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Abstract

Existing research on the political-economic determinants of coup d'état events has not explored the role of property rights protection in decreasing the likelihood of their global and regional incidence. Case studies confirm that the military institutions of the developing world began to represent elite class values that reacted adversely to state attempts at the redistribution of wealth and the expropriation of property after the 1970s. Thus far, no empirical analysis has tested the assertions made by these cases. Using Binary Times Series Cross-Section models from the period 1970–90, this article investigates the impact of the Contract Intensive Money ratio and International Country Risk Guide measures, which are tapped as property rights proxy variables, on decreasing the likelihood of a coup. The findings show that developing states that secure their property rights (as a function of these measures) are more likely to experience a decreased likelihood of a coup. The effect of property rights protection on the decreased likelihood of a coup shows statistical significance in Africa, Asia, and Latin America. The results hold true even when the global model is subjected to a sensitivity analysis where lagged coup events over a six-year period are included as a control variable.

Keywords

Coups, Political instability, Property rights, Civil–military relations, Elite theories of society

Successful coup d'état events that overthrow incumbent regimes often have characterized the turbulent histories of the developing world. Global coup events have led into situations that either prolong economic underdevelopment (Zimmerman, 1979) or produce no effect on economic growth in developing states.[1] What is apparent is that the coup events that do occur have a tendency to prolong political instability in the nations afflicted (Londregan and Poole, 1990; Zimmerman, 1979). Furthermore, coup events launched against civilian governments are known to have led to democratic breakdowns and prolonged periods of political instability. Military regimes are also known to suppress many civil liberties and basic freedoms of citizens in the developing world (David, 1987).

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As yet there is an apparent lack of empirical studies that expand on the political-economic determinants of global coup events beyond linking their incidence to poverty traps (Londregan and Poole, 1990), economic underdevelopment (Zuk and Thompson, 1982), export dependency (O'Kane, 1981, 1983, 1987, 1993), and ethnic fractionalization (Jackman, 1978, 1986; Jenkins and Kposowa, 1992). The role of property rights protection in the decreased probability of a coup has not been examined in any systematic analysis. A plethora of case studies document that during the period of the 1970s and 1980s military institutions in the developing world began to represent elite class values that reacted adversely to state attempts at the redistribution of wealth and the expropriation of property. The case studies that will be discussed shortly share a prevalent theme: developing states with ineffective state institutions are more likely to experience the collapse of civilian governments through military intervention because of their inability to secure the property rights and economic well-being of a propertied class. Thus far no systematic, quantitative work has been conducted to test if the assertions made by these case studies have any substantial merit. To rectify this, the article studies the effect of property rights protection on the decreased frequency of coup events during the years 1970–90. Through a cross-sectional panel study of developing nations, I am specifically interested in investigating two questions: 1. Do developing states that secure and protect property rights decrease the likelihood of a coup event? 2. Are there regional variations in the impact of property rights on the global frequency of coup events?

Veto Coups and Property Rights

The theoretical point of departure of this article emanates from O'Donnell's (1973) and Nun's (1976) thesis suggesting that the military became the servant of elite class interests and then became interventionist when the state began to espouse public policies that threatened to nationalize and expropriate private and personal property. Naturally, the military did not intervene when elite class interests were safeguarded from populist pressures. But O'Donnell mainly looked at Latin American cases. I extend O'Donnell's argument to examine whether this phenomenon was also predominant in the African and Asian regions during the same period.

Samuel Huntington (1968) also conceptualized praetorian coups in the modernization era as guaranteeing the vested interest of the middle class. Like O'Donnell and Nun, Huntington posits that praetorian states are likely to have a military apparatus that perceives itself as having a professional role in controlling or pacifying the extreme mobilization of the underclass. To substantiate this, he argues (Huntington, 1968: 222): "If a society moves into the phase of mass participation without developing effective political institutions, the military becomes engaged in a conservative effort to protect the existing system against the incursions of the lower classes, particularly the urban lower classes. They become the guardians of the existing middle class order." Although Huntington does not make the linkage between the lack of property rights and the occurrence of coups in the developing world, we can infer from his early writings that developing states that achieved a semblance of modernity are at risk of coups if they do not develop effective state institutions that can guarantee the vested wealth interests of the middle class. Thus, the military are seen as institutional gate-keepers against lower-class mobilization. The military reacts adversely against socialist policies that seek to empower the political rights and political accessibility of the lower class (Huntington, 1968: 222). The role of the military has therefore been relegated to one that prohibits civil society movements from capturing state power with the intended goal of egalitarian income distribution.

The lack of property rights protection as a determinant for coup events also has received extraordinary attention from David's case studies. David (1987) conceptualized coups that arise from

property rights protection as "veto coups." Veto coups are events through which the military asserts its vanguard role in controlling the redistributive demands coming from pressures from the political left. The military intervenes specifically because it wants to limit or control the unbridled hopes of the masses for a paternalistic state. As David asserts, global coup events during the 1970s and 1980s shared the following trait:

> Nations that protected the interests of the propertied elite were more capable of averting the politicization of its military, while societies where large new groups attempt to secure for themselves a portion of the wealth of the few are at most risk of military intervention. (David, 1987: 14)

Thus, in the time period he examined, the military launched veto coups because they were fearful of losing the political influence that they had cultivated with the landed, propertied, and ruling elite. The military became interventionist especially because of the socialist-inspired movements in the developing world that sought to redefine the meaning of property as reflective of a more egalitarian worldview. These veto coups became paramount in Latin America, beginning with the removal of the populist dictator Juan Bosch of the Dominican Republic, but they only became more commonplace after the removal of Salvador Allende by General Pinochet in 1972, continuing well into the late 1980s in the rest of Latin America. The rise of veto coups also spread throughout the world, largely in response to civilian or military regimes that tried to alter property–state relations which infringed on the monied interests of the segmented elite. In such regimes, propertyless individuals placed political pressure on elite interests by instigating unrest, political mobilization, and political protest in the streets. As the government became more sensitive to the interests of the average voter, who did not possess property, reforms were implemented, including the redistribution of land, higher taxes for the rich, and welfare policies in favor of the destitute. This often triggered the elite to court the military to launch a coup to veto "out" populist policies that curtailed the economic liberties and political dominance of the elite base (David, 1987).

