

Comparative Democracy: The Economic Development Thesis Revisited

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Prepared for submission to the *American Political Science Review*.

I would like to thank Joel Barkan, Fred Boehmke, Scott Cody, Doug Dion, Vicki Hesli, Ha-Lyong Jung, Eric Manning, Dan Morey, Tom Rice, Helena Rodrigues, Robert Salmond, Megan Shannon, Tracy Slagter, Matthew Whittaker, Jeremy Youde and especially Michael Lewis-Beck for many helpful comments and suggestions on earlier versions of this paper. Any remaining errors and omissions in this paper are my own responsibility.

Abstract:

Several studies have examined whether economic development causes democracy. This paper extends Burkhart and Lewis-Beck's (1994) study in light of theoretical challenges to their findings and an increasing number of democracies since the late 1980s. I test whether economic development, world position and whether a nation-state is an oil country affect whether a country is more likely to be a democracy. I estimate my model on data from 180 nation-states with cross-sectional time series data from 1972 to 1995. I discover that a country is more likely to be a democracy as it economically develops. Further, semi-peripheral, peripheral and oil countries are less likely to be democracies. Finally, my findings hold regardless of how I measure democracy and after controlling for heteroskedasticity as well as spatial and temporal dependence.

Political scientists have long suspected that a relationship exists between economic development and democracy. One reason offered for this connection is that the populace's demand for democracy grows as their country becomes economically better off because such development can spread authority and democratic aspirations over a wide range of people (Burkhart and Lewis-Beck 1994; Dahl 1989; Huntington 1991). Also, increased economic development should foster democracy because nondemocracies that partly develop may change their political systems because they are able to afford the costs that go along with having a democratic system.¹

Along these lines, many have argued that nation-states that economically develop are more likely to be democracies (Burkhart and Lewis-Beck 1994; Feng 1997; Jackman 1973; Leblang 1997; Lipset 1959, 1994). Others argue that peripheral and semiperipheral countries are less likely to be democracies than core countries (Bollen 1983; Burkhart and Lewis-Beck 1994; Snyder and Kick 1979; Wallerstein 1974). Finally, some suggest that oil countries are less likely to be democracies (Barro 1999; Smith 2004).

To determine which explanation most accurately explains the conditions under which a country is more likely to be a democracy, I empirically retest and expand Burkhart and Lewis-Beck's (1994) study. A reanalysis is useful for three reasons: 1) more countries have become democracies since the late 1980s (Freedom House 2003); 2) recent research has theoretically challenged the basis for their findings; and 3) I would like to see whether economic development affects a state's level of democracy in light of the first elections in newly democratic countries, new methodological techniques that better test this relationship, and using different measures of

¹ These costs include, but are not limited to services that the government must provide to its citizens because those citizens demand them. Examples of such services include infrastructure improvements, elections and social services. See Boix (2001) and Baum and Lake (2003) for more details.

democracy. I will answer my research question in five parts. First, I review the basics of Burkhart and Lewis-Beck's (1994) study. Second, I state three reasons why we should reexamine their study. Third, I discuss the conditions under which we should expect a relationship between economic development and democracy and derive a series of hypotheses from these conditions. Fourth, I will test my hypotheses on a dataset consisting of 180 nation-states from 1972 to 1995. To conclude, I discuss my results.

Background

Burkhart and Lewis-Beck (1994) test whether economic development causes economic development. Through a pooled, cross-sectional analysis of 131 nation-states from 1972 to 1989, they discover that countries which are more economically developed are more likely to be democracies. Also, they find that this relationship partly depends on that state's position in the world system. Finally, they learn from Grainger's (1969, 1988) tests on their data that economic development "causes" democracy, not the other way around.

Since Lewis-Beck and Burkhart's (1994) published their article, their thesis has generated considerable debate amongst scholars who study the relationship between economics and democracy. For example, Rice and Ling (2002) argue that proponents of the economic development thesis give little thought to how culture relates to the relationship between economics and development. Using data from the 1990 World Values and the cumulative General Social surveys, Rice and Ling (2002) find that whether a country was a democracy in the 20th century depended more on social capital in the 1800s than 19th century economic development.

