

# Fiscal Independence from Electorate Accountability

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*By Daniel Klein, George Mason University*

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# Foreword

The authors of this monograph write, “it was necessary to impoverish the crown as a desideratum to subject the king to law.” They advance the idea that a spender spends more—as a percentage of what exists at the moment—and spends worse, the less that the sources of the money spent can resist the depredations of the spender. That makes sense to me.

The spender they have in mind is the central governors of a nation. The sources of the money spent is “the electorate,” by which they generally mean the citizens. When the Magna Carta was signed in 1215 or even when Victoria was coronated in 1838 the electorate was very different from the set of all citizens. The authors, then, project modern connotations of the term when thinking of the “electorate” in the pre-democratic age.

The idea, then, is that the central government spends more the less it is accountable to the electorate. The authors use “independence” for such lack of accountability.

Inversely, being more accountable induces the governors to take actions that enrich and ingratiate the private-sector

sources on which those governors are dependent. That spells liberalization, as opposed to the governmentalization of social affairs. Again, it makes sense to me.

To operationalize these ideas, the authors need to formulate them in empirical terms. Spending more is pretty straightforward, but spending worse is less so. Another challenge is the idea of accountability to the electorate.

I am not qualified to assess their operationalizations. What I can say is that I've worked with Hugo Faria and Hugo Montesinos-Yufa on articles published in *Econ Journal Watch*, of which I am chief editor. I believe that, as matter of personal dedication and moral purpose, Hugo and Hugo work in a scrupulous, reasonable, sincere, and thoughtful manner. The present effort, on an idea that makes a lot of sense, deserves serious consideration.

What also makes sense to me is that the authors would not find a sympathetic ear at mainstream economics journals. The authors' underlying view of Leviathan is that it tends toward rapacity if not hemmed in. Such an idea is not likely to appeal to mainstream economics, now dominated by people on the political left. By and large, the morals of the political left tend to advance the governmentalization of social affairs, and the governmentalization of social affairs is here subjected to sober and critical investigation, since governmentalization spells less electorate accountability. Governmentalization makes the electorate more dependent on and prostrate before government. It makes the electorate more obeisant to the junta, and hence makes the junta more "independent," in the authors' phrasing.

There are some scholarly journals that would be open to research of the kind here. The study is lengthy and complicated, for a journal article, and it is written by authors who are not native English speakers. The study knocked around as a submission at several journals, without success. The authors shared referee reports with me. The authors are being very bold in this research, and referees may not be comfortable taking up their project in a serious-enough way to persuade editors to go forward. Also, for empirics of this

kind, there are always questions and suggestions for further and further tests and analyses. As for my own journal, *Econ Journal Watch*: we publish research that is framed as the study of economists' doings, and the present research simply isn't that.

There is something else that makes sense to me: That it would be a group of Venezuelans (three are ex-pats) who conceive the present idea and carry it through to the current investigation. They see more clearly than most what is what.

**Daniel Klein**

George Mason University  
November, 2022

# Abstract

This study is based on an intuitive idea: National governors tend toward rapacity if not checked. In order not to be dominated and despoiled, the people—or the electorate—must have some way of making governors accountable for their spending. Honest elections are the most basic means of exerting such accountability, but they are not the only way. When governors are not fiscally accountable, we say they are “fiscally independent.”

Inspired by historical divergent political-economic paths in England, France, Portugal, and Spain, we examine the modern conditionally estimated effects of government being fiscally independent. This study documents that higher levels of fiscal independence are associated with detrimental effects on the quality of democracy, the rule of law, judicial independence, freedom of speech, clean elections, and other desirable outcomes. Fiscal independence is detrimental to human well-being. Fiscal independence is also associated with greater state ownership of productive assets and dictatorship.

Our proxy for fiscal independence is a novel and sturdy conditional determinant of political development. Finally, years of education are also conditionally determined by fiscal independence.

# 1

## Introduction

*“Absolute monarchy results when the crown owns all or at least two-thirds of the landed wealth; aristocracy, when the nobles own a similar share. When the people possess two-thirds or more, the result is democracy.”* [[Harrington, 1656, 1992](#); pp.271-272].

*“English constitutional evolution... provides a classic illustration of how private wealth restrains public authority”* [[Pipes, 2000](#); p.123].

**T**o the best of our knowledge, the empirical corpus of work on the origins and persistence of democracy has not evaluated the effect of governments fiscally independent from the electorate on the quality of democracy and complementary political institutions. In its classical form, fiscal independence measures the extent to which the ruler derived revenues from royal estates, weakening the chances of subjecting the monarch to the rule of law. Contemporaneously, state ownership of productive assets that provide government revenues largely contributes to fiscal independence from the electorate, while corporate taxation levied on privately or government-owned companies also promotes fiscal independence.