Studies on Property Rights and Coups

Beyond David's case studies, there is an abundance of research documenting the rise of coup events emanating from state threats to property rights (Gupta, 1990; Sanders, 1981; see also Welch and Smith, 1974). In developing countries during this time frame, there was an increase in the number of states that attempted to expropriate private property to appease citizens that had suffered from income inequality that favored the wealthy. Elaborating on this further, Sanders (1981) uncovered the impact of Cold War tension and American hegemonic influence in creating a third-world military infrastructure that largely became hostile to socialist policies of wealth equalization through land redistribution. Perlmutter and Bennet (1980) explored the dynamic of how the military apparatus of the third world identified itself with the neoliberal economic policy of guaranteeing property rights protection as a result of its dependence on American arms transfers and US military aid. Further, military institutions in the developing world incorporated elitist "pro-property" rights values because the top generals who masterminded putsches were often recruited from well-to-do families that had received Western education or training.

Undoubtedly, the link between property rights and political instability is most apparent in Latin America, where most coup events had a reactionary character propagated by the military's desire to protect the property rights of the status quo (Needler, 1978). As O'Donnell (1973) argued, the military in Latin America assumed corporate values in terms of its dogmatic insistence that state intervention with the goal of redistributing the wealth of the nation was a destructive policy that

would lead to economic collapse. Latin American populist regimes were overthrown in tandem with the rise of military juntas or civilian–military regimes that emphasized the protection of property rights, which was seen as the only engine of economic growth. Latin American military generals often shared an ideological mission to secure property rights that had been confiscated by populist regimes with socialist leanings. Historical cases that validate this include the 1971 coup by General Banzer against Juan José Torres in Bolivia, the putsch of General Pinochet against Salvador Allende in Chile in 1973, the El Tacnazo coup against Juan Velasco of Peru in 1975, and a series of rightist coups in Guatemala in 1983 (Farcau, 1994).

Sub-Saharan Africa also saw its share of rightist coups in response to populist regimes that had assumed expropriation-of-wealth tendencies. For instance, sub-Saharan African states witnessed how the private property of the landed and commercial elite was confiscated by regimes through failed land reform programs. In the 1970s and 1980s African states began to embrace socialism as an ideology of governance, and the attempt at championing egalitarian policies combined with incompetence at public administration further facilitated the active politicization of the army. As Wangome asserts (1985: 4):

> Other African [governments] were out experimenting on new and foreign ideologies in the name of African socialism. Some of these governments started openly courting the Eastern bloc for advice and guidance. Corruption had become an accepted way of life. Mismanagement of the economy coupled with sheer incompetence had led to runaway inflation and unaffordable prices. These were the kind of situations to be found in Ghana, Sudan, Somalia, Uganda and other countries when their governments fell to the military.

Ayittey's work (1998) provides the strongest evidence showing the linkage between the lack of property rights protection and the high incidence of coup events in Africa. He argues that during the 1970s and 1980s a series of governmental policies introduced by African states intervened in the functioning of markets. Instead of enhancing foreign and domestic private investments by providing incentives and protecting the interests of the investing class, African leaders adopted policies that involved the heavy regulation of industry with the generalized aim of large scale nationalization of industry in order to allocate natural and wealth resources equitably. African governments granted the task of resource allocation to populist presidents. This was seen by many African generals as tantamount to inefficient and ineffective governance that could only lead to further underdevelopment. This resentment held by African generals against civilian leaders politicized the military and increased the role of the military in politics. Further, resource allocation, through the radical land reform programs, provided African presidents with opportunities to extract rents. As a result, landowners faced extremely high tax burdens. Soon enough, empowered elites demanded lower taxes and courted the support of the military to overthrow governments that had made property rights insecure through the arbitrary expropriation of property and heavy taxation.

Asian coups during the 1970s to 1990s also exhibited reactionary tendencies on the part of the military aimed at establishing public order after state actions had failed to protect elite interests. Historical examples include the coups in Bangladesh in 1975, 1981, 1982 (Baxter, 1997), in Pakistan in 1977 and 1979 (Talbot, 1999), in Thailand in 1971, 1973, and 1977 (Chuto, 1987), and in Fiji in 1979 and 1987 (Narayan and Prasad, 2007; see also Lal, 1990).

Property Rights and Political Instability

As mentioned previously, the issue of property rights and their impact on coup events has not been systematically explored. However, there is an active line of literature that explores how state threats

to property rights can increase the likelihood of political instability. Nonetheless, none of these studies examine the direct effect of property rights protection on coup episodes.

For instance, Mancur Olson (1982) argues that in wayward populist regimes there is a natural tendency for specialized interest groups and a mobilized underclass to demand the distribution and expropriation of wealth, which threaten the private property (and interests) of the commercial and landed elite. This generates demarcated social rigidities, which increase the potential for political turbulence. Alesina and Perotti (1996: 1208) also contend that when property rights are threatened in a nation-state, this can trigger a decrease in public and private capital investment that can generate political instability in various forms, including coups. They create an index of political instability that associates coups with assassinations and other state-related violence (such as riots) but does not test directly whether limited property rights protection induces coup episodes.

Other studies have also offered prescriptions concerning the role of property rights in averting political instability. As an example, Clague (1993) and Clague et al. (1997) reveal that nations can prevent economic instability that can cause political turmoil – if they have institutional qualities that have safeguards for property rights, among which are included contract-intensive activity dependence, limitations on the expropriation of private property, the establishment of the rule of law, strict enforceability of contracts, bureaucratic effectiveness, and continued privatization. Knack and Keefer (1995) also assert that states seeking to nationalize private industry (and hence transgress on the property rights of elites) risk financial insolvency and political instability because such states discourage private investment by distorting the rate of taxation and engaging in higher rent extraction. Further, states that have expropriation tendencies also tend to decrease capital stock per capita and generate an economic environment that is not conducive to contract intensive activity. Prolonged expropriation tendencies of a state can lead to investment flight and fright, which can elicit further political disorder in the long term (Clague, 1993).

