Banking Crises, Collective Protest and Rebellion

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Introduction

Developed and developing countries, regardless of geographic region, have experienced economic and political turmoil associated with banking sector failures. Economists often acknowledge the existence of political pressures associated with the containment and solution to banking failures. However, analyses of corrective bank intervention policies routinely discount or downplay the potential political hazards and costs associated with such policies (see Enoch, 2000; Frydl and Quintyn, 2000; Garcia, 1997; Kaufman and Seelig, 2001; Lindgren et al., 1996).[1] Thus, while there exists a growing body of literature studying the economic costs of banking meltdowns, little scholarly attention has been devoted to actually examining the relationship between banking crises and domestic agitation (internal conflict).

We believe that the failure to explore the impact of banking crises on domestic agitation risks excluding a key component in understanding the puzzle of domestic political stability. The financial sector plays the crucial role of dispersing capital to competing domestic interests and the failure of domestic banks has significant repercussions on domestic economic and societal stability (Carstens et al., 2004; Hardy, 1998; Stiglitz, 2003). Furthermore, banks are generally considered more fragile and subject to failure than other firms (Kaufman, 2000; Rennhack, 2000).

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Consequently, owing to the banking sector's fragility and economic importance, some studies of domestic agitation may be seriously flawed due to the problem of misspecification. Furthermore, since financial investments (and by implication the accompanying financial institutional framework) are critical to the globalization process, it is important to understand the relationship between banking crises and domestic agitation. After all, domestic stability—political as well as economic—is widely considered to be a key element in attracting and maintaining foreign investment. Understanding the consequences of the relationship between the two variables can contribute to understanding the tide of the globalization process.

This article attempts to address what we perceive to be a gap in the stability literature by empirically investigating the relationship between banking crises and domestic agitation. We perform our empirical examination on a cross-sectional time-series data set comprising 125 economically developed and developing countries of the world for the years 1981 to 2000. Rather than focusing on a single indicator of domestic agitation, we conduct a dimensional analysis of the concept and ultimately employ two separate indicators: collective protest and rebellion/internal war. This allows us to paint a broad picture of how banking crises affect domestic political stability. We find a country's level of banking crisis to be strongly associated with its level of collective protest activities, but not at all associated with its level of rebellion/internal war activities.

Banking Crises and the Economy

A banking crisis is a situation where a country's banking system has exhausted most of its banking capital and has become profoundly "unsound" (Caprio and Klingebiel, 2003). By and large, the soundness of a banking system is measured by its "ability to withstand adverse events" (Lindgren et al., 1996: 9). More fully:

> A sound banking system may be defined as one in which most banks (those accounting for most of the system's assets and liabilities) are solvent and are likely to remain so. Solvency is reflected in the positive net worth of a bank, as measured by the difference between the assets and liabilities (excluding capital and reserves) in its balance sheet. In other words, the distance between soundness and insolvency can be gauged in terms of capitalization, since net worth is equivalent to capital plus reserves. (Lindgren et al., 1996: 9)

Undercapitalized banks are thought more likely to be prone to political, economic or even nature-induced shocks and, thus, more likely to collapse.

Banks play a unique role in an economy. The financial sector can be described as the "brain of the economy" (Stiglitz, 2003: 113). It is the banking sector that directs scarce capital to competing domestic inter-

Abstract. Both developed and developing countries have experienced turmoil associated with banking sector failures. However, while there exists literature studying the economic costs of banking meltdowns, little scholarly attention has been devoted to examining the relationship between banking crises and domestic agitation (internal conflict). Failing to explore the impact of banking crises on domestic agitation risks excluding a key component in understanding the puzzle of domestic political stability. Examining a dataset of 125 countries for the years 1981 to 2000, we find banking crises to be systematically associated with greater levels of collective protest activities such as riots, anti-government demonstrations and strikes.

Résumé. Les défaillances du secteur bancaire ont causé des perturbations sociales aussi bien dans les pays développés que dans les pays en voie de développement. Toutefois, tandis qu'il existe des recherches sur les coûts économiques des faillites bancaires, les chercheurs se sont peu intéressés au rapport entre crises bancaires et problèmes socio-politiques intérieurs. En négligeant l'effet des crises bancaires sur les troubles sociaux intérieurs, on risque d'exclure un élément clé de l'analyse complexe de la stabilité politique intérieure. L'examen d'un ensemble de données sur 125 nations pour les années 1981 à 2000, nous permet de constater que les crises bancaires sont systématiquement associées à une accélération des activités de protestation collective telles que les émeutes, les manifestations anti-gouvernementales et les grèves.

ests. Without a sound banking sector, macroeconomic stability can be difficult to achieve and, thereby, the country is more prone to economic crisis (*The Economist*, 1997; Eichengreen, 1997; Hardy, 1999).[2] This is particularly true for less developed countries (LDCs), where banks often provide the vast majority of finance through the allocation of the nation's savings to creditworthy individuals and corporations. For most LDCs, alternative financial instruments (stocks and equities) are limited, and therefore indigenous economic actors must rely on domestic banks. Without available financial resources, domestic enterprises cannot access the capital required to maintain, let alone expand, levels of production. Declining levels of income and continued economic hardship are associated with falling production levels (Kaufman, 1996; Stiglitz, 2002). Solvent banks with a steady source of financial capital are essential for the process of late industrialization (Garcia and Lindgren, 1998; Singh and Weisse, 1998).

