators in a neural model that we hoped would provide a far more sophisticated and accurate specification of how income affected instability. Yet no model, no matter how complex, performed significantly better than models that simply used infant mortality (logged and normalized) as a single indicator of standard of living.

While we then settled on conditional logistic regression as our preferred method of data analysis, we continued to test models with non-linear and interactive specifications. In some cases, these analyses bore fruit. For example, in testing for the impact of armed conflict in neighboring countries on instability onset, we found a large quadratic effect, and further investigation has allowed us to reduce this to a threshold effect.<sup>12</sup> In most cases, however, expected non-linearities and interactions could not be found. For example, many authors have argued that having an exceptionally large fraction of youth under age 30 in the population (a ‘youth bulge’) increase the odds of political instability. And indeed, in many of our early model runs, ‘youth bulge’ was a significant factor raising the odds of instability onset. However, when we better specified our measure of regime characteristics (more on that below), the impact of youth bulge then became insignificant in multivariate models that also included our best measures of regime type. To try to ‘bring back’ this factor, we tested models that specified

---

<sup>12</sup> Our latest global model shows that countries with four or more neighboring countries experiencing armed civil or ethnic conflict are several times as likely to suffer a crisis onset as those with three or fewer.

extreme and non-linear effects for youth bulge, and interactions between youth bulge and regime type. None gave any significant results for youth-bulge or related variables.<sup>13</sup>

Much the same was true for a large number of other independent variables that we were certain would have substantial impact—urbanization, short-term rates of economic growth (one to five years), government debt, population size, inflation rates, etc. Again, the ontology of conflict onset appears to be as we stated above. Certain general conditions, which are simple and few and rest mainly on regime characteristics, largely determine the vulnerability or resilience of a regime. Once these vulnerability or resilience factors are well-specified in a model, additional variables – which may have had a causal impact in specific countries at certain times – do *not* show a general and consistent cross-national impact, and thus lack statistical significance. We now tend to believe that inflation, over-urbanization, short-term economic reversals, youth bulges and other such factors only act to reveal the level of pre-existing vulnerability or resilience by actualizing ‘potential’ instability that is already present and largely determined by other factors. If there are strong simple (e.g. univariate) correlations between such factors and instability, it seems likely that this is because countries that are vulnerable or lack resilience are, in effect, poorly governed. And in countries that are poorly governed, it is more likely that there will arise bouts of high inflation, or sharp economic reversals, or that people will rely more on family support (and hence high birth rates and large youth bulges, or that migration to cities will reach dangerous or difficult levels. In other words, the burden of a decade of difficult work has begun to convince us that the functional indicators of coming political instability are simple rather than complex, and center on the characteristics of regimes and their resilience to

---

<sup>13</sup> There was one exception: for the onset of ethnic wars, we find youth bulge has re-emerged as a significant factor. But it remains insignificant when included in the global or sub-Saharan Africa models discussed in this paper, as well as separate models of revolutionary war and internal war more generally.

challenges, rather than on any detailed or elaborate listing of such challenges and their intermediate effects.

We said that this realization was the fruit of many years of slow progress and difficult challenges. These challenges arose, in part, because our task was somewhat different from that which has framed most cross-national research in political science. In most such research, the goal has been to identify statistically significant causal factors, or, in practice, to demonstrate independent variables that have a statistically significant impact across countries and across time. The explanatory power of the models in which such significant factors appeared was not of great consequence. It was presumed that the effects of variables that could not be measured, or of individual country-level effects, or of random errors due to happenstance events or unsystematic measurement errors, would naturally reduce model fit to modest levels. It was therefore enough to show that a particular independent variable was significant and robust to test a theory regarding that variable, even if the overall model had only modest success in explaining overall variation.

For our purposes, however, hypothesis testing would not be enough. Instead, our government sponsors wanted a model that, when applied to current data, would accurately distinguish countries that were relatively vulnerable to instability from those that were not. In other words, leaving half the variance unexplained would not be acceptable.

Our initial models barely passed this test. After our first year of work with both neural network and regression models, we found that no matter how rich, complex, or theoretically well-grounded our models, they were no more than two-thirds accurate in classifying countries as 'likely' or 'unlikely' to experience an instability onset two years after the date of data observations. (By two-thirds accurate, we mean equalizing Type I and Type II errors so that we

correctly classified two-thirds of the countries that experienced instability as likely to do so, and correctly classified two-thirds of the countries that did not experience instability as unlikely.) This was a substantial improvement over the 50-50 guess that a coin flip might offer on any given country, but it seemed hardly a worthwhile improvement on what was expected of a trained country analyst using his or her judgment, experience, and qualitative sources.

Even a second year of work barely pushed our accuracy much closer to the 70% mark. Rather, we spent most of the next two years seeing if we could increase the accuracy of our model (which started as a simply global model pooling all countries and all kinds of instability) by skilful disaggregation. That is, we thought that perhaps comparing apples with apples—looking only at ethnic wars, or certain regions—would produce stronger results. We also engaged in extensive data-cleaning and acquisition to improve our materials. However, we found (with consistency that was both daunting and enticing) that regardless of how we varied our models or narrowed our focus, the accuracy remained ‘locked’ in the range of 65 to 70 percent. And, even more intriguing and frustrating, instead of models focusing on specific regions or different kinds of conflict allowing us to profitably introduce new variables, we found that the same core set of independent variables tended to consistently dominate our results.

### **3. HOMING IN ON REGIME CHARACTERISTICS**

We finally were able to make greater progress by following a suggestion of Gary King and Langche Zeng (2001b). In critiquing our early work, they nonetheless observed how difficult it was for them, despite their best efforts, to improve upon the explanatory power of our models, and noted that only variables regarding regime quality seemed to have any real impact. This

confirmed our own interpretation of our results, and led us to refocus our efforts on improving upon the most common ways to present regime type and quality in comparative analysis.

