

COMPARATIVE DEMOCRACY REDUX:
THE ECONOMIC DEVELOPMENT THESIS 1972-2014

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ABSTRACT

This paper replicates the analysis conducted in Burkhart and Lewis-Beck (1994), using current statistical software, where economic development demonstrates a causal relationship to democracy in an extensive cross-national dataset from 1972-1989, even in the face of strong control variables such as regime history and world-system position. It extends those findings with a dataset of approximately 120 countries from 1972-2014, largely confirming the previously published findings.

INTRODUCTION

This short paper is, essentially, a replication exercise, a quest to understand the durability of the "economic development thesis" in explaining variation in cross-national democratic performance. A quarter-century ago, we published an article in the *American Political Science Review* on "Comparative Democracy: The Economic Development Thesis" (Burkhart and Lewis-Beck 1994). The article has been cited in the top 2.6% of APSR articles (APSR website, accessed August 2020) . The article makes three claims. First, using an extensive dataset of 131 countries over the 1972-89 time frame, it established that higher levels of economic development were statistically significantly related to higher levels of democracy. Second, this relationship was significant even in the face of tough control variables such as lagged values of democracy and world-system position: in fact, the more peripheral the country in the world-system, the less able were higher levels of development translated to higher levels of democracy. Third, the relationship is causal: economic development causes democracy to vary, but not vice versa.

While these findings have been accepted and cited by the literature 1151 times according to Google Scholar (1 August 2020), and is currently cited in freshly minted research such as Boese, Alexandra, Edgell, Hellmeier, Maerz, and Lindberg (V-DEM 2020), the findings are due for an update. The post-Cold War period is now three decades old and is barely incorporated into the article. The globalization of the 1990s and early 2000s led to a general rising economic tide (Roser 2013). The era of illiberal democracy during the 2010s has resulted in significant retrenchment of political democracy (Levitsky and Ziblatt 2018, Zakaria 1997). Too much has occurred to trust that the results

from a quarter-century ago will have withstood the test of time without examining them closely.

In this paper, we extend our dataset from the original 1972-89 version to a more current version, 1972-2014 (the most current year of our key independent variable, energy consumption per capita). We thus are able to incorporate modern historical eras into our research: the post-Cold War era, the globalization era, and the illiberal democracy era. We also can use more modern estimation techniques, as our original work occurred at the infancy of software estimators for pooled datasets, some of which no longer exist.

THEORY AND OPERATIONALIZATION

The basic theory that we test is modernization theory, which is encapsulated by the famous sentence from Seymour Martin Lipset, "The more well-to-do the nation, the greater the chances that it will sustain democracy" (1959, 75). While the development literature has changed over time to move from a "determinants" based language imagining countries have similar development stages (Rostow 1960) to a more flexible conceptualization, the general reasoning remains: a polity whose populace has an enhanced economic voice, through wealth acquisition, will also demand a greater political voice, which is more likely to lead toward democratization. We operationalize modernization through energy consumption per capita (kilograms of coal equivalent) in order to avoid biased estimates of the most common measure, GDP per capita (Lewis-Beck 1979)

Another enhancement comes from the addition of world-system position into the model (Wallerstein 1974, Bollen 1983, Gonick and Rosh 1988). Accounting for relative

placement of the country within global finance and trade also suggests some difficulties in translating economic development to political development. We operationalize this through use of a "panel of experts" who have scored countries based on their location in the world-system: core, semiperiphery, and periphery.

Finally, direct incorporation of the political history of the country is essential in the modeling exercise, as democracy does not arise *de novo*, but rather is encouraged by social movements, leadership decisions and charismatic appeals, changing societal environments, and dramatic events such as the Arab Spring and Color Revolutions. We operationalize this through use of the lagged value of democracy for each country and year measured.

DATA AND METHODS

We have endeavored to use the same or similar data sources as we did with the original paper: Freedom House for the democracy data (reversed coding), the United Nations via the World Bank for energy consumption per capita, and Clark (2013) for a decade-by-decade update of the world-system positions of all countries around the globe. We are thus able to extend the dataset from 1989 through 2014 for nearly all countries in our dataset (approximately 120, depending on the data).

Our methodology is also similar: while the main software, Micro-Crunch is not available (it was a DOS-based system), Stata's XTREG procedure produces the same results as the GLSE routine in Micro-Crunch (Stimson 2018). We thus use Stata 15.1 IC for the model estimations.

MODEL

The model we test is the same as in our APSR article:

$$D = f(D_{t-1}, E_t, E_{txSP}, E_{txP})$$

Where D = measure of democracy, D_{t-1} = last year's measure of democracy, E_t = energy consumption per capita, E_{txSP} = energy consumption multiplied by semiperipheral world-system position, E_{txP} = energy consumption multiplied by peripheral world-system position.

We estimate the model with two different estimators: XTREG (GLS random effects) and XTIVREG (GLS random effects IV regression). The overwhelming nature of using the democracy score from the previous year is likely to suppress the effects of the exogenous variables in the XTREG estimation. We thus utilize an instrumental variables approach where the endogenous variable, last year's democracy score, is regressed on last year's energy consumption value, last year's energy consumption score multiplied by semiperipheral world-system position, and last year's energy consumption score multiplied by peripheral world-system position (the XTIVREG estimator).

RESULTS

We first present the results for the main model using the XTREG estimator.

$$D = .06 + .97 D_{t-1} + .09 E_t - .02 E_{txSP} - .02 E_{txP}$$

(1.01) (285.56) (4.93) (1.41) (1.95)

Wald chi-square = 125796.86 Prob. = .000 N=5221

(Figures in parentheses are z-scores)

While our pooled estimates appear secure from violating the regression assumptions in a technical sense, clearly, the extreme statistical significance of the D_{t-1} variable overwhelms the exogenous variables in our model. Thus, we present the XTIVREG estimates using the instrumental variable for D_{t-1} .

$$D = .74 + .73 D_{t-1} + .76 E_t - .30 E_{txSP} - .31 E_{txP}$$

(2.69) (7.77) (2.91) (2.69) (2.77)

R-squared = .94 N = 5191

(Figures in parentheses are z-scores)

The replication is confirmed. The results are very similar to those reported in the APSR article. The R-squared is healthy, and the variables are signed in the theoretically correct direction: positively for the lagged democracy instrumental variable and the energy consumption variable, negatively for the interaction variables economy and world-system, with non-core countries unable to translate economic development as effectively toward democratic performance.

FUTURE DIRECTIONS

Our next steps are, first, to isolate the 1990 – 2014 time period to demonstrate whether or not the findings are subject to period effects, and, second, to perform Granger causality tests on the dataset as in the APSR article.

CONCLUSIONS

The findings from 1972 – 1989 are confirmed including the later time period. Economic development causally enhances democracy, controlling for democratic history and global financial position. Even during the retrenchment of democracy, the relationship holds, across countries around the globe, and over time.

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