Regardless of international economic standing, all countries that are exposed to a banking crisis experience negative economic costs. At a minimum, citizens experience some loss of wealth and a disruption to the supply of credit for investment projects (Hardy, 1998). Nonetheless, the depth of any particular crisis is dependent upon several factors, namely the size of the banking sector relative to the total wealth of the economy and the number of sound banks in the system (Enoch, 2000; Frydl and Quintyn, 2000). For example, although the Savings and Loan crisis of the late 1980s eventually cost the United States economy well over $100 billion, the huge US economy, combined with the existence of a large number of healthy banks, was able to absorb the loss without experiencing a significant economic downturn. However, LDCs have been espe-

cially vulnerable to banking crises, owing to the weakness of their domestic economies and the frailness of many financial institutions. For instance, the expense of bailing out the banking sector following the Mexican crisis of 1994–1995 has been estimated at 14.4 per cent of Mexico's GDP for 1997, to be amortized over 30 years during the lifetime of the programmes. Moreover, in 1995 the Mexican economy slowed by 6.2 per cent and inflation climbed to over 52 per cent (Martinez, 1998).[3] Similarly, between 1988 and 1996, 20 African countries experienced banking crises, of which five had to spend more than 10 per cent of their GDP to repair the damage (Valencia, 1997). Thus, banking crises impose economic strains on all countries, but are particularly expensive to those nations already in a fragile economic condition.

Although it is widely accepted that banking crises impose significant costs on affected countries, it is not as easy to identify how or when banking crises occur (see Carstens et al., 2004; Ouattoara, 1998; Schwartz, 1998). There are, however, several key dangers that appear to be prevalent in many banking crises. For one, many banks have established connected lending patterns. That is, bank managers often form relationships with companies and/or government officials that they lend to at very reasonable interest rates. After some time, it becomes extremely difficult to deviate from this established pattern, regardless of the risk of the venture, thus inviting more bad loans to follow (see Lindgren et al., 1996, 1999).[4] For example, South Korea provides an example of the ill effects of "connected" borrowing. South Korean government officials applied considerable pressure on banks to support domestic projects and to funnel loans to large industrial conglomerates. In particular, bank loans were directed to the giant steel firm Hanbo, although the firm was failing to generate any profits by the mid-1990s. The result was that South Korean bank portfolios were dominated by non-performing loans. Hanbo alone is reported to have cost South Korean banks around US $7 billion (Valencia, 1997).

Additionally, many governments see the banking sector as another tool for it to carry out ill-founded industrial policy. In the 1980s the Zambian government set up a number of state-owned banks for the purpose of funding public sector companies. By the 1990s most were insolvent, with billions of dollars having been wasted (Valencia, 1997). Lastly, poor and/or fraudulent bank management can lead to bank failures (Madura, 1998). The Bank of New England, for example, found itself buried in non-performing loans by the end of the 1980s owing to overexposure of loans in the real estate market (that is, a lack of loan diversity). A study by the US Office of Comptroller of the Currency reviewed about 160 cases of national bank failures since 1979 and found that in most cases banks failed to have an adequate (or failed to follow) loan policy (Madura, 1998).[5]

Banking Crises and Domestic Agitation

What is the relationship between banking crises and domestic socio-political conditions? The most immediate impact of financial unsoundness is that banks become vulnerable to deposit runs. When citizens are threatened with the loss of their savings, they will scramble to recover their money before the banks can close their doors. That is, citizens demand full and immediate access to their financial funds during a financial crisis. The failure of citizens to recoup their savings can incite violent dissatisfaction with the government. As noted by former Uruguayan president Julio Maria Sanguinette, "The banking system will never take you to paradise, but it can bury you in hell in an afternoon" (Carstens et al., 2004: 30).

Moreover, the attempt to revitalize the banking sector is an extremely costly endeavour. Funds that could have been used for social programmes or job creation projects are instead funnelled into repairing the banking sector and implementing policies designed to recover domestic and foreign investor confidence. The result is budget cutbacks that often eliminate subsidies and programmes for the middle and lower classes, thereby decreasing domestic political support for the government (Mydans, 1998). Furthermore, well-connected bankers often use their political influence to exempt themselves from intervention policies enacted to stabilize the banking crisis. Consequently, political leaders are hesitant to impose interventionist policies in a swift and decisive manner (Enoch, 2000; Kaufman and Seelig, 2001).[6]

In the late 1990s and early 2000s, many countries had the misfortune of experiencing banking crises. In many of these cases governments were faced with an angry citizenry demanding full access to their deposits. For instance, in December 2001, Argentina experienced economic and political turmoil owing to a significant bank failure. In an attempt to end a depositor run on the banks, the government imposed a temporary suspension on access to bank accounts. Specifically, the government limited cash withdrawals to $250 per week for a period of 90 days and overseas cash transfers were limited to $1000. The only exception to these caps was the allowance of the continued use of credit and debit cards (see *The Economist*, 2002; Keesings, 2001; Pearlstein, 2001). The policy had the effect of enraging millions of middle-class and poor Argentines, who lacked access to banking credit. Consequently, President Adolfo Rodriquez Saa's government was forced to resign after facing a large general strike organized by trade unions and countrywide violent street protests responding to the government's bank intervention policies.

Argentina was not the only South American country to experience political unrest owing to banking failures. In 1999, the Ecuadorian gov-

ernment was forced to close eight banks due to insolvency.[7] In order to limit a run on the banks, the government ordered the freezing of all bank deposits. In response, trade unions, indigenous organizations and grassroots activists staged a general strike that crippled the country. To stop the ensuing social unrest, the president of the country imposed a state of emergency. In 2000, Nicaragua also experienced a banking crisis in which authorities limited access to deposits. Once again, this policy was met with angry and loud street protests. In the end, public pressure forced the government to guarantee all depositors full recovery of their savings.