Political scientists often rely on the Polity IV dataset, developed and maintained by Monty Marshall, Keith Jagers, and Ted Gurr to identify countries as democracies or autocracies (2003). Polity characterizes regimes along three dimensions: the degree of openness and electoral competitiveness in the recruitment of the chief executive (Executive Recruitment); the degree of institutional constraints on the authority of that chief executive (Executive Constraints); and the degree to which political competition is unrestricted, institutionalized, and cooperative rather than repressed or factionalized (Political Competition).<sup>14</sup> The variables used to measure these dimensions and their components are frequently summarized in a 21-point scale ranging from fully autocratic (-10) to fully democratic (+10). In recent years, a number of analysis have suggested that risks of conflict and instability are highest not among democracies or autocracies, but in the intermediate regions of the Polity scale, among regimes that have been variously labeled “partial democracies,” “anocracies” or “illiberal democracies.” Regimes in this “gray zone” (Carothers 2002) show some democratic characteristics, such as elections or competitive parties, but these are mixed with autocratic characteristics, such as an absence of constraints on executive authority or limits on the political participation of certain groups. Snyder and Mansfield (1995) found that such regimes often relied on bellicose nationalism to gain popular support and were thus more likely to become embroiled in international wars, while Zakaria (2003) warned that populist, elected regimes that fail to respect civil liberties pose a significant and lasting threat to freedom.

---

<sup>14</sup> Competition is ‘factionalized’ when the major political parties are not open to all and focused on particular policies, but identify themselves with particular ethnic, religious, or regional communities and pursue only goals for advancing that community.

In line with others' research on partial or illiberal democracy (or "anocracies"), we found that such regimes were indeed exceptionally prone to all types of instability. In the years from 1955 to 2001, only 14.6% of all country-years represented cases of partial democracy, yet more than one-third of all instability onsets (33.9%) during that period occurred in partial democratic regimes (Polity scores 0-7). Nonetheless, even incorporating this three-fold regime type-classification was not sufficient to improve the forecasting accuracy of our work. Models that included this division of regime types, plus income, plus other factors still failed to give much more than 70% accuracy in classifying historical cases of instability across the globe (Goldstone et al. 2000).

This behavior of partial democracies formed a significant clue to the conditions of instability onset, but it was only a beginning. After all, only one-third of instability onsets occurred in countries with Polity scores of 0-7; two-thirds still occurred in democracies and autocracies. Thus it was clear that simply locating a regime on the linear Polity IV scale did not fully capture the key characteristics making for vulnerability or resilience. In addition, critics of the Polity scale had noted that the linear -10 to +10 scale should not be treated as a simple cardinal, or even ordinal measure, due in no small part to the fact that this index combines a number of underlying scales that have categorical, rather than ordinal, features (Gleditsch and Ward 1997, Vreeland 2003).

In the most recent phase of our analysis, we therefore resolved to set aside the Polity scale and rely instead the underlying component variables. Guided by a combination of inductive analysis, deductive reasoning, and our sponsor's interest in democratization, we discovered that a categorical classification of regimes based on a two-dimensional scheme suggested by Dahl's (1971) conceptualization of polyarchy. Specifically, we now use Polity's

measures of executive recruitment (EXREC) and the competitiveness of political participation (PARCOMP, one of two component variables used to construct the broader measure of Political Competition, POLCOMP) to characterize regimes in ways that have proven to be theoretically richer and statistically more powerful.<sup>15</sup>

Figure 3 illustrates the four-part categorization that resulted. The dark orange cells represent *full autocracies*—regimes that combine an absence of effective contestation with repressed or suppressed participation (e.g., North Korea, China, Cuba, Saudi Arabia, and Sudan). In the opposite corner are *full democracies*, which combine fully free and fair elections with open and well-institutionalized participation (e.g., all of Western Europe, Costa Rica, and Mongolia). Two forms of “hybrid” regimes occupy the conceptual space in between those illiberal and liberal extremes. The light blue cells represent *partial democracies*—regimes in which top government officials are chosen through competitive elections and political participation is not effectively controlled by those officials, but that still fall short of full democracy on one or the other of those dimensions (e.g., Albania, Brazil, Ghana, and Turkey). On the opposite side of a democracy/autocracy divide are the cases we label *partial autocracies* (light orange cells), which either allow hold competitive elections or allow substantial political participation outside the government’s control, but not both (e.g., Cambodia, Jordan, Togo, and Yemen).

[Figure 3 about here.]

Our research shows that vulnerability to political instability tracks these broad categorizations in now-familiar ways. Unsurprisingly, we find that the risk of instability is lowest in full autocracies and full democracies, other things being equal. By contrast, hybrid

---

<sup>15</sup> See Ulfelder and Lustik (2005) for models that treat movement back and forth between the democratic and autocratic sides of this ledger—in other words, transitions to and from democracy—as the dependent variable.

regimes—partial autocracies and partial democracies—are substantially more vulnerable to crisis than their more “coherent” counterparts.

The real surprise came from the predictive power associated with the addition of a single element of this scheme. By distinguishing partial democracies according to the presence or absence of *factionalism* in political participation, we found we could substantially improve the fit of our models. As measured by Polity, factionalism occurs when political competition is dominated by ethnic or other parochial groups that regularly compete for political influence in order to promote particularist agendas and favor group members to the detriment of common, secular, or cross-cutting agendas. Factionalism typically occurs in new democracies, where party systems are weak and political participation is more likely to flow through networks rooted in traditional identities or other parochial interests, but it can emerge in established democracies as well. Factionalism is also the most common form of participation in autocracies that do not repress political competition, either by design or incapacity. Recent examples include Bolivia and Ecuador, where the mobilization of indigenous movements has produced stand-offs over the appropriate uses of mineral wealth; Venezuela, where polarization along class lines has produced mass protest and a failed coup in recent years; and Bangladesh, where personalist rivalries have dominated national politics since a return to democracy in 1991.

