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

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Appendix

Introduction to the Appendix

In the supplementary material below. We discuss the primary independent variable in detail in addition to several other variables that we consider in robustness tests. We also present results from these additional models, provide consistent and supporting evidence for the argument we make in the main manuscript.

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 **?** 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 a "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 1816-2001.

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 this variable as the geocoded distance from the projecting state capital to the location of the MID. 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) dataset (**?**) and the longitude and latitude coordinates for each state's capital city from the Distance Between Capitals dataset (**?**). The MIDLOC dataset includes latitude and longitude coordinates for the location of each MID from 1816-2001. 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.

Dependent Variable for Hypothesis 3: Naval Tonnage

We use data on naval ship tonnage as an operational measure for states' power projection capabilities. We focus on naval tonnage in this paper 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.[1] 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 dataset on naval power developed by (**?**). The dataset 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 73 countries from 1865-2001.

[1] For example, **?** 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.

Key Independent Variable: Primary Energy Consumption

The Correlates of War dataset's Primary Energy Consumption variable consists of four categories of energy: coal, petroleum, electricity, and natural gas.[2] Each of these elements is broken into a variety of different component parts. The original data were collected by **?** and **?**. Primary Energy Consumption data comes from two primary sources, and several secondary sources.[3] The primary sources include the International Historical Statistics (**????**) and the Energy Statistics Database (**?**). 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 States 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 conversation process that links the energy output across these different materials. See the **?** documentation for additional discussion about these issues and a list of auxiliary sources used in constructing the series.

All of the equations, which covert each energy source into equivalent units of coal, are available in (**?**). Each conversion, as it relates to coding the variable, is discussed in detail. For example, anthracite and bituminous coal produce more energy, more efficiently than brown coal (**?**).

By 1962, the average country, generated just over 1 metric ton of coal or equivalent in energy per person. This amount of energy produces on average, 1,904 kWh per ton, per person. Contrast this number with the 1902 value, which was 0.1 metric tons of coal or equivalent. 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 European countries, have industrialized much more rapidly than other countries in the 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.

Estimate GDP variable

The new GDP estimates are based on a dynamic latent variable model that brings together 11 different measures of GDP, GDP per capita, and population. It uses the available information across these different historic and contemporary datasets to infer the values for missing values. As the number of sources for each country-year unit increases, the level of precision of the estimate also increase. The model can be thought of as a flexible and sophisticated imputation model that takes into account the temporal information available in the different data sources. As additional pieces of information become available from new historic datasets we will be able to further assess and improve the precision of the these estimates. We are actively working on this project.

[2] **?**.

[3] Ibid.

Additional Model Specifications

Are the results presented above driven solely by variation within key states over time? We test several additional model specifications to find out. Here we consider three additional models, (1) Primary Energy Consumption in the postcolonial period (1945 forward), (2) a model with year fixed effects that examines the between-country variation for the Primary Energy Consumption variable[4], and (3) Primary Energy Consumption for all countries except major powers as identified by the Correlates of War project. The results of these models are consistent with the other regression models in the main text of the manuscript.

[4]This time fixed effects approach allows us to examine variation across the domain of countries for each year in the dataset.

Table 1: Post-World War II Era (after 1945) Robustness Checks

	(1)	(2)	(3)
Primary Energy Consumption pc	-0.1861	0.3544^{**}	0.0893^{***}
	(0.1762)	(0.1285)	(0.0254)
Gross Domestic Product pc	0.0799	-0.1451	0.0958^{***}
	(0.2014)	(0.1402)	(0.0248)
Threat	26.5131	-69.4327^{*}	1.3515
	(33.2119)	(33.6453)	(2.6597)
Polity2	-0.0083	-0.0123	0.0005
	(0.0129)	(0.0142)	(0.0010)
Time Count	-0.2439^{***}		
	(0.0205)		
Time Count^2	0.0032^{***}		
	(0.0004)		
Time Count^3	-0.0000^{***}		
	(0.0000)		
Intercept	$-0.4606^{\dagger}$	2.5139^{***}	0.4264^{***}
	(0.2587)	(0.2597)	(0.0573)
Num. obs.	6914	6914.0000	2875.0000

Significance levels: $^{\dagger}(p \leq 0.1)$, $^{*}(p \leq 0.05)$, $^{**}(p \leq 0.01)$, $^{***}(p \leq 0.001)$.

