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Revolutionary Pathways: Leaders and the International Impacts of Domestic Revolutions

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ABSTRACT

How much and in what ways do individual leaders matter for international politics? This article sheds new light on these questions by considering the consequences of domestic revolutions in international relations. We argue that revolutions have international effects due to two separate pathways, one associated with the event and one associated with the new leader's administration. In the first pathway, a revolutionary event disrupts established relationships and perceptions, creating uncertainty both within the state and abroad. In the second pathway, revolutions put individuals into office who are more willing to challenge the status quo and who have publicly committed to a sustained shift in policies during their administration. These two distinct pathways suggest that the important question about revolutions is not whether leaders or events matter most but rather the conditions under which they matter. Consequently, we studied these pathways on three phenomena: international economic sanctions, domestic economic growth, and interstate alliances. We find that revolutionary events have a short-term negative effect on domestic economic growth, while revolutionary leaders have a long-term effect on the probability that a revolutionary state is targeted for sanctions. Both the revolutionary leader and the revolution's immediate events alter the state's international alliances. Our findings suggest that no single level of analysis completely dominates, and the answer depends on the outcome of interest.


KEYWORDS

Alliances; economic growth; leaders; revolutions; sanctions

How much and in what ways do individual leaders matter for international politics? The views of political scientists on this question have ranged from a structuralist perspective that minimizes the influence of individuals (Skocpol 1979; Walt 1987; Waltz 1979) to more recent scholarship that emphasizes the beliefs, preferences, and agency of individuals as central to political outcomes (Byman and Pollack 2001; Chiozza and Goemans 2004, 2011; Horowitz and Stam 2014; Kurzman 2009; Rosen 2007; Saunders 2011). While few scholars would dismiss the role of individuals entirely, there is a significant range of belief about how much, in what ways, and over what types of outcomes, individual

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leaders matter. Virtually all of the existing research on leaders, however, focuses exclusively on the impact of individuals on a single outcome or dependent variable. This approach makes research more tractable (and publishable), but it also means that the answer obtained in such studies might depend crucially on the particular features of the dependent variable selected for study. The single-variable approach has led to a conflicting set of findings. The choice of dependent variable is thus a central question.

We seek to advance our understanding of the influence of leaders in international politics by conducting exploratory research on the impacts of domestic political revolutions. Because domestic revolutions are among the most consequential types of social phenomena, we are able to compare the impact of leaders across a variety of outcome variables. The profound domestic and international impacts of a revolution can affect social structure (Skocpol 1979), military expenditures (Colgan 2011), war (Colgan 2013; Colgan and Weeks 2015), and economic upheaval (Huntington 1969). Simply put, the fact the revolutions matter is not in question. What is less clear, however, is: How do they matter? Recent advances in the study of revolutions and their multiple effects on international relations create new opportunities to address this question. We argue that revolutions have international effects due to two separate pathways, one associated with the revolutionary event itself and one associated with the individual leader(s) who come to power by way of a revolution.

In the first pathway, a revolutionary event disrupts established relationships and perceptions, both within the state and across its boundaries, generating uncertainty. We theorize that the disruptive event of the revolution matters most for behavior that relies on certainty in, or stability of, ongoing relationships. In the second pathway, revolutions put individuals into office who are typically more willing to challenge the status quo and who have publicly committed to a sustained shift in policies during their administration, as compared to the prerevolutionary one. These changes can lead to negative reactions from their neighbors and the broader international community. While the first pathway can be expected to decay away over time as relationships normalize, effects from the second pathway could be observable for a period of years or decades, as the leader(s) installed by a revolution continues to set the direction of the state. Thus whereas the first pathway generates short-term uncertainty, the second pathway often changes the content of international relationships for a sustained period of time. These two distinct pathways suggest that the important question about revolutions is not whether leaders or events matter most, but rather the conditions under which they matter. The two pathways also help explain a mixed set of research findings on the effect of revolutions: Some scholars have emphasized the first pathway (Maoz 1996; Walt 1996), whereas others have favored the second (Gurr 1988).

We select three phenomena that should vary significantly in the way in which revolutionary events and leadership affect them: international economic sanctions, domestic economic growth, and interstate alliances. A leader’s decisions—both in the revolutionary state *and* in the states reacting to it—matter greatly as they use policy to try to alter each other’s behavior, such as by applying economic sanctions. While sanctions are sometimes triggered by specific events, more often they are driven by attempts to alter the long-term behavior of the state’s leadership, such as apartheid in South Africa or communism in Cuba. By contrast, the revolutionary event will be highly consequential for a state’s rate of economic growth because it represents a disruptive shock to the stability of thousands of microeconomic relationships. Individual leaders also matter indirectly for economic growth, but their effect is mitigated by myriad other factors, including the historical legacy, underlying institutions, and physical and social capital of the state. Finally, we study alliances because we expect both causal pathways to be in play: Alliances are heavily conditioned by stability and inertia in the transnational relationship, but they are also designed to alter another state’s behavior (current and future). By studying these three variables at once, we gain analytic purchase on the causal pathways. [Figure 1](#) illustrates the logic behind our research design. We also draw upon previous research that investigated other phenomena, such as the onset of international military conflict, to test the consistency of our results. Our findings provide considerable empirical support for the theory. In sum, there is no single answer to the question of which is more important, leaders or

<u>Dependence on Events</u>			
		High	Low
<u>Dependence on Leader</u>	High	Alliances	Sanctions
	Low	GDP Growth	N/A

Figure 1. Research design.

events; instead, the answer depends systematically on the nature of the phenomenon in question.

Studying multiple phenomena or variables is challenging for a single article, but it offers three crucial advantages. First, studying multiple phenomena is necessary to test whether the effects of a revolution are transmitted through multiple mechanisms. By doing so, this study fills an important gap in the literature on revolutions (Armstrong 1993; Bisle 2004; Bukovansky 2010; Calvert 1997; Carter, Bernhard, and Palmer 2012; Foran 2005; Goldstone 1997, 2001, 2014; Halliday 1999; Katz 2000; Selbin 2009; Walt 1996). Second, studying multiple phenomena is also important in exploring the conditions under which leadership matters (Chiozza and Goemans 2004, 2011; Saunders 2011). Third, the research design allows us to contribute to three distinct research literatures: on the origins of sanctions, economic growth, and alliances respectively. Importantly, we show that revolution is a significant factor for understanding all of these phenomena, even though revolutions are often ignored within political science in quantitative studies of conflict, sanctions, alliances, and other phenomena.¹

The article proceeds as follows. In the next section, we review existing approaches to leaders' role in international relations. In the following section, we define our terms and describe our theory, which produces three specific empirical hypotheses. The next section describes our data and methods, and the section after that provides the empirical results. Our results demonstrate that both revolutionary leadership and the revolutionary event itself matter, depending on the phenomenon of interest. While revolutionary leaders make economic sanctions more likely, it is the revolutionary event that has a negative effect on economic growth. In terms of alliance formation, both revolutionary leadership and revolutionary events matter. A final section summarizes and concludes.