The link between factionalism and instability may sound unsurprising, so much so that one might wonder whether factionalism itself is simply part and parcel of the instability that ensues. Our analysis suggests that it is not. Only about half of countries coded with factionalism develop instability in our data; thus knowing a country is factional in its political competition still gives you no better than a 50-50 guess about its stability status two years hence. It is only when factionalism is combined with a relatively high level of open competition for office

(executive recruitment scores 6-8 on the 8-point scale) that extremely high vulnerability to instability results, and even then, factionalism does not inevitably lead to instability.<sup>16</sup>

Models that use our four-part regime categorization and further distinguish among partial democracies according to the presence or absence of factionalism have consistently produced postdictive accuracy rates of 80% or better. In short, by far the worst situation in terms of risks of instability were for a political landscape that combined deeply polarized or factionalized competition with open contestation. The combination of a winner-take-all, parochial approach to politics with opportunities to compete for control of central state authority represents a power keg for political crisis.<sup>17</sup> It is perhaps ironic that policies aimed at spreading democracy tend to focus on the first two elements—ensuring open and competitive elections and limiting executive authority—when our research suggests that *it is how these elements are combined with the character of political participation that substantially determines how resistant regimes are to political instability.*

## **5. OTHER RISK FACTORS: ECONOMICS, DEMOGRAPHY OR POLITICS?**

In the voluminous literature on internal instability, numerous hypotheses regarding the causes of various kinds of instability have been put forward. It has been argued that rapid economic growth inoculates regimes against pressures for change, and that rapid economic growth triggers instability. Both arguments have also been made regarding a lack of economic growth, that is,

---

<sup>16</sup> This point should also be evident from the real-world examples cited above, none of which has yet experienced an event that qualifies as political instability according to our definitions.

<sup>17</sup> The framers of the American constitution were perhaps most deeply concerned about this characteristic of a political system when developing that document. Their design for Congress—with a proportionately represented House and a regionally, not proportionally represented Senate—was developed mainly to curb factionalism by making broad coalitions necessary to pass legislation, rather than to conform to the ideal of equal representation for all. In addition, the Founders were deeply concerned with institutionalizing political activity, calling for exceptionally frequent elections (every two years for the House, every four years for President) and rigorously guarding the rights of assembly and free speech. Of course, even that design did not inoculate the system against factionalism, as is evident from the American Civil War.

economic stagnation has been presented by some authors as a source of stability, but by others as a source of instability. Short-term economic crises or major depressions, however, are generally assumed to increase the odds political instability. Demographic factors—including a country's population size, its population density, its age distribution (the 'youth bulge'), its level or rate of urbanization, and its ethnic composition (e.g. degree of fractionalization, or presence of certain-sized minorities)—have also been alleged as drivers of instability. Physical characteristics of a country – the fraction of its area covered by mountains or forest, the extent of arable land per population (or per population in agriculture) – have further been alleged to be relevant to stability. And of course a host of political factors, such as regime type, government spending, government debt, and corruption, to name only a few, are often argued to be crucial to stability.

With so many promising hypothesized causes of instability and some very clear-cut and opposing hypotheses (such as regarding economic growth) to test, we expected to find strong results regarding most of these factors. The only strong and consistent finding that we achieved regarding most of these factors, however, is a negative one. According to our research, most economic, demographic, geographic, and political variables do *not* have consistent and statistically significant effects on the risk of instability onset.

What did matter? The results of our global analysis of instability onset—based on 117 onsets of instability and three randomly drawn control sets, each with 351 stability cases, for a total N of 1,170—are shown in Table 1. As we have said, to our surprise, a quite simple model without interaction terms and with few nonlinearities is consistently over 80% accurate in distinguishing countries that experienced instability two years hence from those that remained stable.

The model essentially has only four independent variables: regime type, infant mortality (logged and normalized to the global mean in the year of observation), a “bad neighborhood” indicator flagging cases with four or more bordering states embroiled in armed civil or ethnic conflict, and the presence or absence of state-led discrimination. All of these variables are statistically significant at the  $p < .05$  level (and usually  $<.01$ ); all have a substantial impact on the odds of instability onset (odds ratios of at least 1.9, and more commonly 3 or even higher); and all have consistent effects across multiple random samples. (After studying literally thousands of alternative models, we can say that achieving all these qualities is no mean feat). By contrast, when one adds any of the above-named economic, demographic, geographic, or political variables to these models, the results for those variables are non-significant, inconsistent, do little to improve model fit, or all three.

In short, the combination of accuracy, efficiency, and simplicity of this model is not what we expected or aimed at. Rather, we were driven to these results by our data and design. Put another way, the model is simple not because we were unimaginative, did not work long enough, or resisted complications. Quite the reverse: the model is simple because it has resisted years of efforts to make it more complex.

As described in the preceding section, the model tells us that the most stable regimes are full autocracies. Even full democracies, other things equal, have odds of instability three to five times higher. The same is true of partial democracies without factionalism (odds ratio 5-6), while partial autocracies are a bit more unstable (odds ratio for instability 6-9). However, the most striking results are for partial democracies with factionalism. This regime type shows odds ratios for instability ranging from 36 to 60 across the control sample sets, roughly an order of magnitude larger than the other regime types.

While regime type may appear to dominate our results, the effects of other variables are not small. In particular, the odds of instability in countries at the 75<sup>th</sup> percentile in global infant mortality are four to seven times higher than in countries at the 25<sup>th</sup> percentile. Although the odds of instability are not significantly affected by conflict in one, two, or even three neighboring countries, the odds of instability jump by a factor of 14 to 22 when a country is surrounded by four or more neighbors with their own internal conflicts. Finally, countries with state-led discrimination—indicated by a score of ‘4’ on the index of economic or political discrimination for at least one communal group tracked by the Minorities at Risk (MAR) Project—are more than twice as likely to suffer an outbreak of instability as countries without such discrimination.<sup>18</sup> In short, the variables that remain in our model have large, not incremental effects.