For example, the price of oil exports includes the tax paid by the oil-producing company, and consumers of the

importing country may end up paying most of it.<sup>1</sup> Consequently, the willingness of the domestic government to be accountable to the electorate may wane in this scenario, providing tax revenues to the polity independently of citizens who may become gradually neglected. That is, the supply of accountability is whittled down. The accountability demand by the people may also fall given the presence of revenues, burdenless to domestic consumers, which could be used to finance subsidies, favors, goods, and services “free.”<sup>2</sup>

Moreover, assuming that the government invests in productive assets, not necessarily to produce goods for exports, revenues arise from taxes levied on state-owned corporations. These taxes are insidious given that the effective taxpayer (consumers, workers, or shareholders) unknowingly pays the tax numbing its cost and contributing to lessening voters’ political participation and vigilance of government. In other words, the demand for accountability is attenuated sparked by “costless” taxation. Consequently, Electorate accountability may decline from voters’ imperfect information on identifying the effective taxpayer.

Our proxy for fiscal independence is component 1C, titled “government enterprises and investments,” provided by the Fraser Institute index on Economic Freedom. Component 1C measures the fraction of total investment supplied by the government and state-owned enterprises in a given country. Furthermore, a critical finding that the investigation later discloses is a positive, strong, and conditional effect of fiscal independence on state ownership of productive assets, a

<sup>1</sup> Foreign consumers will pay most of the tax independently of who owns the oil company in the exporting country, the state, or private shareholders.

<sup>2</sup> Relevant evidence furnished by Weigel (2020) indicates that the government elicited from citizens increased political participation, in a sizeable Congolese city, after attempting to levy taxes on them for the first time. Moreover, we unveil evidence documenting a deleterious effect of fiscal independence on clean elections, a participatory component index, and a civil society participation index. Results based on the two participatory indices are shown in the Appendix, [Table A5](#).

measure constructed by Varieties of Democracy.<sup>3</sup> The positive conditional association suggests that upsurges in fiscal independence, a higher fraction of total investment provided by the government, are likely translated into more productive assets acquired by the government with the potential to generate additional tax revenues, circumventing the electorate.

An impoverished government deprived of productive assets appears to be a cultural feature associated mainly with an individualistic culture that shapes the design of constitutional rules aiming to shackle the Leviathan by forcing the state to live off the people's taxes. For example, the U.S. Constitution in Section 8 of Article 1 bestows Congress with the obligation to establish Post Offices. No other economically profitable asset is mentioned, limiting potentially productive assets owned by the state and revenues not directly paid by taxpayers. Conversely, Latin American constitutions enshrine governments as the owner not only of the subsoil but also with the exclusive right to exploit resources, including oil, natural gas, iron, gold, silver, and numerous mineral deposits. Unsurprisingly, all Latin American countries are culturally classified as collectivist.

The econometric analysis uses various instrumental variable (IV) estimators, which apply Lewbel's (2012) constructed instruments, revealing a conditional negative effect, robust, statistically significant, and quantitatively meaningful impact of fiscal independence on the degree of democracy as measured by the Freedom House. This finding which conditionally explains the observed global heterogeneity among democracies allows for the potentially confounding effects of democratic rule determinants, commonly used in the democratization literature. In particular, the study allows for years of education, ethnolinguistic fractionalization, the individualism-collectivism cultural cleavage, legal origin, risk of

<sup>3</sup> The coefficient on fiscal independence enters with a negative sign because lower values of the variable state ownership correspond to a higher level of productive assets owned by the government.

expropriation protection, income inequality, traditional local democracy, genetic diversity, the openness of the economy, geographical characteristics such as latitude and availability of oil reserves, and continental fixed effects to control for unobserved heterogeneity bias induced by time-invariant variables.

In addition, these findings are robust to different measures of democracy. Specifically, robust to six measures of democracy developed by V-Dem VARIETIES OF DEMOCRACY as well as the democracy indices of Polity IV, Economist Intelligence Unit, and Political Rights, the latter from Freedom House. Moreover, results are qualitatively similar to employing a dichotomous indicator of democracy and dictatorship based on Cheibub *et al.*'s (2010) widely cited paper and Bjornskov & Rode's (2020), which updates and expands on several political and economic dimensions the piece by Cheibub *et al.*, (2010).<sup>4</sup>

The analysis also casts light on other critical complementary institutions of democracies. Notably, our research unveils a strong conditional negative link between fiscal independence and measures for the rule of law, independence of the judiciary, freedom of expression, clean elections, and educational attainment, a covariate associated with the Modernization Hypothesis and economic development. In addition, the Appendix contains a wealth of results where fiscal independence is also statistically linked to dimensions of the rule of law, judicial independence, and civil liberties areas, such as transparent laws with predictable enforcement, court-packing, and participatory components indexes.