Existing approaches to leaders in world politics

A major theme of some Realist arguments about international politics is that leaders do not much matter. Waltz argued that leaders, and domestic politics generally, matter little for the major outcomes of international relations; instead, anarchy is the omnipresent condition that steers world politics (1979:93–96). Although Waltz's theory attracted much criticism, his view on individual leadership lives on. For instance, in 2013 Robert Jervis argued that “if we were to apply the test . . . of writing the history [of United States foreign policy in the Cold War] without mentioning the name of the serving president, it would be hard to infer when a new person entered the Oval

¹There is much multidisciplinary research on revolutions, but it has not permeated into studies of other aspects of international relations affected by revolutions.

Office” (2013:172). More broadly, contemporary bargaining models of international security accord little importance to the role of individual leaders (Fearon 1995; Wagner 2007).

An emerging body of scholarship, however, argues that leaders do matter in fundamental ways (Ahlquist and Levi 2011). Saunders (2011:4–10) argues that US presidents’ prior beliefs play a crucial role in the choice to intervene militarily in another country. Horowitz et al. argue that a leader’s experiences prior to coming to office, especially rebel activity, matter for a host of subsequent behaviors (Fuhrmann and Horowitz 2015; Horowitz and Stam 2014). Chiozza and Goemans (2004) argue that the expected retirement fate of leaders powerfully conditions their propensity to initiate conflict. Byman and Pollack (2001:134) argue “individuals set the ultimate and secondary intentions of a state” and that states led by leaders with grandiose visions are more likely to destabilize the system.

Even with this new literature, it is possible for structuralists to concede that individuals might matter temporarily or in particular crisis situations but maintain their position that deeper historical events and structural forces establish the terms under which crises arise in the first place (Waltz 1979:127–128). Scholars continue to privilege events, such as those leading to information updates or changes in a state’s military capability, as central features of international behavior (Smith and Stam 2004). Jervis (2013:175) argues that US presidents are at least as likely to be influenced by international events as their own preferences.

Progress resolving this debate is possible if one poses the question of which types of phenomena are driven primarily by individuals and which ones are driven by events. This approach could help develop a theoretical framework for classifying types of phenomena by their underlying causal processes. Such a framework would deepen our understanding of the ways in which leadership affects international relations: explaining *how* leaders matter, not just that they do.

Isolating the causal impact of leaders is not easy. Scholars have long been interested in revolutions as one way of plausibly identifying a change in international relations that is primarily domestic and thus quasi-exogenous to the day-to-day forces of international politics (Armstrong 1993; Bisley 2004; Bukovansky 2010; Calvert 1997; Carter et al. 2012; Foran 2005; Goldstone 1997, 2001, 2014; Gurr 1988; Halliday 1999; Katz 2000; Maoz 1996; Selbin 2009; Skocpol 1988; Walt 1996). Yet until recently they faced an empirical challenge: robust quantitative data sources focused specifically on revolutions have only recently been made available. Consequently, the time is ripe for a new approach.

Theory

We define a *revolution* as an event that transforms the existing social, political, and economic relationships of the state by overthrowing or rejecting the principal existing institutions of society. This definition is similar to the

one provided by Walt, Huntington, and others (Colgan 2013; Huntington 1969; Maoz 1996; Walt 1996)—though not Skocpol, who focuses on rarer “social revolutions” (1979). Revolutions are distinct from other events such as coups, assassinations, and revolts (although these could be a component of a revolution). We use the term *revolutionary event* cautiously, recognizing that revolutions are complicated, sprawling phenomena that often have some duration. Still, we take the key “event” as the turnover in the country’s political leadership, which is typically a pivotal moment within the revolutionary sequence. A revolutionary state, leader, or government is simply one where a revolution has occurred and the original leader(s) is in power. A more detailed empirical operationalization is given in the following.

We use the term *domestic revolution* to emphasize that revolutionary leaders are identified entirely based on the domestic transformations within the state, to avoid a potential tautology when considering the impact of revolution on international variables. We do not include foreign-imposed regime changes. Some scholars have sought to explain the complex factors that cause a revolution (Brinton 1965; Foran 2005; Goldstone 2001; Gurr 1970; Huntington 1969; Katz 2000; Kuran 1991; Kurzman 2009; Lohmann 1994; Skocpol 1979). We take revolutions as a starting point, to focus on what happens in the postrevolutionary period.

The many ways in which a domestic revolution matters for a state’s international relations can be loosely categorized into one of two pathways. First, revolutions are finite-duration events that disrupt or shock the relationships of almost every set of actors that interacts within and across the border of the state, including low-level economic, political, bureaucratic, diplomatic, cultural, academic, and financial relationships. Second, a revolution installs a new political regime and administration in the state that behaves substantially differently than the prerevolutionary leadership (by definition), and the administration is often in place for a relatively long period of time. These two pathways can be characterized as being different both in terms of their duration and the manner in which they operate.

First, consider revolutions as events (the “event pathway”). Revolutions can cause or contribute to major changes in international behavior by (1) disrupting routine activities, supply chains, and business during the intense periods of social and political conflict; (2) creating a sense of crisis between the revolutionary state and its nonrevolutionary neighbors; (3) increasing the chance of miscalculation between actors inside and outside the revolutionary state by lowering the quality of information available; and (4) creating windows of opportunity for other states or actors to confront, exploit, divest, or otherwise change their relationship with a revolutionary state or actors within such a state.²

²Some of these mechanisms are adapted from those identified in Walt 1996.

Some of these mechanisms might extend beyond the immediate aftermath of the revolutionary event, but their effect is strongest during and immediately following the revolution. Moreover, these mechanisms reflect revolutions-as-events because they exist regardless of the kind of leader that is empowered by revolution.

Note that even a “short-term” pulse effect, like those we expect from the first pathway, can have long-term consequences. A short-term decrease in economic growth, for instance, can permanently lower a state’s long-term economic trajectory, even if the growth rate returns to its prerevolutionary level in subsequent years. We refer to this type of pulse effect as short-term, however, because the change in the growth rate is short-lived.³ By contrast, the long-term effects that we describe from the second pathway affect the behavior over a sustained period of time.