## **6. ARE THINGS DIFFERENT IN AFRICA?**

Even though our global model takes region and economic development into account, it might be argued that we are still missing something important. That is, the global model could simply be picking up on some hidden ways in which rich and democratic countries in Europe and North America are far more stable than poorer and less democratic countries, for example in sub-Saharan Africa. Thus the global model might produce reasonable inferences about the stability of, say, Canada compared to Ethiopia; but it might be of little value in explaining, or guiding us in ameliorating, political violence among poorer countries themselves. In short, our global results

---

<sup>18</sup> We were surprised to find that state-led discrimination had such a robust effect in our global model, even when we did not take the size of the aggrieved group into account. In fact, we experimented with other MAR-based measures that took advantage of information about group size and territorial concentration or focused on political rather than economic discrimination, but none of these alternatives proved as consistently powerful as the simple yes/no version we adopted. This variable is probably picking up in large part on the risk of ethnic war, as suggested by the results we obtain when we focus exclusively on that type of instability; see Gurr, Woodward, and Marshall (2005).

might be obtaining its classificatory power by tackling the relatively easy chore of distinguishing apples from oranges.

Fortunately, it is easy to test this notion; we simply need to repeat the analytic exercise by focusing only on countries *within* a given region, and performing the case-control analysis to see how well it distinguishes between cases of stability and instability. The region with the most episodes of instability since 1955 was sub-Saharan Africa. Fortunately, despite the high level of instability in this region, there are also many, many periods in which particular countries remained free of instability for periods of seven years or more. There is thus ample scope for developing a case-control model that asks how countries within sub-Saharan Africa that are on the verge of political instability differ from *other countries in the same year within sub-Saharan Africa* that are experiencing stable periods. In a sense, this is what we really want to know for a forecasting model of instability—not why Cote d’Ivoire in 2000 was more vulnerable to instability at the time than Canada, France, or Japan, but why Cote d’Ivoire in 2000 was more vulnerable than Senegal, South Africa, or Mozambique.

Following this logic, the Task Force set out to develop a separate model to identify the correlates of near-term instability from 1955 to 2003 within sub-Saharan Africa. During this period, there were 49 consolidated instability episodes, almost half of the total in the global model. These 49 episodes included 47 instances of adverse regime change, 28 instances of ethnic war, 19 instances of revolutionary war, and 16 genocides or politicides. These proportions are almost identical to those in the global data; the main difference is that more of the global events included only one or two kinds of instability, while the African cases almost all were complex events that included several overlapping or coincident kinds of instability. However, because we had to exclude from analysis those instability episodes that began before

or in the first two year of a new country's independence, we could only utilize 39 consolidated instability episodes in our analysis.

In pursuing this analysis, the Task Force did not simply start with the global model and see if it applied to Africa. Rather, we undertook a separate, parallel exercise to see if we could develop a better explanation of instability in Africa using factors that theorists had suggested were germane to that region. We tested many configurations of variables to capture ethnic and religious diversity and proportions, colonial history, environmental conditions, dependence on mineral or agricultural resources, urbanization, age structure, leadership characteristics, and various interactions and non-linear forms of these variables. We also examined a wide range of trade and financial data, include trade partnerships, openness to international trade, and corruption indices.<sup>19</sup>

Table 2 displays the odds ratios derived from this model, using only cases of instability and control sets drawn from within this region. Because there are far fewer cases, we accepted a lower threshold of statistical significance ( $p < 0.10$  instead of  $.05$ ). What is striking nevertheless is that, even within this potentially exceptional part of the world, the same factors that dominated the global model stand out, and do so even more strongly.

[Table 2 about here.]

To be sure, the model differs in some details. Because most African countries have high levels of infant mortality, this factor is no longer statistically significant in differentiating among stable and unstable cases. If we take infant mortality as an index of economic development, then while differences between rich and poor countries were a factor in the global model of instability, the more modest differences in development within sub-Saharan Africa apparently

---

<sup>19</sup> As was true of our global analysis, our ability to test hypotheses related to many of these factors was impaired by the scarcity or poor quality of relevant data.

play no significant role in shifting the relative odds of instability in that region. Instead, several other variables appear that were not significant in the global model.

First is trade openness (the total value of imports plus exports divided by GDP). Countries with lower trade openness (at the 25<sup>th</sup> percentile in the global distribution) had roughly two to three times higher odds of near-term instability than countries with higher openness to trade (those at the 75<sup>th</sup> percentile). State-led discrimination reappears, but with a larger impact. The odds ratio between states with and without major economic or political discrimination ranges from three to forty across the three control sets. The large range suggests the presence of outliers in control set B2, but the variable remains statistically significant across all three control sets. Colonial heritage makes a notable difference in stability, with countries that were not formerly French colonies having odds of instability roughly four to thirteen times greater than former French possessions.<sup>20</sup>

Two other factors proved significant as well: leaders' years in office and a country's religious composition. Dominant individual leaders, including many 'presidents for life,' have played a major role in the durability of African regimes since World War II. We thus expected that a leader who had established his hold (and in Africa, it was only "his" hold) on office was likely to provide a more stable regime than leaders who were either new to office, or aging leaders who were more likely to vacate office soon. We tested this argument with a categorical version of a variable that counts a chief executive's cumulative years in office and found that new leaders (less than five years in office) and "entrenched" leaders (those more than fourteen years in office) indeed faced higher odds of instability than their peers who had been in office

---

<sup>20</sup> This most likely reflects the fact that France has been far more involved than other former colonial powers in maintaining economic and political order in its prior domains, including supporting the West African Franc, providing generous support to post-colonial rulers, and even intervening militarily to maintain unpopular rulers and head off rebellions.

from 5-14 years. The odds of near-term instability for short-term leaders were two to fifteen times higher, and those for entrenched leaders were six to twelve times higher.

