

# Producing Goods and Projecting Power: How What You Make Influences What You Take

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## Abstract

How does a state's source of wealth condition the domain in which it seeks to project influence? We argue that what a state makes conditions what they take. Specifically, the less states rely on land rents to acquire wealth, the less interested they will be in seeking control over territory and the more interested they will be in securing access to distant markets. We develop and test several observable implications that should follow whether this proposition is true. First, as states become less economically dependent on territory, they should be less likely to fight over territory; second, those states should be more likely to both invest in power projection capabilities and subsequently project power at greater distances. Our findings support our theory. These results are robust across a variety of model specifications that take into account potential confounds, such as regime type, economic development, threat, and geography.

## Keywords

power projection, territorial conflict, political economy of security, foreign policy

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During the first century after its founding, the United States pursued an expansionist foreign policy by extending its borders to the West Coast of North America and beyond. By 1890, the United States had grown from a small collection of former colonies to become one of the world's largest states in terms of both territory and population; it had even surpassed China as the world's largest economy (*The Economist* 2014). Kings, emperors, and prime ministers feared that Washington would continue this expansion, following in the footsteps of its European ancestors by projecting military power around the globe to conquer colonies and extract resources from territory (see Kennedy 1987, 246; Tooze 2014, 15).<sup>1</sup> In some ways, these fears were well founded: the United States did start out on the path of territorial conquest by acquiring Guam, the Philippines, and Cuba at Spain's expense. The United States also continues to project more military power around the globe than other states. Yet, as the United States moved through the twentieth century, it tended *not* to use its military power to engage in territorial conquest as many had feared (Frieden 1994). Instead, American foreign policy emphasized the projection of military force to protect access to trade and commerce; it sought to trade rather than to capture wealth outright.<sup>2</sup>

Existing theories do not provide a clear explanation for this type of empirical pattern. Theories of the democratic peace, for instance, suggest that democratic political institutions restrain the rent-seeking and expansionist tendencies of states. However, this cannot account for why the United States chose to take so much territory during the first century after its foundation, but then stopped. The United States has been a democracy during its entire history, but its appetite for territory has dramatically decreased. Balance of power realists have argued that structural incentives drove the United States to project power globally, to balance peer competitors like Germany and Japan, and then Russia during the Cold War. However, the Cold War ended a quarter of a century ago and yet the United States still maintains a global military presence.

The behavior of the United States highlights a puzzle: why do rising powers sometimes project power to secure access to markets, while at other points engaging in territorial expansion? The solution to this puzzle is instructive for understanding world politics today: just as the United States overtook China to become the world's leading economic power during the nineteenth century, China is now once again becoming a dominant player in the international political system. Like the international leaders who worried about American military might a century ago, leaders from Mumbai to Moscow must now pursue policies that are driven by expectations about how China and other rising states will behave. The problem for policy makers and scholars alike is anticipating how variation in the interests of increasingly powerful states such as China, Brazil, Russia, and India will drive their foreign policy choices.

This challenge is fundamental to international politics, yet no clear answer exists for why states project power to pursue some goods over others. The answer, we argue, is that what states make influences what they take. More precisely, the

sources of states' wealth and income influence the type of objectives that they pursue via the projection of power. Our argument generates two key expectations. First, states that generate income through extracting wealth from the control of territory will be more interested in taking additional territory. Second, states that generate the majority of their income through producing goods and services will be less interested in taking territory by force and more interested in securing access to sea-lanes and markets in order to maintain and develop opportunities to import and export goods. Thus, the less economically dependent a state is on territory, the weaker its preference will be to seek additional territory.<sup>3</sup>

We report empirical evidence demonstrating that variation in the economic interests of states systematically influences the foreign policy choices of those states. Specifically, we show that as states become more economically dependent on producing goods and services, they become less likely to engage in conflict over territory, more likely to project power at greater distances from their home territory, and more willing to develop the capabilities to project power at sea. We conclude that there is strong evidence to support our argument that what states make does indeed influence what they take.

We make three primary contributions in this article. First, we develop a novel theory of how states' economic interests influence their foreign policy preferences and behavior. In doing so, we build on and contribute to a burgeoning literature on the economic causes of international security outcomes (Colgan 2010, 2013; Brooks 2005, 2013; Fordham 2010, 2011; Gartzke and Rohner 2011; Gartzke and Weisiger 2014; Kirshner 2007; Kleinberg and Fordham 2013; McDonald 2009; Mousseau 2005, 2013; Narizny 2007; Rosecrance 1986). We apply this theory to explain how variation in states' preferences drives foreign policy behaviors that are of interest to scholars and policy makers, such as when and how states will arm, what goods they will fight over, and where they will project power. Although our theory is not about strategic interactions between states, it does deduce the origins of states' preferences over foreign policy preferences that are essential to understand before then analyzing strategic interactions.

Second, our study refines and challenges previous work on the relationship between economic development, trade, and conflict. While existing work on this topic tends to focus on *if* states develop economically, we suggest that what may matter more is *how* they develop. Previous work suggests that if states undergo an economic transformations and become more economically developed (Gartzke and Rohner 2011), trade-oriented (Rosecrance 1986), advanced technologically (Brooks 2005), or energy modern (Colgan 2015), then they will become less interested in territory. Instead, we argue that these economic transformations will result in less competition over territory when combined with shifts in the sources of state income away from territory and toward the production of goods. Critically, our theory suggests that states that derive income primarily from extracting land rents will still have a preference to compete over territory, even if they are economically developed, advanced, trade-oriented, or energy modern.

Third, our theory and findings contribute to a rich literature on the role that territorial competition can play in creating interstate conflict (Braithwaite 2006; Diehl 1992; Most and Starr 1980, 1989; Starr and Most 1976; Vasquez 1995; Senese and Vasquez 2003). Some scholars suggest that territorial disputes are nearly a sufficient condition for conflict between states. In contrast, once disputes over territorial borders are settled, states generally have peaceful relations (Gibler 2007, 2014; Owsiak 2012). This work has been complimented by research on the effect of international legal institutions on territorial conflict (Huth, Croco, and Appel 2012). These explanations demonstrate that territory plays a central role in generating conflict and that settling territorial disputes dramatically improves the prospects for peace.

Focusing on states' sources of income allows us to explain empirical anomalies that remain puzzling for existing theories. For example, the theories developed by Brooks (2005) and Colgan (2015) suggest that Russia should no longer be interested in territory because it is both economically advanced in terms of technology and energy modern. In contrast, our theory provides an explanation for why land-oriented states like Russia remain focused on projecting power to control territory, despite being coded as a technologically advanced economy by Brooks (2005) and energy modern economy by Colgan (2015). Moreover, our theory is able to explain the foreign policy behavior of trading states like China, which remain puzzling for scholars such as Rosecrance (1986). Whereas his argument suggests that trading states should be less interested in building and projecting military force because they focus instead on generating wealth through trade, our theory holds that China is investing in projecting military power in part *because* it is a trading state. More precisely, so long as the income of those who rule the Chinese state depends on producing goods and services, the state will have a strong interest in securing access to markets.

Despite the strength of research linking territorial competition to conflict, one critical question remains unanswered: why do states vary in their preference to compete over territory in the first place? The answer is important. While we know empirically that states have become less likely to fight over territory, the origins of this trend, and whether or not it is likely to continue in the future, remain unclear. By focusing on states' preferences to seek control over territory, we build on and advance existing work that seeks to explain why states have become less interested in territory and the degree to which this trend is likely to continue (Frieden 1994; Rosecrance 1986; Gartzke 2007; Gartzke and Rohner 2011; Brooks 2005). In this way, our work augments studies of territorial conflict. States with a weaker preference to control territory may be more likely to peacefully settle their disputes, use international legal principles when doing so, and subsequently adhere to agreed borders than states that have a stronger preference for territory. We can show why.

The remainder of our article proceeds in three parts. Part I begins by discussing existing scholarship and situating our contribution within this literature. We then define key concepts, lay out theoretical assumptions, and deduce propositions

regarding how a state's economic structure conditions its foreign policy preferences and behavior. Part II focuses on describing the research design that we use to test the theoretical propositions against those of our competitors. We defend our operationalization of theoretical constructs and explain how the research design allows us to deal with potential threats to the validity of our findings. Part III analyzes the strength of our findings and their implications for theory. We conclude with a discussion of our results in terms of policy suggestions and international relations theory.

## Existing Scholarship

Territorial conflicts have been a defining feature of the international system since its inception. However, these conflicts have become increasingly rare in recent decades (Holsti 1991). Three sets of explanations attempt to explain this trend. The first series of explanations focuses on the ways in which the costs of conquest have increased with respect to economic development (Gartzke and Rohner 2011), military technology (Quester 1977), and nationalism (Evera 1990).<sup>4</sup> In short, economic development may increase labor and opportunity costs associated with employing soldiers to occupy territory (Gartzke and Rohner 2011). Alternatively, shifts in military technology can make the acquisition and retention of territory more costly (Quester 1977). Lastly, nationalism increases the costs associated with occupying territory and reduces the acquired benefits, since conquered citizens may be less willing to generate economic surplus (Evera 1990).