Second, revolutions install new state leaders (the “leader pathway”). A revolution brings to power individuals with particular personal characteristics and who have publicly committed to a sustained shift in policies during their administration. Both of these factors—the personal characteristics of the leader and the policy change—could contribute to changes in the state’s international relations that continue to unfold over the course of the leader’s administration. The individuals who succeed in taking power through a revolution are systematically more likely to be risk tolerant and ambitious to alter the status quo than nonrevolutionary leaders because individuals without those characteristics are unlikely to start a revolution (Colgan 2013; Gurr 1988).⁴ Mao Zedong, Muammar Qaddafi, and Gamal Abdel Nasser are examples. These characteristics—risk tolerance and ambition—in turn make it more likely that the leader will seek to create changes in the state’s foreign policy once in power. Additionally, the revolutionary leader typically commits to a major change in the state’s policies as part of coming to power via the revolution. While leaders do not always follow through on the promises they make prior to coming to power, they have strong political incentives (and likely personal preferences) to follow through on at least some of them. We characterize both of these effects as part of the change in leader and his administration and do not try to separate them in this article.

Crucially, revolutionary leaders cause changes in international relations both directly and indirectly: directly, because the revolutionary leader often alters his state’s foreign policy, and indirectly, because the revolutionary leader takes actions—sometimes domestically, sometimes in foreign policy—that displease other states and cause them to react, trying to deter or compel the revolutionary

³The pulse effect is thus quite different from a hypothetical decrease in yearly economic growth in each of the 10 or 20 years following a revolution (which we do not observe empirically).

⁴All state leaders, even nonrevolutionary ones, require some risk tolerance and ambition. Yet more risk tolerance is required when the leader must do so outside of a regularized process.

leader to take a different course of action. Sanctions and military actions targeting the revolutionary state are prime examples of such indirect behavior.

Note that we distinguish between an administration (which ends when the leadership changes) and the political structures and processes of a regime, which might last for several administrations. It is plausible that a revolution also affects the regime, which in turns has international effects (Colgan and Weeks 2015). Research also suggests, however, that what matters most is the original revolutionary leader(s) and his administration (Colgan 2013). Consequently, we focus here on the impact of a revolutionary leader's administration, in comparison to (1) the prerevolutionary administrations and (2) the administrations that follow after the original revolutionary leader steps down, even if the same regime is in place.

This second pathway is important because if revolutions are important to political, economic, and social behavior solely as events, one would expect their impact to peak during and immediately after the revolution and then decay away over time (a "pulse" effect). Business and diplomatic activities gradually resume after disruptive events: The sense of crisis passes, information about the new revolutionary regime surfaces, and the "window of opportunity" for international change closes. It is perhaps not surprising, then, that some scholars have assumed that the propensity for international conflict following a revolution passes after 5 (Maoz 1996) or 10 years (Walt 1996). Yet if some of the impact of a revolution is a result of a change in the leader(s) of the state, and the leader's individual characteristics and policy preferences are durable over time, then we should expect some phenomena to continue to be affected by the revolution even long after the event itself. This leads us to formulate three propositions:

- Proposition 1: *When the outcome of interest (dependent variable) is principally about altering the behavior of another actor, based on explicit political decisions (inside or outside of the revolutionary state), a revolution will have long-term consequences linked to the length of time that the original revolutionary leader(s) spends in power.*
- Proposition 2: *When uncertainty is highly important to the outcome of interest (dependent variable), a revolution creates a disruptive, short-term shock (pulse) that rapidly disappears after the revolutionary event.*
- Proposition 3: *When uncertainty and explicit political decisions are both important to the outcome of interest, a revolution creates both long- and short-term effects after the revolution.*

The propositions are not directly testable, but they generate testable empirical implications. We focus on international economic sanctions as an example of the first kind of phenomenon: one that is principally designed to alter the behavior of the state. Leaders are principally responsible for the decisions and policies that lead to sanctions in two ways: The revolutionary leader's decisions induce the sanctions, and other states' leaders decide to

apply the sanctions. Naturally, the decision to impose sanctions is based partly on other factors, such as the domestic politics of the state(s) imposing the sanctions (Cox and Drury 2006; Drezner 1999; Martin 1993). Still, the actions that cause a state to be targeted for international sanctions in the first place—such as international aggression or a poor domestic human rights record—are usually the result of decisions made by the leader of the targeted (revolutionary) state. Consequently, if revolutions are more than just events, and the character of individual revolutionary leaders is an important pathway by which revolutions have an effect, we expect that the probability that a revolutionary state is targeted for international sanctions to be heightened throughout the revolutionary leader's tenure, not just in the immediate revolutionary period.

We then focus on economic growth as an example of the second kind of phenomena: one that is heavily shaped by uncertainty and relationship stability via recurring transactions between actors. A revolution is likely to have its biggest impact on economic growth during and in the immediate aftermath of a revolution, as supply chains are disrupted and business activities are temporarily suspended or inhibited. Of course, if a revolution installs a new kind of regime, such as one significantly more democratic or autocratic than the previous one, that could affect long-term economic growth as well. Indeed, some revolutionary states have poor long-term economic growth: Cuba, for instance. Yet Cuba has roughly the same GDP per capita as its nonrevolutionary neighbors Jamaica and the Dominican Republic. Controlling for the nature of the regime, we expect that the short-term disruption of the revolution itself will create a negative economic effect that is far more important than any annual drag on economic growth in future years.

Finally, we consider a third kind of phenomenon, changes in alliances. We theorize that revolutions affect alliances through both causal pathways because alliances are designed to alter the behavior of another state *and* are heavily shaped by relationship stability and inertia between actors. The change-seeking characteristics of revolutionary leaders make them generally less interested in order-preserving international alliances; however, this tendency may be partially or completely offset during the window of opportunity for political change and realignment in the immediate aftermath of the revolutionary event. Qaddafi, for instance, was generally too quixotic for long-term international alliances, but immediately after coming to power he repositioned Libya closer to the Soviet Union as a way of breaking free of Libya's traditional relationships with the United States and Britain.

While our theory predicts that both the revolutionary event and the leader will be consequential for alliance change, the disruptive effect of the event itself could make it more likely for states to create or dissolve alliances. On one hand, the shock to established relationships might cause the end of alliances. On the other hand, the shock also encourages states to reevaluate

their relationships and create new partnerships where appropriate. Consequently, the net effect on a state's total number of alliances is theoretically ambiguous—it could increase or decrease—but the theory unambiguously predicts that the probability of change in any given dyadic relationship is higher in the period immediately following the revolution. These considerations lead to the following testable hypotheses:

H1: *Revolutionary states are more likely to be the target of sanctions than nonrevolutionary states, throughout the revolutionary leader's tenure.*

H2: *States with a recent revolution will have lower (or more negative) rates of economic growth that have not experienced a recent revolution.*

H3a: *Revolutionary states are less likely to form alliances than nonrevolutionary states over the long run.*

H3b: *In the short run, revolutions increase the probability of alliance change as old perceptions change and new friendships form.*

Some justification of our focus on sanctions, growth, and alliances is required. As we noted in the introduction, revolutions might influence a whole host of variables. We used three criteria when designing our empirical strategy. Our first criterion was variation in the strength of the two causal pathways: see [Figure 1](#). (We might have chosen to also study military conflict, but that variable has been well studied; more on that in a moment.) The second criterion was feasibility: We chose variables for which there were reputable and accessible data sources. Finally, our third criterion was significance: We chose variables that other scholars had found worthy of study and about which there was a substantial literature. These criteria led to our choice of three dependent variables. We do not need a fourth dependent variable, corresponding to the final cell of [Figure 1](#), because in that scenario neither the leader nor the event of the revolution is predicted to cause significant change.