Finally, we did find one effect of group composition on instability. Countries that had a dominant religious majority (over two-thirds of the population identified with the main religious group) were *more* likely to experience instability than countries in which the population was more evenly divided among different religious groups. Countries with a dominant religious majority faced relative odds of instability five to twelve times greater than those that were more evenly divided.<sup>21</sup>

All of that said, regime type once again showed the strongest effects. With fewer cases and thus smaller samples, we did not find significant differences among all five regime types; instead, it was simply the case that full autocracies were most stable, partial democracies with factionalism were the most unstable, and all other regimes fell in the same middling range of instability. In particular, these other regimes had odds of instability that were six to nine times higher than those of full autocracies. Here, however, the impact of partial democracies with factionalism shoots right off the scale because in our data *every African country that mixed partial democracy with factionalism suffered instability*.<sup>22</sup>

Other factors were still quite important, as odds ratios in the range of six to ten or higher demonstrate. Nonetheless, it is striking that even in this more difficult “apples vs. apples” test – seeking to identify the proximate conditions of instability solely among countries in sub-Saharan

---

<sup>21</sup> In most of the African cases where a single religious group comprised at least 65% of the population, that majority group was Sunni Muslim. In fact, when we swapped the current variable with one indicating that Sunnis comprise at least 65% of the population, the statistical results were virtually identical, both for the individual variable and for the model as a whole. We chose to use the more generic version in our final model because of uncertainty about the causal process giving rise to this correlation.

<sup>22</sup> Because this pattern is so complete, the odds ratios associated with this variable in the sub-Saharan Africa model cannot be compared directly to the others. The only exceptions to this pattern are a handful of cases where an episode of factional democracy was ongoing at year-end 2003, so the possibility remains that they will escape this trap.

Africa – we obtain results very similar to our global model. That is, a relatively simple model (six variables, with no interactions) has remarkable accuracy in distinguishing cases of instability from stable cases. Indeed, the postdictive accuracy of this model is striking: 87 to 92 percent of cases are correctly classified when we choose a cut point that balances model sensitivity and specificity. This is *greater* accuracy than the global model, and a sharp refutation of the notion that the accuracy of the global model rested on the ‘easy’ distinctions between rich and poor nations. Moreover, just as in the global model, the most powerful independent variable by far is regime type, and in particular the type of regime characterized as partial democracy with factionalism. Indeed, in Africa, such a regime type almost invariably leads to near-term instability.

## **7. NEW POLICIES AND OLD WISDOM**

A century and a half ago, the French social analyst Alexis de Tocqueville warned that the most dangerous time for autocracies arose when they first set out on the path to reform. The above results regarding partial autocracies and partial democracies with factionalism would seem to offer resounding proof of Tocqueville’s wisdom. Indeed, as President Jimmy Carter learned to his regret in Iran and Nicaragua, simply urging harsh dictators to loosen up their regime is more likely to unleash violent political crises than to pave the way for a smooth transition to full democracy. If full democracy is to be achieved by means of gradual transition from autocracy, then it seems clear that the path of choice would be through partial democracy *only* if that can be done while avoiding factionalism.

Of course, our focus on factionalism echoes the warnings of James Madison, who argued that factionalism was the greatest threat to a republic. Modern statistical analysis of data two

hundred years later shows how remarkable were his insights into the dynamics of political systems. Factionalism with democracy appears to pose a threat to stability an order of magnitude greater than any other single factor, be it economic, political, or demographic.<sup>23</sup>

It is interesting that full autocracies are the most stable regimes, and indeed a harsh and ruthless dictatorship (such as those led by Saddam Hussein or Kim Jong Il) can prove highly stable. Yet, as dictators age, or as populations grow richer and more anxious to share in political power, autocracies often slip into allowing some political competition, ostensibly to appease regime opponents. Unless steps are truly taken toward strong partial or full democracy, the result is sometimes the opposite of appeasement; autocracies with some political competition create the promise without the reality of sharing power, and this awkward combination can unleash factional divisions and encourage radical responses. Such regimes therefore show a high risk of violent political crises. Indeed, the single most common path by which factionalized democracies arose was as part of a transition from autocracy to partial democracy.

Reflecting on these results, it seems clear that any policies designed to bring stability to world affairs by spreading democracy must look beyond simply identifying the spread of competitive elections with greater stability. Indeed, for some kinds of regimes, the reverse is dramatically the case. Consequently, careful attention should be given to the pathway taken from autocracy to democracy, with an emphasis on avoiding the “high-risk” regime types, if such policies are not to produce unexpected, undesired, and highly dangerous results. In future

---

<sup>23</sup> We also wish to note that, while ethnic and revolutionary wars and violent coups are brutal enough, the world has seen a dreadful eruption of genocides in the last few decades. One of the most striking findings of the Task Force and its compilation of instability events is that genocides do not strike out of the blue; instead, they nearly always occur in the context of an ongoing episode of instability (Harff 2003). From Hitler’s putsch against the Weimar democracy, to the ethnic and revolutionary wars and state collapses that occurred in Rwanda, Bosnia, and Cambodia, political instability has provided the conditions under which racial or other group hatreds have been fanned to genocidal pitch. Thus one way to reduce the risk of future genocides is to reduce the risks of other forms of instability.

research, we hope to shed more light on institutional configurations and other strategies that might serve to reduce the risk of factionalism—and thus instability—in nascent democracies.

While our analysis spotlights patterns of political authority as the critical factor in assessing vulnerability to instability, it also helps to put the impact of other factors in comparative perspective. We think the results are encouraging. Although it is certainly true that increasing levels of economic development and engagement in international trade are associated with substantial effects in reducing the risks of violent crises, dramatic progress in these regards is not a requirement for increasing stability in turbulent regions, even in sub-Saharan Africa, as simply reducing the number of highly vulnerable regimes (e.g. factionalized partial democracies) seems likely to have a greater impact, regardless of economic change.

At the same time, it should be evident that one cannot merely plant the seeds of democracy and assume they will take root and flourish. Even if the basic institutions of strong full democracy are established, care must be taken that chief executives do not steal back excessive power, or that political parties and electoral processes become corrupted or ineffective, or that the electorate and elites become so polarized that political cooperation on shared goals becomes impossible. The risks of such a slide from full to factionalized democracy are not merely a matter of the loss of some democratic character. Instead, they are more realistically viewed as a massive increase in the risks of political catastrophe, including civil war, genocide, and ethnic slaughter.