The second set of explanations explores how the benefits associated with conquest may have decreased in two distinct ways. One focus area outlines the factors that reduce the value of conquered territory, such as capital flight (Angell 1913; Rosecrance 1986), the dispersal of production (Brooks 1999, 2005), and control mechanisms that reduce the incentives of conquered citizens to generate wealth (Brooks 1999, 2005; Evera 1990). The second focus area discusses the increasing appeal and availability of substitutes for conquest such as vertical integration (Frieden 1994) or alternative means of generating wealth through trade and foreign direct investment (Rosecrance 1986; Brooks 2005).

Collectively, both the first and second sets of explanations suggest why the expected gains associated with territorial control have decreased by identifying factors that have increased costs and reduced benefits. Despite the reduction in the expected gains from the control of territory, however, some states still engage in territorial conquest. This finding has motivated a third set of explanations, which focus on why some states choose to capture gains from territory even if these gains are decreasing over time.

This latter class of studies generally emphasizes the explanatory power of regime type, economic structure, or the interaction of these two factors to explain why states have a stronger preference to engage in territorial expansion. Research focused on regime type holds that autocracies should have a stronger preference to engage in

territorial expansion because they can force society to pay the costs of conquest (Lake 1992) while concentrating the rents or private goods among a narrow elite (Bueno de Mesquita et al. 1999). In contrast, studies that emphasize the importance of economic variables argue that more economically developed (Gartzke 2007; Gartzke and Rohner 2011) or technologically advanced states (Brooks 2005; Rosecrance 1986) will have a weaker preference to seek territory because they enjoy more attractive options for generating wealth and also because the costs of conquest and occupation are greater. Finally, some scholars suggest that the effect of regime type is conditioned by the economic structure of states (Mousseau 2009; Markowitz 2014; Colgan 2015) or the economic interests of individuals within their governing coalitions (Snyder 1991; Frieden 1999; Mousseau 2009). Mousseau argues that the effect of democracy is conditioned by the degree to which states possess a contract-intensive economy. Snyder (1991) explains a state's preference for expansion in terms of the degree to which the states' domestic political institutions are cartelized and dominated by groups that benefit from expansion.

Our study extends this third set of explanations in a number of important ways. First, Lake (1992) and Bueno de Mesquita et al. (2003) argue that domestic political institutions condition the degree to which states seek rents and private goods from the control of territory. It remains unclear, however, whether this expectation should still apply in states where economics dictate limitations on income from territory or where alternative sources of income are easier to realize. Our theory shows why some states have a stronger preference to control territory versus access to markets as a function of economic factors rather than political imperatives.

Second, whereas scholars like Rosecrance (1986) argue that states' decisions to fight over territory reflect the degree to which they are "trading states," we focus on whether states derive income primarily from producing goods or through control of territory. In our theory, the degree to which states participate in trade is less important than the type of goods that serve as sources of their income. For example, according to Rosecrance (1986, 18, 135), historically, the United States was not a trading state because it derived a relatively small share of its gross domestic product (GDP) from trade and still invests heavily in building and projecting military force. In contrast to Rosecrance, our theory holds that the (contemporary) United States is highly production-oriented and should therefore be relatively uninterested in territory. We also disagree with Rosecrance's suggestion that states that lack an appetite for territory will necessarily be more peaceful or less interested in projecting and applying military force. As we will see, the changing nature of states' sources of income simply changes—rather than eliminates—the ways in which they develop and deploy military power.

## **What States Make Determines What States Take**

Tilly (1990) famously stated that "War made the State and the State made war." Tilly's insight was that states were institutions that individuals had constructed as a

means to realize more fundamental ends such as security and economic prosperity. Individuals who wished to live long and prosper found states to be the more efficient means of generating the military power required to defend and further these most fundamental interests. This is because the centralized institutions of states allowed rulers to more efficiently conquer, administer, and extract rents from the control of territory (Scott 1999). However, the raising of armies and waging of war was costly and this increased states' demand for revenue. In a world in which territory was the principal source of wealth, territorial expansion represented the best strategy to generate the revenue needed for security.

Our argument picks up where Tilly left off. Like Tilly, as well as other researchers in comparative and international politics, we assume that states seek to maximize income (Lake 1992). If war over land rents motivated the creation of the state, and the state made war in order to generate the income required for its survival, then state behavior is likely to change in order to accommodate alternative means of generating wealth.

Our goal is to understand states' foreign policy objectives as conditioned by state institutions designed to generate wealth. We define these objectives broadly, as the outcomes that states pursue to further their foreign policy interests. We are interested in how variation in these interests drives states to pursue different foreign policy objectives such as territorial aggrandizement or access to markets. The scope of our theory is broad because it is an explanation of the origins of states' foreign policy interests. However, for the purpose of empirical testing, we focus specifically on factors that lead states to seek control over territory, as opposed to access to sea-lanes and foreign markets. These are not mutually exclusive objectives and states can choose to pursue many objectives simultaneously. What we are interested in explaining is why some states have a stronger preference to pursue one objective—in this case, territorial expansion—over others.

Although it is difficult to observe these choices directly, we can assess several implications that should follow from them. First, we can observe whether states choose to invest in the military force structure to project influence over land or at sea. Second, we can observe the distance that states choose to project power. Presumably, if states seek to influence access to distant markets, they will project power at greater distances than states that seek to expand the borders of their own states by conquering adjacent territory. Third, we can observe the propensity of states to coercively bargain and fight over territory.

Governments, like publicly traded firms, are in a constant struggle to ensure the flow of wealth and other goods to the governing coalitions that keep them in power. While the executives in companies must answer to shareholders, political leaders must also retain the support of key constituencies, whether in the form of voters (as in democracies) or elites (more typical in nondemocratic states). The resources that these constituencies consume, however, vary in accordance with the nature of economic production within each state.

We focus on what we assume is the most basic dimension along which economic activity may vary. At one end of this spectrum of economic activity are states that derive income primarily from the control of territory. As a result, these *land-oriented* states have the incentive to control territory from which they can profit. On the other end of the spectrum are states that do not rely on territory at all to generate income. These societies rely instead on the production of manufactured goods and services. That is, they possess *production-oriented* economic interests that drive them to seek access to the resources and interactions that foster this kind of activity. Few states will fall entirely on one end of the spectrum or the other, but the interests that motivate certain actions will become more pronounced as they become more land- or production-oriented, respectively.

The role that economic interests play in driving states' behavior can be illustrated by looking at the actions of other organizations with a profit incentive, such as firms like Google and the Russian state energy firm Gazprom. Gazprom's business model relies on controlling territory and extracting resources to sell its energy products at a price higher than the cost of extraction. So long as the market price for resources is higher than the cost of extraction, no firm can take these rents away from Gazprom without taking its land. Thus, Gazprom's control over territory serves as a barrier to competition and allows it to secure wealth in the form of land rents.

In contrast, Google's business model relies on hiring, retaining, and incentivizing talented people to produce innovative products that are either superior to, or cheaper than, the products of their competitors. Innovation serves as a barrier to competition, allowing Google to earn profits that would otherwise be taken by rival firms. Google also seeks monopoly or oligopoly rents by attempting to increase its market share, buying out rivals, and employing anticompetitive behaviors that harm both its rivals and customers.

Whether the state's means of production are more Google-like or Gazprom-like influence the foreign policy interests of the state as a whole. Production-oriented states should be less interested in controlling territory and more interested in securing inputs, such as human capital, access to the materials needed for inputs to production, and access markets to sell those products (Rosecrance 1986; Ullman 1991). In contrast, land-oriented states should have a stronger interest in securing control of additional territory as a source of land rents.

Historically, nearly all states were economically dependent on land rents, since agrarian land represented the largest source of wealth prior to the industrial revolution (Piketty 2014). Most of human history has been characterized as a battle both between and within states over territory and the economic benefits associated with its control. However, as the industrial revolution began to sever the link between land and the production of wealth, most states became much less interested in securing additional territory (Brooks 2005; Rosecrance 1986). Today, the only nonagrarian states that depend on land rents are states that rely on extractive industries such as oil, gas, and mining.

If the benefits from producing goods and services are so great, then why do land-oriented states not simply substitute and invest in manufacturing goods and services? They can and many attempt to, but it is costly because several mechanisms drive up the cost: *entrenched interests*, *the economic cost of substitution*, and *the political benefits associated with land rents* (Ramsay 2011; Ross 2001). The logic of entrenched interests is straightforward and applies both to production-oriented and extraction-oriented states (Sokoloff and Engerman 2000). Groups in power tend to entrench themselves by creating rules and institutional advantages that shift political power and economic benefits to themselves and away from their political opposition. They then reinvest these gains into securing additional political influence and restricting the power and economic productivity of the political opposition, thus solidifying their control over the state.