Restructuring the banking sector often includes the loss of jobs, as banks are streamlined to decrease financial losses. At the extreme, many banks may be closed, resulting in the permanent loss of jobs in the financial sector. For example, the French government's restructuring of *Credit Lyonnais* included the closure of 73 branches at the cost of numerous jobs. Well over 2,000 employees protested in the streets of Paris over the job cuts (*The Economist*, 1998).

Long-term externalities may also accompany banking crises. For one, firms that require financing are negatively affected by the ensuing credit crunch that inevitably takes place. Simply, firms are often unable to obtain the necessary financial support to stay in business. The Nicaraguan government's decision to close the Bancafe bank in 2000 threatened the livelihood of farmers since it was one of the few banks that lent money to farmers and ranchers. Not surprisingly, hundreds of farmers protested in front of the bank's offices throughout the country. The financial meltdown in Southeast Asia in the late 1990s also provides an example of the adverse effects of a credit crunch. Because South Korean banks lacked the capacity to lend, small- and medium-sized firms increasingly faced a credit shortage, thus adding to the economic woes of the country. The result was increased domestic agitation as unions and citizens increasingly protested the economic situation. As a consequence, a union rally protesting the economic crisis in May 1998 resulted in a violent riot.

A lack of government willingness to enact a reputable banking intervention policy can also contribute to domestic political and economic turmoil. For example, if influential banks are exempted from closure policies, the public trust in the overall intervention strategy may crumble. This is exactly what occurred in Indonesia in 1997, when the government allowed well-connected owners of banks to resume operations and the cost of solving the banking crisis continued to climb.[8] As a result, disillusioned Indonesians lost confidence in the intervention plan and continued to withdraw funds from banks (Enoch, 2000). Moreover, the political and economic conditions in Indonesia worsened as government corruption in the banking sector was exposed. Unable to establish

political and economic stability, the government of President Suharto experienced severe domestic strain (Uchitelle, 1998). In an effort to end the run on banks and restore confidence in the economy, President Suharto decided to guarantee all bank deposits and liabilities. Although bank runs began to subside, anger at his government continued to grow.

In an effort to further shore up the financial sector and stabilize its balance of payment crisis, Indonesia turned to the International Monetary Fund (IMF) for financial help. In turn, the IMF demanded that the Suharto government reign in domestic spending. The chief opponents to Suharto tended to be labour unions, political rivals of the government, and students disenchanted with the corruption of the Suharto family and its political allies. In addition to protests and riots, Indonesian citizens targeted the ethnic Chinese community for revenge. The eventual outcome was the overthrow of the Suharto regime.[9]

Additionally, banking crises can often be associated with severe economic downturns (Eichengreen, 1997; Valencia, 1997). One way for this to happen is when a banking crisis is accompanied with a currency crisis, thus causing a significant outflow of investment capital.[10] As a result, inflation is likely to increase rapidly, thus forcing the government to raise interest rates. Moreover, since there is no longer an ample source of credit available to domestic enterprises (or available only at high interest rates), economic growth can slow dramatically. Consequently, LDCs are often forced to appeal to the IMF for loans that require weighty decreases in public spending and other economic liberalization measures.[11] All of these factors contribute to a substantial increase in unemployment rates. The overall costs of the crisis and the resulting adjustment programmes fall disproportionately on middle-to-low income households, causing decreased support for the prevailing government. In the mid-1990s, for instance, Venezuela's government assumed control of over 43 financial institutions, and by the end of the crisis owned over 70 per cent of the banking system (Keesings, 1995). To help stabilize the financial system and correct a balance of payments problem, the Venezuelan government turned to the IMF. The ensuing austerity programme was protested by thousands of public employees opposing the suspension of pay wages. Others protested the decision to eliminate subsidies to the poor. The result of the banking crisis was the decision by the government to temporarily suspend six constitutional guarantees.

The above discussion provides us with a testable hypothesis regarding the relationship between banking crises and domestic agitation: countries experiencing a banking crisis will encounter a contemporaneous increase in domestic agitation. A corollary of this hypothesis is that these effects may carry over into the future. Below, we describe our research design and findings.

Data, Models and Estimation

Data and Models

For our empirical analyses, we employ a pooled cross-sectional time-series data set comprised of 125 economically developed and developing countries for the years 1981 to 2000. This period is lower bound by the availability of our banking crisis data and upper bound by the availability of both our domestic agitation data and banking crisis data. The country-years included are those that were common to all source-data sets used in the analyses. Our data are representative of all geopolitical regions of the world, as well as all regime types. To examine the relationship between banking crises and domestic agitation, we examine both the contemporaneous and lagged relationship between a country's level of banking crisis and its level of two types of domestic agitation. Below, we discuss the variables included in our models. Also, we state each variable's expected relationship with domestic agitation.

Domestic Agitation

This study differs from some other large cross-national empirical studies of contentious politics in that the chief concept of interest is not government-based action such as negative sanctions (Davenport, 1995, 1996, 1998; Francisco, 1996; King, 1998; Ziegenhagen, 1986) or human rights violations (for example, Cingranelli and Richards, 1999; Mitchell and McCormick, 1988; Poe et al., 1999; Richards et al., 2001) but, rather, collective action taken by citizens against government. That is, we are interested in what causes domestic agitation by citizens rather than what causes government repression of citizens.

In our previous discussions, we have used the term "domestic agitation" to represent a varied group of collective activities which citizens may employ to agitate against a government. To test our central hypothesis that banking crises may instigate domestic agitation, however, we must be able to distinguish between various types of such agitation. Gurr (1970), Hibbs (1973) and Lichbach and Gurr (1981) imply that the important sources of variation between agitation activities are the extent of organization, scope of citizen participation and the violent/non-violent nature of activities. Gurr (1970) distinguishes between turmoil (mass, spontaneous unorganized violence) and revolution (consisting of conspiracy and internal war, both of which are organized violence, but differ in scope of citizen participation). Hibbs (1973) differentiates between what he calls collective protest (riots, anti-government demonstrations and politicized strikes) and internal war (armed attacks, assassinations). Similarly, Lichbach and Gurr (1981: 5) distinguish protest activities, which are "short-

lived challenges by members of associational groups" (demonstrations, strikes, riots) from protracted rebellion activities, which involve combat between rebels and governments.[12] Essentially, these studies posit dimensions of domestic agitation.