The uncovered evidence suggests the existence of a latent informal rule, cultural, undergirding the onset and, more crucially, the persistence of democratic rule. Further, the

<sup>4</sup> Interestingly, differences between the minimalist approach and the V-Democracy data used in this paper are minor. (Bjornskov & Rode, 2020 expand on this issue). However, this is not the case for the Freedom House, Polity IV, and EIU measures of democracy, also used in this study.

unveiled findings on fiscal independence are congruous with landmark historical events such as the English Glorious Revolution, the Act of Settlement, and the tardier emergence of democracy in continental Europe. Similarly, our findings expand our understanding of the modern heterogeneity of democracies. Specifically, results enlighten Western democracies' flourishing experience and the absence or low levels of democracy among countries where governments are patrimonial, that is, owners of revenue-generating companies or recipients of substantial tax revenues paid by private or state-owned corporations. Conspicuous examples of nations with governments, mostly fiscally independent, are Saudi Arabia and Venezuela. Presently, the former is a kingdom, and the latter is a failed democracy.<sup>5</sup>

This research offers the following structure. Section 2 presents our contributions to the related literature. The historical Section 3 briefly comments on relevant events concerning fiscal independence dynamics in Western Europe. The data in Section 4 details the outcome variables, the variable of interest, the main control variables, and the regressors used for robustness checks. The empirical strategy displayed in Section 5 delineates the econometric methods employed, followed by Section 6, which discusses the main results and robustness checks. The final Section 7, concludes while suggesting avenues for future research.

<sup>5</sup> Relatedly, Faria (2019) discusses the incompatibility of democracy and socialism, the latter understood as state ownership and management of productive assets such as those linked to oil, steel, and iron with the clear potential to increase fiscal independence. A suggested solution is to distribute corporate oil taxes among adult citizens, forcing the government to collect taxes from the people. In exchange, the people demand protection of fundamental rights and better governmental quality (see Faria, 2008).

## 2

## Contributions to the Related Literature

A pioneering paper in the determinants of democracy line of inquiry is Barro (1999). Although our paper shares some of the determinants used by Barro, there are relevant differences. For instance, the rule of law variable is used in Barro as a regressor; contrarily, equality before the law can be construed as the essence of democracy; thus, we treat it as a dependent variable, as shown in our results. Our study also incorporates protection against the risk of expropriation index and trade openness to elucidate economic institutions' potential role in determining democracy.

Barro's cultural variable is religion; instead, we use the individualism/collectivism cultural dimension developed by Hofstede (2001) and considered by cross-cultural psychologists as the most relevant cultural variation dimension Heine (2007), while Gorodnichenko & Roland (2011) have shown that this dimension is the cultural trait that matters most for long-run economic growth. More specific to our research, Gorodnichenko & Roland (2021) uncover a strong positive link, across different specifications and

methods, between individualism and democracy. Further, Bentzen, Kaarsen, & Wingender (2017) and Buggle (2020) document a complementarity between collectivism and autocratic political institutions. Buggle (2020) also finds that ancestry-adjusted irrigation is a significant predictor of firms' collective ownership, while the latter strongly correlates with collectivism. State ownership of firms is prevalent among autocracies and countries with weak democracies. Examples abound in Latin America and sub-Saharan Africa.

Our findings on fiscal independence add to the literatures of state capacity and corruption, e.g. (Faria, Morales, Pineda, & Montesinos, 2012; Belsey & Persson, 2014; Bardhan, 2016; Acemoglu, Moscona, & Robinson, 2016; Faria, Montesinos, Morales, Aviles, & Brito-Bigott, 2013). More specifically, critical levers of democracy, such as the judiciary's independence, favor the fair resolution of conflicts, law enforcement, and abatement of corruption. In addition, freedom of speech and the press facilitates broadcasting people's desires, contributing to fine-tuning the state's responsiveness to the electorate's will. Simultaneously, clean election results provide a mechanism to oust incompetent politicians, potentially rendering an enhanced capable state. These democracy levers are partially determined by fiscal independence.

Fiscal dependence empowers the people, promoting increased participation in politics and collectively organizing to, for example, redress the state's potential excesses. Furthermore, state capacity importantly depends on the bureaucracy's quality. A bureaucracy dependent on the voters' taxes increases its accountability and efficiency, knowing that electors pay their salaries. Simultaneously the cost of taxation to contributors energizes taxpayers to become more vigilant of government, ensuring that their wishes are fulfilled. This example of a two-way dynamic interaction between the state and the people bolsters state capacity: "This is because it is the contest between the state and society that underpins greater state capacity" (Acemoglu & Robinson, 2019, p.69).

Participation in the political process via protests and riots, as an alternative to lobbying and voting, is addressed by

Passarelli & Tabellini (2017). These scholars argue that political unrest is motivated by emotions rooted in aggrievement and the perception of being unduly maltreated by governmental decisions. Our findings suggest that fiscal dependence is an apropos conditional factor explaining political participation. Still, both channels could simultaneously contribute to spur street protests. Taxpayers who believe that the government's reciprocity falls short of expectations may harbor the view of becoming victims of an unfair deal, prompting them to partake in anti-government demonstrations. Thus, the cost of taxation to voters and the sense of a raw deal can more easily outweigh political participation costs, facilitating political dissent.

Our study results speak to several papers that address the role of history as a determinant of democracy. Recently, Acemoglu, Ajzenman, Aksoy, Fiszbein, & Molina (2021) revealed a positive association between democratic experience/exposure and political preferences. More concretely, successful democracies breed their support, where success is measured by economic growth, peace and political stability, and public goods. Our findings suggest that a socially transmitted value and belief compatible with the convenience of an impoverished government, measured by financial dependency on the electors, inclusive economic institutions such as protection against the risk of expropriation, and openness are crucial ingredients of prosperous democracies that explain their success.