Notes: Models 1-3 analyze the robustness of our main regression results in a sample that is restricted to observations after 1945. Model 1 assesses the likelihood that states have at least one territorial militarized interstate dispute in a given year. Because the dependent variables is dichotomous, we utilize a logistic regression model with polynomial time-count variables to account for serial autocorrelation. Standard errors clustered by country in parentheses. Models 2 and 3 present results for linear regression tests with panel corrected standard errors, and an AR(1) term to account for serial autocorrelation. Model 2 analyses how far states project military power on average, by observing the average distance away from states' national capitals at which militarized interstate disputes occur in each year. The dependent variable in model 3 measures states' Naval Power as determined by the total tonnage of naval vessels in their armed forces at a given time. Primary Energy Consumption 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, Naval Tonnage, Primary Energy Consumption 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.

Table 2: Regression Models with Time Fixed Effects

	(1) Territorial Conflict	(2) Power Projection	(3) Naval Power
Primary Energy Consumption pc	-0.1407†	0.1566†	0.0983***
	(0.073)	(0.087)	(0.027)
Gross Domestic Product pc	0.0736	0.0570	0.1426***
	(0.062)	(0.056)	(0.024)
Threat	-26.2999	-29.2330†	4.2654
	(20.522)	(17.097)	(4.060)
Polity2	-0.0201*	-0.0106	-0.0054*
	(0.008)	(0.008)	(0.002)
Time Count	-0.2234***		
	(0.010)		
Time Count^2	0.0030***		
	(0.000)		
Time Count^3	-0.0000***		
	(0.000)		
Intercept	-0.8599	1.9604**	0.3276*
	(1.161)	(0.668)	(0.160)
N	10236	10337	4373

Significance Levels: † ($p \leq 0.1$),* ($p \leq 0.05$), ** ($p \leq 0.01$), *** ($p \leq 0.001$).

Notes: Results for linear regression with time fixed effects. The first column denotes the results for logistic regression tests on the binary variable that indicates the presence of at least one militarized interstate dispute involving territory in a given country-year. The second column reflects tests on a dependent variable that 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 third column shows results for tests on Naval Power as determined by the total tonnage of naval vessels in a state's armed forces at a given time. Primary Energy Consumption 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, Primary Energy Consumption 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.

Table 3: Regression Results with Major Powers Excluded from Sample

	(1)	(2)	(3)
Primary Energy Consumption pc	-0.2288^{*}	0.2598^{**}	0.0101
	(0.1147)	(0.1000)	(0.0248)
Gross Domestic Product pc	0.0898	-0.3020^{***}	0.1268^{***}
	(0.1059)	(0.0883)	(0.0247)
Threat	-6.5777	-7.2029	10.1059^{***}
	(13.5667)	(12.7950)	(2.1950)
Polity2	-0.0067	-0.0029	0.0038^{***}
	(0.0100)	(0.0096)	(0.0010)
Time Count	-0.2243^{***}		
	(0.0175)		
Time Count^2	0.0030^{***}		
	(0.0004)		
Time Count^3	-0.0000^{***}		
	(0.0000)		
Intercept	-0.4118^{*}	2.2612^{***}	0.4522^{***}
	(0.1955)	(0.1570)	(0.0513)
Num. obs.	9344	9344.0000	3341.0000

Significance levels: $^{\dagger}(p \leq 0.1)$, $^{*}(p \leq 0.05)$, $^{**}(p \leq 0.01)$, $^{***}(p \leq 0.001)$.