Based on the aforementioned theoretical foundations, the following hypothesis is generated:

Hypothesis: Nations with secure property rights, as a function of state–society relations, were less likely to experience military intervention during the period 1970–90.

Operational Definition of Successful Coups

In this article, I utilize the conceptual definition of a successful coup as one wherein an incumbent regime is displaced and overthrown by a cabal of military generals (McGowan and Johnson, 1984). Successful coup events are often fast, deliberate, and abrupt, leading to immediate regime transition (O'Kane, 1981). Thus, successful coups often bring about the exile, assassination, or imprisonment of the incumbent executive head and a drastic overhaul of the constitutional relationship between the organs of the state and the new political leaders. The ideological purpose of coup leaders can arise from reactionary or revolutionary predispositions, often characterized by their belief that the old regime has exhibited incompetence in political administration or failed in delivering public goods. Implicit in this definition of successful coups is that they are carried out in a matter of hours or days, and that they are distinct from longer episodes of political turmoil that often involve the military but are characterized by extreme polarization of the masses and high civilian casualties. These longer struggles for political power are outside the definitional purview of successful coups and are known as rebellions, revolutions, or civil wars. Coups also affect a variety of regime types – for instance, they displace with equal frequency personalistic civilian dictatorships, struggling democracies, or already existing military regimes (McGowan and Johnson, 1984).

I only utilize successful coup events collected from the Banks data set (1970–90) as my dependent variable, wherein successful coup events are coded as 1, while non-events are coded as 0.

Although other empirical studies have tried to incorporate coup plots, attempted coups, and failed coups to create an additive index for measuring the incidence of coups in an effort to increase the frequency of events,[2] I contend, based on O'Kane's (1981, 1983) justification, that this is problematic because such a methodology has reliability and validity shortcomings.[3] Thus, I do not include failed coup attempts and plots in the operationalization of the dependent variable.

I also limit the unit of analysis to the 88 developing nation-states in Africa, Asia, and Latin America listed in the appendix. Limiting the unit of analysis to developing states (which are more prone to coup episodes) is also in accord with the methodological design of the past empirical research that utilized a similar time-series panel study (see Zuk and Thompson, 1982).[4]

Lastly, I only investigate coup events during the period 1970–90, because after 1990 the number of coup events in Latin America, Asia, and Africa (where most coups occurred) drastically decreased, as can be seen from Figure 1. Thus, it serves no empirical purpose to expand the analysis beyond 1990 because of the increased rarity of coup events post-1990. The temporal period of this study begins in 1970, because according to David (1987) veto coups that represented the reactionary nature of the third-world military infrastructure initially began in the 1970s, heralded by the 1971 coup of General Banzer against Juan José Torres in Bolivia. Furthermore, the process of decolonization in the 1950s and 1960s ushered in a period of successive turnovers in civilian leadership in the developing world, and military incursions into civilian politics did not achieve a

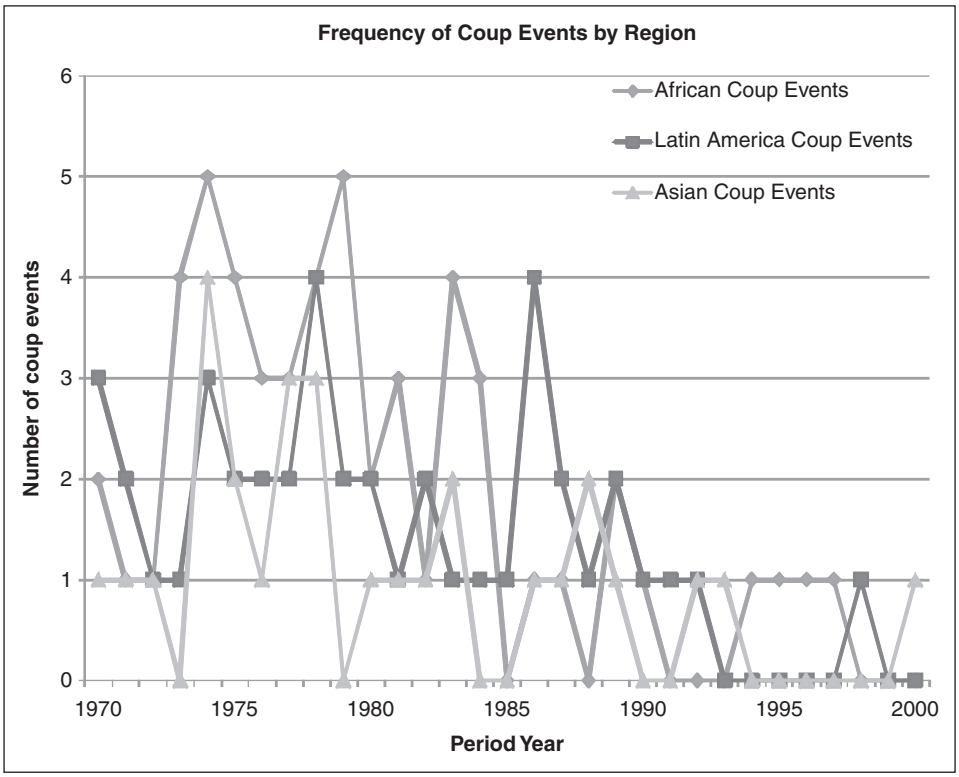

Figure 1. Frequency of Successful Coups by Region
Sources: Data derived from Banks (2000), double-checked using Keesing's news archives.

semblance of activism immediately after colonial powers retreated (see, for instance, Rothermund, 2006). As a result, coup events from the 1950s to the 1960s are also excluded from the analysis.

Independent Variables

The specific purpose of this study is to investigate the role of the protection of property rights in the decreased likelihood of a coup event. As such, I tap two independent variables that will serve as proxies for property rights, specifically: a) the degree of contract intensive activity measured by the CIM ratio, and b) the risk of property expropriation and repudiation of contracts by the state, also referred to as International Country Risk Guide measures.