At the end of the day, it appears that old wisdom is perhaps the best guide to new policies aimed at spreading democracy. For America's founding fathers, it was not a maximal democratic character in terms of direct popular participation in elections and majority rule that they sought to instill, but a system of checks and balances to filter popular electoral choice

through intermediate bodies and constrain elected chief executives, and a system of civil rights and electoral procedures to guarantee frequent but highly institutionalized political competition. For de Tocqueville, the moments most to be feared were those when an autocracy takes significant steps to reform itself, introducing partial and formal democratic procedures, yet without truly opening up access and choice, and creating institutions to assure broad and meaningful political competition. It was precisely such partial reforms that led to the violent overthrow of monarchies in France and Russia, and, more recently, that helped to spark internal wars in places such as Congo-Brazzaville and Cote d'Ivoire.

The key elements of stable democracy are to combine fully open access to political office with fully institutionalized and functional political competition. It is these conditions, not elections as such, and certainly not a mythic and utopian notion of "democracy," that should guide policy-makers seeking greater stability in the world. Where these conditions obtain, even amidst seemingly inhospitable conditions for stability or democracy, as in sub-Saharan Africa, the relative odds of ethnic wars, revolutions, and genocides have been dramatically lower. Where these conditions are absent, even if conditions of economic development and trade seem favorable, the relative odds of near-term instability, *especially for factionalized partial democratic regimes*, loom exceedingly large.

## REFERENCES

- Bates, Robert, Avner Greif, and Smita Singh. 2002. "Organizing Violence." *Journal of Conflict Resolution* 46, 5: 599-628.
- Carothers, Thomas. 2002. "The End of the Transition Paradigm." *Journal of Democracy* 13, 1 (January): 5-21.
- Collier, Paul and Anke Hoeffler. 1998. "On the Economic Causes of Civil War." *Oxford Economic Papers* 50, 4: 563-573.
- Collier, Paul and Anke Hoeffler. 2001. *Greed and Grievance in Civil War*. Oxford: Center for the Study of African Economies.
- Collier, Paul & Anke Hoeffler, 2002. "On the Incidence of Civil War in Africa." *Journal of Conflict Resolution* 46, 1: 13-28.
- Dahl, Robert. 1971. *Polyarchy*. New Haven: Yale University Press.
- Elbadawi, Ibrahim and Nicholas Sambanis. 2003. "Now Much War Will We See? Explaining the Prevalence of Civil War." *Journal of Conflict Resolution* 46, 3 (June): 307-344.
- Elbadawi, Ibrahim and Nicholas Sambanis. 2000. "Why Are There So Many Civil Wars in Africa? Understanding and Preventing Violent Conflict." *Journal of African Economies* 9, 3 (December): 244-69.
- Fearon, James and David Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97, 1: 75-90.
- Gleditsch, Kristian and Michael Ward. 1997. "Double Take: A Reexamination of Democracy and Autocracy in Modern Polities." *Journal of Conflict Resolution* 41: 361-83.
- Goldstone, Jack A. 2001. "Toward a Fourth Generation of Revolutionary Theory," *Annual Review of Political Science* 4:139-187.

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 Ulfelder, and Alan N. Unger. 2000. *State Failure Task Force Report: Phase III Findings*. McLean, VA: Science Applications International Corporation (SAIC).

Gurr, Ted Robert, Mark Woodward, and Monty Marshall. "Forecasting Instability: Are Ethnic Wars and Muslim Countries Different?" Paper presented at the Annual Meeting of the American Political Science Association, Washington, DC, September 1-4, 2005.

Harff, Barbara. 2003. "No Lessons Learned from the Holocaust? Assessing Risks of Genocide and Political Mass Murder since 1955." *American Political Science Review* 97(1): 57-73.

King, Gary and Langche Zeng. 2001a. "Logistic Regression in Rare Events Data." *Political Analysis* 9:137-163.

----- . 2001b. "Improving Forecasts of State Failure." *World Politics* 53:623-58.

Marshall, M, K. Jaggers and T.R. Gurr (2003), *Polity IV Data Set*, on web-site <http://www.cidcm.umd.edu/inscr/polity/index.htm>.

Regan, Patrick and Daniel Norton. "Greed, Grievance, and Mobilization in Civil Wars." *Journal of Conflict Resolution* 49, 3 (June): 319-336.

Rothman, K. J. 1986. *Modern Epidemiology*, Boston: Little Brown.

Sambanis, Nicholas. 2001. "Do Ethnic and Non-Ethnic Civil Wars Have the Same Causes? A Theoretical and Empirical Enquiry (Part I)." *Journal of Conflict Resolution* 45, 3 (June): 259-282.

Snyder, Jack and Edward Mansfield (1995), "Democratization and the Danger of War," *International Security* 20, pp. 5-38.

Ulfelder, Jay and Michael Lustik. 2005. "Modeling Transitions to and from Democracy." Paper presented at the Annual Meeting of the American Political Science Association, Washington, DC.

Vreeland, James. 2003. "A Continuous Schumpeterian Conception of Democracy." Paper prepared for presentation at the 2003 Annual Meeting of the American Political Science Association, Philadelphia, PA, August 28-31.

Zakaria, Fareed. 2003. *The Future of Freedom: Illiberal Democracy at Home and Abroad*. New York: Norton.