Over time, *entrenched interests* drive up *the economic cost of substitution* because they have restructured the economy to benefit their sector over others. Production-oriented coalitions will select policies that increase the profitability of their sector of the economy, such as investing in intellectual property rights, universities, and basic R&D. In contrast, extraction-oriented coalitions will be more likely to underinvest in this type of knowledge infrastructure and build the infrastructure required to extract wealth from land, such as mines, oil and gas wells, refineries, pipelines, and liquid natural gas terminals (Sokoloff and Engerman 2000). The result of these policies is an underdeveloped manufactured goods and services sector that is relatively uncompetitive in global markets. The implication of this is that the *economic cost of substitution* will be higher for several reasons: high fixed costs of infrastructure and education, need for subsidies and/or trade protection to survive, and opportunity costs associated with the time until profits are realized. All of these factors affect the economic costs of substituting investment away from land.

Land rents produce several *political benefits* that make them an attractive source of revenue and patronage. Many governments lack the state capacity to tax their citizens and land rents can serve as an alternative source of revenue (Menaldo 2014). Unlike goods in the service sector, land rents can be physically appropriated and their production is easier for the state to monitor and control. Furthermore, land rents are inherently private goods and their economic benefits can be directed at political supporters and withheld from opponents. This may explain why higher energy prices are associated with greater regime survival in both autocracies and democracies (Wright, Frantz, and Geddes 2015).

A closer look at the trajectory of the United States provides an illustrative example of our argument. In the early nineteenth century, the United States economy was highly dependent on agriculture. The historical record shows that there has been a long-term shift away from land as the principal means of generating wealth and toward the production of services. In 1840, agriculture accounted for 50 percent of the US GDP and 70 percent of the labor force (Gallman and Weiss 1969). During this period, the United States fought the Mexican–American War, in which it conquered 55 percent of Mexico’s territory, including a large part of contemporary

Texas, California, New Mexico, Nevada, Arizona, Utah, and Colorado (U.S. Department of State 1848). However, by the early twentieth century, the United States transitioned from a land-oriented economy to a manufacturing economy. In 1910, agriculture had fallen to a little over 10 percent of the output of the US economy and the United States had stopped seeking additional territory and focused instead on projecting power to secure access to overseas markets in Asia and Latin America. Interventions into foreign territory tended to be temporary and focused on establishing political stability and influence rather than to control territory outright.

In summary, the economic structure of a country determines the state's best strategy for generating income, which in turn influences its foreign policy objectives. These foreign policy objectives are manifest in a number of behaviors of significance for international relations, most notably in their choice to invest in the capabilities to project power into one domain over another.

We examine these actions in the context of three types of behaviors. Specifically, we examine the objectives that states choose to fight over, the type of military force structure they choose to invest in, and the distance over which they choose to project power. We expect that these behaviors are likely to reflect the influence of economic interests on foreign policy.

First, the more economically dependent on territory the state is, the stronger its preference will be to seek rents through control of territory. This preference for territory will, in turn, translate into a stronger propensity to engage in coercive bargaining interactions over it. Even if we assume that most of these coercive bargaining interactions do not end in conflict, we should still expect to observe more territorial conflict among states that coercively bargain over its acquisition compared to states that do not enter into such bargaining interactions in the first place. This leads to our first observable implication: *the more economically dependent on territory the state is, the more likely it will be to fight over territory* (Hypothesis 1: Dispute Types Hypothesis).

Second, the more production oriented a state's economy is, the stronger its incentives will be to seek access to foreign markets. Foreign markets provide both the inputs needed to produce goods and, perhaps more critically, consumers to buy those goods. The stronger the incentives for a state to seek access to distant markets, the greater its incentives will be to project power with increased frequency and at longer distances in order to secure sea-lanes and defend against threats to market access. The state's foreign policy objectives condition the set of military missions that a state seeks to execute and, subsequently, the force structure in which it chooses to invest. Historically, taking and controlling territory requires the state to invest in building an army, whereas maintaining secure sea-lanes necessitates naval forces (Sprout and Sprout 1943).

Although during the colonial era states also projected power over great distances to take territory and seek land rents, even colonial powers were often more interested in seeking access to markets or deterring the local government from appropriating site-specific assets, as opposed to conquering territory and extracting land rents

(Blanken 2012; Frieden 1994). Moreover, the empirical record reveals that, more often than not, states have engaged in territorial expansion by conquering adjacent states. Additionally, our findings hold even when we test our theory during the postcolonial area. Previous empirical research demonstrated that as states project power over greater distances, they become less likely to fight over territory and more likely to seek to compel other states (Gartzke and Rohner 2011). Our theory provides an explanation as to why this is the case. It utilizes not only the states' level of economic development but also takes the nature of this development into account. Specifically, as states transition away from an economic model based on extracting income from territory to one based on producing goods, they will face a stronger incentive to seek access to foreign markets. This proposition leads to a second observable implication: *the more production oriented a state economy is, the greater distance it should project power from its home territory* (Hypothesis 2: Power Projection Hypothesis).

Third, the more economically dependent the state is on producing goods and services, the stronger the state's preference will be to invest in the military capabilities to access markets and sea-lanes. States do not simply decide to project power over great distances. They must first invest in military forces and logistical infrastructure, such as "blue water" navies. This proposition leads to our final observable implication: *the more production oriented a state's economy is, the more likely the country is to invest in building naval capabilities to project power in order to secure access to markets and sea-lanes* (Hypothesis 3: Naval Tonnage Hypothesis). In contrast, states that are land-oriented should be less likely to invest in naval capabilities because they are generally far less useful than armies for controlling territory.

For simplicity, we have used the language of ideal types—referring to states as either "land-oriented" or "production-oriented"—when describing the key economic dimension along which states interests will vary. However, it is important to emphasize that from both a theoretical and empirical standpoint, the structure of states' economies and their foreign policy preferences are continuous variables that reflect general tendencies. As states become more production-oriented, they will be less interested in territory and more interested in securing access to markets. However, our theory does not suggest that production-oriented states will have no interest in territory, just that the preference will be weaker for these states when compared with land-oriented states. Similarly, land-oriented states may still value accessing markets, but, on average, they will value this less than production-oriented states.

A summary of all three observable implications can be seen in Table 1.

## Research Design

To assess each of the hypotheses, we specify several cross-national time-series models common to international relations research. Although we cannot directly assess the internal validity of the empirical results from these models in absence of an appropriate identification strategy, we are able to provide other types of evidence

**Table 1.** Summary of Hypotheses.

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Hypothesis 1	States that are economically dependent on territory are more likely to fight over territory.
Hypothesis 2	States will project power farther away from their home territory as their economies become more production oriented.
Hypothesis 3	States will invest more extensively in naval capabilities as their economies become more production oriented.

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concerning the validity of our conclusions by focusing on the construct validity of the operationalized constructs and the predictive validity of the model specifications we develop. Finally, we provide evidence that our theory and findings are externally valid by demonstrating the ability of our theory to explain variation in the foreign policy preferences and behavior of more than seventy states for over one hundred years. In addition, we demonstrate that our findings hold even when they are restricted to the postcolonial era (i.e., after 1945).

We conduct three sets of analyses, which correspond to each of the hypotheses, respectively. We regress each of these dependent variables on primary energy consumption (PEC), which is our main independent variable of interest, and several potentially relevant confounding variables. By operationalizing states' foreign policy preferences with three distinct metrics, we are able to assess the theoretical explanation in a variety of different ways. In doing so, we can analyze both the breadth of the theory in terms of the types of behaviors it can predict, while also increasing overall confidence in the strength of the theoretical mechanism; as results that hold across a variety of tests are less likely to be driven by chance. These tests also allow us to assess the predictive validity of our model across different periods of time with dissimilar samples of states.

### *Dependent Variable for Hypothesis 1: Dispute Types*

In order to operationalize a state's choice to engage in territorial conflict, we employ data on the characteristics of militarized interstate disputes (MIDs) from Maoz (2005) to code whether states engaged in at least one dispute over territory in a given year. These territorial-dispute state-years are coded as 1, while those without at least one territorial dispute are coded as 0. We use a dichotomous variable because we must first establish the conditions under which states decide to compete over territory before we can develop a more precise explanation that can describe the number of these competitions that occur. For these models, data are available for 170 countries from 1816 to 2001.