While this article investigates economic growth, sanctions, and alliances, the role of revolutions in the onset of military conflicts has been investigated in previous research (Colgan 2013; Maoz 1996; Walt 1996). Colgan finds that states led by revolutionary leaders are more likely to be the instigators of a militarized interstate dispute (MID), regardless of the number of years after the revolution. However, other states were likely to attack the revolutionary state only within the immediate postrevolutionary period. We interpret Colgan's findings as suggestive of multiple causal mechanisms at work in the relationship between revolution and the onset of an MID. Like sanctions, military conflict is often designed to alter another state's behavior. On the

other hand, revolutionary events also open up temporary windows of opportunity for other states to attack the revolutionary state while the situation is still tumultuous (Walt 1996). This is consistent with the finding that other states were likely to attack the revolutionary state only in the few years after the revolution. Thus Colgan's results can be understood as congruent with our theory.

Data and methods

Our exploratory approach is to test the same basic independent variables—revolutions as events and revolutionary leaders—on three different dependent variables: sanctions, economic growth, and alliances. The period of analysis varies in each of the models because of data availability: for sanctions (1971–2000), economic growth (1971–1999),⁵ and alliances (1946–2004).⁶

Independent variables: Revolution onset and revolutionary leader

Our first independent variable, *revolutionary leader*, is from the Revolutionary Leader data set (Colgan 2012:446–447). Each state-year has a dichotomous coding, based on whether the state is ruled by a revolutionary leader, which is judged according to two principal criteria. The first criterion is whether the leader of the state came to power through use of armed force, widespread popular demonstrations, or a similar uprising (henceforth called an “an irregular transition”). It is possible for more than one leader to have “led” an irregular transition, but the leadership is restricted to its senior leaders. Thus both Lenin and Stalin had an irregular transition as leaders of the Russian Revolution, but Khrushchev did not, even though he fought in the Revolution as a young man. The second criterion is that once in power, the leader must have implemented radical domestic changes for the purpose of transforming the organization of society, including its social, economic, and political institutions and practices. Dramatic changes in policy in at least three of seven categories of possible change are required for the leader's policy to be considered revolutionary. The coding is based entirely on domestic policy, not foreign policy.

To separate the effects of revolutionary leadership from the onset of the revolutionary event and its immediate aftermath, we include a variable for a 3-year revolutionary period. It is assigned a value of 1 for the state-year in which a revolution took place, as well for the 2 subsequent years; otherwise it takes a value of 0. As a robustness check, we also rerun all the models using a 5-year revolutionary period, and the results do not meaningfully change.

⁵The period of analysis is due to missing data in some of our control variables prior to 1971. As a robustness check, we also examine economic growth over a longer period (1962–1999), and the results are consistent.

⁶Table 4 uses a slightly shorter period of analysis (1947–2000).

Dependent variable #1: Sanctions

To test our first hypothesis, we use a time-series cross-sectional logit regression of the state-year data. We base our model on the analysis by Peksen and Drury (2010). Their underlying theoretical model (Peksen and Drury 2010:242–243) matches our expectation, namely that states apply sanctions against a regime anticipating that the sanctions will cause economic hardship, thereby generating an incentive for altered regime behavior or a change of regime. Conveniently, they compile data from Hufbauer, Schott, Elliott, and Oegg (2007); the Threat and Imposition of Sanctions (TIES) data set (Morgan, Krustev, and Bapat 2006); and others, allowing us to include as many sanction episodes as possible. Peksen and Drury also offer a good base model for our sanctions analysis because it uses state-year observations, allowing us to examine within-state variation over time and thus the effect of specific leaders. Other models of sanctions often rely on case-level data (of sanctions), rendering them inappropriate for our purposes.

We use a dichotomous dependent variable (*sanctions1*), coded as 1 if a state faces economic sanctions in a given year. We use sanction incidence rather than onset because (1) that approach is more consistent with the sanctions literature (e.g., Peksen and Drury 2010:249–251), (2) sanctions are costly in each year that they are imposed, so the decision to continue them is nontrivial, and (3) it allows us to study many important instances of sanctions that would otherwise be excluded because they were imposed prior to 1971 (e.g., US sanctions on Cuba). By using a variant of the sanctions variable (*extensive sanctions*), we are able to further examine the effects of revolutions.

We incorporate control variables from Peksen and Drury (2010) and Cox and Drury (2006:714–716) where appropriate. One important factor is democracy. Democracies use sanctions more than any other regime type, and they are less likely to sanction other democracies (Cox and Drury 2006; Hafner-Burton and Montgomery 2008a; Wallace 2013). To account for this effect, we include a dichotomous variable (*democracy*) that is coded 1 if a state's composite Polity IV score is 7 or above on the –10 to +10 scale. We also include *polity* as a continuous measure of regime type. We include *interregnum* and *transition* dummy variables to address potential biases caused by the irregular coding of periods of regime change (Plümper and Neumayer 2010:208–209).⁷

We include a dichotomous variable, *major power*, following the Correlates of War (COW) data set's specifications in designating major power status, in order to account for differences in relative power. We expect *major power* to be negatively correlated with sanctions (Cox and Drury 2006:718). We also

⁷*Interregnum* and *Transition* are coded as a 1 when the state-year's polity score is coded as a –77 and –88 respectively.

include a Cold War period (pre-1990) dummy variable because the end of the Cold War led to greater incentives and opportunities to use economic sanctions (Cox and Drury 2006:710). We control for population size (*population, log*), which we expect to be positively correlated with sanctions. Large population size has been linked to increased levels of government repression (Peksen and Drury 2010:252; Poe, Tate, and Keith 1999:294), which in turn make such states more likely to face economic sanctions. To account for the possible relationship between economic conditions and the imposition of sanctions, we also include percentage change in GDP per capita (see following details).

Dependent variable #2: Economic growth

To test our second hypothesis that revolutions cause a temporary shock that inhibits economic development, we use ordinary least squares regression. The dependent variable, *GDP_PC*, measures the percentage change in GDP per capita from the preceding year (in constant 2000 US dollars), based on data from the World Bank (2015).