**Table 1. Global Model of Vulnerability to Onset of Instability, 1955-2003**

Variable	Greater Risk	Lesser Risk	Control Set 1		Control Set 2		Control Set 3	
			Odds Ratio	P-Value	Odds Ratio	P-Value	Odds Ratio	P-Value
Regime Type*	Full democracy		3.92	0.04	5.05	<0.01	2.67	0.15
	Partial democracy with factionalism		60.84	<0.01	38.56	<0.01	36.91	<0.01
	Partial democracy w/o factionalism	Full autocracy	5.85	<0.01	6.92	<0.01	6.22	<0.01
	Partial autocracy		7.71	<0.01	9.51	<0.01	6.37	<0.01
	In transition (Polity = -88)		10.05	<0.01	11.42	0.01	188E5	0.99
Infant mortality**	Higher	Lower	3.89	<0.01	7.14	<0.01	6.59	<0.01
Four or more bordering states with major civil or ethnic conflict	Yes	No	17.16	<0.01	14.13	<0.01	22.01	<0.01
State-led discrimination	Yes	No	1.89	0.03	2.10	0.01	1.93	0.03
<b>Model summary statistics</b>								
number of problems			117		117		117	
number of controls			351		351		351	
% instability onsets classified correctly			82.1		82.1		80.3	
% controls classified correctly			81.5		81.5		81.8	
cut point			0.23		0.25		0.24	

\* Odds ratios for regime type are relative to full autocracy (POLPACMP < 3 and POLEXREC < 6);  
Code: 1) Full democracy (POLPACMP = 5 and POLEXREC = 8);  
2) Partial democracy with factionalism ( POLPACMP = 3 and POLEXREC > 5);  
3) Partial democracy without factionalism (POLPACMP =0, 4, or 5; POLEXREC > 5; and not full democracy);  
4) Partial autocracy (POLPACMP >= 3 and POLEXREC < 6) or (POLPACMP = (1 or 2) and POLEXREC >= 6).

\*\*Odds ratios are based on risk of country at 75th percentile to country at 25th percentile.

**Table 2. Model of Vulnerability to Onset of Instability in Sub-Saharan Africa, 1955-2003**

Variable	Greater Risk	Lesser Risk	Control Set 1		Control Set 2		Control Set 3	
			Odds Ratio	P-Value	Odds Ratio	P-Value	Odds Ratio	P-Value
Regime Type*	Full democracy, Partial democracy without factionalism, or Partial autocracy	Full autocracy	8.71	0.02	6.67	0.05	9.21	0.03
	Partial democracy with factionalism		863E7	<0.01	61E9	<0.01	71E9	<0.01
Trade Openness**	Lower	Higher	1.84	0.16	3.01	0.08	3.09	0.07
State-Led Discrimination	Yes	No	3.22	0.10	39.97	0.02	9.28	0.02
Colonial Heritage	Not French	French	3.67	0.12	7.18	0.04	12.76	0.02
Leader's Tenure	0-4 years	5-14 years	1.74	0.53	15.53	0.06	4.36	0.14
	>= 15 years		6.57	0.05	12.25	0.07	11.89	0.03
% of Population in Largest Religious Group	>=65%	<65%	8.16	0.03	5.07	0.06	12.57	0.03
<b>Model summary statistics</b>								
number of problems			39		39		39	
number of controls			117		117		117	
% instability onsets classified correctly			87.2		89.7		94.9	
% controls classified correctly			87.2		89.7		92.3	
cut point			0.22		0.29		0.3	

\* Odds ratios for regime type are relative to full autocracy (POLPACMP < 3 and POLEXREC < 6);

Code: 1) Full democracy (POLPACMP = 5 and POLEXREC = 8);

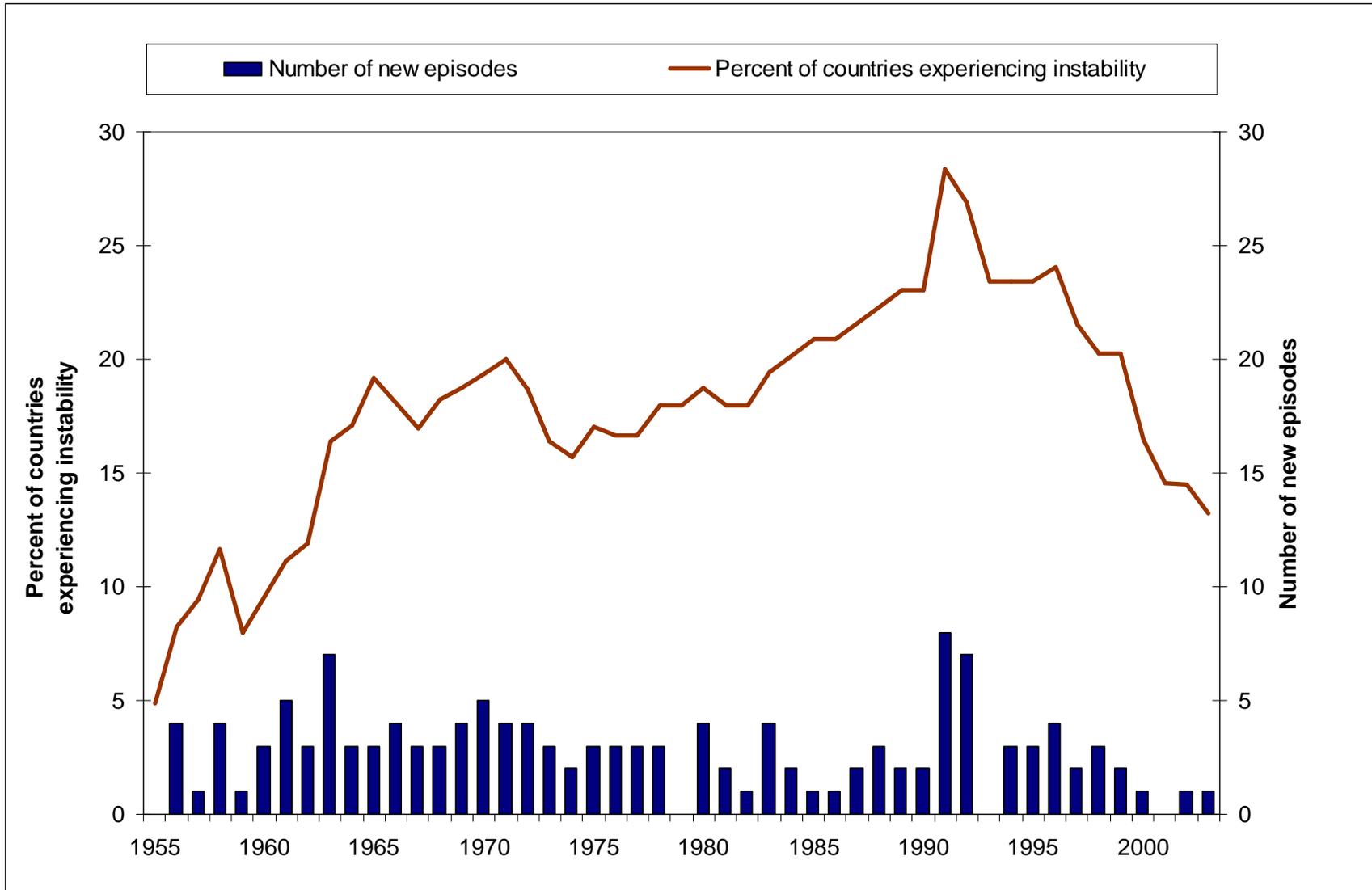
2) Partial democracy with factionalism ( POLPACMP = 3 and POLEXREC > 5);

