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Does democracy drive income in the world, 1500–2000? ☆

Jakob B. Madsen [a,*], Paul A. Raschky [a], Ahmed Skali [b]

[a] Department of Economics, Monash Business School, Monash University, Melbourne, Australia
[b] Faculty of Business and Law, Swinburne University of Technology, Melbourne, Australia

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ABSTRACT

Using data for political regimes, income and human capital for a sample of 141 countries over the periods 1820–2000 and 1500–2000, this research examines the income and growth effects of democracy when human capital, among other key variables, is controlled for. Linguistic distance-weighted foreign democracy is used as an instrument for domestic democracy. Democracy is found to be a significant determinant of income and growth and the result is robust to various estimation methods and covariates. We find that a one-standard deviation increase in democracy is associated with a 44–98% increase in per capita income.

1. Introduction

The Arab Spring was the most recent example of citizens in several countries demanding a transition from an authoritarian to a more democratic regime. Although the reasons for the social uprisings varied, a commonly shared hope across the region was that more democratic institutions would eventually improve people's standards of living. However, among economics and political science scholars, the idea that more democracy will lead to more economic prosperity is still controversial and subject to theoretical and empirical debate.

In most expositions, autocracy is considered to have negative income effects because decision-making in such regimes is typically discretionary or even arbitrary, not subject to strong checks, and leaders have incentives to conduct policies that will benefit themselves and a small number of elites (see, for an overview, Tavares and Wacziarg, 2001; Gerring et al., 2005; Doucouliagos and Ulubaşoğlu, 2006). Detractors of positive economic effects of democracy argue that democracies lend themselves to popular demands for immediate consumption at the expense of profitable investments, are influenced by the interests of rent-seekers in the political arena, and cannot mobilize resources swiftly (Doucouliagos and Ulubaşoğlu, 2006).

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* Corresponding author.
E-mail address: jakob.madsen@monash.edu (J.B. Madsen).

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Compiling 470 regression estimates from 81 studies of the effects of democracy on economic growth, Doucouliagos and Ulubaşoğlu (2008) find that 16% of the coefficients of democracy are negative and statistically significant, 20% of the estimates are negative but statistically insignificant, 38% of the estimates are positive and statistically insignificant, and 26% of the estimates are positive and statistically significant. Applying meta-regression analysis for the 470 estimates, Doucouliagos and Ulubaşoğlu (2008) are unable to detect direct effects of democracy on growth; however, they find positive indirect effects through human capital. Coupled with the finding of Glaeser et al. (2004) that institutional quality becomes an insignificant determinant of growth once human capital is controlled for, this suggests that human capital needs to be accounted for in empirical studies of the nexus between growth and democracy.

Investigating the effects of democracy on per capita income, this paper makes the following contributions to the literature. First, a novel dataset for a panel of 141 countries with annual data on per capita income for the period 1820–2000 and for the year 1500 is introduced. For that purpose, we have extended Maddison's (2006) per capita income data substantially using national sources, urbanization data and new sources for African countries; an extension that is crucial since Maddison's data do not go very far back for the poorest countries in the world and have several missing observations before World War II (WWII) for most countries in the world. Furthermore, we have compiled literacy data over the period 1900–2000 for 141 countries, which allows us to test the extent to which democracy influences income through human capital for a much larger sample of countries than the 74 countries for which educational attainment data are available from 1870 in Morrisson and Murtin (2009). Finally, we have computed data for ancient village democracy at the country level in order to test whether the change in democracy since ancient times is associated with a higher increase in income since 1500; noting that cross-country income inequality was not very large in 1500. As shown below, the extensions in time and space compared to the existing literature are crucial since the results are highly sensitive to the country sample size.

Panel data analysis has a distinct advantage over most of the existing studies that use cross-sectional data on income and democracy in that it can deal with unobserved heterogeneity. To deal with unobserved heterogeneity, more recent studies, such as Papaioannou and Siourounis (2008a), Rock (2009), and Knutsen (2013), use post-WWII panel data and control for country fixed effects. However, for a large number of countries, there were very few political regime changes over this period of time. In particular, most OECD countries have remained democratic since WWII, while a large number of continuously autocratic states have only recently experienced regime changes (such as the transformations in Eastern Europe, the Soviet Union, and South America in the 1980s and, lately, in the Middle East).

One notable exception is the panel data analysis by Murtin and Wacziarg (2014), which is, to the best of our knowledge, the only study that uses panel data from the pre-WWII period and, at the same time, conditions the results on the effect of human capital. They construct panel data for 69 countries over the period 1870–2000, which yields plenty of identifying variation in the data; however, these data are constrained by the unavailability of historical information on income and educational attainment for poor developing countries. The 69 countries analyzed by Murtin and Wacziarg (2014) mainly consist of OECD and Latin American countries, and only a few Asian and African countries.

Econometrically, a benefit of using long panel data is that the fixed effect estimator becomes more consistent as the sample grows, which is essential for the estimates here since changes in the strength of democracy are rare events. Furthermore, Davidson and MacKinnon (2006) show that instrumental variable parameter estimates can be severely biased in small samples. Finally, an additional gain from extending the analysis backward to 1820 is that it captures all three waves of democratization identified in the seminal work of Huntington (1991, p. 16). Post-1960 studies capture Huntington's third wave, while Murtin and Wacziarg's (2014) study captures the second (1943–1962) and third waves. Our study is the only one that includes the whole first democratization wave in the period 1828–1926 and that considers the improvement in democracy over the very long run as detailed in Section 3.

Our second contribution is related to the identification of the effect of democracy on income. To our knowledge, Tavares and Wacziarg (2001) and Acemoglu et al. (2014) are the only studies that have used external instruments. Other studies have either based their results on OLS or used internal instruments that exploit orthogonality conditions of the independent variables. We propose an identification approach that uses the strength of democracy in linguistically similar countries as an instrument for democracy. Linguistic weighted democracy is a strong predictor of the strength of democracy since regime changes are often fueled by political movements in linguistically/culturally close countries, where the Arab Spring is the most recent example of linguistic clustering of regime changes. As compared to the geographic distance-weighted democracy instrument of Acemoglu et al. (2014), our instrument, at least to some extent, is more likely to satisfy the exclusion restriction that foreign democracy influences domestic income only through domestic democracy because linguistically close countries are often geographically distant but culturally close, as discussed in Section 2.1. The robustness of the results to the choice of instruments is tested by using leader's natural death and resource dispersion as complementary instruments, in addition to system Generalized Method of Moments (GMM) estimation.

Third, we examine the extent to which democracy can explain income growth over the period 1500–2000 using cross-sectional data, where 1500 marks a period at which per capita income was not very different across countries. In this respect, we contribute to the literature on the long-term economic effects of political institutions. Michalopoulos and Papaioannou (2013), for example, find evidence that political centralization at the tribe level in ancestral times affects contemporary economic development; and Dell (2010) shows that lower household consumption in parts of Peru today can be traced back to institutional arrangements that began over 400 years ago. Unlike Acemoglu et al. (2005), who examine whether growth impinges on democracy using data over the period 1500–2000, we do not assume that countries outside Europe were necessarily autocratic, since there is substantial evidence that democracy at the village level and at more