The Degree of Contract Intensive Activity

According to Clague et al. (1997: 70), nations that secure property rights should expect private contracts to be reliably enforced, and as a result citizens should use hard currency less and rely more on extensive currency holdings. Even for small transactions that involve the selling of property, goods, and services, citizens living in states with secure property rights would rely less on hard currency exchanges and have a wide array of options to finalize financial transactions through amortization payments, credit loans, and installment plans. To substantiate this further, Clague et al. (1997: 70) assert that:

> In societies where an unstable legal and policy environment makes it sensible to conceal one's activities and assets from the government, people will make extensive use of hard currency to carry out transactions. People may prefer to hold assets in the form of hard cash rather than financial claims because they lack confidence in the integrity of banks or other issuers of financial claims or because they doubt the government's competence in the prudential regulation of financial institutions.

As a result, states that do not guarantee property rights should expect citizens to rely less on contract intensive activity and rather to carry out financial transactions through hard currency exchanges that are free from the risks of high taxation and confiscation by a state that does not guarantee property rights (Clague et al., 1997).

For this project, I therefore use the Contract Intensive Money (CIM hereafter) ratio as a good proxy measure for the degree to which states protect property rights. The CIM ratio is a measure of the nature of contract compliance in a state. It is derived using the formula $(M_2–C)/M_2$. The ratio denotes the non-currency money as a function of the total money supply.[5] The numerator of the formula involves non-hard currency transactions involving time deposits, non-currency holdings, investments, and checking accounts, while the denominator is the total sum of all assets and currency holdings in a state. Clearly, higher values of the CIM ratio are indicative of more highly secure property rights in a specific nation-state. Thus, I hypothesize that the higher the CIM value is, the less likely it is that a nation will experience a coup event.

I derive the CIM ratio for more than 80 developing states for the period 1970–90 from the International Monetary Fund's (IMF) *International Financial Yearbooks*.

International Country Risk Guide Measures

The CIM measure may not effectively capture the way the state threatens property rights, largely because it is a reflection of how citizens perceive the way in which the government functions in protecting their private assets. Furthermore, the CIM ratio can also be sensitive to sudden natural

disasters, economic shocks, and inter-state conflicts that affect developing states, which may have little to do with threats to property rights. Therefore, to better approximate the magnitude and degree of private property protection in nation-states and its effect on global and regional coups, I also utilize data provided by the International Country Risk Guide (ICRG hereafter) database. ICRG scores are proxy measures that regional specialists allocate to nation-states in terms of the prevailing economic and institutional conditions, in particular whether institutional and economic modalities favor the protection of property rights. Extant empirical research has shown that ICRG measures are reliable and are legitimate proxy measures that can capture the degree to which states guarantee the protection of private and personal property (Clague et al. 1997; Knack and Keefer, 1995).[6]

I utilize two ICRG measures that comprehensively capture the relationship between the state and property rights protection, specifically:

a) the Risk of Expropriation of Private Investment Measure – this variable, ranked on a scale of 1 to 10, evaluates the risk of "outright confiscation and forced nationalization of property" by the state. Lower ratings, with a minimum score of 1, are given to countries where expropriation of private investment is a likely event. Nations that score 10, which is the maximum score, are states where expropriation of private property and investment is a highly unlikely event. I hypothesize that nations that score highly on this expropriation risk variable (indicating more secure property rights) are less prone to coup events.
b) the Risk of Repudiation of Contracts Measure – this is also a variable ranked on a scale of 1 to 10. It addresses the likelihood that private businesses, contractors, and financial consultants will encounter the possibility of a drastic change in the nature of contractual obligations or their enforcement as a result of outright rejection, termination, postponement, or scaling down by the state because of a dramatic shift in economic or social policies and priorities. The lowest score of 1 is given to states where the likelihood of governmental repudiation of private contracts is strong, while a high score of 10 is allocated to nations where the repudiation of contractual obligations is very unlikely. Thus, I hypothesize that nations that score highly on this repudiation risk variable (indicating more secure property rights) should experience a decreased likelihood of coup events.[7]

To capture the interactive effect of both the expropriation and repudiation variables, I also create an additive independent variable by simply adding both variables together and creating a new variable that accounts for the additive impact on the dichotomous dependent variable. I create this additive variable because the expropriation and repudiation tendencies of the state often go hand in hand. The ICRG variables utilized in this study are from the period 1982–90; pre-1982 data are not available.

Control Variables

I incorporate seven control variables in this study based on the fact that they are standardized as controls or have been used previously as independent variables in prior empirical research looking at the determinants behind global coup events.

Existing research has shown that dependency on a primary commodity export leads to coups (O'Kane, 1981, 1983, 1987, 1993). Developing nations that are dependent on one commodity export cannot rely on export substitution to avert a crisis because they often do not have the skills or the technology to do so as a result of long-standing substandard GDP growth rates. Therefore, their economic survival is dependent on external markets and the fluctuations, economic cycles,

and volatility of world prices (Myrdal, 1972). If world demand and consumption of a commodity export decreases and international prices tumble, the state loses its ability to legislate substantive policy to ameliorate pressing social problems and often cannot allocate and distribute public goods efficiently. Thus states dependent on one commodity export for their developmental programs encounter a greater likelihood of military intervention.

To operationalize states that are primary commodity exporters, I utilize Przeworski et al.'s Democracy and Development database (2000). The dataset codes states that are primary commodity exporters as 1, while those that are not are coded as 0. To double-check the accuracy of the Przeworski data with regard to primary commodity exporters, I check them against the data in O'Kane's original dataset (1987). In cases where there is a discrepancy in the Przeworski dataset or a missing value is elicited, I relied on O'Kane's measures.

The use of regime type as a control variable is also common in the empirical analysis of coup d'état events. McGowan and Johnson's study of the African region (1984, 1986), using regime type as a control, reveals that coup events affect democracies, dictatorships, and civilian–military regimes with proportionately equal frequency. To operationalize regime type, I utilize data from Przeworski et al.'s dataset (2000). The data on the minimalist definition of regime type have a dichotomous nature that codes nations that are authoritarian as 1 and democracies as 0.