Moreover, Persson & Tabellini (2009) argue, backed by empirical evidence, that democratic capital formed in a country's historical democratic experience confers consolidation and more stability of democracy, increasing returns on investment and stimulating economic growth while rising income diminishes the probabilities of lapsing into an autocracy. Thus, a virtuous circle emerges prodded by the interplay of democratic and physical capital, the state variables.

However, our formal and informal, non-written, institutional approach leads not only to a virtuous circle, as in Persson & Tabellini (2009), but also to a vicious circle. Our

findings suggest that fiscally dependent governments deprived of revenues from exploiting productive assets are more inclined to foster a market economy that increases people's income and taxation potential. Moreover, we show that fiscal dependency enhances the quality of the rule of law, the judiciary, clean elections, and freedom of speech, strengthening democracies' quality and stability. Accordingly, a virtuous circle arises in a mutually reinforcing process where both the political and economic spheres co-evolve. However, contrariwise, high fiscal independence leads to a vicious circle characterized by sparse economic growth and low democracy quality.

Belsey & Persson (2019) posit coevolution of democratic values as measured in World Value Surveys and democratic institutions showing strong (weak) support for democracy in countries with long (short) historical experience with democratic rule. Our findings lead us to believe that democratic values are induced by a good performance of the democracy and the economy, while both emerge from a pauperized government that induces political and economic inclusive institutions.

Giuliano & Nunn (2013) document that the fraction of contemporary individuals in a given country whose ancestors experienced local democracy at the ethnic level supports democratic beliefs at the national level. Accordingly, a culture of democratic institutions is susceptible to intergenerational transmission facilitating the adoption of democratic rule. However, our institutional covariates, coupled with education, are a more powerful predictor of democracy than the culturally embedded trait of experience with democracy transmitted intergenerationally.

This research also contributes to the literature on oil stymieing democracy; Ross (2001) and Tsui (2010) are classical papers of this strand. Specifically, our uncovered findings help us understand why oil discovery has not harmed Norway's democratic quality, Great Britain, and the U.S. despite the recent come-of-age of the Fracking technology while exerting a deleterious effect on less developed countries' democracies. However, the inclusiveness of political and economic

institutions and the degree of fiscal dependency makes the difference. In our research, proven oil reserves negatively affecting democracy and its levers is not a robust result. Moreover, coefficient estimates linked with the economic-institutional variables are positive, statistically significant, and sizably impact democracy, negatively associated with fiscal independence, and statistically significant and quantitatively meaningful.

Our paper is also related to La Porta, Lopez-de-Silanes, Pop-Eleches, & Shleifer (2004). They report a positive effect of judicial independence and constitutional review on economic and political freedom using *de jure* constitutional variables from 71 countries. However, our research's principal focus is different. In particular, we delve deeper into the potential determinants of judicial independence, among other pillars of democracy.

The disclosed findings on fiscal independence contribute to comprehending better Lipset's (1959) Modernization hypothesis, Acemoglu & Robinson's (2012) rejection<sup>1</sup>, and Gorodnichenko & Roland's (2021, p.166) question on the issue of the modernization hypothesis: "Could modernization theories have overlooked slow-moving forces such as culture that may facilitate or hamper (the) transition to democracy?"<sup>2</sup> According to the main results of this research, when a country's economy develops, measured by income per capita or education, and the tendency is for government to live off the people, democracy is more likely to arise and gradually become consolidated. Conversely, when a substantial fraction of government revenues do not proceed from the people's taxes, development is bound not to lead to democratic rule.

<sup>1</sup> See Acemoglu, Johnson, Robinson, & Yared (2005) and Acemoglu *et al.*, (2008) for empirical evidence using Arellano & Bond (1991) not supportive of the Modernization hypothesis. However, Bobba & Coviello (2007) Faria, Montesinos, & Morales (2014), and Faria & Montesinos-Yufa (2017), using Blundell & Bond (1998) report evidence consistent with the Modernization hypothesis.

<sup>2</sup> This explanation is plausibly compatible with ours. Collectivist countries exhibit higher levels of fiscal independence than individualist.

Consider South Korea's case and Saudi Arabia's. Both are high-income countries. While South Korea is collectivist, Saudi Arabia is moderately collectivist. However, according to our measure of fiscal independence, the government of South Korea, in 1980, seven years before the onset of democracy, invested 21.66 percent of the country's total investment, obtaining a rating of 8.16 on a scale from zero to ten, where higher ratings correspond to a governmental lower percentage of total investment. By 2018 the total investment fraction had dwindled to 15.18 percent, with a corresponding almost perfect rating of 9.95.