Notes: The United States, Great Britain, France, Russia, China, Germany, Austria, Japan, and Italy are excluded from the sam- ple. The first column shows logistic regression tests that assess the likelihood that states have at least one territorial militarized interstate dispute in a given year. Standard errors clustered by country in parentheses. The second column denotes tests on a dependent variable that 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 third column presents the results of tests on the total tonnage of naval power possessed by a state. Primary Energy Consumption is a per-capita measure of each state's use of energy, and is expressed in terms of the number of coal ton equiva- lents 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, Primary Energy Consumption 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.

Additional Models of Power Projection with Only Country-Years that Experienced at least one MID

We test several additional specifications for the power projection dependent variable after excluding all units that did not experience at least one MID.

Table 4: Power Projection for All Country-Year Units with at least one MID

	(1)	(2)	(3)	(4)
Primary Energy Consumption pc	0.5151^{***}	0.6012^{***}	0.5471^{***}	0.3223^{***}
	(0.0862)	(0.0807)	(0.0821)	(0.0633)
Gross Domestic Product pc	-0.2091^{***}	-0.3443^{***}	-0.3300^{***}	
	(0.0612)	(0.0636)	(0.0630)	
Threat	34.7585^{***}	52.9960^{***}	58.4159^{***}	49.5022^{***}
	(7.2309)	(6.9537)	(7.0004)	(6.9960)
Polity2		0.0417^{***}	0.0435^{***}	0.0348^{***}
		(0.0052)	(0.0053)	(0.0052)
Land Contiguities			0.0364^{**}	0.0527^{***}
			(0.0129)	(0.0131)
Sea Contiguities			0.0631^{***}	0.0601^{***}
			(0.0163)	(0.0165)
Intercept	6.1235^{***}	6.1280^{***}	5.8318^{***}	5.4817^{***}
	(0.1105)	(0.1085)	(0.1399)	(0.1224)
Num. obs.	3657.0000	3452.0000	3452.0000	3452.0000

Significance levels: $\dagger(p \leq 0.1)$, $^{*}(p \leq 0.05)$, $^{**}(p \leq 0.01)$, $^{***}(p \leq 0.001)$.

Notes: 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 1816-2001 which experienced at least one MID. Primary Energy Consumption 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, Primary Energy Consumption 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.

Ethnic Territorial Conflict

The ICOW data provides information that we use to construct a binary variable for whether or not the country-year unit has engaged in a territorial conflict that is based on an identified issue of ethnic salience (**??**).

Ethnic salience This variable is an indicator of territorial claim salience, which is coded 1 if the territory includes significant portions of ethnic, religious, linguistic, or other identity groups linked to the target state; 0 otherwise.

Table 5: Disputes over Ethnically Salient Territory

	(1)	(2)	(3)
Primary Energy Consumption pc	−0.1028	0.1608	0.3597
	(0.3548)	(0.3780)	(0.3853)
Gross Domestic Product pc	0.1535	0.0013	−0.1102
	(0.2934)	(0.3303)	(0.2537)
Threat	33.1535	55.6696	63.6014
	(53.0043)	(55.3172)	(66.5122)
Polity2		0.0458*	0.0531*
		(0.0196)	(0.0252)
Land Contiguities			−0.0366
			(0.0860)
Sea Contiguities			−0.1057
			(0.1353)
Time Count	−0.6474***	−0.6496***	−0.6300***
	(0.1018)	(0.1036)	(0.0779)
Time Count^2	0.0086***	0.0087***	0.0084***
	(0.0015)	(0.0015)	(0.0010)
Time Count^3	−0.0000***	−0.0000***	−0.0000***
	(0.0000)	(0.0000)	(0.0000)
Intercept	1.1053	0.7068	1.0674
	(1.0451)	(1.0836)	(1.1080)
Num. obs.	11186	10337	10337

Significance levels: †($p \leq 0.1$), *($p \leq 0.05$), **($p \leq 0.01$), ***($p \leq 0.001$).

Notes: Results for logistic regression analysis, which assesses the likelihood that states compete over territory that includes significant portions of ethnic, religious, linguistic, or other identity groups linked to the target state (Frederick, Hensel, and Macaulay 2017). Polynomial time-count variables are used to account for temporal dependence. The sample is inclusive to all states in the international system from 1816-2001. Primary Energy Consumption is a per-capita measure of each state's use of energy, and is expressed 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, Primary Energy Consumption 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.