O'Kane's (1993) probabilistic models also show that a past coup experience increases the likelihood of a future coup in a state, while nations that did not have a previous coup event exhibit a smaller probability of having one. Likewise, Londregan and Poole (1990: 160–5, 178), utilizing a simultaneous equation model and a series of lagged coup events over 13 years, found that prior coups beget future coups, even when controlling for a nation's recent independence. To capture the effect of prior coups on future coups, I create a time variable that captures past coups at $_{(t-1)}$. In the sensitivity analyses, I also lag the past coup variables over the duration of six years,[8] in order to determine if previous coups have a role in increasing the likelihood of future coups.

The natural log of GDP per capita is also frequently used as a standard independent or control variable in most empirical studies on coups (see Londregan and Poole, 1990; O'Kane, 1981, 1983, 1993; Wang, 1998), where it is shown that an increase in the annual GDP per capita led to a decreased probability of coup events in global and regional models. Based on these past studies, it is crucial that the natural log of GDP per capita be controlled for. I do this by utilizing the time-series data from the World Development Indicators of the World Bank.

There is an apparent raging debate as to the impact of colonialism on facilitating the occurrence of coups. McGowan and Johnson (1984) discover that in Africa nations that were former British colonies faced a decreased likelihood of a coup, while French colonies, because of colonial mismanagement and neglect, were more prone to coups. For instance, McGowan and Johnson (1984: 648) state that: "Colonial experience is in fact a relevant factor with former French territories evidencing greater praetorianism both in terms of intervention and long-term rule by the military." I therefore create a dummy variable to tap British colonial experience. I operationalize it such that colonies that have a long-standing British colonial experience will be coded as 1 and all others will be coded as 0. The data are available from La Porta et al.'s (1998) study.

States whose central governments overspend on total capital expenditures (such as education, social security, and subsidies) have a tendency to neglect or decrease military spending or so-called "state allocations" to military corporate interests (Zuk and Thompson, 1982). A decrease in military spending or the proportion of military allocations (which is a ratio of military expenditures divided by central government total capital expenditures) can lead to a higher probability of a coup event. To employ this as a control, I use data on the central governments' total capital expenditures on welfare, health, and social security for the developing states under study in the period 1970–90 (as factor cost, based on

current national currency), which are derived from the World Development Indicators provided by the World Bank. The logic is that states that overspend on total capital expenditures will allocate less money to military related spending, thus working against the military's corporate interests.

Finally, previous studies have shown the increased frequency of coup events in states that have had long-standing ethnic divisions (Jackman, 1976, 1978, 1986; Jenkins and Kposowa, 1992; Johnson et al., 1984). This is more common in sub-Saharan Africa, where ethnic rivalries often pit one segment of the military against the other. It can also occur when those who are in control of major state bureaucracies and institutions are composed of the racial or ethnic rivals of those who are in the top echelons of the military. Using the data collected by Alesina (2003), I control for ethnic fractionalization as well.

Method and Design

I utilize a Binary Time Series Cross-Section (BTSCS hereafter) analysis of developing nations for the period 1970–90 to examine the linkage between property rights protection and the decreased likelihood of coups. This method allows for the comparison of units and regions within and across time and space, and for an appropriate measure that can utilize lagged time events. BTSCS analysis can also account for the varying impact of a series of independent and control variables on variations generated on a dichotomous dependent variable over time, which has constrained GLS, OLS, and discriminant analysis methods. In sum, BTSCS modeling can simultaneously solve the parameter issues and controversies of time and space that often arise in any study of political phenomena, in particular events that occur only rarely (see Beck et al., 1998).

Using a BTSCS analysis presents some problems, especially concerning the possibilities of temporal dependence and the occurrence of serial auto-correlation (Beck et al., 1998). To mitigate this deficiency all models are run with ancillary cubic splines as a smoothing-out mechanism for the temporal count variable. Further, standard errors are clustered around the nation-state based on the expectation that observations within the same state over time are unlikely to be independent (see Beck et al., 1998).

Results

I begin the analysis by testing if states with secure property rights (as a function of their CIM) are less likely to experience coup d'état events. The coefficients for the models are presented in logistic likelihood form, and so a negative coefficient represents a decreased likelihood of a coup event, while a positive one connotes an increased likelihood of a coup event. Table 1 presents the global and regional results. What is noteworthy here is that the CIM ratio variable, globally and across the three regions, produces maximum likelihood coefficients that are in the expected direction, and all are statistically significant at the $p<.05$ and $p<.01$ level. This indicates that states with higher CIM ratios (indicative of secure property rights) were less likely to experience a coup event during the period 1970–90. Furthermore, the effect of property rights protection on coups is strongest in Latin America. The results clearly validate the aforementioned hypothesis.

The global model in Table 1 also suggests that states that are primary commodity exporters are more vulnerable to coups (significant at the $p<.05$ level). This largely confirms O'Kane's findings (1981, 1983) that developing nations whose economy is dependent on a primary commodity export are more susceptible to coup episodes. The global model also illustrates how a past coup (lagged at $_{t-1}$) can elicit an increased likelihood of a future coup, which is significant at the $p<.05$ level. This finding accords with Londregan and Poole's (1990) discovery that prior coups precipitate future coups.