However, two problems plague their study. First, they employ measures of social capital that "stack the deck" in favor of a statistically significant relationship between social capital and

democracy. We see such an effect because they perform an *ex post* analysis by using contemporary data as a historical measure of social capital.² Second, Jackman and Miller (1996a, 1996b) employ measures of social capital that circumvent the *ex post* problem and discover little evidence that yields a systematic relationship between political culture and political and economic performance (Jackman and Miller 1996a, 653).

Other scholars argue that researchers should distinguish between exogenous and endogenous theories with respect to the relationship between economic development and democracy. Endogenous explanations say that countries which continue to economically develop are more likely to be democracies (Przeworski and Limongi 1997; Przeworski, Alvarez, Cheibub and Limongi 2000). Conversely, exogenous theories argue that countries establish democracies independent of economic development. However, democracies are more likely to survive in developed countries (Przeworski and Limongi 1997; Przeworski, Alvarez, Cheibub and Limongi 2000). These researchers argue that once we disentangle these explanations, support for endogenous explanations falls away in favor of exogenous ones.

While their line of research seems convincing, it comes with two problems. First, they use proprietary measures to operationalize democracy. While using these measures has some benefits, the drawbacks of using such measures outweigh the benefits. The main drawbacks are that the rater may introduce random and/or systematic measurement error (Bollen 1993), the measure may not be reliable (see Przeworski and Teune 1970) and that such measures are available for limited time periods. Second, both studies only look at nation-states until 1990.

² Using such data assumes that a country had a lot of social capital in its history because it currently has a lot of social capital. One cannot prove such an assumption without accurate social capital measures during that country's history.

Ending their analysis at 1990 poses significant problems because many countries have become democracies since that time.

Because more recent research has cast doubt upon exogenous explanations for the relationship between economic development and democracy — especially Burkhart and Lewis-Beck's (1994) — it is useful to extend their dataset and reexamine this relationship for two additional reasons. Since the late 1980s, we have seen a number of partially developed authoritarian states become democracies (Freedom House 2003). This rise has four implications. First, we should observe less conflict in international politics because democracies are less likely to fight one another (Cedarman 2001; Dixon 1994; Huntington 1991; Maoz and Russett 1993). Second, economically developing democracies will have larger public sectors that provide collective goods and transfer payments to their citizens than authoritarian countries (Boix 2001).³ Third, those who inhabit poor democracies are more likely to live longer (Baum and Lake 2003). Finally, citizens of comparatively wealthier democracies are more educated on average (Baum and Lake 2003).

Further, major studies that examine the relationship between economic development and democracy measure democracy differently. Early studies employed proprietary measures to operationalize democracy (Bollen 1979, 1983; Bollen and Jackman 1985; Jackman 1973; Lipset 1959). However, these measures came with significant drawbacks. Because of these limitations, most recent research has employed Polity or Freedom House scores to measure democracy (Baum and Lake 2003; Burkhart 1997; Burkhart and Lewis-Beck 1994; Feng 1997; Leblang 1997). Researchers who favor using Polity scores argue that Freedom House measures are conservatively biased to favor American allies (Hartman and Hsiao 1988; Nagle 1985; Scoble

³ Examples of collective goods include government regulation and infrastructure. Also, transfer payments include, health insurance, unemployment benefits and pensions (Boix 2001).

and Wiseberg 1988). Others who favor using Polity measures argue that Freedom House scores contain a liberal bias against American allies (Bozeman 1979; Feen 1985). Proponents of Freedom House measures argue that these ratings are relatively unbiased (Bollen 1993; McCamant 1981) and that Polity scores are biased against monarchies (Herb 2004). From this controversy, one can ask whether any relationship between economic development and democracy depends on how one measures democracy.

Hypotheses

Economic Development and Democracy

We should expect a relationship between economic development and democracy for four reasons. First, the populace's demand for democracy grows as their nation-state becomes economically better off. People within that country tend to demand democracy because rapid economic growth is more likely to destabilize authoritarian regimes in favor of Democratic ones (Gasiorowski 1995; Huntington 1991).

Second, the values of a nation-state's citizens change as that country economically develops (Huntington 1991; Putnam 1993). More specifically, citizens develop more feelings of interpersonal trust, life satisfaction, and competence as the economy develops (Huntington 1991; Putnam 1993). These attributes of social capital strongly correlate with whether democratic institutions exist.