In contrast, with a king generally benevolent, Saudi Arabia's government financed 56.13 percent of its investments in 1990. In 2018, it financed 45.84 percent almost thirty years later, conducing to a paltry rating of 1.9. If Saudi Arabia stalls on its economic reforms empowering the people, democracy's onset likelihood is low, and growth may also taper off.<sup>3</sup> Thus not all rapid economic growth cases leading to a high income per capita are the same in stimulating the emergence of democracy.<sup>4</sup> Another revealing example is Chile, a culturally collectivist country that has made substantial strides towards a high-quality democracy until 2021. For example, in 1990, the year of democracy's restoration in Chile, component 1c displayed a perfect score of 10; the government financed less than ten percent of all investments, while the economy experienced substantial growth in the eighties under Pinochet's dictatorship.

Uncovered results on the conditional impact of fiscal independence on democracy also cast additional light on when state expansions are inimical to democracy's quality, which was a chief concern of Hayek's *Road to Serfdom*, published in 1944. An instructive case is Great Britain. The expansion of the British state started at the end of the Second World War, which led to the rise of a welfare state and an ambitious process of crucial companies' nationalizations and

<sup>3</sup> *Mutatis mutandis* for the China experience.

<sup>4</sup> As a reference point, the corresponding percentages for Sweden, the U.S., and Switzerland are 18.94%, 16.04%, and 12.36%, respectively.

capital expropriation. By the late 1970s, the British government owned a broad swath of strategic companies ranging from aerospace to automobile, petroleum, steel, and electricity. The economic crisis of the 1970s induced the British government, in the 1980s, to massive privatizations, which stopped short of privatizing healthcare provision.

According to our results, the difference is that a welfare state implies more government expenditures financed by voters' taxes, congruous with restrictions on the state. Conversely, owning profitable companies may provide the state greater autonomy from the people, plausibly diminishing democracy's quality. The negative effect of a poorly performing economy and attendant people's discontent provided the impulse for a course change. Centuries of struggle to impoverish the crown reaching an apogee in the seventeenth century during the English Civil War and the Glorious Revolution left an indelible cultural mark among the people. In other words, the deeply rooted notion of a government that rules but that it does not own, initially articulated by James Harrington (1656), could not be effortlessly cast away by the British people.

Our results also unveil institutional foundations of education in congruence with North & Thomas (1973, p.2): "The factors we have listed (innovation, economies of scale, education, capital accumulation, etc.) are not causes of growth, they are growth." Our regression models include education and income inequality to account for the Modernization hypothesis. However, we also find that our institutional covariates are predictors of education. More precisely, regression coefficients associated with our institutional surrogates, including fiscal independence, are statistically and economically significant. Thus, this finding intersects with the comparative economic development literature while lending credence to the hypotheses that economic institutions, portraying deep economic growth determinants, exert a direct and indirect influence through education on political development. Accordingly, our results suggest that ultimately *de facto* power of the population predominantly rests on the impoverishment of government,

which stimulates financial dependence of the government on people's taxes and not on education which economic institutions spur.<sup>5</sup> Acemoglu & Robinson (2006) cite Britain's Great Reform Act of 1832, which expanded the franchise based on property and income. However, the financial dependence of the Crown in England started in earnest in 1688, paving the way for the reform act of 1832, suggesting a deeper source of people's empowerment.

Finally, our findings cast light on the preindustrial income and wealth disparities summarized by Alfani (2021). Specifically, Alfani reports that England displayed the lowest inequality extraction ratio in all European countries between 1300 and 1800 AD. The Alfani study suggests several potential culprits for inequality change relevant to our research: state-building and state collapse, the rise of the fiscal-military state, and taxes.

State-building in preindustrial times was generally based on extractive institutions. In early modern times, a case in point is the French monarchy, which became the wealthiest crown in Europe, accentuating inequality in France. Simultaneously, the English crown, partially bridled by the parliament, was gradually impoverished while merchants, gentry, and yeomen saw their wealth increase, thus reducing inequality. Accordingly, the wealth reduction process of the English crown, which led to a constitutional monarchy, can be construed as an example of a financial collapse of the crown.

Interestingly, the military revolution associated with gunpowder and national armies' development led to increased states' power and more taxes. Moreover, the enhanced centralization contributed to the gradual eclipse of organizations equivalent to the English parliament in some

<sup>5</sup> Parente, Saenz & Seim (2022) develop a theoretical model predicting that education induces *de facto* power of the population leading to a democratization process congruous with the Modernization hypothesis. Suggestive evidence reveals that increases in *de facto* power, as proxied by the number of protests, tend to precede democratic transitions. Using a different approach, Faria, Montesinos, Morales, & Navarro (2016), also find evidence that cognitive skills operates through economic institutions in the development process.

countries in continental Europe. England, on the contrary, had no standing army diminishing the odds of increasing the crown's power and alleviating the people from more taxes. Moreover, the Bill of Rights of 1689 established that a standing army required parliamentary approval.

The English people were the most lightly taxed in Europe at the dawn of the seventeenth century. However, during the interregnum between the end of the civil war in 1648<sup>6</sup> and the restoration of the monarchy in 1660, the Commonwealth heavily depended on the newly created army, which cost a substantial amount of money. As a result, the tax burden increased immensely; however, the Brits offered little resistance since the new taxes enjoyed the parliament's assent and needed the army to uphold the victory over the crown.