### *Dependent Variable for Hypothesis 2: Power Projection*

Assessing whether states choose to project power at greater distances requires that we measure the distances over which states chose to deploy their military forces. We

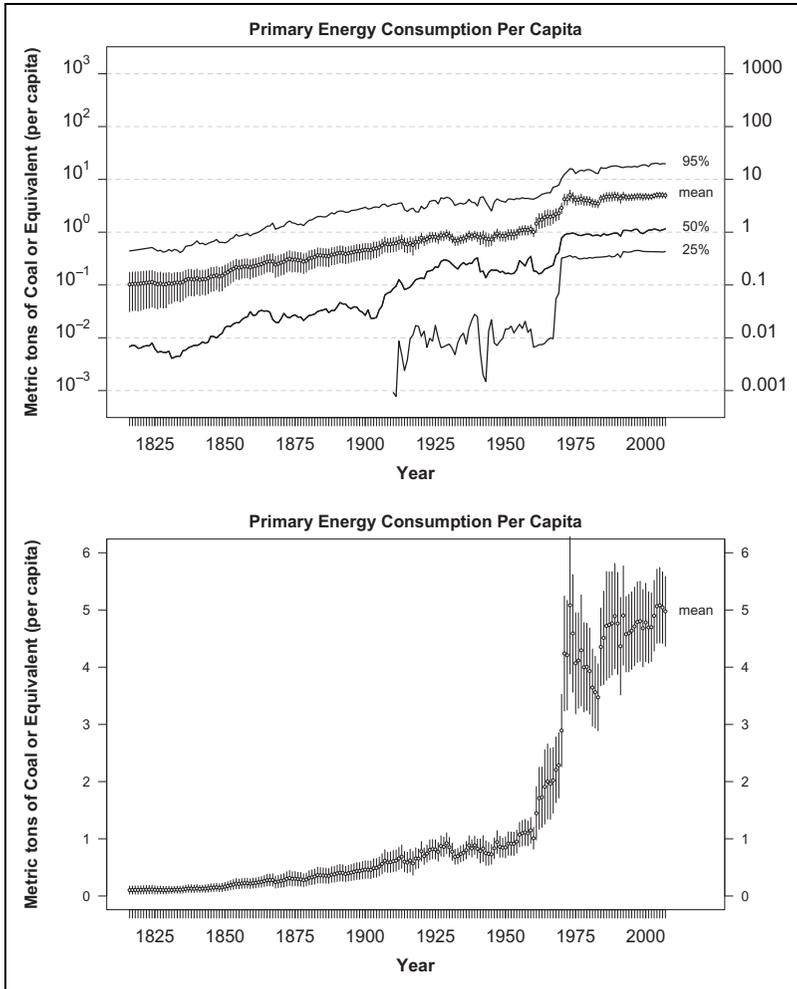
operationalize the distance variable as the geocoded distance from the projecting state capital  $i$  to the location of the MID  $j$  in year  $t$ . The projecting state is coded as the state that is fighting at the greatest distance from its capital. We construct this measure using the longitude and latitude coordinates from the MID (MIDLOC v1.0) data set (Braithwaite 2010) and the longitude and latitude coordinates for each state's capital city from the Distance Between Capitals data set (Gleditsch and Ward 2001). The MIDLOC data set includes latitude and longitude coordinates for the location of each MID from 1816 to 2001. We measure the distance between the location of the MID and the location of each participant state's capital location using data on the latitude and longitude coordinates of the states' capitals; thus, for each dyad, two distance measures are created.<sup>5</sup>

### *Dependent Variable for Hypothesis 3: Naval Tonnage*

In order to evaluate Hypothesis 3, we operationalize states' choices to build power projection capabilities. We use data on naval ship tonnage as an operational measure for states' power projection capabilities. We focus on naval tonnage in this article because it is a measure for which we have comprehensive cross-national data over time. However, we recognize that there are other important measures of power projection and military force structure, especially in the contemporary era.<sup>6</sup> In other research, we focus on the degree to which the level of geopolitical competition can explain the choice to build other weapons systems that are associated with power projection, such as aircraft, missiles, and nuclear weapons. For data on naval ship tonnage, we use a new data set on naval power developed by Crisher and Souva (2014). The data set records the naval tonnage for all states that possessed at least one frigate class ship or submarine of at least 1,000 tons. For these models, data are available for seventy-three countries from 1865 to 2001.

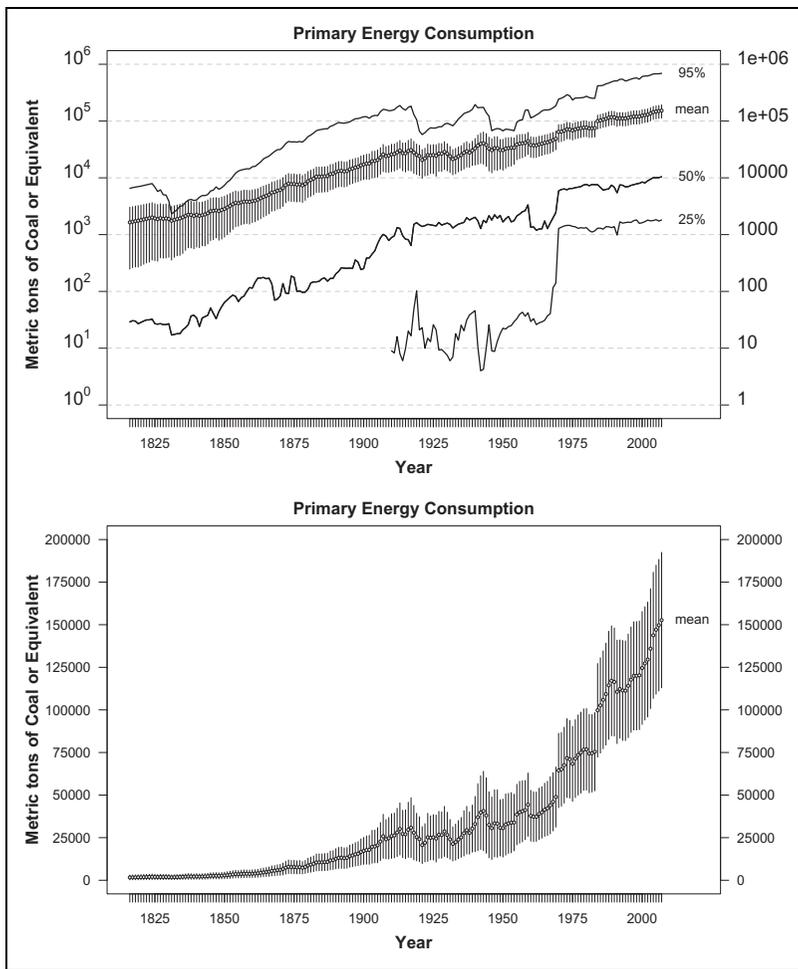
### *Primary Independent Variable: Energy Consumption*

Although we cannot directly observe the degree to which a state is economically dependent on territory, we can utilize a proxy measure that should vary concomitantly with the state's reliance on territory (Colgan 2015).<sup>7</sup> Historically, as a state's economy shifts from an agrarian to an industrial/service-based economy, domestic energy use increases. We therefore use a measure of the domestic consumption of energy for each country each year. The primary independent variable in each of the three sets of model specifications is the correlates of war PEC variable (Greig and Enterline 2010), which consists of four categories of energy: coal, petroleum, electricity, and natural gas. Each of these elements is broken down into a variety of different component parts. Figures 1 and 2 contain the average value of the PEC variable over time. The upper panel in each figure shows this value in log base 10, in addition to the 25th, 50th, and 95th percentile values. The lower panel in each figure shows only the untransformed values for the mean level of this variable.



**Figure I.** Primary energy consumption (PEC) per capita. Both figures contain the average value of this variable over time. The upper panel shows this value in log base 10, in addition to the 25th, 50th, and 95th percentile values. The lower panel shows only the untransformed values for the mean level of this variable. The PEC variable and total population variable for each country are both taken from the Correlates of War National Material Capabilities (version 4.0). For more details about these data, their source material, and validity, see the Online Appendix.

The original data were collected by Singer, Bremer, and Stuckey (1972) and Singer (1987). The PEC data come from two primary sources and several secondary sources (Greig and Enterline 2010). The primary sources include the International Historical Statistics (Mitchell 1988, 1998) and the Energy Statistics



**Figure 2.** Primary energy consumption (PEC). Both figures contain the average value of this variable over time. The upper panel shows this value in log base 10, in addition to the 25th, 50th, and 95th percentile values. The lower panel shows only the untransformed values for the mean level of this variable. The PEC variable for each country is both taken from the Correlates of War National Material Capabilities (version 4.0). For more details about these data, their source material, and validity, see the Online Appendix.

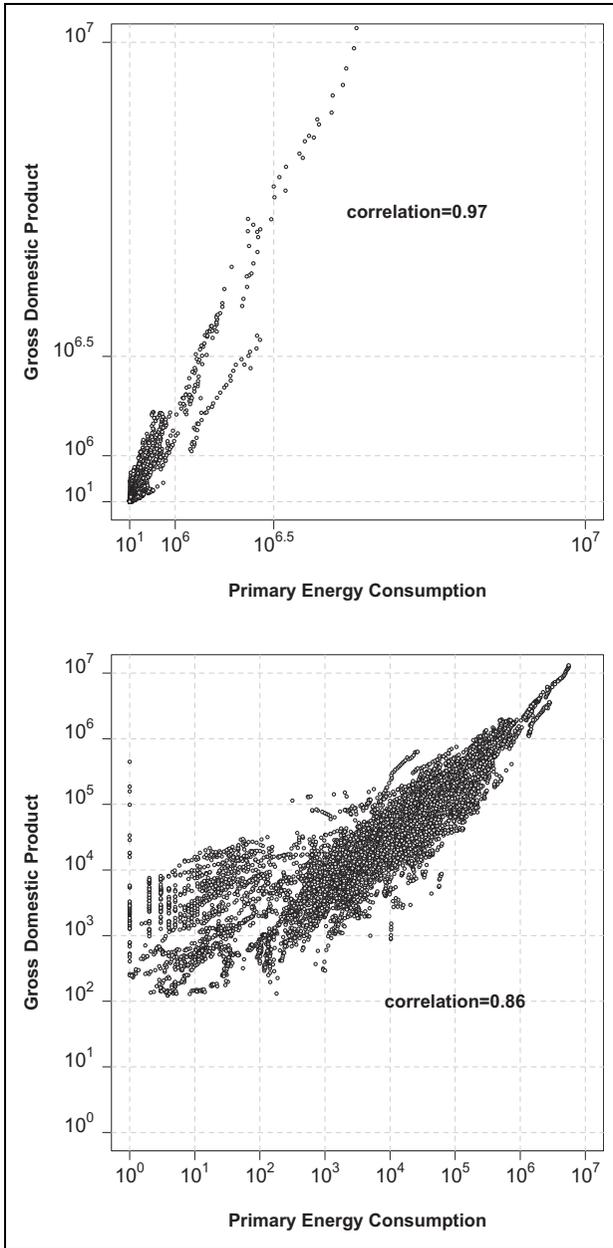
Database (United Nations 1997). The volumes from Mitchell contain international historical statistics on most states in the international system from 1816 until approximately 1993. The Energy Statistics Database from the United Nations begins tracking data for industrialized states in approximately 1950 and for all states in 1970. Importantly, these references are constructed by international experts on the various types of energy commodities used to feed the energy needs

of industrialized societies. As such, these data sources are detailed in both the form that the energy takes and the conversion process that links the energy outputs across these different materials.<sup>8</sup>