Table 1. Effect of Contract-Intensive Money (Property Rights Proxy Variable) on the Likelihood of a Coup d'Etat Event (1970–90)

	Global	Latin America	Africa	Asia
Contract-intensive money $_{(t-1)}$	−1.46 ** (.436)	−1.54** (.495)	−1.44 * (.592)	−1.31* (.532)
Primary commodity exporter	.052* (.030)	.048 (.036)	.053* (.020)	.051* (.025)
Regime type (Coded 1 for dictatorship; democracies, 0)	−3.18* (1.48)	−2.25 (1.54)	−3.16* (1.51)	−2.09 (1.62)
Past coup $_{(t-1)}$	.080* (.040)	.074 (.049)	.078 (.042)	.069 (.053)
Log of GDP per capita $_{(t-1)}$	−.049 (.029)	−.047 (.028)	−.050 (.029)	−.046 (.028)
British colony (1 for British colony; 0 = all else)	−.693 (.822)	−	−.716 (.846)	−.967 (.873)
Central governmental total capital expenditures $_{(t-1)}$	.905 (.762)	1.04 (.757)	.591 (.749)	.553 (.741)
Ethnic fractionalization	.231 (.211)	.077 (.190)	.045 (.221)	.066 (.145)
Constant	−15.79* (7.14)	−16.72* (8.34)	−15.35** (4.21)	−14.27* (7.17)
Log likelihood	−105.88	−102.74	−104.65	−100.44
Number of observations	1659	436	829	394

Notes: Binary Time Series Cross-Section analysis; standard errors in parentheses; statistical significance: **p<.01, *p<.05; cubic splines are not shown due to lack of space; standard errors clustered around the state.

Regional results show that the primary commodity export variable only shows significance in Africa and Asia (both significant at p<.05), and not in Latin America. Interestingly, regime type shows significance only in Africa (at p<.05), indicating that authoritarian regimes in Africa are less likely to face a coup event.

The other control variables in Table 1 do not have any statistical significance, yet they all yield coefficient values in the expected direction. To summarize briefly, the GDP per capita variable yields negative coefficients, indicating that an increase in growth rates (increasing economic affluence) leads to a decreased likelihood of a coup. The British colonial history variable globally and in Africa and Asia yields negative coefficients, illustrating that ex-British colonies are less susceptible to coups. This seems to confirm McGowan and Johnson's findings (1984) that ex-British colonies are less praetorian and have more stable political institutions than former French colonies. The total capital expenditure variable also shows a positive coefficient – largely confirming prior studies that found that an increase in central governmental spending can trigger coup events (Zuk and Thompson, 1982). Finally, ethnic fractionalization shows no effect but its signs are in the expected direction.

I next test the hypothesis using the ICRG measures that assess whether the risk of state expropriation and the repudiation of contracts have an effect on the frequency of coups. Table 2, Model A, shows that the expropriation variable generates a negative coefficient significant at p<.05. In other words, nations that score highly on this measure (indicative of more secure property rights) should expect to face a decreased likelihood of a coup. Model B also generates a negative coefficient for the repudiation of contracts variable, which has a higher significance

level at p<.01. In Model C, I create an additive index where I simply add the expropriation and repudiation variables together in order to capture the additive impact of both variables on the dependent variable. The additive variable still retains a negative coefficient significant at p<.01. The models suggest that these proxy measures for property rights have a strong influence on the decreased likelihood of coup episodes. Thus, states that are not facing an increased risk of property expropriation and contract repudiation by the incumbent regime are less likely to experience coup d'état episodes during the time period 1982–90. Thus, the hypothesis formulated earlier seems to be affirmed.

Of general interest in Table 2 is that Model C, which has the additive ICRG index as the sole independent variable, also elicits significance in some of the control variables. As in the previous model, states that are primary commodity exporters are likely to be coup prone, while states that are ex-British colonies are not. A past coup event that is lagged at $_{(t-1)}$ also shows a positive coefficient in the expected direction that is significant at p<.05 – largely confirming Londregan and Poole's (1990) empirical assessment that developing states that experience regime change through military coups are at an increased risk of encountering a future coup event. There is thus a pressing need to conduct a sensitivity analysis that includes lagged coups over an extended time period as a control variable.

Table 2. Effect of ICRG Measures (Property Rights Proxy Variables) on the Likelihood of a Coup d'Etat Event (1982–1990)

	Model A	Model B	Model C
Risk of expropriation	–.189* (.091)	–	–
Risk of repudiation of contracts	–	– .408** (.127)	–
Risk of expropriation + risk of repudiation (additive index)	–	–	–.227** (.062)
Primary commodity exporter	.124* (.054)	.127* (.056)	.132* (.070)
Regime type (coded as dummy; 1 = dictatorships, 0 = democracies)	–.016 (.025)	–.011 (.025)	–0.09 (.154)
Past coup $_{(t-1)}$	.360 (.364)	.329 (.367)	.315* (.158)
Log of annual GDP per capita $_{(t-1)}$	–.014 (.027)	–.015 (.027)	–.139 (.235)
British colony	–.077 (.057)	–.089 (.072)	–1.22* (.617)
Central government expenditure $_{(t-1)}$	1.15 (.571)	1.13 (.502)	2.24 (1.12)
Ethnic fractionalization $_{(t-1)}$	.211 (.113)	.210 (.117)	.211 (.118)
Constant	–1.84 (1.61)	–.995 (.750)	–1.97** (.315)
Log likelihood	–170.16	–165.50	–179.34
Number of observations	1267	1190	1190

Notes: ICRG measures (higher scores indicate more secure property rights); Binary Time Series Cross-Section analysis; standard errors in parentheses; statistical significance: **p<.01, *p<.05; ICRG data provided by IRIS-3; cubic splines are not shown due to lack of space; standard errors clustered around the state.

Table 3. Effect of Property Rights Proxy Variables on the Likelihood of a Coup d'Etat Event with Past Coups Lagged Events

Contract-intensive money $_{(t-1)}$	–.037** (.015)
Commodity exporter	.414* (.216)
Regime type (coded 1 for dictatorship; democracies 0)	–.671 (.498)
Log of annual GDP per capita $_{(t-1)}$	–.315 (.277)
British colony	–.017* (.010)
Central governmental expenditures $_{(t-1)}$	.148 (.182)
Ethnic fractionalization	.119 (.073)
Past coup $_{(t-1)}$	.093** (.028)
Past coup $_{(t-2)}$	.042* (.021)
Past coup $_{(t-3)}$	.196 (.120)
Past coup $_{(t-4)}$	.470 (.351)
Past coup $_{(t-5)}$	.363* (.182)
Past coup $_{(t-6)}$	.619 (.631)
Constant	–9.34*
Log likelihood	–210.16
Number of total observations	1659
Number of countries	88

Notes: Binary Time Series Cross-Section analysis; standard errors in parentheses; statistical significance: **p<.01, *p<.05; constant not shown due to lack of space; cubic splines are not shown due to lack of space; standard errors clustered around the state.