In the wake of the Glorious Revolution, growing state capacity was in the offing with the parliament controlling expenditures. Thus, tax increases were passed to finance activities associated with the welfare of the people. One of them was strengthening the navy to protect mercantile interests and enlarging the bureaucracy's quality. Thus, it appears that the people's reaction to new taxes depends on their legitimacy and the spending composition.

In sum, the impoverishment of the crown, no standing army, and relatively low taxes coupled with their better disbursement furnished by the parliament's assent aids in understanding England's low inequality extraction ratio. Other factors leading to a more egalitarian England are royal lands' distribution in the Tudor era, Poor-Laws arising at the local level in 1549, and the elimination of monopolies in the seventeenth century.<sup>7</sup>

<sup>6</sup> The English Civil War started in 1642.

<sup>7</sup> We revisit some of these issues in the following historical section.

# 3

## Abbreviated Historical Background \*

### Medieval England

In the aftermath of the Roman's retreat from England in the fifth century AD, the island was subjected to numerous invasions, mainly by Anglo-Saxons, an ethnic subset of the Germanic tribes. Anglo-Saxon kings ruled with the assistance of a council of the wise, *wita*, who jointly with the king addressed military issues, legislated, and levied taxes. Crucial decisions were approved by a folkmoot (assembly) comprising all free men. Of interest is that Anglo-Saxon kings could not tax nor legislate without the approval of the *wita* and the folkmoot.

In 1066, the Normans invaded England, led by William the Conqueror, who implemented a feudal system moderated by the deeply rooted Anglo-Saxon traditions. Henry II, a great-grandson of William, ascended to the throne in 1154, while in 1166, with the approbation of the Council, levied a tax on revenues and movables.

\*<sup>1</sup> This section draws from Pipes (2000) and Acemoglu & Robinson (2012 and 2019).

The new taxes contributed to finance a host of legal reforms, among them establishing a jury system to collect evidence, paving the way for “trials by a jury of your peers.” Another critical reform was the notion of precedents, based on rulings by judges, serving as the basis for judge-made laws based on first principles. Thus, Henry II made it possible to establish English common law pillars while increasing the crown’s state capacity.<sup>2</sup>

The signing of the Magna Carta in 1215, generally considered the first of the English Statutes of the Realm, was provoked by the nobles who took advantage of King John’s fiscal predicament. Indeed, King John asked the barons for money after his defeat at Bovines in France. In what will be a classical bargain in English constitutional history, the barons provided the money in exchange for rights limiting the king’s power. Evidence suggesting that King John signed the Magna Carta reluctantly is that after the barons dispersed, the king asked Pope Innocent III to annul it, to which the pope acquiesced.

Interestingly, the Magna Carta exhibits ample scope, protecting the rights of all free men of the kingdom and limiting abuses against serfs, that is, non-free people. Particularly relevant to this research is the clause stating that no tax may be levied in our kingdom without general consent—a mechanism to shackle the king.

Following the Anglo-Saxon kings, the Norman sovereigns financed the court and the kingdom’s administration expenses with private revenues. Rents derived from the royal demesne were the primary source of funds which generally

<sup>2</sup> Another crucial development in English constitutional history concerns the judiciary’s evolution imparted by the Magna Carta and culminating with the milestone 1701 Act of Settlement, which formally established the judicial system’s independence underpinned by the extension to judges of lifetime appointments. A decisive contribution to English judicial independence is closely related to trials by jury and the struggles against the courts of royal prerogative, which were subservient to the king during the reign of the Stuarts (La Porta *et al.* 2004). According to La Porta *et al.*, judicial independence is mainly associated with common law vis-a-vis civil law.

Abbreviated historical background

did not cover all outlays. Thus, feudal dues and after the termination of serfdom ignited by the bubonic plague,<sup>3</sup> income from import and export tariffs supplemented the crown's revenues. Tax levies required assent from the people taxed were reserved for extraordinary events.

## Early Renaissance

At the close of the fifteenth century, serfdom was practically extinguished in England, displaying a large pool of independent farmers and freeholder yeomen. In 1485 Henry VII, a Tudor acceded to the throne. A consequential policy adopted by Henry VII was the distribution of royal lands among small owners. In need of revenues, Henry VIII expropriated land from the clergy with the parliament's consent and sold it to the gentry, yeomen, and artisans. The fiscal imbalance, however, was not solved. At the death of Henry VIII, just one-third of the ex-church land remained part of the royal estate, thus not generating enough rental income compromising the crown's self-sustenance.

During the reign of Elizabeth, daughter of Henry VIII and crowned queen in 1558, the English people were the least taxed in Europe. This light taxation outcome is partly due to the parliament's resolve to shape a monarchy not fiscally independent (See Rowse 1951 cited in Pipes 2000). Elizabeth, nonetheless, also suffered financial distress and was forced to sell more crown lands, diminishing her annual income from the royal estates. Systematic fiscal deficits also forced Queen Elizabeth to convene the parliament every 4.5 years, somewhat less frequently than Henry VIII, who summoned parliament every 4.2 years.