Third, economic development increases a society's level of education (Huntington 1991; Lipset 1959). Education is important to the development of democratic institutions because more highly educated people, "...tend to develop the characteristics of trust, satisfaction and competence that go with democracy" (Huntington 1991, 65-66). Also, education favorably affects the development of democracy because citizens of more educated societies are more

likely to tolerate opposing viewpoints and believe in multi-party rather than single-party systems (Lipset 1959).

Finally, economic development makes more resources available for the government to distribute to social groups (Huntington 1991). If a government has more resources, then it forces groups within and outside of the government to compromise with one another to determine who receives what share of the resources (Huntington 1991). Democracy is more likely when groups must compromise and accommodate one another in such a situation because such actions teach members of those groups democratic values. For all of these reasons, I anticipate that:

Hypothesis One: ECONOMIC DEVELOPMENT. A country is more likely to be a democracy as it economically develops.

World System Position and Democracy

Further, we know that a country's chances for democracy depend on where it is placed within the world's economy (Bollen 1983; Burkhart and Lewis-Beck 1994; Snyder and Kick 1979; Wallerstein 1974). Dependency theorists argue that core countries have a considerable economic and political advantage over peripheral and semi-peripheral countries.⁴ Core countries have an advantage over peripheral and semi-peripheral nation-states in three respects. First, semi-peripheral and peripheral countries have production systems within their economies that are export-oriented and usually specialize in raw materials (Snyder and Kick 1979; Wallerstein 1974). Second, multinational corporations from core countries use these economic structures to exploit peripheral and semi-peripheral countries' resources to benefit core nation-states (Wallerstein 1974). Finally, core countries have substantial control over the activities of political

⁴ Core nation-states are those countries with high gross domestic products (GDPs), high standards of living and transnational corporations. Semi-peripheral countries are those states that have medium GDPs, moderate standards of living and no multinational corporations. Peripheral countries are those nation-states with low GDPs, low standards of living and are exploited by transnational corporations from core countries. See Wallerstein (1974) for more details.

and economic elites in peripheral and semi-peripheral nation-states that prevent the latter from breaking off the relationship (Wallerstein 1974). Peripheral and semi-peripheral countries face serious constraints on their ability to become democracies because of the advantage that core nation-states have over these countries. Therefore, I anticipate that:

Hypothesis Two: WORLD SYSTEM POSITION. Peripheral and semi-peripheral nation-States are less likely to be democracies than core states.

Oil Countries and Democracy

Finally, oil countries fundamentally differ from those nation-states that are not major oil exporters because such countries tend to be one party states or ruled by some kind of monarch (Herb 2004; Huntington 2004). Oil countries are more likely to have such political structures because the wealth that oil sales generate goes to the government and/or to multinational corporations who have operations in those countries (Barro 1999; Przeworski, Alvarez, Cheibub and Limongi 2000). Further, governments of oil countries rarely redistribute their wealth to the population that lives in these countries (Barro 1999). Since we know that countries that rarely redistribute their wealth are less likely to be democracies (see Gasiorowski 1995), I anticipate that:

Hypothesis Three: OIL COUNTRIES. Oil countries are less likely to be democracies.

Data and Methods

My data focuses on 180 countries from 1972 to 1995 and describes the degree to which each country is a democracy. My dependent variable is each nation-state's democracy score from 1972 to 1995. Since researchers disagree about how to measure democracy, I use two different measures.⁵ First, I measure democracy using Polity III Scores for each country during this time period. Jagers and Gurr (1995) coded their democracy rating from zero to ten, with higher

rankings assigned to more democratic states.⁶ Second, I measure democracy using Freedom House scores. This organization coded each country's score from two to fourteen based on civil and political rights within a nation-state, with a lower score indicating a more democratic state. I rescaled these scores by reducing each by two to create a scale from zero to twelve. The intuitive meaning of these scores is the same as the original measurement in that a lower score still indicates a more democratic state.⁷

My first independent variable is economic development. I use kilowatt hours of electricity consumption per capita to measure economic development.⁸ I acquired data for this variable from the World Development Indicators CD-ROM (1998). I took the natural log of the values for each country in every year for two reasons. First, "... the relationship between development and

⁵ One benefit of using different measures is that I can determine whether the relationship between my dependent and independent variables depends on how I measure my dependent variable.