Additional Independent Variables

We take several measures from the World Development indicators and use them to create additional control variables that we include in our models. These variables measure other aspects of the economic structure of a state in a given year. They allow us to control for these structure to see if the Primary Energy Consumption variable is still associated with the dependent variables of our study. These variables all suffer from missingness in the earlier period of our study but, they do allow us to estimate models during the post colonial period and to estimate some dichotomous indicators that serve as usual control variables in our primary models. We are working on developing a more rigorous imputation model for these indicators in another project.

GDP from Oil/Gas Oil and Gas revenue as a percentage of GDP (available from 1932 to 2014).

WDI GDP from Agriculture Agricultural revenue as a percentage of GDP (available from 1960 to 2015).

Agricultural Dependence A variable coded 1 if the value of Agricultural revenue as a percentage of GDP is greater than 10%; otherwise 0.

Rent Addiction A variable coded 1 if the value of Agricultural revenue as a percentage of GDP is greater than 10% and/or the value of Natural resources rents as a % of GDP is greater than 10%; 0 otherwise. Data for natural resources rents begin in 1970, but we need estimates starting around the time when countries first began generating income from oil and gas (e.g. Venezuela & Saudi Arabia in the 1930s and 1940s). We estimate a linear model with no constant to find the slope of the relationship between combined oil & gas revenues (% of GDP) and natural resources rents (% of GDP). We use the coefficient to predict missing values of resource rents. This allows us to measure resource rents from 1932-2014.

We make use of two new variables Oil and Gas revenue as a percentage of GDP (available from 1932 to 2014) and the Agriculture revenue as a percentage of GDP (available from 1960 to 2015). We also use this Agriculture variable to create a dichotomous variable if more than 10% of revenue comes from agriculture. Finally, we create a rent addiction with a linear prediction model that makes use of the observed data we have available. We are working on developing a more rigorous imputation model for these indicators in another project. Nonetheless, the models that include any of these additional control variables demonstrate that primary energy consumption is still significantly associated with our dependent variables. See specifically tables, 10, 11, and 12 in the appendix. In sum, the results from these additional models suggest that the relationship between primary energy consumption and the three dependent variables are still statistically and substantively important to the inclusion of these additional variables that each represent different parts of the economic structure of a country. As the primary energy consumption variable increases, states are less likely to engage in territorial conflict, project power to MIDs further away from their state, and build large naval forces. These results hold with the inclusion of these other variables. However, some additional results are worth mentioning. First, in table 12, the rent addiction measures we have created are negatively related to projecting power. This result is suggestive and we are working on creating a more robust version of this rent addiction measure for future study. In table 13, the agriculture dummy variable we created is positively related with developing naval power but this relationship is not robust when using the original continuous measure. We believe these results are suggestive and we thank the reviewer for pushing us to consider developing additional measures of the structure of the economy. The findings with these additional controls demonstrate that primary energy consumption is a useful measure after controlling for petro-states that tend to use high levels of energy but are land oriented.