Our domestic agitation data come from Arthur S. Banks's *Cross-National Time-Series Domestic Conflict Data* (Banks, 2003). Banks provides annual event-count indicators of six types of agitation: assassinations, general strikes, guerrilla activities, riots, revolutions and anti-government demonstrations.[13] From Hibbs (1973), and Lichbach and Gurr (1981), we would expect to see two dimensions in our domestic agitation data. First, we would expect to see a "collective protest" dimension associated with activities such as riots, anti-government demonstrations and strikes. Second, we would expect to see a "rebellion/internal war" dimension associated with activities such as guerrilla activities, assassinations, terrorism and revolution. From Gurr (1970), we would expect to see three dimensions. First, we would see a "turmoil" dimension associated with mass spontaneous unorganized violence such as riots or large-scale demonstrations. Second, we would see a "conspiracy" dimension associated with organized violence of limited participatory scope, such as assassinations and other very selective forms of terrorism. Third, we would see an "internal war" dimension characterized by organized mass violence such as all-out guerrilla warfare and revolution.

Table 1 shows the results of a varimax principal component analysis used to determine how our data conforms to any of the aforementioned dimensional expectations. We find that the two-dimensional schemes of Hibbs (1973) and Lichbach and Gurr (1981) are clearly supported, while Gurr's (1970) three-dimensional scheme is not. The analysis returned two identifiable factors, each of which clearly included three of our six indicators. Factor 1 includes riots, anti-government demonstrations and general strikes. This would be the "collective protest" dimension. Factor 2 includes guerrilla activity, revolutions and assassinations. This would be the "rebellion/internal war" dimension.

TABLE 1

Varimax Principal Component Analysis of Six Types of Domestic Agitation

Type of Agitation	Factor 1	Factor 2
Assassinations	.14	**.58**
General strikes	**.61**	.07
Guerrilla warfare	.10	**.84**
Riots	**.86**	.05
Revolutions	− .03	**.79**
Anti-government demonstrations	**.86**	.05

Thus, the analyses in this article will examine the relationship between banking crises and two types of domestic agitation, "collective protest" and "rebellion/internal war." The two indicators of domestic agitation used as dependent variables in this study were created by using principal components analysis to create factor scores from the raw event-count data.[14] Two scores were generated for each country-year, one representing the level of collective protest activities and one indicating the level of rebellion/internal war activities. For use in our analyses, we log the factor scores for both domestic agitation indicators.

Bank Crises

The IMF and the World Bank have developed an ordinal indicator measuring the level of banking system crises in IMF member-states, 1980–2000 (Caprio and Klingebiel, 2003; Lindgren et al., 1996). This measure uses solvency as a proxy for the degree to which a banking system is sound (or lacking crisis). The indicator is coded such that:

Score	*Indication*
(0)	No crisis
(1)	Significant/non-systemic problem
(2)	Crisis/systemic

Lindgren et al. (1996: 20) explain that, following the lead of Sundararajan and Balino (1991), cases "where there were runs or other substantial portfolio shifts, collapses of financial firms, or massive government interventions [are referred to as] crises. Extensive unsoundness short of a crisis is termed significant." While there is some deal of subjectivity in this measure, it is the only one that we have found to exist, and to its credit, the country-specific case evidence provided along with these rankings is considerable.

The costs of banking crises vary considerably and are not restricted to any particular geographic region. For example, in 1997 Nigeria experienced financial distress that accounted for about 4 per cent of banking systems assets (Caprio and Klingebiel, 2003). However, between 1980 and 1982, Argentina experienced a catastrophic systemic crisis in the financial sector. In fact, around 170 financial institutions experienced central bank intervention and/or were dissolved. In total, the financial cost to Argentina amounted to about 55 per cent of its gross domestic product (Caprio and Klingebiel, 2003; Lindgren et al., 1996). Countries that experience crisis/systemic financial problems are experiencing capital exhaustion. Countries that are facing significant/non-systemic problems continue to retain a majority of banks that are solvent.

We use this ordinal measure as our indicator of a country's level of banking crisis. The data are taken from the International Monetary Fund's

Bank Soundness (Lindgren et al., 1996) and the World Bank's *Episodes of Systemic and Borderline Financial Crises* (Caprio and Klingebiel, 2003) datasets.

Control Variables

We include indicators in our analyses that account for some of the competing hypotheses regarding the causes of domestic agitation.

Democracy

The first alternative hypothesis is that regime type may affect citizen propensity towards agitated behaviour. We would expect a different relationship between the extent to which a regime is democratized and both of our indicators of domestic agitation. Most empirical studies that examine the relationship between democracy and political agitation or repression assume a linear association. Yet many scholars argue that a curvilinear relationship exists between the two variables. Tilly (1978) asserts that we would expect democracies to be more able and willing to be facilitative to powerful contenders engaging in larger-scale activities, possibly short-circuiting revolution (and a necessarily linear relationship between democracy and rebellion/internal war actions). Also, newly established democracies face a myriad of obstacles to overcome. These include the formation of new political institutions, the elimination of state restrictions on individual behaviour and social inhibitions, and the perplexity regarding standards of morals (Huntington, 1997). The initiation of free elections also requires politicians to compete for votes. Huntington (1997) argues that it is relatively easy for inexperienced politicians to solicit public support by appealing to ethnic, religious and moral differences, thereby exacerbating social, ethnic and religious conflict.[15]