3) Partial democracy without factionalism (POLPACMP =0, 4, or 5; POLEXREC > 5; and not full democracy);

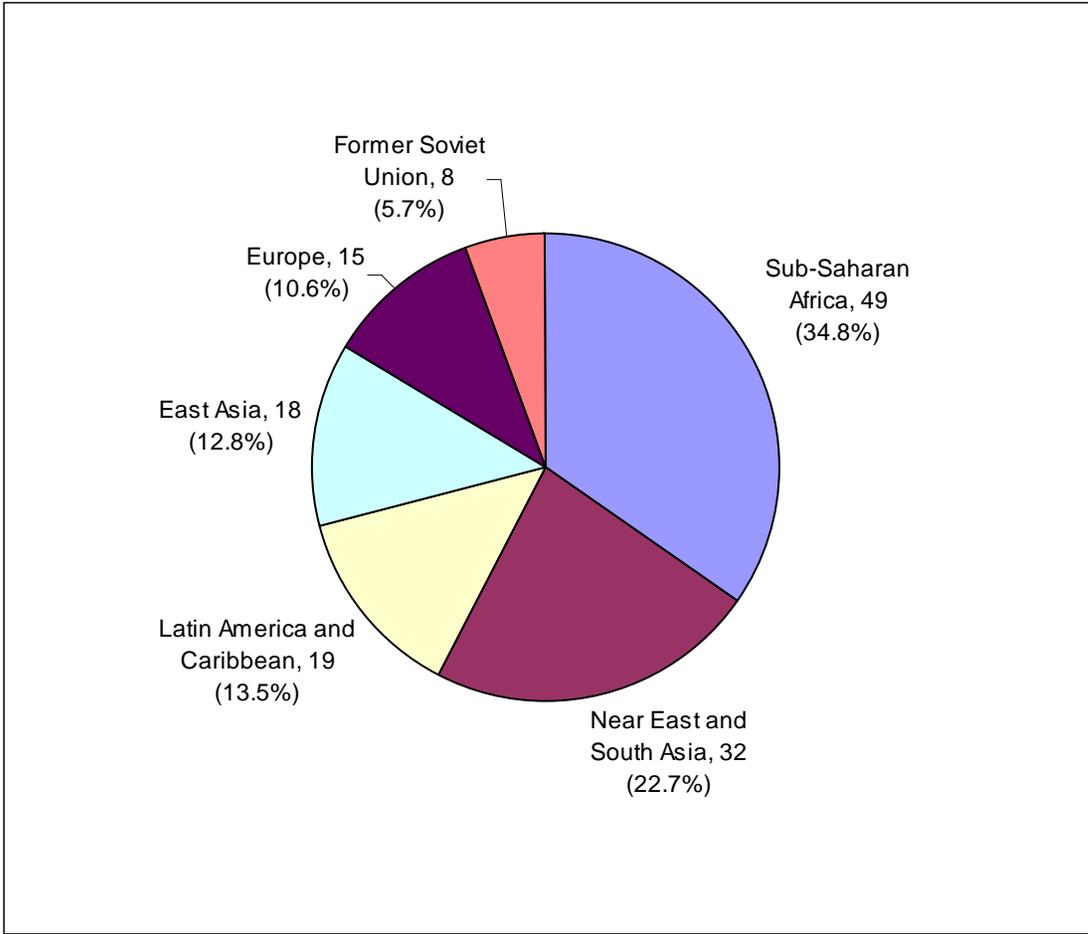
4) Partial autocracy (POLPACMP >= 3 and POLEXREC < 6) or (POLPACMP = (1 or 2) and POLEXREC >= 6).

\*\* Odds ratios are based on risk of country at 25th percentile to country at 75th percentile.

Figure 1. Incidence and Prevalence of Political Instability Worldwide, 1955-2003



**Figure 2. Episodes of Instability by Region, 1955-2003**



**Figure 3. Characterizing Political Regimes for Analysis of Vulnerability to Instability**

	<i>Competitiveness of Political Participation</i>					
<i>Executive Recruitment</i>	Repressed (1)	Suppressed (2)	Unregulated (0)	Factional (3)	Transitional (4)	Competitive (5)
(1) Ascription	Dark Orange	Light Orange	Yellow	Yellow	Yellow	Yellow
(2) Ascription + Designation	Dark Orange	Light Orange	Yellow	Yellow	Yellow	Yellow
(3) Designation	Dark Orange	Light Orange	Yellow	Yellow	Yellow	Yellow
(4) Self-Selection	Dark Orange	Light Orange	Yellow	Yellow	Yellow	Yellow
(5) Transition from Self-Select.	Dark Orange	Light Orange	Yellow	Yellow	Yellow	Yellow
(6) Ascription + Election	Yellow	Yellow	Light Blue	Light Blue	Light Blue	Light Blue
(7) Transitional or Restricted Elec.	Yellow	Yellow	Light Blue	Light Blue	Light Blue	Light Blue
(8) Competitive Election	Yellow	Yellow	Light Blue	Light Blue	Light Blue	Dark Blue

Dark orange = full autocracy; light orange = partial autocracy; light blue = partial democracy; dark blue = full democracy. Based on Executive Recruitment (EXREC) and Competitiveness of Political Participation (PARCOMP) variables in the Polity data set.