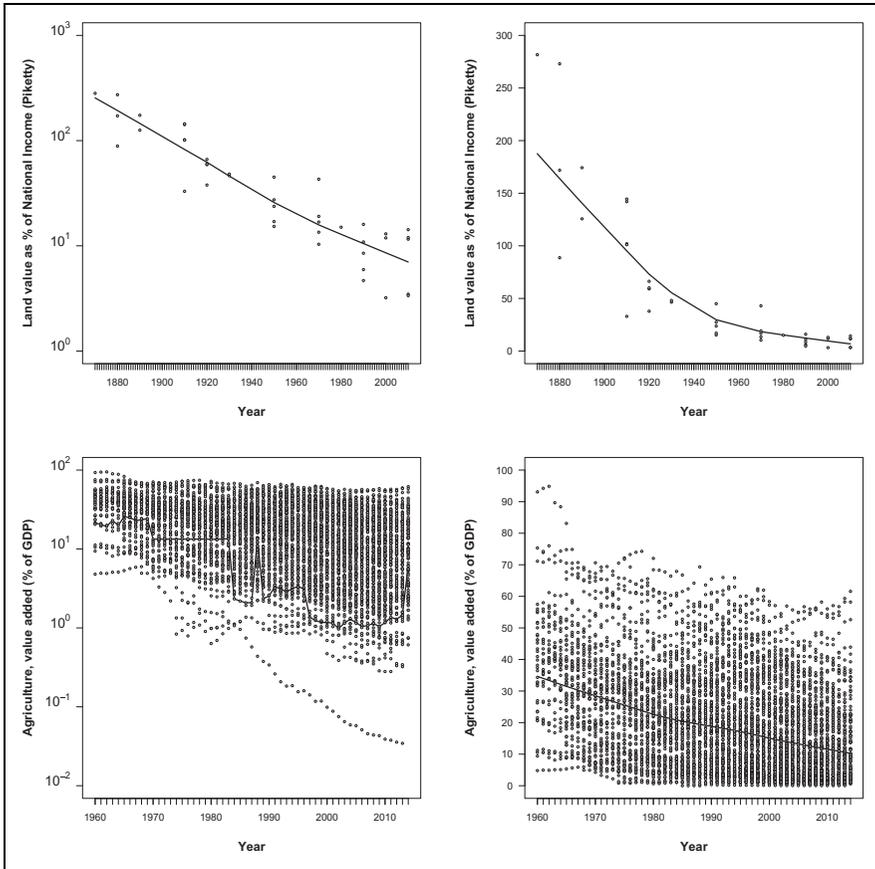
Importantly, all of the equations, which convert each energy source into equivalent units to coal, are available in the Correlates of War Project (Greig and Enterline 2010). Each conversion, as it relates to coding the variable, is discussed in detail. For example, anthracite coal and bituminous coal produce more energy more efficiently than brown coal (Darmstadter, Teitelbaum, and Polach 1971). These conversions allow for both cross-national and over-time comparisons of domestic energy consumption.

In 1902, the average country generated just over 0.1 metric ton of coal or equivalent in energy per person. Contrast this number with the 1962 value, which was 1 metric tons of coal or equivalent. This amount of energy produces, on average, 1,904 kWh per ton, per person. In 2007, the last year for which data are available, the value had increased to 4.57 metric tons of coal or equivalent, or 8,703 kWh per ton, per person. The United States, Japan, and Western Europe have industrialized much more rapidly than other countries in the international system and therefore have much higher values for this variable. To put these values in context, the global average for energy consumption for the average household with access to electricity was 3,500 kWh in 2010. The average household in the United State consumes approximately 4 times this amount, whereas the average household in India consumes approximately 0.25 times this amount.

Figure 3 demonstrates the strong relationship between the PEC variable and each country's GDP. This allows us to obtain evidence for convergent validity, which is a type of construct validity, by showing that one variable is highly related to another theoretically related variable. Although these variables are strongly related, the PEC variable is more closely related to the underlying theoretical concept that we argue is associated with different foreign policy preferences (translational validity). To demonstrate that this correlation is not simply a function of development—but rather the nature of development—we show that as states shift away from agrarian economy to a production-oriented economy, their energy consumption dramatically increases. Utilizing new data collected by Piketty (2014) on agrarian land rents as a percentage of Gross National Income (the principal source of wealth before industrialization), as well existing data from the World Bank that measure agriculture's value-added as a percentage of GDP, we demonstrate that as a state becomes less dependent on agriculture and more dependent on production, its energy consumption increases. Several graphical representations of this trend can be seen in Figure 4, which provides evidence of the decreasing importance of agricultural land as part of the overall economy as a function of time. Most states in the international system, on average, are less dependent on agricultural rents today than in previous eras.



**Figure 3.** The strong relationship between the primary energy consumption (PEC) variable and a variable measuring gross domestic product demonstrates the convergent validity of the PEC variable. Convergent validity is a type of construct validity. We obtain evidence for this type of validity by showing that one variable is highly related to another theoretically related variable. The correlation coefficients of both the logged and unlogged variables provide evidence for this type of construct validity.



**Figure 4.** The four panels provide evidence of the decreasing importance of agricultural products as part of the overall economy as a function of time. States in the international system, on average, are decreasingly dependent on agricultural rents today than in previous eras. The data are from files made publicly available by Thomas Piketty. The Y-axes for the left-hand panels are converted to log base 10 scale.

### Controlling for Competing Explanations

States' foreign policy behavior may reflect a number of factors. We control for variables associated with the three strongest alternative explanations, specifically the development ("capitalist") peace, the democratic peace, and variants of structural realism. Existing research suggests that economic development is a primary driver of both a states' decision to compete militarily and the ways in which they do so (Beckley 2010; Gartzke and Rohner 2011). In order to ensure that our results are not an artifact of the economic development effect, we specify a

number of models in which we include a measure of each country's GDP per capita. Unfortunately, accurate data for GDP exist only in the post-World War II era. Economic power is measured using GDP data from the World Development Indicators (The World Bank 2016) and supplemented with historic GDP data developed by Gleditsch (2002) and Maddison (Maddison-Project 2013). These three measures of GDP are highly correlated over the period when all data series exist (1960–2010). We use a Bayesian measurement model to estimate a GDP series that covers the entire period of observation from 1816 to 2011 (Markowitz and Fariss 2018).

Political institutions may also condition states' foreign policy preferences (Bueno de Mesquita et al. 2003; Lake 1992). Specifically, previous research suggests that democracies should be less expansionist than autocracies and less likely to fight over territory. We include the Polity2 variable, which measures states on a scale from  $-10$ , for most autocratic, to  $+10$ , for most democratic (Marshall, Gurr, and Jagers 2014).

Variants of structural realism suggest that states' foreign policy choices are driven primarily by the structure of their strategic environment. Since we seek to analyze the way in which states compete militarily, we need a measure that accounts for the nature of each state's strategic environment but is not endogenous to the types of foreign policy behavior captured in our dependent variables. In order to do so, we rely on a measure of a state's threat environment developed by Markowitz and Fariss (2018). The threat variable is constructed by identifying states' potential adversaries by developing a dyadic metric of interest compatibility based on relative regime type: two democracies are deemed to have compatible interests, while all other combinations of regime types are deemed potentially incompatible. For states that are deemed incompatible, the measure accounts for their relative difference in economic capabilities. Economically powerful states are deemed to be more threatening than economically weak states. Since power degrades over space, the measure weights the economic disparity information by distance. The final measure represented the geospatial weight of the dyadic threats of all other states relative to a single state. We use this country-year measure in our analysis.