Furthermore, newly formed democracies are responsible for solving the problems inherited from their predecessors. These often include economic stagnation, corruption, an inept bureaucracy and public mistrust (Narayan, 2000; Rose, Shin and Munro, 1999; Snow, 1997; Wiarda, 2004). If the new democratic government fails to successfully address these problems, public anxiety and unrest are likely to erupt. Only when democracy is fully consolidated (that is, it becomes the "only game in town") does it play a wholly stabilizing role in the domestic political environment (Diamond, 1999; Newton, 1999; Snow, 1997). At this stage, individuals and political organizations rely on the formal rules of conduct and sanctions to vie for political power and no major political group seriously attempts to overthrow the democratic regime (Linz and Stepan, 1997; Newton, 1999). Thus, we might reasonably expect to see a nonlinear relationship between democracy and domestic agitation that takes

an upside-down "U" shape. To test for this non-linear relationship, we express democracy as a quadratic polynomial.

Our measure of democracy is a 21-point ordinal regime-type indicator from the *Polity IV: Political Regime Characteristics and Transitions, 1800–2002* dataset (Marshall and Jaggers, 2003). This measure is constructed by subtracting the ordinal Polity measure of a country's level of institutionalized autocracy from the ordinal measure of a country's level of institutionalized democracy. This results in an ordinal variable ranging from −10 (strongly autocratic) to +10 (strongly democratic). Since we needed to create a polynomial for use in our analyses, it was necessary to modify the original scale of the original regime-type variable. The fact that the variable had both negative and positive values created a potential problem for substantive interpretation after squaring scale values. Thus, we shifted the original scale to 0 through 20 before creating the polynomial used in our analyses. We expect the linear democracy indicator to manifest a positive relationship with domestic agitation, and the polynomial indicator to manifest a negative relationship with domestic agitation.

Level of Economic Development

We include an indicator to control for the alternative hypothesis that a country's level of economic development may influence the propensity of its citizenry to engage in domestic agitation. As previously discussed, countries with stronger economies are more likely to be able to afford and withstand a banking crisis. Furthermore, Gurr (1994: 359) points out that at least in terms of ethno-political conflict (such as in our Indonesian or Malaysian examples), it is easy to specify why poverty may cause more frequent and more severe conflict, as "systemic poverty means limited state capacity: substantial concessions to communal contenders therefore are prohibitively costly ... and conflicts over power and material issues tend to be seen by all contenders in zero-sum terms." Lichbach (1989: 464) notes that while "[s]ome dimensions of economic inequality might be related to some dimensions of conflict under some conditions ... no empirical work has so far established this claim." Thus, this indicator is of interest.

Like Cingranelli and Richards (1999), Mitchell and McCormick (1988), Poe et al. (1999) and Richards et al. (2001), we use the logged per capita value of a state's gross domestic product (GDP) (purchasing power parity) as our indicator of economic development. The fact that, by definition, GDP per capita does not take into account distributional issues has not gone unnoticed here. However, statistical examinations employing other measures, such as the Physical Quality of Life Index (PQLI) and the Human Development Index (HDI), do not produce results

different from those produced using GDP per capita in constant dollars. Thus, we use the logged value of GDP per capita (purchasing power parity) as it is a more widely (spatially and temporally) and readily available indicator than either PQLI or HDI. Data was gathered from the World Bank's *World Development Indicators 2004* dataset (World Bank, 2004). We would expect the level of domestic agitation to rise as the level of economic development falls.

Repression

Our next alternative hypothesis is that the level of government repression in a society may be related to the propensity of citizens to engage in domestic agitation. That is, does repression lead to turmoil? Jackson et al. (1978) and Lichbach and Gurr (1981) have both posited that increased repression leads to increased rebellion. Indeed, in a longitudinal analysis of Chile, Davis and Ward (1990: 468) find evidence that "rebellion is (primarily) a response to government repressiveness in the form of deaths from political violence."

While many agree that some relationship exists between repression and turmoil, there is some debate surrounding the nature of this relationship. Many have specified this relationship as linear, while others have made the case that the relationship is actually more complex than that. Gartner and Regan (1996: 285) note that:

> One widely held view [of the interaction between opposition groups and a government] posits that as government coercion increases political dissent will increase accordingly, though at some point, where government coercion becomes particularly oppressive, the marginal effect of the continued coercion will generate a decrease in overt political dissent.

This non-linear approach suggests that an upside-down "U"-shaped relationship exists between repression and domestic agitation such that repression, up to some point, will produce greater turmoil until this coercion becomes so overwhelming that it actually decreases levels of dissent.[16]

This approach assumes that repression works. That is, if a regime bears down hard enough on an opposition by, say, eliminating its leaders and jailing its rank-and-file, agitated opposition will, at some point, deteriorate. A tabular analysis of our cross-national data strongly indicates that such a nonlinear relationship is a possibility, and certainly, many states with high equilibrium levels of repression have very low levels of domestic agitation. As Gartner and Regan state, a linear relationship between coercion and repression would lead to an ever-increasing game of "tit-for-tat" culminating in civil war.

To control for this nonlinear alternative hypothesis, we include an indicator of repression from Arthur S. Banks's *Cross-National Time-*

Series Domestic Conflict Data (Banks, 2003) that counts the number of "[s]ystematic elimination[s] by jailing or execution of political opposition within the ranks of the regime or the opposition." In our models, we include a quadratic polynomial to account for nonlinearity.[17] We expect the linear repression indicator to manifest a positive relationship with domestic agitation, and the polynomial indicator to manifest a negative relationship with domestic agitation.