Table 6: Robustness Checks for Energy Consumption and Territorial Disputes

	(1)	(2)	(3)	(4)	(5)
Primary Energy Consumption pc	-0.3302^{**}	-0.3191^{**}	-0.3477^{**}	$-0.2930^{\dagger}$	$-0.2842^{\dagger}$
	(0.1151)	(0.1159)	(0.1165)	(0.1687)	(0.1693)
Rent Addiction	-0.2103		-0.1845		
	(0.1574)		(0.1561)		
Ag Dependence		-0.1655	-0.1125		
		(0.2148)	(0.2075)		
GDP from Oil/Gas				$0.0031^{\dagger}$	
				(0.0019)	
WDI GDP from Ag					0.0056
					(0.0107)
Gross Domestic Product pc	0.1101	0.1092	0.1072	0.1031	0.2296
	(0.0883)	(0.0890)	(0.0897)	(0.1770)	(0.2143)
Threat	-2.3746	-1.9464	-1.9555	51.7245^{*}	-6.5620
	(9.9590)	(10.1325)	(10.2243)	(25.6048)	(71.1069)
Polity2	-0.0127	-0.0108	-0.0125	0.0061	-0.0069
	(0.0087)	(0.0085)	(0.0087)	(0.0118)	(0.0166)
Land Contiguities	0.0768^{**}	0.0760^{**}	0.0770^{**}	0.0966^{**}	$0.0800^{\dagger}$
	(0.0277)	(0.0277)	(0.0277)	(0.0304)	(0.0410)
Sea Contiguities	$0.0628^{\dagger}$	$0.0621^{\dagger}$	0.0636^{*}	0.0810^{*}	$0.0691^{\dagger}$
	(0.0321)	(0.0321)	(0.0321)	(0.0371)	(0.0408)
Time Count	-0.2151^{***}	-0.2145^{***}	-0.2148^{***}	-0.2434^{***}	-0.2524^{***}
	(0.0153)	(0.0153)	(0.0153)	(0.0191)	(0.0350)
Time Count^2	0.0029^{***}	0.0029^{***}	0.0029^{***}	0.0031^{***}	0.0035^{***}
	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0007)
Time Count^3	-0.0000^{***}	-0.0000^{***}	-0.0000^{***}	-0.0000^{***}	-0.0000^{***}
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Intercept	-0.6720^{*}	-0.7105^{*}	$-0.5855^{\dagger}$	-1.2159^{***}	$-1.1262^{\dagger}$
	(0.2688)	(0.3279)	(0.3369)	(0.3169)	(0.6051)
Num. obs.	10290	10290	10290	6585	3409

Significance levels: $\dagger(p \leq 0.1)$, $^{*}(p \leq 0.05)$, $^{**}(p \leq 0.01)$, $^{***}(p \leq 0.001)$.

Notes: Results for logistic regression analysis, which assesses the likelihood that states have at least one territorial militarized interstate dispute in a given year. Polynomial time-count variables are used to account for temporal dependence. Primary Energy Consumption is a per-capita measure of each state's use of energy, and is expressed terms of the number of coal ton equivalents consumed per person. In addition to this measure, we also control for several additional measures of the structure of the economy for the country-year unit. We make use of two new variables Oil and Gas revenue as a percentage of GDP (available from 1932 to 2014) and the Agriculture revenue as a percentage of GDP (available from 1960 to 2015). We also use this Agriculture variable to create a dichotomous variable if more than 10% of revenue comes from agriculture. Finally, we create a rent addiction with a linear prediction model that makes use of the observed data we have available. We are working on developing a more rigorous imputation model for these indicators in another project. 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, Primary Energy Consumption 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.

Table 7: Robustness Checks for Energy Consumption and Power Projection

	(1)	(2)	(3)	(4)	(5)
Primary Energy Consumption pc	0.4136^{***}	0.5520^{***}	0.4639^{***}	$0.2335^{\dagger}$	0.0077
	(0.1093)	(0.1169)	(0.1117)	(0.1354)	(0.1656)
Rent Addiction	-0.5661^{***}		-0.6850^{***}		
	(0.1718)		(0.1862)		
Ag Dependence		0.1778	0.4068^{*}		
		(0.1908)	(0.2071)		
GDP from Oil/Gas				−0.0042	
				(0.0037)	
WDI GDP from Ag					0.0022
					(0.0073)
Gross Domestic Product pc	-0.4938^{***}	-0.4681^{***}	-0.4881^{***}	−0.0988	0.0011
	(0.1008)	(0.1008)	(0.1002)	(0.1427)	(0.2611)
Threat	41.3592^{**}	39.4566^{**}	39.9902^{**}	66.0900^{*}	23.0083
	(14.0551)	(14.0754)	(14.0245)	(29.2713)	(60.9591)
Polity2	0.0224^{*}	0.0283^{**}	0.0207^{*}	0.0323^{*}	0.0153
	(0.0098)	(0.0101)	(0.0098)	(0.0130)	(0.0184)
Land Contiguities	0.2197^{***}	0.2221^{***}	0.2191^{***}	0.2676^{***}	0.3005^{***}
	(0.0259)	(0.0259)	(0.0258)	(0.0235)	(0.0272)
Sea Contiguities	0.2170^{***}	0.2106^{***}	0.2186^{***}	0.2671^{***}	0.3207^{***}
	(0.0296)	(0.0295)	(0.0296)	(0.0326)	(0.0367)
Intercept	1.7250^{***}	0.9800^{***}	1.4318^{***}	$0.4397^{\dagger}$	0.2850
	(0.2747)	(0.2695)	(0.2957)	(0.2578)	(0.5833)
Num. obs.	10290.0000	10290.0000	10290.0000	6585.0000	3409.0000