⁶ Please see Jagers and Gurr's (1995) article for more information on how they operationalize each facet of a democracy.

⁷ I recoded these scores to make the Beck, Katz and Tucker (1998) corrections work with my data.

⁸ Researchers vehemently disagree about how to measure economic development. Some researchers have measured this concept via gross national or gross domestic product (Barro 1999; Bollen and Jackman 1985; Jackman 1973). One benefit of measuring economic development in this manner is that most researchers agree that GNP and GDP per capita adequately measures economic development. However, measuring economic development in this manner has two significant drawbacks. First, values of GNP and GDP are susceptible to the exchange rate problem (Bollen 1979, 578). This problem occurs when a researcher converts the GNP/GDP value from one currency to another. The values of GNP and GDP fluctuate depending on when the researcher converted these values from that country's currency to another. Given the floating exchange rate system, these values vary considerably.

Second, we observe a related problem that concerns comparability in that currencies fluctuate in value as compared with each other (Bollen 1979, 578). Such a problem comes about in two different ways. First, when researchers convert several nation-states' GDP or GNP into a third currency, values for those countries partly depend on the exchange rate on the particular day, hour and minute that the conversion takes place. Second, this problem surfaces when researchers compare the GDP or GNPs of Communist and noncommunist countries. It is widely acknowledged that Communist GDP and GNP calculations (and their per capita derivatives) are inaccurate such that the margin of inaccuracy is not consistent across years and countries.

Because of these problems, I cannot use GNP and GDP per capita to measure economic development. Instead, I use per capita electricity consumption. Using this measure carried two benefits. First, at least two major studies have employed this measure as a substitute for GNP and GDP measures (see Bollen 1979; Burkhart and Lewis-Beck 1994). Second, this measure is highly valid at face value because it carries a .9 correlation with GNP per capita over time (Bollen 1979).

democracy is curvilinear and can be best captured by a log transformation of energy consumption" (Jackman 1973; Bollen 1979, 578). Second, such a transformation, "...reduces the extreme skewness in the untransformed energy consumption variable" (Bollen 1979, 578).

My second independent variable is world system position. World systems theorists argue that each country fits into one of three categories: core, periphery or semi-periphery. To measure world system position, I employ Burkhart and Lewis-Beck's (1994) ratings for each country.⁹ Because I want to test whether semi-peripheral and peripheral countries are less likely to be democracies than core nation-states, I use core countries as my comparison category. I employ two dummy variables that correspond to peripheral and semi-peripheral nation-states, respectively. I code the peripheral dummy one if a country is located in the periphery and zero otherwise. Also, I code the semi-peripheral dummy one if a nation-state is located in the semi-periphery and zero otherwise. Since dependency theory argues that the effect of world system position is conditioned upon that state's economic well-being, I interact each peripheral dummy with my measure of economic development.

My third independent variable measures whether a country is an oil country. A state is an oil country if it is a member of the Organization of Petroleum Exporting Countries (OPEC). I code this variable one if a nation-state is an OPEC member and zero otherwise. My final independent variable is a lagged, instrumental dependent variable. I include such a variable for two reasons. First, one must account for other social factors that can have an effect on Democracy (Burkhart and Lewis-Beck 1994). Second, one must control for any and all unintentionally omitted independent variables. An instrumental lagged dependent variable performs quite nicely on both counts.

⁹ See Appendix B for more details on how these ratings were constructed and expanded.

Because both measures of my dependent variable are discrete and ordered in a cross-sectional dataset, I test my hypotheses via ordered probit with Beck, Katz and Tucker (1998) corrections. I cannot employ Ordinary Least Squares (OLS) to test my hypotheses for three reasons: 1) the observations are not independent of each other; 2) the errors are heteroskedastic; and 3) there is a considerable amount of missing data.¹⁰ To control for temporal dependence, I employ Beck, Katz and Tucker's (1998) corrections which create a series of splines. To correct for heteroskedastic errors and spatial dependence, I employ White (1980) standard errors.

Results

I present my results in Table One. Model One shows the results for Polity III Scores whereas Model Two displays the results for Freedom House scores.