We base our model on the augmented Solow growth model, as presented in Mankiw, Romer and Weil's (1992) seminal article on economic growth. This model predicts economic growth based on a neoclassical production function, using population and the savings rate as the primary explanatory factors. It is the dominant economic model of economic growth, and the article is the most frequently cited on the topic. The variables are: working-age population (*working-age pop*),⁸ percentage change in secondary school enrolment (*secondary school enrolled*), and annual percent growth of gross fixed capital formation (*gross fixed capital*).⁹ Data for these three variables come from the World Bank (2015). We use linear interpolation to estimate the values of *secondary school enrolled* and *gross fixed capital* between known data points (years); we do not extrapolate beyond the boundaries of existing data. Linear interpolation increases the number of observations for *secondary school enrolled* from 3,652 to 4,774 and from 3,640 to 3,671 for *gross fixed capital*.

We augment this base model by including *major power*, *cold war*, and *population* as controls. To control for possible effects of regime on economic growth (Barro 1996:10–15), we include the state's composite Polity IV score, as well as the dichotomous democracy, interregnum, and transition variables. We also include a dichotomous variable (*civil war*) for ongoing civil war (Fearon and Laitin 2003:76–77), as well as a dummy variable for the 5-year

⁸Working-age population measures the percentage of a state's population between 15 to 64 years of age.

⁹Gross fixed capital formation includes land and infrastructure improvements, as well as plant, machinery, and equipment purchases.

period after a civil war has ceased (*post-war economy*). While civil wars have a negative effect on a country's economy, we also expect economies to experience higher than normal levels of growth once peace has returned (Collier and Duponchel 2013:68–71). Finally, we include a dichotomous variable to control for the effects of oil exports on economic growth (*oil*), which takes a value of 1 when more than one-third of a state's annual export revenues come from fuel (Fearon and Laitin 2003).

Dependent variable #3: Alliances

We use a logit model to test the hypothesis that both revolutionary leaders and revolutionary events affect alliance formation. We use Crescenzi, Kathman, Kleinberg, and Wood (2012) as our base model. They model alliance formation as a process by which each state leader evaluates the prospective alliance's perceived benefits and costs, typically involving a trade-off between security and autonomy (Crescenzi et al. 2012:262). This theoretical model makes it appropriate for our purposes.

Our analysis also uses the Alliance Treaty Obligations and Provisions (ATOP) data set (Leeds, Ritter, Mitchell, and Long 2002). We use ATOP for our primary measure of the dependent variable because it covers a broader “geographical domain” than the COW data, and thus includes more data on alliances (Gibler and Sarkees 2004; Kimball 2010). However, we also test the hypothesis using the COW data because it provides a different perspective on changes in alliances (more on that later). Following Crescenzi et al. (2012), the dependent variable is *alliance onset*. This dichotomous variable is coded 1 in the first year that the states signed a written alliance agreement (Crescenzi et al. 2012:266; Leeds et al. 2002:238). Unlike our study of sanctions, we focus on alliance onset or change rather than the incidence of alliance. This follows the literature on alliances (including Crescenzi et al. 2012) and makes theoretical sense: The decision to make or change an alliance is much more significant than perpetuating the status quo, but that is not equally true of sanctions, which are costly on an ongoing basis and require ongoing adjustment as conditions change.

Our independent variables are revolutionary leader and postrevolutionary period, adapted for directed-dyadic data. Following Crescenzi et al. (2012), we include control variables that might influence alliance formation. *Alliance history* ranges from 1 to –1; positive values reflect a history of upholding alliance obligations, and negative values reflecting the opposite. *Alliance reputation* measures how the first state in a directed dyad pair perceives the reputation of the second state, given the second state's alliance history with all other states in the international system. The Interstate Interaction Score (*IIS*) measures the extent of cooperation and conflict between two states more broadly by examining both militarized disputes and new joint IGO memberships (Crescenzi et al. 2012). The *distance* between two states is calculated by taking the square root of the total

distance between the two capitals; contiguous states are assigned zero distance (Crescenzi et al. 2012; Lai and Reiter 2000). *Joint enemy* is dichotomous, coded 1 if both states have been involved in a MID with the same state over the past decade (Jones, Bremer, and Singer 1996). *Joint democracy* is also dichotomous, coded 1 if both states are democracies—a Polity2 score of 5 or higher (Crescenzi et al. 2012:267–68; Lai and Reiter 2000).¹⁰ *Polity difference* measures the absolute value of the difference between the two states' Polity IV score. We also include measures of alliance *portfolio similarity* and an indicator for whether the state is a *major power*.

To provide a more nuanced examination of how revolutionary leaders and events affect alliance formation, we test alternative measure of alliance using the COW data. The COW alliance data are coded on a 4-point scale: 1 (*no agreement*), 2 (*an entente*), 3 (*a neutrality pact*), or 4 (*a defense pact*). These values are loosely understood as an ordinal ranking of the alliance strength. *Alliance change* is a dichotomous variable that is coded as a 1 when alliance strength in a dyad changes from the preceding year. *Stronger alliance* and *weaker alliance* are both dichotomous variables that capture the direction of alliance change. We use the same base model in our analysis of alliance change as we used for alliance onset. While there are substantial differences in these outcome variables, Crescenzi et al. (2012) provide arguably the best base model for studying both. Factors such as facing a mutual enemy and reputation as an alliance partner not only influence decisions to form alliances but also whether to maintain them over time.

Empirical results

Our empirical results support our theory that revolutions have consequences through multiple pathways. First, consider the impact of revolutions on international economic sanctions (H1).

Figure 2 describes the aggregate relationship between revolutionary states and economic sanctions. States with revolutionary leaders faced sanctions at more than twice the rate of states without revolutionary leaders (32.7% vs. 15.4%). States with a revolutionary leader faced extensive sanctions in 16.5% of years, compared to 2.0% for states without a revolutionary leader. These findings suggest that revolutionary leaders differ from nonrevolutionary leaders not only in the number but also in the severity of the sanctions they face.

The results of logit regression models in Table 1 are consistent with Figure 2. *Revolutionary leader* is statistically significant ($p < .05$) in all models. This relationship is also substantively significant, as states with

¹⁰We also run models using a joint democracy variable based on composite Polity IV score of 7 or higher, as a robustness check.