Sensitivity Analysis with Lagged Coups

Londregan and Poole (1990: 163–4) generated a model where they lag prior coups for 13 years and discover that a coup occurring $_{(s+1)}$ years in the past has a 0.89 times chance of generating a future coup event. A key finding in their model suggests that: "The after effect of coups [eliciting a future coup] wears off geometrically with a half-life of about six years" (Londregan and Poole, 1990: 163). Therefore, the results presented thus far may be erroneous, granted that lagged coups over a specific time frame may in fact be the primary variable that causes the greatest impact on the propensity for successful coup episodes. This may render spurious the effect of the property rights proxy variables on inhibiting coups.

Because of Londregan and Poole's robust findings, I employ in Table 3 a sensitivity analysis that uses past coups lagged over a six-year period as controls. Table 3 looks at the effect of the CIM ratio on the likelihood of global coups with the six-year lags of past coups. The results in Table 3 indicate that even with lagged coups over a six-year period, the CIM ratio yields a negative coefficient in the expected direction (significant at p<.01). In sum, the results provide evidence that – even while controlling for the impact of lagged coups over a six-year period – developing states that have high CIM ratios (indicative of more secure property rights) were less likely to experience a coup episode during the period 1970–90.

Discussion

The empirical analysis strongly supports the expectations of the article. The better a state protects its property rights, the less likely it is that a coup will occur. States whose citizens engage in a lot of contract intensive activity, reflecting an institutional environment where

Table 4. Summary Statistics

Variable	Mean	Standard deviation	Minimum score	Maximum score
Coup event	.0118	.1052	0	1
Commodity exporter	.3262	.4688	0	1
Contract-intensive money ratio	.6755	.2382	0	1.136
Log of annual growth rate per capita	2.640	3.2376	.57589	4.2507
Regime type	.601	.489	0	1
Total capital expenditures	33.783	17.544	19.240	41.140
British colony	.2433	.4297	0	1
Expropriation score	5.090	2.311	1	10
Repudiation score	4.426	2.745	1	10
Ethnic fractionalization	.3790	.2480	0	.862

the state protects property rights, are more than likely not to have experienced a coup event during the period 1970–90. Further, states that restrain themselves from the expropriation of property and the repudiation of public and private contracts/property are also more than likely not to have experienced the interventionist role of the military in state affairs during the period 1982–90.

This analysis also reveals that primary commodity exporters, colonial historical experience, and past coups also matter when explaining the incidence of global coup events in the same period. Prior coups can elicit future coups, as revealed by the statistical significance this variable attains in the various models. However, prior coups do not affect the explanatory power of property rights protection on the decreased likelihood of a coup, as demonstrated in the sensitivity models.

The results of the analysis also show that the impact of the property rights variables on the decreased propensity for a coup event hold true for all regions. Even Africa, despite conflicting assessments of its populist and reactionary coups during the period (McGowan and Johnson, 1986), seems to be very sensitive to the CIM ratio. This indicates that in Africa property rights protection was also paramount in decreasing the likelihood of a coup episode.

A final aspect of the analysis that warrants significant attention is the commodity export variable, which has statistical significance even in the sensitivity models in Table 3. This finding largely confirms O'Kane's (1983, 1987, 1993) discovery that developing nations who are highly dependent on a primary commodity export are at a high risk of a coup because a sudden drop in the international prices of their main commodity export can lead to immediate economic insolvency that yields political turmoil. She claims that export dependency precipitates a prolonged economic crisis out of which a political environment is created in which the military takes over (either through a junta or by imposing a new civilian government backed by the military) because the incumbent regime has lost its moral legitimacy to govern and distribute public goods efficiently. Thus, future empirical research should consider utilizing this variable as a standard control variable in assessing the global incidence of coups. The commodity export variable has not been tapped by any other empirical work on the study of the political economy of coups since O'Kane popularized it in her studies.

Conclusion

What this study has accomplished is to rigorously test the assertions put forth by the elite-class coup theories of O'Donnell (1973) and Nun (1976). They argue that as modernization reached a peak in the early 1970s, the masses became empowered through the populist programs that incumbent regimes began to implement. Such programs, which often involved property redistribution or land reform programs, went against the entrenched interests of the elites. Against the background of an international environment in which Cold War politics were at play, the military establishment developed an alliance with the landowning and investment classes to secure their hierarchical dominance in a very stratified social system. Top generals and high-ranking soldiers also received Western education and were exposed to the doctrines of Western capitalism. When elite segments in Latin America, as Nun points out, began to lose the ability to control the excesses of wayward populist regimes, they frequently courted the military to intervene in the polity to maintain their oligarchic hold on politics and society. This approach saw the entrenchment of the alliance between the military and the landowning and investment classes, which was clearly evident in the long repressive military regimes that Argentina, Uruguay, and Ecuador experienced from the 1970s to the late 1980s (Farcau, 1994). What this article shows is that the elite-class theory on coups that O'Donnell (1973) and Nun (1976) postulated back in the 1970s has saliency beyond the Latin American cases. As Ayittey's (1998) case studies in Africa and the various country-specific studies in Asia (Baxter, 1997; Chuto, 1987; Lal, 1990; Talbot, 1999) have indicated, the elites became alarmist at the proliferation of populist regimes worldwide that sought to restructure state–society relations in respect of property rights. As modernity expanded, popular mobilization of the masses became manifest, through which the masses gained expansive rights to suffrage, access to political and labor unions, and educational opportunities. As their numbers grew, a critical mass was reached and they made stronger demands for the redistribution of resources. In the end, in states that modernized quickly and witnessed increased threats to property rights there was an increase in coup events during the 1970s to 1990s. States that protected the property rights of the elites effectively were able to avert this politicization of the military. In large measure, Nun's theory about how Latin American generals had become the fiduciary of the elite class, and how the military seized civilian control of government when elite interests were endangered, can be generalized across all regions during the time period examined, in which a number of coups vetoed out the populist tendencies of the state.