Because we are estimating the likelihood that states invest in the capabilities to compete over land or water, it is also important to account for the opportunities that exist for these competitions (Most and Starr 1980, 1989; Starr 2013). Island nations, for example, may be less likely to fight over territory than countries with land borders for reasons that have more to do with geography than foreign policy preference. Similarly, land-locked states may have less need for naval capabilities than states with coastlines. We use the Correlates of War Direct Contiguities data set (Stinnett et al. 2002) to generate two variables: land contiguities and sea contiguities. These measures reflect the number of neighbors with which a state shares a contiguous land border or is within 400 nautical miles by sea, respectively. The 400 nautical mile limit reflects the maximum distance at which states' exclusive economic zones may overlap.

## Analysis

### *Projecting Power over Different Goods*

The first observable implication of the theory concerns the types of goods over which states are likely to compete; that is, production-oriented states are less likely to engage in disputes over territory. Because the dependent variable—territorial MIDs—is dichotomous, we utilize logistic regression to model this relationship. We account for serial autocorrelation using polynomial time count variables, as suggested by Carter and Signorino (2010). Because observations are grouped by country, we cluster the standard errors accordingly.<sup>9</sup>

The results presented in Table 2 support the hypothesis: states with higher levels of per capita PEC are less likely to have engaged in a territorial dispute in a given year. The direction of this relationship is consistent across models specified with a variety of different covariates, though the statistical significance is strongest in models that account for the geopolitical environment. Notably, we find that once one accounts for the nature of states' economic productivity in terms of its most important factors of production, the level of economic development is no longer a statistically significant predictor of territorial disputes. Furthermore, this relationship does not depend on the inclusion of GDP per capita, since the key results remain constant in models that omit this variable (see Table 2, model 4).

One must wonder, however, whether the distinction between land- and production-oriented states is meaningful for policy. In order to illustrate the substantive significance of the results, we derive a series of predicted probabilities from model 3 in Table 2, which is specified with all covariates. In doing so, we observe how the predicted probability of a territorial dispute changes as a function of variation in PEC per capita, holding all other variables constant. These predicted probabilities are based on a hypothetical case with control variables set to the values for China in 2005.<sup>10</sup> While we intend for our argument and analysis to be applicable across the globe, the contemporary debate over China's foreign policy ambitions makes this a useful case to consider.

The predicted probabilities are plotted in Figure 5, which illustrates both point estimates and 95 percent confidence intervals around these points. A shift from the lowest energy consumption per capita value in the data set (near 0 metric tons) to the highest (130 metric tons) results in a 31.2 percent drop in the predicted probability of a territorial dispute in a given year. Under more modest circumstances, shifting from the median value of 0.6 metric tons to the 75th percentile of 2.25 tons results in a 5 percent predicted decline in probability of a territorial dispute.

The model predicts that a state with 1.63 tons per person of energy consumption—like China in 2001—would have a 40 percent chance of engaging in at least one territorial MID. Alternatively, a state with 18.3 tons per person of energy consumption like the United States—but with the same covariate values as China—is predicted to have only a 26.4 percent chance of at least one territorial MID. If the

**Table 2.** Energy Consumption and Territorial Disputes, 1816 to 2001 (MID Occurrence).

	(1)	(2)	(3)	(4)
PEC per capita	-0.1565 (0.0960)	-0.1761 <sup>†</sup> (0.0948)	-0.2905* (0.1128)	-0.2124* (0.0843)
Gross domestic product per capita	-0.0237 (0.0809)	0.0516 (0.0809)	0.1151 (0.0870)	
Threat	-5.4080 (9.8081)	-9.2226 (10.787)	-2.9367 (9.8596)	0.7857 (9.1259)
Polity2		-0.0154 <sup>†</sup> (0.0089)	-0.0117 (0.0085)	-0.0081 (0.0085)
Land contiguities			0.0736** (0.0277)	0.0684** (0.0263)
Sea contiguities			0.0595 <sup>†</sup> (0.0321)	0.0573 <sup>†</sup> (0.0317)
Time count	-0.2180*** (0.0165)	-0.2170*** (0.0157)	-0.2125*** (0.0154)	-0.2125*** (0.0156)
Time count <sup>2</sup>	0.0029*** (0.0004)	0.0029*** (0.0004)	0.0028*** (0.0003)	0.0028*** (0.0004)
Time count <sup>3</sup>	-0.0000*** (0.0000)	-0.0000*** (0.0000)	-0.0000*** (0.0000)	-0.0000*** (0.0000)
Intercept	-0.2310 (0.2079)	-0.3337 <sup>†</sup> (0.1895)	-0.8701*** (0.2284)	-0.7467*** (0.2145)
Number of observations	11,186	10,337	10,337	10,338

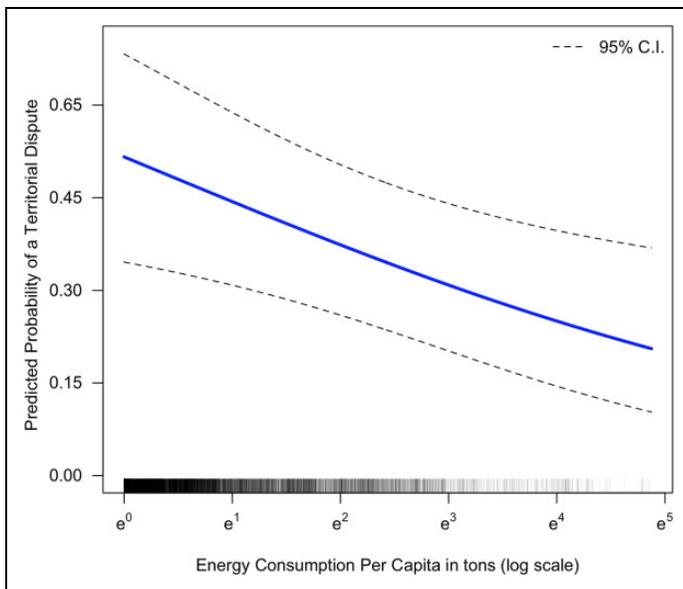
Note: Results for logistic regression analysis, which assesses the likelihood that states have at least one territorial militarized interstate dispute in a given year. Standard errors clustered by country in parentheses. Polynomial time count variables are used to account for temporal dependence. The sample is inclusive to all states in the international system from 1816 to 2001. PEC is a per capita measure of each state's use of energy and is expressed in terms of the number of coal ton equivalents consumed per person. Gross domestic product is divided by the total population of the state; this per capita measure is a commonly used indicator of economic development. Because the measures of power projection, PEC per capita, and gross domestic product per capita are right-skewed, we transform them using the natural logarithm. Threat is a measure of how competitive each state's geopolitical environment is, as a function of interest compatibility with potential rivals, their relative economic power, and the distance between these adversaries. Polity2 measures states' relative levels of democracy versus autocracy, from -10 for fully autocratic states to +10 for fully consolidated democracies. Land is a measure of the number of neighboring states with which the state of interest shares a contiguous land border. Sea is the number of states with coastlines within 400 nautical miles of the coastline of the state of interest the maximum distance at which states' exclusive economic zones could overlap. PEC = primary energy consumption.

<sup>†</sup>  $p \leq .1$ .

\*\*  $p \leq .05$ .

\*\*\*  $p \leq .01$ .

\*\*\*\*  $p \leq .001$ .



**Figure 5.** Territorial disputes and primary energy consumption (PEC), 1816 to 2001. Predicted values derived from Table 2, model 3. Covariate values based on China in 2005. The Y-axis shows the predicted probability that a state will experience at least one territorial dispute in a given year. PEC per capita is measured in metric tons; this variable has been transformed using the natural logarithm.

United States' own covariate values are used in our analysis instead, the likelihood of a territorial dispute drops to 6 percent. In practice, the United States did not have a single territorial dispute between 1991 (the year of the Persian Gulf War) and the end of our sample of disputes in 2001.

### *Projecting Power at Greater Distances*

Hypothesis 2 makes a prediction about a different aspect of foreign policy behavior where states will try to wield their influence. In particular, the theory suggests that states with production-oriented economies will project power at greater distances. The proxy for power projection—the average distance away from a state's capital city at which MID occurs in a given year—should therefore increase with the extent to which a state consumes energy per capita. Because we are utilizing time-series cross-sectional data, it is necessary to account for interdependence among observations. We implement a method that is commonly used to analyze this type of data: linear regression with panel-corrected standard errors (Beck and Katz 1995). The serial autocorrelation is modeled using an AR(1) term.<sup>11</sup>

The models presented in Table 3 support the hypothesis. States with higher levels of energy consumption project power farther away from their capital cities. These

**Table 3.** Energy Consumption and Territorial Disputes, 1816 to 2001 (MID Distance).

	(1)	(2)	(3)	(4)
PEC per capita	0.7477*** (0.1124)	0.7567*** (0.1174)	0.5239*** (0.1142)	0.2221* (0.0933)
Gross domestic product per capita	-0.5771*** (0.0919)	-0.5755*** (0.1086)	-0.4731*** (0.1017)	
Threat	21.1715 (12.9375)	27.5338 <sup>†</sup> (14.9987)	40.4763*** (13.9758)	24.4800 <sup>†</sup> (12.5790)
Polity2		0.0215* (0.0105)	0.0290** (0.0101)	0.0143 (0.0092)
Land contiguities			0.2249*** (0.0258)	0.2490*** (0.0253)
Sea contiguities			0.2125*** (0.0297)	0.2086*** (0.0300)
Intercept	2.4187*** (0.1811)	2.3989*** (0.1763)	1.1466*** (0.2072)	0.6361*** (0.1834)
Number of observations	11,186.0000	10,337.0000	10,337.0000	10,338.0000