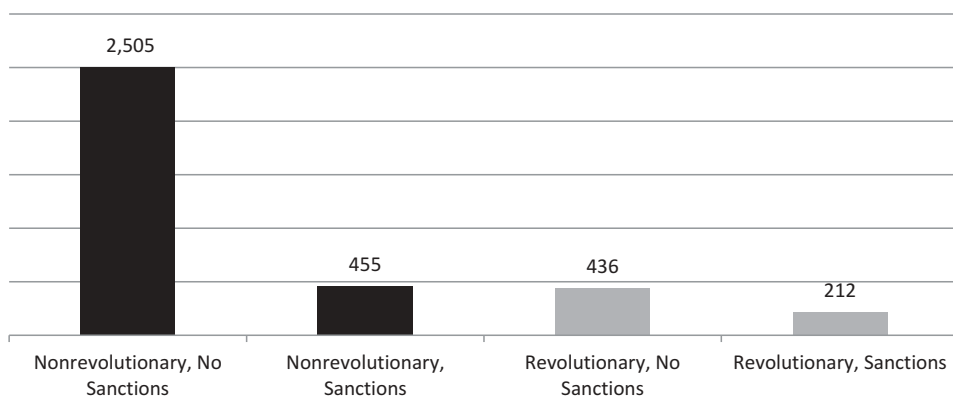


Figure 2. Revolutionary states and sanctions: state-years.

Table 1. Monadic Analysis of Economic Sanctions, 1971–2000.

Model:	1.1		1.2	
Revolutionary Leader	0.721	*	0.702	*
	0.322		0.334	
3-Year Revolutionary Period	0.183		0.248	
	0.529		0.527	
Population, log	1.824	***	3.817	***
	0.329		0.683	
Polity	−0.055	*	−0.053	
	0.028		0.029	
Interregnum	1.975	**	1.619	**
	0.616		0.593	
Transition	0.549		0.439	
	0.464		0.463	
Democracy	−2.185	***	−2.248	***
	0.412		0.423	
Cold War	−1.001	***	−0.363	
	0.216		0.270	
Major Power	−4.329	*		
	2.013			
GDP_PC	−0.006		−0.001	
	0.012		0.012	
Fixed Effects	No		Yes	
N	3149		1353	
AIC	1458.94		929.30	
BIC	1573.99		976.19	
Chi2	148.14		172.09	

Note. Two-tailed test: *** $p < .001$, ** $p < .01$, * $p < .05$

revolutionary leaders were more than twice as likely to face sanctions as states without revolutionary leaders.¹¹

These findings support the hypothesis (H1) that states with revolutionary leaders are more likely to be targeted with economic sanctions, even when other factors, such as civil war, are taken into account. The revolutionary

¹¹Odds ratios for revolutionary leadership are 2.06 (random effects) and 2.02 (fixed effects).

period variable is not significant in any of these models, suggesting that the effect of revolutionary leadership is separate from the effects of the revolutionary event itself.

The evidence also points to the significance of the revolutionary leader and his policies, rather than underlying factors. The presence of country fixed effects in the regression analysis suggests that the leader and his policies are responsible for the correlation between sanctions and revolutions. This impression is bolstered by looking at the raw data. Of the cases where sanctions were imposed on a revolutionary state and those sanctions were lifted before the data set ends in 2000, forty percent were lifted immediately after the revolutionary leader left office (within 2 years), even when a successor takes over the same regime structures.¹²

Sanctions imposed on revolutionary Nicaragua, Congo (DRC), and Uganda fit this pattern. Most of the other cases were short-lived sanctions that were lifted prior to the revolutionary leader leaving office—which is consistent with the observation that sanctions are hard to sustain over time (Martin 1993).

Two real-world examples help illustrate these statistical findings and why revolutions ought to be incorporated into existing studies of sanctions (Drezner 1999; Drury, James, and Peksen 2014; Hafner-Burton and Montgomery 2008b; Martin 1993). In Libya, although King Idris was overthrown in 1969, economic sanctions against Qaddafi's regime did not begin until 1973, after he had consolidated power. Those sanctions remained in place until 2004—three and a half decades after the revolutionary event (Peksen and Drury 2010). This suggests that it was not the revolution itself, but rather the leadership choices of Qaddafi, that motivated other states to sanction Libya. A second example is the 1959 Cuban revolution. Although the revolutionary event occurred more than half a century ago, Cuba is still the target of US economic sanctions.¹³

These sanctions are less about the disruptive events of the revolution itself and more about the Communist regime and choice of policies by the revolutionary leaders Fidel and, since 2011, his brother Raúl Castro. While US domestic political considerations also play an important role in sanctioning behavior, the continued tenure of the original revolutionary leaders is an impediment to lifting the Cuban embargo. The Libyan and Cuban cases illustrate that the immediate events of the revolution do not matter so much as the leader who comes to power and the administration he leads, which has a long-term influence on state policy. The revolutionary leader's decisions then provoke other states' decision to impose and maintain sanctions.

¹²Unfortunately, many of these sanctions were imposed before the data set begins or were lifted after the data set ends, so the sample is fairly small (10 sanction durations).

¹³Although President Obama reopened diplomatic channels in 2014, sanctions remain in place.

Consider now our second hypothesis (H2) about economic growth. As Table 2 indicates, we find that per capita GDP growth is negatively affected by a revolutionary event but not by revolutionary leadership. This contrasts with our findings about economic sanctions, which found the opposite. Specifically, *3-year revolutionary period* is significant ($p < .001$) in all four models. By contrast, *Revolutionary leader* is not statistically significant in three out of the four models, with the exception being the fixed effects model that includes all economic control variables. Moreover, we have reason to be cautious about the positive statistical finding in the fourth model because that model drops approximately one-third of the observations. The loss of observations due to nonrandom missing data makes us skeptical of the result. Overall, we find that during a 3 year revolutionary period, states have between 2.3 and 4.7 percentage points lower GDP per capita growth than

Table 2. Monadic Analysis of Economic Growth, 1971–1999.

Model:	2.1		2.2		2.3
Revolutionary Leader	-0.441		-0.537		-0.637
	0.450		0.412		0.501
3-Year Revolutionary Period	-2.317	***	-4.450	***	-2.394
	0.696		0.675		0.701
Population, log	0.021		0.056		-3.340
	0.204		0.183		0.899
Polity	-0.013		-0.064		0.017
	0.038		0.034		0.042
Interregnum	-10.938	***	1.590		-10.050
	1.066		1.316		1.094
Transition	-2.685	***	-0.855		-2.787
	0.744		0.656		0.754
Democracy	-0.491		0.234		-0.893
	0.574		0.483		0.625
Cold War	-0.019		-0.015		-0.686
	0.257		0.218		0.302
Major Power	-0.578		-0.320		
	1.284		0.950		
Civil War	-2.120	***	-1.121	**	-1.635
	0.432		0.365		0.487
Postwar Economy	2.594	***	0.662		3.493
	0.562		0.524		0.603
Oil	-0.813		-0.985	*	-0.925
	0.559		0.467		0.696
Working Age Population	0.004		0.047	*	0.018
	0.047		0.039		0.060
Secondary School Enrolled			0.058		
			0.034		
Gross Fixed Capital			0.127	***	
			0.005		
Fixed Effects	No		No		Yes
<i>N</i>	2959		2194		2959
<i>R</i> ²	0.108		0.312		0.002

Note. Two-tailed test: *** $p < .001$, ** $p < .01$, * $p < .05$

states experience in nonrevolutionary periods, depending on the model specification that is used.¹⁴

The collapse of Nicolae Ceaușescu's regime in late December 1989 exemplifies the disruptive effect of the revolutionary event itself. The Romanian economy experienced negative growth for 3 years after Ceaușescu's overthrow, but the economy began to make gains thereafter.