Discrimination

Our final alternative hypothesis posits that high degrees of economic and political discrimination may lead to turmoil. This hypothesis is based in the framework of relative deprivation (Crosby, 1976; Gurr, 1970; Hibbs, 1974; Runciman, 1966; Stouffer et al., 1949). The basic logic of relative deprivation is straightforward. It assumes people compare their condition, either as individuals or members of a group (or both), with the condition of others. To the extent that one's own condition, or that of one's group, is inferior or degraded relative to that of others, one is likely to become dissatisfied/frustrated. Incorporating the frustration-aggression model of behaviour, relative deprivation theory asserts that the more frustrated one becomes at this perceived lack of status relative to others, the more likely one is to become aggressive, or to engage in violence. There is a strong parallel to the hypothesis that as economic inequality grows in society, so does the risk of violent behavior (Gurr, 1970; Hey and Lambert, 1980; Tilly, 1978; Yitzhaki, 1979).

We focus on what is known as fraternal relative deprivation, whereby group status is the mode of comparison (Crosby, 1979; Runciman, 1966). That is, to the point one's group (however self-identified) is seen as degraded relative to other groups, the more potential for dissatisfaction and perhaps, ultimately, violence. We work from the assumption that individuals as members of groups are cognizant of their status relative to other groups in society. It follows, importantly, that they are then aware of discrimination against them (fraternal relative deprivation) and that this discrimination can lead to violent behaviour as a result.

The results of empirical tests of both relative deprivation and economic inequality as wellsprings of violence have been famously mixed (Canache, 1996; Lichbach, 1989). Canache (1996) notes, however, that this is largely the result of flawed research designs and data not suited for these tests. Our data on discrimination against groups in society come from the Minorities at Risk (MAR) Project (Davenport, 2003; Gurr, 2000).[18] The MAR Project defines a "minority at risk" as "an ethnopolitical group (non-state communal group) that: collectively suffers, or benefits from, systematic discriminatory treatment vis-à-vis other groups in a society; and/or collectively mobilizes in defense or promotion of its

self-defined interests" (Davenport, 2003: 5). Our indicator of fraternal relative deprivation additively combines the MAR indices of both a country's mean level of political discrimination and economic discrimination against groups. The MAR indicators describe "the role of public policy and social practice in maintaining or redressing political inequalities" (Davenport, 2003: 36). Our indicator is continuous and ranges from zero (no such discrimination) to eight (a high level of discrimination). We would expect domestic agitation to increase along with increased discrimination.

Estimation Technique

Because our data is in pooled cross-section time-series form (with significantly more spatial units than temporal units), we employ the generalized estimation equation (GEE) estimation technique with robust standard errors. The GEE approach was developed to extend "generalized linear models (GLMs) to a regression setting with correlated observations within subjects," making it very attractive for use with panel data (Horton and Lipsitz, 1999: 160). When "the primary question of interest is ... comparison across groups or subpopulations," GEE is a more appropriate estimation technique than "conditional" models (e.g., fixed-effects) (Zorn, 2001: 475). Further, GEE allows researchers to specify correlation patterns within clusters. We specify an exchangeable correlation structure, where covariance is assumed to be equal within any given individual cluster. This correlation structure corresponds to a random-effects model.

Findings

In the majority of cases in our data (approximately 61%), no banking system problem was present. Approximately 16 per cent of our cases were coded as having significant banking problems, while approximately 22 per cent of the cases were identified as having full-blown banking crises. Thus, roughly 38 per cent of our cases had some banking problem. It was mentioned earlier that the creators of the banking crisis indicator acknowledge that there is some degree of subjectivity involved in differentiating between a "significant banking problem" and a "banking crisis." Were these categories independent for the purposes of our analysis, we might expect to see a statistically significant difference in the mean level of domestic agitation. That is, we would see a statistically significant different mean level of agitation between "no banking crisis," "significant problem" and "banking crisis" cases. Using a difference-of-means test we find that in the collective protest context, the "significant problem" and "banking crises" categories are not statistically indepen-

dent, and that in the rebellion/internal war context, they are barely independent.

This might indicate that these data really represent only two categories of information, "no banking crisis" or "banking crisis," and not three. To test this possibility, we created a dichotomous version of the banking crisis variable, leaving "no banking crisis" as one category and combining the other two categories into a single "banking crisis" category. However, when employed in the regression analyses reported below, this indicator returned substantively identical results compared to the original ordinal indicator.

Table 2 presents the results of two regressions examining the contemporaneous relationship between a country's level of banking crisis and its level of two types of domestic agitation. Chi-squared tests show that both models are statistically significant from their null counterparts at the .00 level of significance. We see that a country's level of banking crisis is a statistically significant predictor of its level of collective pro-

TABLE 2

GEE Estimates of the Contemporaneous Relationship Between Level of Banking Crisis and Two Types of Domestic Agitation

| | Type of Domestic Agitation | |
	Collective protest	Rebellion/internal war
Level of banking crisis	.10**	−.00
	(.04)	(.03)
Level of democracy	.05**	.04
	(.02)	(.04)
Level of democracy squared	−.00	−.00
	(.00)	(.00)
Level of economic development	.04	−.18**
	(.04)	(.05)
Repression	.90**	1.13**
	(.41)	(.39)
Repression squared	−.31*	−.36**
	(.16)	(.16)
Discrimination	.06**	.08**
	(.02)	(.02)
Constant	−.82**	1.04**
	(.36)	(.43)
N	1525	1521
Prob > chi-squared	.000	.000

Figures in parentheses are heteroskedasticity-corrected standard errors.
* $p \leq .10$
** $p \leq .05$

test activities, but not its rebellion/internal war activities. We find a weak positive linear relationship between collective protest activities and democracy, although there is no evidence for a nonlinear relationship. No statistically reliable relationship is found between democracy and rebellion/internal war.