Significance levels: $\dagger(p \leq 0.1)$, $^{*}(p \leq 0.05)$, $^{**}(p \leq 0.01)$, $^{***}(p \leq 0.001)$.

Notes: 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. Primary Energy Consumption 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. We make use of two new variables Oil and Gas revenue as a percentage of GDP (available from 1932 to 2014) and the Agriculture revenue as a percentage of GDP (available from 1960 to 2015). We also use this Agriculture variable to create a dichotomous variable if more than 10% of revenue comes from agriculture. Finally, we create a rent addiction with a linear prediction model that makes use of the observed data we have available. We are working on developing a more rigorous imputation model for these indicators in another project. 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, Primary Energy Consumption 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.

Table 8: Robustness Checks for Energy Consumption and Naval Power per capita

	(1)	(2)	(3)	(4)	(5)
Primary Energy Consumption pc	0.0681^{**}	0.0715^{**}	0.0682^{**}	0.0939^{***}	$0.0615^{\dagger}$
	(0.0253)	(0.0260)	(0.0263)	(0.0252)	(0.0319)
Rent Addiction	-0.0109		$-0.0242^{\dagger}$		
	(0.0117)		(0.0130)		
Ag Dependence		0.0293^{**}	0.0379^{**}		
		(0.0109)	(0.0117)		
GDP from Oil/Gas				-0.0004	
				(0.0005)	
WDI GDP from Ag					-0.0000
					(0.0010)
Gross Domestic Product pc	0.1294^{***}	0.1535^{***}	0.1588^{***}	0.1791^{***}	0.2373^{***}
	(0.0239)	(0.0250)	(0.0253)	(0.0264)	(0.0375)
Threat	8.4811^{***}	11.1803^{***}	12.0462^{***}	8.5369^{**}	3.2608
	(2.1570)	(2.3088)	(2.3536)	(2.8815)	(4.1263)
Polity2	0.0025^{*}	0.0037^{***}	0.0040^{***}	0.0016	0.0009
	(0.0010)	(0.0010)	(0.0011)	(0.0011)	(0.0013)
Land Contiguities	-0.0068	-0.0089^{*}	-0.0094^{*}	-0.0048	0.0091
	(0.0046)	(0.0045)	(0.0045)	(0.0050)	(0.0076)
Sea Contiguities	-0.0027	0.0003	0.0010	-0.0173^{**}	0.0022
	(0.0055)	(0.0057)	(0.0057)	(0.0064)	(0.0066)
Intercept	0.5410^{***}	0.4748^{***}	0.4816^{***}	0.3575^{***}	0.0244
	(0.0581)	(0.0564)	(0.0570)	(0.0596)	(0.0816)
Num. obs.	4298.0000	4298.0000	4298.0000	2755.0000	1533.0000

Significance levels: $^{\dagger}(p \leq 0.1)$, $^{*}(p \leq 0.05)$, $^{**}(p \leq 0.01)$, $^{***}(p \leq 0.001)$.

Notes: 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 1870-2001, and is limited by the availability of data for naval power and the threat environment. Primary Energy Consumption is a per-capita measure of each state's use of energy, and is expressed 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, Primary Energy Consumption 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.