The potential for endogeneity is of particular concern for the economic growth models, so we include lags of up to 5 years of the dependent variable on the right-hand side of all our models (see online appendix). To further address this issue, we use Rose's (2004) event history approach to examine the average impact of revolutions on economic growth before and after a revolutionary event (see Figure 3). The before-and-after analysis demonstrates that GDP per capita declined an average of 2.89% in the years in which a revolutionary event occurred. GDP per capita continued to decline for 3 years following a revolution. The analysis also shows a modest decline in GDP per capita (0.133%) in the year prior to a revolution, which could possibly be a sign of reverse causality. However, we consider it much more likely that this negative rate of growth is due to simultaneity: Revolutions often unfold over several months, and the revolutionary "event" is coded according to the fall of the incumbent leader, which is often the final act of such turmoil. In some cases the principal events in the revolutionary process take place in a different calendar year than the actual "event" itself. For example, the Iranian Revolution is recorded as occurring in 1979 because the

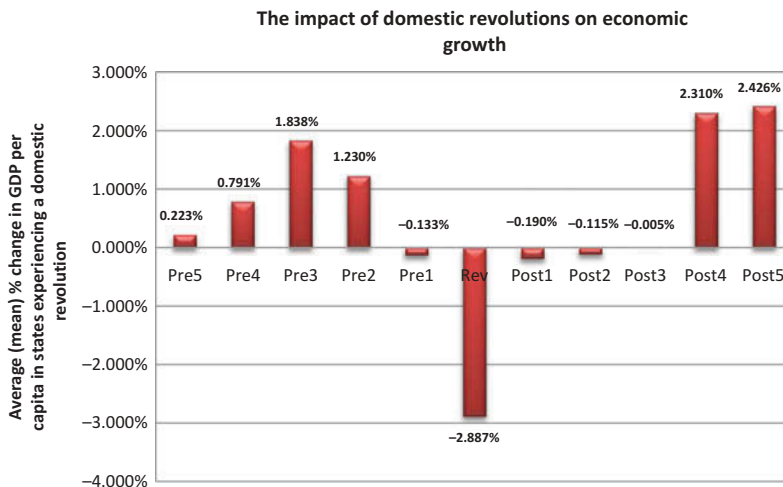


Figure 3. Event history of economic growth and revolutions (1962–2004).

¹⁴Models 2.1 and 2.3 do not include secondary school enrolled and gross fixed capital. There are many missing data in those variables, potentially biasing the results.

Shah was forced into exile in January 1979, but many of the events that directly led to his overthrow occurred in the summer and autumn of 1978. These included large demonstrations, the declaration of martial law, and a general strike that crippled Iran's oil industry (Kurzman 2009:77–83).

Table 3 provides evidence in support of our third set of hypotheses (H3a and H3b) that states led by revolutionary leaders are generally less likely to form alliances than nonrevolutionary states over the long run (H3a), but in the short run revolutions increase the probability of alliance change as old perceptions change and new partnerships are needed (H3b). All else equal, a state with a revolutionary leader is 31.1% less likely ($p < .001$) to form an alliance than a state without one. However, a state that experienced a revolution within the last 3 years is 30.1% more likely ($p < .01$) to form an alliance than one that has not.¹⁵ When both *revolutionary leader* and *3-year revolutionary period* are included in the model, the results are amplified: States with revolutionary leaders are only

Table 3. Dyadic Analysis of Alliance Onset, 1946–2004

Model:	3.1		3.2		3.3	
Revolutionary Leader	–0.382 0.057	***			–0.649 0.075	***
3-Year Revolutionary Period			0.263 0.081	**	0.844 0.105	***
Polity	0.007 0.004		0.010 0.004	**	0.005 0.004	
Interregnum	–3.427 0.998	***	–3.380 0.998	***	–3.439 0.998	***
Transition	0.902 0.088	***	0.839 0.089	***	0.813 0.089	***
Alliance Reputation	4.682 1.230	***	4.631 1.198	***	4.547 1.199	***
Alliance History	9.929 4.816	*	9.887 4.838	*	10.018 4.820	*
Portfolio Similarity	4.905 0.181	***	4.885 0.180	***	4.900 0.181	***
Interaction Score (IIS)	0.184 0.214		0.205 0.211		0.168 0.214	
Joint Enemy	0.304 0.043	***	0.307 0.043	***	0.312 0.043	***
Distance	–0.036 0.001	***	–0.036 0.001	***	–0.036 0.001	***
Major Power	0.598 0.054	***	0.578 0.053	***	0.592 0.054	***
Polity Difference	–0.020 0.003	***	–0.019 0.003	***	–0.020 0.003	***
Joint Democracy	0.059 0.062	***	0.073 0.063	***	0.056 0.063	***
N	734470		734470		734470	
AIC	43277.83		43321.25		43218.81	
BIC	43519.47		43562.90		43471.97	
Chi ²	6324.37		6467.36		6277.23	

Note. Two-tailed test: *** $p < .001$, ** $p < .01$, * $p < .05$

¹⁵Based on the odds ratios for the respective models.

half as likely to form new alliances, whereas states in a revolutionary period are more than twice as likely to form new alliances.¹⁶

Table 4 shows models using the COW data for change in alliance strength, which further illustrate the relationship between revolutionary leaders, revolutions, and alliance formation. The *3-year revolutionary period* variable is positive and significant ($p < .001$) in all of the models analyzing the COW measure of alliances, supporting our hypothesis that revolutionary events lead to change in international alliances. The effect of revolutionary leadership is more nuanced. Although *revolutionary leader* is not correlated with alliance change on its own, it is negative and statistically significant ($p < .001$) when *3-year revolutionary period* is included in the model. Similar analyses reveal that *revolutionary leader* has a negative correlation ($p < .001$) with *stronger alliance*, suggesting that revolutionary leaders are generally reluctant to strengthen alliances (see online

Table 4. Dyadic Analysis of Alliance Change, 1947–2000.