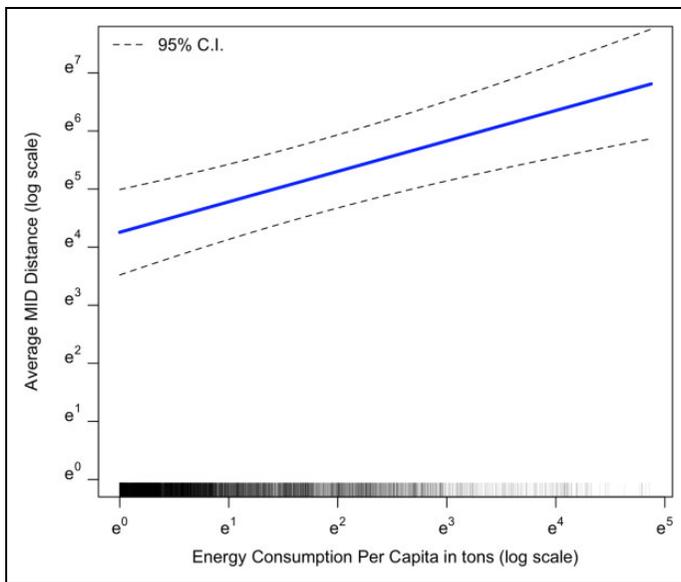
Note: Results for linear regression with panel-corrected standard errors, and an AR(1) term to account for serial autocorrelation. The dependent variable measures states' attempts to project power, as determined by how far each state's disputes take place away from its capital city, on average, in a given year. The sample is inclusive to all states in the international system from 1816 to 2001. PEC is a per capita measure of each state's use of energy and is expressed in terms of the number of coal ton equivalents consumed per person. Gross domestic product is divided by the total population of the state; this per capita measure is a commonly used indicator of economic development. Because the measures of power projection, PEC per capita, and gross domestic product per capita are right-skewed, we transform them using the natural logarithm. Threat is a measure of how competitive each state's geopolitical environment is, as a function of interest compatibility with potential rivals, their relative economic power, and the distance between these adversaries. Polity2 measures states' relative levels of democracy versus autocracy, from -10 for fully autocratic states to +10 for fully consolidated democracies. Land is a measure of the number of neighboring states with which the state of interest shares a contiguous land border. Sea is the number of states with coastlines within 400 nautical miles of the coastline of the state of interest the maximum distance at which states' exclusive economic zones could overlap. PEC = primary energy consumption.

<sup>†</sup>  $p \leq .1$ .

\*  $p \leq .05$ .

\*\*  $p \leq .01$ .

\*\*\*  $p \leq .001$ .



**Figure 6.** Power projection and primary energy consumption (PEC), 1816 to 2001. Predicted values derived from Table 3, model 3. Covariate values are based on China in 2005. The Y-axis shows the average distance at which a state is predicted to project power over a given year. Power projection is determined by the distance from a state's capital at which it experiences militarized interstate disputes. PEC per capita is measured in metric tons; this variable has been transformed using the natural logarithm.

results are consistent across a variety of different model specifications. The fully specified model (model 3) suggests that for every 10 percent increase in energy consumption per capita, states project power about 5 percent farther away on average. This relationship is illustrated in Figure 6. In the case of China, increasing energy consumption from 1.6 tons per person (the observed value in 2001) to the level of the United States, 18.3 tons, would more than double the predicted average distance of power projection.

One might wonder whether the relationship between PEC and power projection is driven primarily by the level of economic development among states, a relationship posited in previous research (Gartzke and Rohner 2010). From this perspective, our results may reflect the tendency for production-oriented states to have the economic resources needed to pursue foreign policies that are more geographically expansive. Yet the findings presented in Table 3 cast doubt on this alternative explanation. First, the negative, significant coefficient on the PEC variable is consistent across models that include and exclude the measure of economic development (see Table 3, model 4). Second, the results suggest that once one accounts for the main source of states' economic wealth, economic development actually reduces the tendency for states to

project power at greater distances (see Table 3, models 1–3). This suggests that an effect that has been attributed to rising wealth may actually be caused by a shift in the means by which it is generated. An implication of this finding is that *how* states become wealthy may matter more than *if* they become wealthy in terms of the set of foreign policy objectives they pursue.

### *Projecting Naval Power*

We next analyze how economic interests drive states' decisions to invest in certain types of military capabilities by examining the relative size of their naval forces. In order to assess this claim, we again utilize a linear regression model with panel-corrected standard errors and an AR(1) term.

If Hypothesis 3 is correct, states with production-oriented economies will develop more powerful navies, all else being equal. The results presented in Table 4 support this claim. The coefficients on the key PEC variable are positive and statistically significant across models specified with a variety of different covariate combinations. Production-oriented states do tend to invest more heavily in their navies. Again, the results are consistent across models that both include and omit the per capita GDP variable.

The substantive significance of this effect, which is shown in Figure 7, is also pronounced. A 1 percent increase in energy consumption per capita results in an expected rise in naval tonnage per person of approximately 0.07 percent, depending on the particular model. In order to put this effect in more concrete terms, consider the predicted change in naval tonnage associated with a move from a level of energy consumption equivalent to preindustrial China at the outset of its Great Leap Forward in 1958 (0.3 tons per person) to the more production-oriented China that joined the World Trade Organization (WTO) in 2001 (1.6 tons per person). At 2001 population levels (1,270 million), this shift results in a predicted increase of approximately 122,000 tons of naval power. This additional naval capacity is roughly equivalent to the tonnage of a US Navy carrier battle group.<sup>12</sup> If China had obtained the same level of energy consumption as the United States that year, the model predicts that China's navy would increase by around 390,000 tons; equivalent to approximately three carrier battle groups (the United States currently has ten fixed-wing aircraft carriers, while China has one, with more in development).

### *Addressing Alternative Explanations*

While we provide empirical evidence to support the theoretical claims, there exist a number of plausible alternative explanations for these results that should be considered in greater detail. First, it is possible that since World War II, production-oriented states have not been interested in projecting power to secure access to markets because they can gain access to markets simply by joining international institutions such as the WTO. Yet if this trend is true—and it likely is to some

**Table 4.** Energy Consumption Per Capita and Naval Power, 1816 to 2001.

	(1)	(2)	(3)	(4)
PEC per capita	0.0687** (0.0245)	0.0691** (0.0247)	0.0688** (0.0252)	0.1098*** (0.0211)
Gross domestic product per capita	0.1300*** (0.0230)	0.1234*** (0.0236)	0.1290*** (0.0239)	
Threat	7.1675*** (1.7589)	8.3539*** (2.1286)	8.4640*** (2.1472)	8.1182*** (2.1566)
Polity2		0.0023* (0.0010)	0.0025* (0.0010)	0.0028** (0.0010)
Land contiguities			-0.0071 (0.0044)	-0.0070 (0.0045)
Sea contiguities			-0.0029 (0.0054)	-0.0037 (0.0055)
Intercept	0.4775*** (0.0574)	0.4774*** (0.0567)	0.5311*** (0.0568)	0.7347*** (0.0506)
Number of observations	4,493.0000	4,373.0000	4,314.0000	4,315.0000

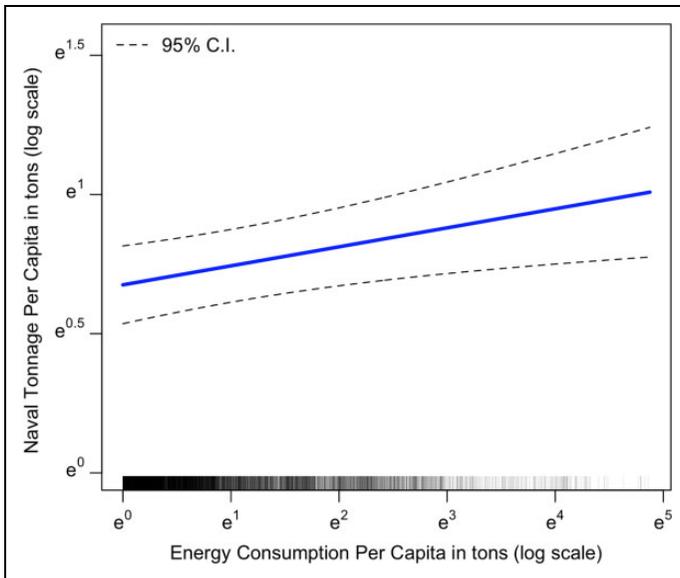
Note: Results for linear regression with panel-corrected standard errors and an AR(1) term to account for serial autocorrelation. The dependent variable measures states' naval power as determined by the total tonnage of naval vessels in their armed forces at a given time. The sample is inclusive to all states in the international system from 1870 to 2001 and is limited by the availability of data for naval power and the threat environment. PEC is a per capita measure of each state's use of energy and is expressed in terms of the number of coal ton equivalents consumed per person. Gross domestic product is divided by the total population of the state; this per capita measure is a commonly used indicator of economic development. Because the measures of naval power per capita, PEC per capita, and gross domestic product per capita are right-skewed, we transform them using the natural logarithm. Threat is a measure of how competitive each state's geopolitical environment is, as a function of interest compatibility with potential rivals, their relative economic power, and the distance between these adversaries. Polity2 measures states' relative levels of democracy versus autocracy, from -10 for fully autocratic states to +10 for fully consolidated democracies. Land is a measure of the number of neighboring states with which the state of interest shares a contiguous land border. Sea is the number of states with coastlines within 400 nautical miles of the coastline of the state of interest the maximum distance at which states' exclusive economic zones could overlap. PEC = primary energy consumption.