It is important to note here that there were some regimes that were cognizant of the danger of wealth expropriation and so reversed policies on the nationalization of industry, widespread land reform, and high taxation (Farcau, 1994). Such regimes did so perhaps under military pressure, but the reversal of their courses of action prevented them from having to deal with an interventionist military. A case can be made, based on the analysis presented in this article, that states which created an institutional environment where property rights were protected from populist pressures aimed at redistribution, expropriation, and the repudiation of contracts were able to avoid the predicament of having coups and a politicized military. Coups generated junta regimes that often rose to power with the objective of preserving property rights, but often curtailed civil liberties, violated human rights, and promoted social inequities.

Finally, one cannot deny that a resurgence of veto coups in order to protect the cultural and intellectual property rights of the native Melanesians from ethnic Indians in Fiji may indicate a new trend of military intervention in ethnically divided polities. The 2000 coup in Fiji may herald the start of veto coups that seek to protect the cultural, intellectual, and private property rights of one ethnic group over another (Robertson, 2002). Only future events will tell if veto coups of this sort are to experience a revival.

Appendix

Table A1. The 88 Nation-States in the Panel Study and the Number of Successful Coups Each Country Experienced in the 1970–90 period

Country	Number of coups
Afghanistan	4
Algeria	0
Angola	0
Argentina	3
Bangladesh	4
Belize	0
Benin	1
Bolivia	3
Botswana	0
Brazil	0
Burkina Faso	4
Burundi	3
Cambodia	2
Cameroon	0
Cape Verde	0
Central African Republic	2
Chad	3
Chile	1
Colombia	0
Congo (Dem. Republic)	0
Congo, Republic of	0
Costa Rica	0
Cote d'Ivoire	0
Cuba	0
Cyprus	1
Djibouti	0
Dominican Republic	0
Ecuador	2
Egypt	0
El Salvador	0
Ethiopia	1
Fiji	2
Gabon	0
The Gambia	0
Ghana	3
Guatemala	2
Guinea	1
Guinea-Bissau	3
Guyana	0
Haiti	3
Honduras	3
India	0
Indonesia	0
Iran	0
Iraq	0
Kenya	0
Korea, South	0

Table A1. *(Continued)*

Country	Number of coups
Lebanon	0
Lesotho	2
Liberia	2
Libya	0
Madagascar	0
Malawi	0
Maldives	0
Mali	0
Mauritania	3
Mauritius	0
Mexico	0
Mongolia	0
Morocco	0
Mozambique	0
Myanmar (Burma)	1
Nepal	0
Nicaragua	1
Niger	1
Nigeria	3
Pakistan	1
Panama	1
Paraguay	1
Peru	1
Philippines	0
Rwanda	1
Senegal	0
Sierra Leone	0
Somalia	1
Sri Lanka	0
Sudan	4
Suriname	1
Swaziland	2
Syria	1
Tanzania	0
Thailand	4
Tunisia	0
Turkey	1
Uganda	5
Uruguay	0
Venezuela	0
Zambia	0
Zimbabwe	0

Notes

1. Londregan and Poole (1990: 175) find no evidence that prior coup events lead to economic underperformance. For instance, they state: "Coups occurring in the recent past have no systemic effect on the rate of income growth."
2. For instance, McGowan and Johnson (1984, 1986) created an index known as the Total Military Involvement Score that allocates a score of 5 for successful coups, 3 for attempted coups, and 1 for a reported plot.

Research by Wang (1998) incorporated an additive index combining successful coups, attempted coups, and coup plots to give a total score and used it as the dependent variable. Londregan and Poole (1990) also used an additive index.

3. First, most coup plots and attempted coups that are reported in newspaper archives such as Keesing's news index are fabricated by faltering regimes to galvanize mass public support, in an effort to paralyze, destabilize, and delegitimize the political opposition. Second, there are some coup plots that never achieve news coverage because they are immediately foiled and the government censors the domestic press from reporting them. This is because their disclosure to the mass public can lead to an increased perception that the state has lost its moral legitimacy to govern. Third, a majority of coup plots never receive news coverage because by their very nature they are planned in high secrecy by military generals who want to strategize a successful coup. Generals are often aware that high-publicity coup attempts have high failure rates. They plan a coup attempt and later abandon it if the political or economic conditions are not right – without the awareness of the domestic or international press. Thus, there is a tendency for news archives from which indexes are collated to over-report or under-report coup attempts and plots, which according to O'Kane (1993: 253) defies conceptual logic. Therefore, it is better to utilize successful coup events that led to the complete overthrow of the incumbent regime and to operationalize these strictly as a dichotomous dependent variable.
4. Similarly, Zuk and Thompson (1982: 64) limited their unit of analysis to 66 less-developed states with a GDP per capita equal to or less than $1700 in constant 1976 US dollars.
5. In the formula, M_2 denotes the money supply, while C is the currency holdings held outside banks (Clague et al., 1997).
6. However, some critics of this measure posit that since it is a subjective measure, it is feasible that the ICRG institutional measures are largely influenced by the economic performance of states, primarily its GDP (Evans and Rauch, 1999). However, some empirical work has consistently used this measure to explain the institutional efficacy of states in terms of promoting long-term economic stability (see, for instance, Knack and Keefer, 1995).
7. The ICRG measures are provided by the IRIS-3 Center at the University of Maryland, which is a private international investment risk consortium. They provide yearly rankings on the nature of the investment climate, risks, and institutional assessments of property rights protection. The data are available for a cross-section of more than 100 countries from 1982.
8. Londregan and Poole (1990) lagged prior coups for 13 years to capture whether prior coups have a cumulative effect on the propensity for generating future coups. I employ their method of lagging, but only do so for six years as a result of the more limited temporal period of my study (20 years) from 1970 to 1990. Londregan and Poole analyzed coup episodes over a longer time frame of 32 years (from 1950 to 1982).

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