[TABLE ONE ABOUT HERE]

Model One shows strong support for the economic development hypothesis because the sign for that coefficient is positive and statistically significant. Also, Model One confirms both facets of the world system position hypothesis. Model One shows that peripheral and semi-peripheral nation-states are less likely to be democracies than core countries because the signs on the coefficients for these variables are negative and statistically significant. Further, Model One confirms that oil countries are less likely to be democracies because the sign for that coefficient is negative and statistically significant. Finally, Model One shows that knowing the values of all of the independent variables is quite useful in predicting the value of my dependent variable.

Model Two demonstrates support that favors the economic development hypothesis because the sign which corresponds to that coefficient is negative and statistically significant.¹¹

¹⁰ I do not rectify my missing data problem because Amelia does not allow an analyst to impute missing data in cases where there is an ordered dependent variable contained within a time series, cross-sectional dataset.

¹¹ Since the Freedom House scores are lower more democratic states, my finding holds.

Moreover, Model Two confirms both parts of the world system position hypothesis in that the signs for both coefficients are positive and statistically significant. Additionally, Model Two shows that oil countries are less likely to be democracies because the sign for that coefficient is positive and statistically significant. Finally, Model Two shows that knowing the values of all of the independent variables is quite useful in predicting the value of my dependent variable.

Discussion and Conclusion

I measured my dependent variable using Polity and Freedom House scores and found that countries are more likely to be democracies as they economically develop. I have three possible explanations for my finding. First, people within economically developing societies are more likely to demand democracy. Second, economic development creates more resources for the government and other actors to distribute to social groups. These groups must work with one another to determine how they plan to allocate the resources. Finally, economic development affects other factors that push a nation-state into becoming a democracy — like education and interpersonal trust (Huntington 1991; Lipset 1959; Putnam 1993).

In addition, I discover that peripheral and semi-peripheral countries are less likely to be democracies than core ones. More specifically, peripheral countries are even less likely to be democracies than semi-peripheral ones. I have two explanations for my discovery. First, core countries economically and politically exploit peripheral and semi-peripheral ones such that these countries are less likely to be democracies. Second, semi-peripheral countries are more likely to be democratic than peripheral ones because core nation-states repress the semi-periphery much less than the periphery. Such a relationship holds because semi-peripheral countries have more ability to resist the core's influence than peripheral states (see Wallerstein 1974). Semi-peripheral states can resist core nation-states in a limited sense because the many

states within the former category are trying to industrialize their economies. Past exemplars of this trend include South Korea, Malaysia and Thailand.

Finally, I learn that oil countries are less likely to be democratic than non-oil exporting ones. I have three explanations for my finding. First, oil countries are less likely to redistribute their wealth to their citizens than other nation-states (Barro 1999). Second, such states tend to have oppressive one party or monarchical political systems which enforce the non-redistribution of wealth (Herb 2004; Huntington 1991). Finally, such states have considerable economic inequalities between rich and poor. We know that countries with great income inequality are less likely to be democracies (Gasiorowski 1995).

To conclude, I discover strong evidence that supports the economic development, world system position and oil country hypotheses. Also, I find that my results hold regardless of how I measure democracy and after correcting for observational interdependence, spatial dependence and heteroskedasticity. Further, my results hold in light of recent theoretical challenges to Burkhart and Lewis-Beck's (1994) piece. Finally, my results hold after many new democracies have held one election.

My piece suggests at least two avenues for future research. First, one could extend my dataset to more effectively account for Huntington's (1991) two turnover test. Finally, one could extend my model to more explicitly account for social (e.g. education and social capital) and natural resource-based factors that may help explain why some countries are democratic and others are not.