In line with our *a priori* expectations, we found a negative relationship between level of economic development and context of rebellion/internal war activities. That is, from these results we would expect levels of rebellion/internal war activities to fall when a country's level of economic development rises, and vice versa. No statistically reliable relationship was found between level of economic development and collective protest. In both models, we found evidence of a nonlinear relationship between domestic agitation activities and repression such that domestic agitation seems to be greatest at middle values of repression.

Finally, Table 2 demonstrates a statistically reliable and positive relationship between discrimination and both types of domestic agitation activities. That is, increases in political and economic discrimination against minorities at risk should be expected to be accompanied by increased levels of collective protest and rebellion/internal war activities. The relationship is slightly stronger in the case of rebellion/internal war activities.

The models used for the analyses in Table 3 are similar to those used in the previous analysis, except that they take into account the fact that the effects of banking crises may extend to a following year. Thus, along with our indicator of the level of banking crisis at time (t), we also employ an indicator of the level of banking crisis at time (t-1). The Kendall's Tau estimation of the association between level of banking crisis at time (t) and time (t-1) is 0.77, indicating less-than-perfect correlation and thus, the presence of some variation between the two time points.[19] As in Table 2, chi-squared tests show that both models are statistically significant from their null counterparts at the .00 level of significance.

In Table 3, we first see that a country's level of banking crisis at time (t) is only reliably associated with domestic agitation in the context of collective protest activities. In neither context of domestic agitation, however, is a state's level of banking crisis at time (t-1) a significant indicator of domestic agitation at time (t). In terms of significance and direction of relationship, other variables perform as in the non-lagged models.

Looking at our raw data, we find different combinations of collective protest activities to be associated with similar levels of changes in the level of banking crises, although continued/increased demonstrations seem to be a mainstay. For example, Senegal in 1982 to 1983 went from no crisis to severe crisis and saw an increase in demonstrations. Given the same increase in the level of banking crisis, Bangladesh in

TABLE 3

GEE Estimates of the Lagged (t-1) Relationship Between Level
of Banking Crisis and Two Types of Domestic Agitation

	Type of Domestic Agitation	
	Collective protest	Rebellion/internal war
Level of banking crisis	.10**	−.03
	(.04)	(.03)
Banking crisis (T-1)	.01	.04
	(.03)	(.03)
Level of democracy	.04*	.04
	(.02)	(.04)
Level of democracy squared	−.00	−.00
	(.00)	(.00)
Level of economic development	.03	−.18**
	(.04)	(.05)
Repression	.90**	1.14**
	(.41)	(.39)
Repression squared	−.31*	−.36**
	(.16)	(.16)
Discrimination	.06**	.08**
	(.02)	(.02)
Constant	−.77**	1.04**
	(.35)	(.43)
N	1514	1510
Prob > chi-squared	.000	.000

Figures in parentheses are heteroskedasticity-corrected standard errors.
* $p \leq .10$
** $p \leq .05$

1987 to 1988 saw increases in riots and demonstrations and a continued
level of strikes. Lebanon in 1987 to 1988 saw an increase in riots. Given
the establishment here of a banking crisis-collective protest relationship
at the macro level of analysis, future studies, perhaps region-specific ones,
would do well to examine collective protest activities in a disaggregated
fashion.

Conclusion

The findings of this study have important implications for understanding
the puzzle of domestic political stability. We posited that banking crises
appear to be a sufficient factor in causing domestic agitation, as citizens
protest against both the direct negative effects of a banking crisis itself
(such as the loss of access to savings and credit), and against a

government's handling of an economy adversely affected by a banking crisis. These protests are often manifested as food riots, labour strikes and anti-austerity demonstrations.

Using a cross-national data set comprised of 125 countries for the years 1981 to 2000, we tested our hypothesis that banking crises are a significant factor in fomenting domestic agitation. We found a contemporaneous relationship between a country's level of banking crisis and its level of collective protest activities. The relationship was such that we would reliably expect to see collective protest in countries experiencing a banking crisis (the worse the crisis, the more domestic agitation). This finding is supported by our case examples, where we almost exclusively saw collective protest activities, such as strikes, anti-government demonstrations and riots, directly resulting from the effects of banking crises on citizens. Thus, the impact of a banking crisis on political stability was found to be immediate and damaging. The silver lining here may be that such ill effects appear to be relatively short-lived. This is supported by the finding that the lagged banking crisis variable demonstrated no significant association with collective protest or rebellion/internal war.

Although there was a considerable amount of rebellion/internal war activity in our sample, our analyses seem to indicate that the effects of banking crises on types of collective action are bounded. On average, the effect of a banking crisis appears to stop short of being related to widely participatory and organized violence against a government. Instead, banking crises seem to be reliably associated with immediate and intense protests by adversely affected individuals.

Certainly no less interesting was the support we found for a relationship between fraternal relative deprivation and amounts of both types of domestic agitation such that greater relative deprivation is associated with greater domestic agitation. In addition, lending support to many who have so surmised, our findings suggest that nascent democracy is a seemingly accommodating context for collective protest activities. We found a negative relationship between level of economic development and rebellion/internal war activity. This relationship was expected, as economic growth is expected to alleviate the plight of poverty and positions countries to better withstand the cost of banking crises, thereby lowering the likelihood of citizens participating in rebellion/internal war.

We found some support for those who posit nonlinear relationships between domestic agitation and repression. In particular, we found possible empirical support for Gartner and Regan's (1996) supposition that while low to moderate levels of repression may spur domestic agitation, it will actually shrink in the face of higher levels of repression. This is an interesting finding and certainly deserves future consideration.