## Seventeenth Century

The seventeenth century was crucial for the English Parliament to survive and subject the king to the rule of law. The successors of Elizabeth, who died in 1603, were the

<sup>3</sup> The plague decimated vast swaths of medieval kingdoms' population, inducing labor scarcity, leading to higher wages and labor mobility in Western Europe.

Stuarts. However, the performance of the Stuarts was fraught with conflict with the parliament stemming from the interrelatedness between absolutism, fiscal imbalances, and religion.

We highlight several critical events that were feasible to tackle due to a more assertive and emboldened civil society based on its increasing wealth and the crown becoming more dependent on the same wealth. First, starting in the second half of the sixteenth century, merchants increased wealth from the maritime trade with the Americas, Africa, and Asia. Second, the patent law of 1624 propelled inventiveness, a central feature of the Industrial Revolution.

Third, incited by the Stuarts' absolutist encroachments, the parliament backed by the wealth of civil society's merchants, yeomen and Puritans engaged and defeated Charles I in the English Civil War, 1642-1648, during which domestic monopolies were broken up, favoring an ampler distribution of wealth and income, serving as a foundation for more widespread distribution of political power. In 1649 Charles I was tried and executed, proving that a king is answerable to the courts.

This process's pinnacle was the 1688 Glorious Revolution, which subjected the king to the law. Indeed, William of Orange acknowledged that he ruled not by divine right but by the English Parliament's vote, sealing parliament's victory over the crown. Thus, the rule of law emerged permanently in the aftermath of the Glorious Revolution, enabling parliamentary democracy's gradual emergence.

Subjecting the king to the law would not have been possible if the crown had not been impoverished, and the people, the gentry and merchants, had not been enriched partly by the Atlantic Trade and the land-distribution policies carried out by the Tudors. In the words of Henry Neville back in 1681: because the princes had "alienated their own inheritance,"... "the king must have a precarious revenue out of the peoples' purses, and to be beholden to parliament for his bread in time of peace... And this alone... is enough to make the king depend upon his people"...(see [Neville, 1681](#), edited by [Robbins, 1969](#), and cited in [Pipes, 2000](#)).

## Continental Europe Contrast

Conversely, absolutism intensified in continental Europe, particularly in Portugal and Spain. The deepening of absolutism was prompted by the flow of precious metals into the crowns' coffers, stemming from the Atlantic Trade. The crown's wealth originated from Royal domain income in France, which became a formidable obstacle to subduing the king. Revealingly, French kings were explicitly prohibited from alienating any portion of the royal estates. As a result, the French king was the wealthiest monarch in Europe in the fourteenth and fifteenth centuries. Moreover, parliaments in Denmark, France, Naples, Portugal, and Spain had vanished or become irrelevant at the hand of continental absolutism. These are conspicuous examples of fiscally independent monarchies, which suffocate the onset of potential democratization processes.

# 4

## Data

This section introduces the data used in this research. Firstly, we briefly introduce the six dependent variables employed in the study's main body; secondly, the independent variables comprising the baseline specifications. Finally, a description of the explanatory variables applied in the robustness checks exercises is provided.

### Outcome Variables

Our research focuses on a measure of democracy and five dependent variables closely related to democracy and its quality: the rule of law, judicial independence, freedom of speech, clean elections, and state ownership. In this subsection, we advance succinct definitions, which are further elaborated in the results section to facilitate the reading of the findings.

*Electorate Democracy* of Freedom House 2018 measured the average civil and political rights. Civil and political rights range from 1, the highest level of protection, to 7, the lowest. We inverted the scale to provide a more natural

interpretation; higher values represent a better democracy quality. Freedom House's "Electorate democracy" designation should not be confused with "liberal democracy," a term that implies a more substantial observance of democratic ideals and a more comprehensive array of civil liberties. However, in the report *Freedom in the World*, most high-ranking nations categorized as free could be considered liberal democracies. In contrast, some Partly Free countries might qualify as Electorate, but not liberal, democracies ([Freedom in the World 2020](#)).

The *Rule of Law* index measures the extent to which laws are transparent and rigorously enforced, and public administration is impartial. The rule of law variable also measures the extent to which citizens enjoy access to justice, secure property rights, freedom from forced labor, freedom of movement, physical integrity rights, and freedom of religion ([V-Dem VARIETIES OF DEMOCRACY, March 2020](#)).

*Judicial Independence* is the ability of courts and judges to perform their duties free of influence or control by other actors, whether governmental or private. (Encyclopedia Britannica, Britannica.com). In order to aid judges in accomplishing their responsibility, the judiciary is enshrined as a coequal government branch in some countries, in equal standing with the executive and legislative branches. As summarized by Alexander Hamilton's remarks, this obligation is bestowed on the fragile branch: the judiciary is the "least dangerous" branch, having "no influence over either the sword or the purse." Thus, this separation of powers responds to "Quis Custodiet Ipsos Custodes," where the judiciary, who ideally fears no one, is the primary enforcer of legal equality. The source is Linzer, Holsinger, Reenock, & Staton ([2019](#)).