Appendix A: Summary Statistics of Dependent and Independent Variables:

<u>Variable</u>	<u>Number of Observations</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
Polity Scores	3331	3.562	4.305	0.000	10.000
Freedom House Scores	3941	6.400	4.115	0.000	12.000
Logged Per Capita Energy Consumption	4017	6.177	1.760	1.800	9.950
Oil Country	4098	.073	.261	0.000	1.000
Peripheral Country*Logged Per Capita Energy Consumption	3657	3.280	2.783	0.000	9.41
Semi-Peripheral Country*Logged Per Capita Energy Consumption	3657	1.867	3.294	0.000	9.95

Appendix B: World System Position Ratings

I used Burkhart and Lewis-Beck's (1994) position ratings for each country to construct my second independent variable, world position. Since their data only goes to 1990, these rankings are somewhat problematic as many countries have come into (or out of) existence since then. For countries that began since 1990, I constructed ratings based on how well they meet the specified conditions that determine whether a nation-state is a peripheral, semi-peripheral or a core country. If they met the conditions for a peripheral country, then they were operationalized as such. The same goes for semi-peripheral and core nation-states. These rankings will be listed starting with the country's name, and a p, s or c by it. These letters signify periphery, semiperiphery, and core as defined by Wallerstein (1974) and others. These ratings are as follows:

Angola, p; Armenia, p; Azerbaijan, p; Belarus, s; Botswana, p; Croatia, s; Czech Republic, s; Estonia, s; Georgia, p; Guinea-Bissau, p; Kazakhstan, p; Kyrgyz Republic, p; Latvia, s; Lithuania, s; Macedonia, s; Moldova, p; Mozambique, p; Namibia, p; Oman, s; Palau, p; Papua New Guinea, p; Russia, s; Slovakia, s; Slovenia, s; Spain, c; Taiwan, s; Tajikistan, p; Turkmenistan, p; Ukraine, s; Vietnam, p; Vietnam p; Yemen (South, when it existed), p; Yemen, p.

I changed one nation's rating from the Burkhart and Lewis-Beck (1994) ratings. I changed South Korea's rating from semiperiphery to core because this nation has enlarged its economy such that it is the eleventh largest economy in the world according to the last World Bank GDP figures (World Bank 1998). Moreover, this nation also has several transnational corporations, where previously none existed. Given these facts, as well as this nation's tremendous increases in per capita energy consumption and GDP since 1961 and the inception of the Developmental State under General Park Chung-Hee, I could not call South Korea a semiperipheral nation. It has become a core nation.

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Table One: Ordered Probit Analysis on the Effects of Economic Development, Peripheral, Semi-peripheral and Oil Country Status on Democracy, N=4098.

<u>Independent Variable</u>	<u>Polity Scores</u> <u>(Model One)</u>	<u>Freedom House Scores</u> <u>(Model Two)</u>
Logged Per Capita Energy Consumption	.240*** (.051)	-.182*** (.025)
Oil Country	-.594** (.204)	.246** (.082)
Peripheral Status*Logged Per Capita Energy Consumption	-.121*** (.048)	.118*** (.021)
Semi-Peripheral Status*Logged Per Capita Energy Consumption	-.102* (.045)	.106*** (.020)
Lagged Democracy Score	.608*** (.039)	.868*** (.038)
Spline One	.0005 (.003)	.0003*** (.0001)
Spline Two	.012 (.003)	-
Spline Three	-.004 (.001)	-
Cut One	1.868 (.302)	-.666 (.238)
Cut Two	2.233 (.302)	.625 (.198)
Cut Three	2.684 (.296)	1.952 (.197)
Cut Four	3.023 (.302)	3.102 (.208)

Table One Continued on Next Page

Table One (Continued): Effects of Economic Development, World Position and Oil Country on Democracy Using Splines.

<u>Independent Variable</u>	<u>Polity Scores</u> <u>(Model One)</u>	<u>Freedom House Scores</u> <u>(Model Two)</u>
Cut Five	3.229 (.313)	3.703 (.222)
Cut Six	3.609 (.346)	4.503 (.258)
Cut Seven	4.047 (.376)	5.215 (.297)
Cut Eight	4.576 (.429)	5.963 (.328)
Cut Nine	5.800 (.472)	6.896 (.370)
Cut Ten	6.554 (.471)	7.850 (.399)
Cut Eleven	-	8.811 (.436)
Cut Twelve	-	9.810 (.453)
N	3051	3368
Pseudo R ²	.565	.500
Log Likelihood	-2067.13	-4193.066
Wald Chi-Squared (7)	389.58	789.17
Prob>Chi-Squared	.0001	.0001

Notes: * denotes $p < .05$, ** denotes $p < .01$, ***denotes $p < .001$; all two-tailed tests. Also, STATA dropped splines two and three in Model Two due to collinearity.