Our findings should be of some interest to those seeking to identify the causes of banking crises themselves. Economists have yet to gener-

ate any uniform agreement regarding the specific causes of banking crises. While there is agreement that a particular set of conditions may be present for one particular crisis, it is by no means accepted that these conditions will be present at other financial crises. Certainly, the discovery of a reliable association between banking crises and collective action activities makes discovering the causes of banking crises all the more important.

To summarize, we found a country's level of banking crisis to be reliably associated with its level of collective protest activities. Given the frequency of banking crises and the fragility and importance of the banking sector, this is a significant finding. A government experiencing a banking crisis faces not only certain economic costs, but also should probably expect to face social disruptions such as strikes, riots and anti-government demonstrations. Moreover, our findings add to the ongoing discussion regarding the economic globalization process. The results of the study clearly suggest that banking crises impose economic and political costs on domestic governments. To reestablish a stable political environment, including the settlement of strikes and anti-government demonstrations, governments may be required to limit participation in international markets. While firm agreement on this will require further study, it is clear that the interconnection between economic and political frontiers adds greater pressure to better understand the determinants and consequences of banking crises; not only to avoid economic distress, but also to avoid the pain of social agitation.

Notes

1 Mahon and Corrales (2002) observed that while scholars were closely following (and predicting) Argentina's financial crisis, little speculation was devoted to the political consequences of the banking crisis that eventually led to the resignation of four presidents.

2 Clearly, the reverse is also true. That is, the banking system is much more likely to be stable if the macroeconomic condition of a country is sound (i.e., steady economic growth and low inflation rates). See Knight (1999) for a discussion.

3 It is also important to remember that Mexico was given an approximately US$40 billion lifeline from the US government. Most less developed countries (LDCs) cannot count on such support to weather economic turbulence.

4 On August 11, 2001, Antonio Siba-Siba Macuacua, an economist hired to investigate the bank failure of Mozambique's Banco Austral, was found murdered at the bank's headquarters. Siba-Siba had begun a process of reducing the size of the workforce and had moved to recover loans that had been made predominately to members of the governing elite (Hanlon, 2001).

5 It is interesting to note that Claude Trichet, governor of France's Central Bank, was investigated for complicity in falsifying the 1992 accounts of the loss-making *Credit Lyonnais*. The eventual cost of bailing out *Credit Lyonnais* to the French taxpayers was approximately US $17 billion.

6 If governments fail to impose interventionist policies that gain the confidence of bank depositors, the demise of a bank can quickly spill over to other banks, thereby worsening the financial sector (Garcia, 1999).

7 In this case, non-performing loans were caused by the widespread "El Nino" floods of the previous year (Keesings, 2000).

8 The failure to close insolvent banks often encourages banker managers to accept high-risk loans in hopes of high returns. Inevitably the bank continues to accrue significant losses, thereby increasing the costs of future financial bailouts.

9 Similar events occurred in Malaysia and Thailand. The two respective governments failed to effectively monitor domestic banking crises, and economic growth stalled. In an effort to create domestic jobs (and perhaps to deflect attention from their inadequate handling of the banking crisis), both governments deported foreign workers. The end result was a series of massive protests and riots.

10 Even if governments guarantee deposits, this places an additional strain on government resources, particularly for LDCs, since the government is responsible for all refunds. Furthermore, this policy invokes the issue of moral hazard. That is, if bankers know that depositors will not punish them, they have a greater incentive to act irresponsibly.

11 The elimination of public projects as a condition of IMF loans was met negatively by Mahathir Mohamad, the prime minister of Malaysia, since these projects were to supply a substantial number of jobs for the country.

12 Others, such as Muller and Seligson (1987) take a unidimensional view. Concerned with the relationship between inequality and insurgency (political violence), they operationalize this type of agitation as "the death rate from domestic conflict per one million population" (433).

13 Details on each indicator can be found at http://www.databanks.sitehosting.net/www/var_group.htm#Domestic (February 20, 2006).

14 Principal components analysis produces a variable that lends itself to regression analysis. By transforming a "given set of observed variables into another set of variables," principal components analysis helps achieve "economy of representation" with the objective of accounting for as much variance in the data as possible (Kim and Mueller, 1978: 14–17). For a discussion on how this economy is achieved, see Kim and Mueller (1978).

15 The former Soviet Union and Yugoslavian Republic provide examples of this problem.

16 Gartner and Regan (1996) do not test this exact relationship, rather, they are concerned with levels of regime coercion relative to opposition demand levels, given international and domestic costs associated with this ratio. They do, however, make a strong general case that the relationship between coercion and protest is, in some way, nonlinear.

17 In our analyses, we replaced Banks' measure with the CIRI physical integrity rights index (Cingranelli and Richards, 2005) as a simple sensitivity analysis. Our results were substantively unchanged.

18 We also tried using a country's GINI coefficient score as a measure of economic inequality and/or relative deprivation (Hey and Lambert, 1980; Lichbach, 1989: 442–443; Yitzhaki, 1979), but because of the cross-regional nature of our study, even the most comprehensive source of GINI data (Version 2.0a of the *UNU/WIDER World Income Inequality Database (WIID)*) significantly reduced our N for analysis. Indicators from the World Bank's *World Development Indicators* database of percentage of population at the top and bottom quintiles of income were subject to even greater missing data problems. Our analyses conducted using GINI had an overall N of 625 and while there was no substantive effect on our relationship of chief theoretical interest (banking crises and domestic turmoil). The GINI measure itself was statistically insignificant.

19 See Friedrich (1982) or Jaccard, Turrissi and Wan (1990) for a discussion on the effects of less-than-perfect multicollinearity among indicators in a regression. Our assumption is that less-than-perfect correlation is not a problem.

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