Model:	4.1		4.2		4.3	
Revolutionary Leader	–0.031 0.066				–0.431 0.088	***
3-Year Revolutionary Period			0.795 0.084	***	1.169 0.113	***
Polity	–0.001 0.004		–0.001 0.004		–0.004 0.004	
Interregnum	–1.481 0.607	*	–1.470 0.608	*	–1.512 0.608	*
Transition	0.820 0.104	***	0.634 0.109	***	0.629 0.108	***
Alliance Reputation	10.823 2.297	***	10.473 2.166	***	10.466 2.174	***
Alliance History	–12.236 4.859	*	–12.341 4.864	*	–12.257 4.924	*
Portfolio Similarity	6.149 0.288	***	6.125 0.287	***	6.127 0.288	***
Interaction Score (IIS)	0.853 0.333	*	0.854 0.331	**	0.833 0.335	*
Joint Enemy	0.765 0.058	***	0.776 0.057	***	0.782 0.057	***
Distance	–0.031 0.001	***	–0.031 0.001	***	–0.031 0.001	***
Major Power	0.942 0.079	***	0.922 0.078	***	0.931 0.079	***
Polity Difference	–0.031 0.004	***	–0.030 0.004	***	–0.031 0.004	***
Joint Democracy	–0.048 0.089		–0.389 0.088		–0.054 0.089	
N	730559		730559		730559	
AIC	28941.84		28854.73		28817.96	
BIC	29183.37		29096.26		29070.99	
Chi ²	4344.87		4521.30		4504.70	

Note. All models use logistic regression analysis (logit). Two-tailed test: *** $p < .001$, ** $p < .01$, * $p < .05$

¹⁶We carry out robustness checks using a 5-year revolutionary period variable, and the results are consistent.

appendix). Revolutionary leaders do not necessarily weaken their state's existing alliances, however, as there is no statistically significant correlation between *revolutionary leader* and *weaker alliance*.

Cuba again illustrates these findings. In the aftermath of the revolution, Castro realigned the country's Cold War allegiances, dramatically changing Cuba's alliances. Between 1959 and 2004, however, Cuba rarely formed formal alliances (Crescenzi et al. 2012). As with the sanctions models, our findings also demonstrate the importance of including revolutions in the study of alliances, which is only rarely done (Crescenzi et al. 2012; Gibler and Sarkees 2004; Lai and Reiter 2000; Leeds et al. 2002; Leeds and Savun 2007).

Additional robustness checks

We use both random and fixed effects models to test our hypotheses on sanctions and economic growth. Using country fixed-effects models allows us to control for unobserved time-invariant omitted variables, such as historical legacy, national culture, and geography. We also run year-fixed-effects models for the economic growth models to account for changes in global economic conditions. In order to assess the relative performance of our logit regression models, we compare the Akaike information criterion (AIC) and Bayesian information criterion (BIC) values with baseline models that do not include our variables of interest. All of our preferred models have lower AIC and BIC values than their corresponding baseline models, which suggests that they are superior in terms of specification. To address potential problems caused by simultaneity or reverse causation, we introduce a 1-year lag on each independent and control variable in all three sets of models as a robustness check. To further address these potential problems, we run a feasible generalized least squares on the four economic growth models; this allows for estimation in the presence of AR(1) autocorrelation within panels, as well as cross-sectional correlation and heteroskedasticity across panels. The results are substantively consistent (see online appendix).¹⁷

We also take steps to address potential omitted variable bias and other measurement issues in all three models. To address geographic regional differences, dummy variables for eight geographic regions based on the World Bank's classifications are included in all models. We also run models including variables for the Muslim percentage of the population (*Muslim*) and for Arab countries (*Arab*) to account for possible religious or cultural factors that could shape relations in the international system.¹⁸ As economic

¹⁷In alliance and growth models, all of the key independent variables retain their statistical significance. In the sanction models, a 1-year lag weakens the significance of the revolutionary leader variable because sanctions are often lifted after a single year.

¹⁸Data on states' religious makeup comes from the World Christian Database (<http://www.worldchristiandatabase.org/wcd/>, accessed June 22, 2010); *Arab* is coded as a 1 for all members of the Arab League, except Somalia. These variables are based on Huntington's (1996:254–265) claim that Islamic countries have particular demographic and cultural features that make them violence prone.

sanctions are sometimes imposed as a result of ongoing intrastate conflict, we run separate robustness checks that include the dichotomous *civil war* variable in the sanctions models. Finally, to remain consistent with our sanctions and economic growth models, we also run the alliance models using a joint democracy variable based on composite Polity IV score of 7 or higher. The results of these alternative models are in the online appendix. Collectively, they suggest that the main results are quite robust.

Conclusion

This article offers a nuanced understanding of the impact of individual leaders on a variety of postrevolutionary political outcomes. Figure 4 summarizes our results. By examining the impact of revolutions on international economic sanctions, economic growth, and interstate alliances, we provide evidence that the effect of leaders depends systemically on the nature of the dependent variable of interest. While states with revolutionary leaders are more likely to be targeted for economic sanctions throughout their time in office, it is revolutions themselves, and their immediate aftermath, that most negatively affect economic growth. Both revolutionary leadership and revolutionary events affect a state's membership in international alliances—although they do so in opposite ways.

Collectively, the evidence that domestic revolutions have an impact on a wide range of interstate phenomena suggests that scholars ought to take revolutions more seriously when creating quantitative explanatory models. The recent emergence of cross-national quantitative data sets measuring revolutions and even changes in the sources of leader support ought to facilitate such efforts.

Our research opens up additional avenues for future research. Scholars might explore additional pathways through which domestic revolutions impact international peace and security. For instance, many scholars argue that commercial trade supports international peace (Bueno de Mesquita, Smith, Siverson, and Morrow 2005; Russett and Oneal 2001). Yet the behavior of revolutionary leaders generates frequent and severe

Models	Dependent Variable	Revol Leader	3-Year Revol Period	Theorized Pathway	Duration
1.1 – 1.2	Sanctions	Positive effect	No effect	Leader	Long
2.1 – 2.4	Growth	No effect	Negative effect	Event	Short
3.1 – 3.3	Alliance Onset	Negative effect	Positive effect	Both	Long and Short
4.1 – 4.3	Alliance Change	Negative effect	Positive effect	Both	Long and Short

Figure 4. Summary of results.

sanctions, which inhibit the flow of global trade. This suggests that revolutions may do indirect long-term damage to international peace and security, in addition to the direct, short-term links highlighted in existing research (Maoz 1996; Walt 1996). Furthermore, revolutions destabilize alliance structures, which may also harm international peace. Understanding the full magnitude and nature of these indirect effects is an inviting topic for additional research.

A second major avenue for additional research focuses on interstate rivalries. The disruptive effects of revolutions might actually intensify interstate rivalries, as was plausibly the case between Iraq and Iran after the 1979 Iranian Revolution. On the other hand, domestic revolutions might create policy windows to ease political tensions, such as the thawing of relations between Russia and the West after 1991. Given the importance of rivalries to international relations (Colaresi, Rasler, and Thompson 2008), understanding the effects of revolutions seems crucial.

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