†  $p \leq .1$ .

\*  $p \leq .05$ .

\*\*  $p \leq .01$ .

\*\*\*  $p \leq .001$ .



**Figure 7.** Naval tonnage and primary energy consumption (PEC), 1865 to 2007. Predicted values derived from Table 4, model 3. Covariate values are based on China in 2005. The Y-axis illustrates the predicted tonnage of states' naval forces. PEC per capita is measured in metric tons; this variable has been transformed using the natural logarithm.

extent—then the direction of this omitted variable bias cut against our results. If production-oriented states no longer need to maintain their own means to secure access to markets, then we should be less likely to observe them engaging in the type of power projection behavior that we have analyzed.

Second, one might still wonder whether the results exist only because states with small economies are incapable of developing and utilizing the capabilities to project power. If these small economies also tend not to be as production-oriented as states with greater economic output, our results could reflect the size of states' economies rather than the nature of their economic production. In order to assess this possibility, we replicate our tests of distance and naval tonnage using subsamples of our original data set that contain only state-years within the top 50 percent or top 25 percent of real GDP, respectively. The results are consistent with those shown above: states with production-oriented economies develop more naval power and project power farther away on average even when considering states with only high levels of GDP.

Finally, one might reasonably take issue with our measures of power projection. We adopted these measures because they had the greatest cross-national and temporal coverage of any publicly available measures. Future research should test these relationships using additional measures of power projection that are currently under

development. These measures include states' choices to invest in foreign basing networks, the frequency and intensity of military deployments, as well as states' investments in long-ranged aircraft and missiles.

## Conclusion

Why do states project power for certain foreign policy objectives over others? We have argued that what states make influences what they take. More precisely, the source of states' income influences the set of foreign policy objectives they are interested in pursuing. The more a state's income is dependent on extracting land rents, the stronger its incentives will be to seek control over territory. In contrast, the less economically dependent a state is on land, and the more income it derives from producing goods and services, the weaker its incentives will be to control territory and the stronger its incentives will be to seek access to markets.

We evaluate three observable implications that are associated with these propositions. The first concerns the objectives for which states project power. We find that as states become less economically dependent on territory, they also become less likely to fight over it. The second implication is related to the question of where states would need to project power in order to secure access to distant markets and sea-lanes. Our findings demonstrate that the more economically dependent states are on producing goods and services, the more likely they will be to project power at greater distances from their home territory. The third pertains to the type of force structure required to seek access to markets and territory. Specifically, the data suggest that the more economically dependent states are on producing goods and services, the more they invest in naval capabilities. In sum, we find empirical support for all three propositions. These findings are robust, even when controlling for potential confounding factors such as a state's level of economic development and certain geographic factors.

Our theory and findings offer insights for the academic literature and policy debate alike. First, we develop a theory of state preferences over a key set of security outcomes. The most prominent theories of international security—realism and rationalist bargaining theory—examine how states behave *if* they have certain interests, which are assumed by the researcher. Our study not only explains why states' interests vary but also identifies certain observable patterns that are associated with these interests. The theory is especially useful for outlining the conditions under which states may have revisionist interests, which are theorized to play a major role in terms of generating conflict, especially with regard to territory (Glaser 2010; Kydd 1997). In fact, extensions of the security dilemma model have demonstrated that at least one state must possess revisionist preferences in order for conflict to occur (Glaser 2010; Kydd 1997). Our theory suggests that the degree to which states have revisionist preferences with regard to a particular good (such as territory) is a function of the degree to which they are economically dependent on that good.

By developing a theory of why some states have preferences that are more or less revisionist, we allow scholars of international relations to understand which states are more likely to engage in coercive bargaining in the first place. Not all states have unlimited aims; if international behavior diverges on the basis of states' preferences, it is important for policy makers to be able to differentiate between states that may have distinct preferences. While we do not offer a theory of strategic interaction, we do describe the origins of the preferences that are essential for understanding how states behave in a strategic context. Assuming that all states have the same aims, as bargaining models of war tend to do, will lead scholars and policy makers to overestimate both the probability of a dispute between states and the likelihood that these disputes will end in bargaining failure and war. Our theory helps to correct for this bias by not only exploring a crucial dimension along which states' preferences can vary but also by explaining why they have these preferences in the first place.

Finally, our theory has important implications for understanding the future trajectory of rising powers. States like China and India that are increasingly reliant on the production of goods and services should become more likely to build power projection capabilities and project power at greater distances, but they should also become less likely to coercively bargain and fight over territory. For those who are concerned about wars of conquest and territorial aggrandizement, this is a good thing. However, it may mean that the domain of competition has simply shifted from the land to the sea, as well as to other domains such as air, space, and cyberspace. For the past quarter century, the United States has retained nearly absolute command of these commons (Posen 2003). Our findings suggest that this era of uncontested dominance may be drawing to a close, as rising powers will increasingly possess incentives to build and project power into the global commons to safeguard their access to foreign markets. This is increasingly the case in East Asia, where a number of production-oriented states are making major investments in the capabilities necessary to project power. These states have explicitly focused on securing vital sea-lanes that carry the trade on which their economies depend (Erickson and Wuthnow 2016).

In contrast, states more focused on acquiring land rents, such as Russia, Iran, and Saudi Arabia, should have a stronger incentive to control territory and invest in the force structure and force posture to do so. Thus, US policy makers are likely to face a world in which their command of the commons is increasingly contested, but territorial warfare is not yet a thing of the past—a possibility that officials will surely want to take into account when considering what force structure and posture to invest in for the future.

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### **Supplemental Material**

Supplemental material for this article is available online.

### **Notes**

1. For examples of rent-seeking hegemony, see the Portuguese, Spanish, Dutch, and early British empires. These states all sought to dominate and maintain exclusive access to trade routes and direct control of land rents.
2. One might argue that Washington's appetite for territory decreased once it acquired all the territory that was adjacent and easy to conquer. However, this does not explain why the United States projected power halfway around the world to conquer the Philippines and Guam. Washington was clearly able to expand beyond North America, to challenge existing European empires like Spain for territory. By that time, the United States was more economically powerful than many European powers and far closer to potentially conquerable territory. In sum, the United States did not stop expanding because it ran out of territory to easily conquer.
3. Our argument builds on previous work, such as Markowitz (2014), and contributes to subsequent path-breaking scholarship on the economic origins of states' territorial preferences (Colgan 2015).
4. Of course, there are a number of factors that make conflict generally more costly such as economic interdependence, but we choose to focus more narrowly on factors that influence the costs associated with a particular type of conflict—wars of territorial conquest.
5. See Markowitz and Fariss (2013) for more information about this variable.
6. For example, Sechser and Saunders (2010) develop and assess a measure of military mechanization. We elect to focus on the measure of naval tonnage because (1) the naval tonnage measure covers a much longer period of time, which allows us to assess long-term trends in state behavior, and (2) our theoretical claims focus on naval versus land power broadly and do not differentiate between the forms that naval or land power may take. The naval tonnage measure accounts for naval power across the different types of ships that may comprise states' naval force structure, whereas mechanization assesses one (important) dimension of land forces.
7. For a similar paper that utilized energy consumption as a proxy measure of the shifting nature of wealth generation, see Colgan (2015). It is important to note that Colgan's theory differs from ours and, because of this, he utilizes energy consumption as a measure of the degree to which a state is energy modern.
8. See the Correlates of War Project (2010) documentation for additional discussion about these issues and a list of auxiliary sources used in constructing the series.

9. Due to the potential for global trends over time for some of our key variables, we also check the robustness of our results with models that include a time trend variable. The results in these models are consistent with those shown below.
10. While the sample used in the analysis extends only to 2001 because of limitations on the temporal domain of the dependent variable, we have data on the covariates through 2005. Consequently, we build our hypothetical case with values for China in 2005 in order to gain an understanding of the substantive significance of our results in terms of the most recent case possible. We can do so because it is not necessary to include observed values for the dependent variable in calculations of predicted probabilities.
11. We repeated the tests of power projection and naval tonnage using linear regression with country fixed effects to control for unobserved heterogeneity. This conservative method produced results that are consistent with those presented below.
12. We base this statement on a carrier battle group comprised of a Nimitz-class carrier (100,000 tons), one Ticonderoga-class cruiser (10,000 tons), and two Arleigh Burke-class destroyers (10,000 tons each).

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