*Freedom of Expression* is the extent to which the government respects press and media freedom, the freedom of ordinary people to discuss political matters at home, in the public square, and the freedom of academic and cultural expression. *Clean Elections* indicate the extent to which free and fair elections connote an absence of registration fraud, systematic irregularities, government intimidation of the opposition, vote-buying, and election violence.

*State Ownership* addresses the scope to which the state owns and controls capital (including land) in the industrial, agricultural, and service sectors.<sup>1</sup> Higher values indicate lower levels of assets owned by the government.

## Variable of Interest

### *Fiscal Independence*

Our proxy for fiscal independence is component 1C titled “government enterprises and investments,” taken from the Fraser Institute index on Economic Freedom 2005, which lagged relative to the different dependent variables, assuages potential endogeneity concerns. Component 1C measures the fraction of total investment supplied by the government and state-owned enterprises in a given country. Countries with more government enterprises and government investments received a lower rating on a scale from zero to ten. A higher fraction corresponds to greater fiscal independence. The sources used are International Monetary Fund, *Investment and Capital Stock Dataset*, World Bank, *World Development Indicators*, and Organization for Economic Co-operation and Development (OECD)<sup>2</sup>

## Main Control Variables

To isolate the effects of fiscal independence from other determinants of political development, the research allows for covariates commonly used in the democratization literature while applying an instrumental variable strategy. This subsection justifies the inclusion of our baseline regressors.

*Ethno-linguistic Fractionalization*: Barro (1999) argues that more population heterogeneity may impose difficulties

<sup>1</sup> The source for our measures of freedom of expression, clean elections, and state ownership is V-Dem VARIETIES OF DEMOCRACY, March (2020).

<sup>2</sup> Fiscal Independence is inherently an economic notion whose proxy, the fraction of yearly investments financed by the government, measures the degree of financial independence of the state from electors and the extent of the countries’ socialism, modern absolutism. Informatively, high levels of financial independence are predominantly encountered among collectivist countries, Faria & Montesinos (2022).

sustaining democracy. Conversely, more homogenous societies are bound to show fewer conflicts facilitating the emergence and sustainability of democracy. Thus, we include ethnolinguistic fractionalization to account for societal fragmentation and potential conflict. A recent democratization paper controlling for ethnic and linguistic fragmentation is Gorodnichenko & Roland (2021). Applied as in La Porta *et al.* (1999)

*Hofstede Individualism:* For culture, we use the individualism/collectivism cleavage, initially developed by Hofstede (2001), to measure IBM's employees' degree of individualism worldwide. Following Hofstede (2001), World Value Survey waves have made it possible to generate measures for more than one hundred countries of the individualist/collectivist cultural dimension.

Gorodnichenko & Roland (2021) find that even after controlling for several variables linked to democratization, individualism exerts a positive and sturdy effect on the Polity IV index, their measure of democracy, between 1980-2010. In addition, these scholars uncover empirical evidence supporting the notion that more individualistic countries adopt democracy earlier than collectivistic ones. Moreover, conditioning for an autocratic collapse in collectivist countries, the most likely outcome is a transition to autocracy and not democracy. The data source is Gorodnichenko & Roland (2015, 2021).

*Education:* This study controls for education to account for the modernization hypothesis articulated by Lipset (1959, p.80), "If we cannot say that a "high" level of education is a sufficient condition for democracy, the available evidence does suggest that it comes close to being a necessary condition in the modern world." Moreover: "Democracy is related to the state of economic development. Concretely, this means that the more well-to-do a nation, the greater the chances that it will sustain democracy." (p.75). Thus, congruous with North & Thomas (1973), education levels measure the degree of economic development.

Evidence supporting the modernization hypothesis is uncovered by Barro (1999), using education (primary

schooling) to measure living standards which positively affects the propensity for democracy. Boix & Stokes (2003) and Treisman (2012), among others, have also found support for the modernization hypothesis. Given the salience of education in the literature for democracy and democratization processes, we control for the average total years of schooling from 1960-2010 and supplied by the Barro & Lee (2013) dataset.<sup>3</sup>

*Inequality Gini index:* Lipset (1959, p.75) adduces that “A society between a large impoverished mass and a small favored elite would result either in oligarchy (dictatorial rule of the small upper stratum) or in tyranny (popularly based dictatorship).” Further, Acemoglu & Robinson (2006) contend that greater inequality levels are conducive to more redistribution, favoring a democratic institutional outcome. On the contrary, elevated levels of inequality may induce the elite to promote a coup d’etat to alleviate the redistributive tax burden proceeding from democratic rule.

Consequently, we allow for the inequality Gini index, which measures income distribution across a given population. This paper uses the Gini coefficient for within-country income inequality developed by Connors, Gwartney, & Montesinos (2020), ranging from zero to one. Zero represents perfect income equality, while one indicates that a single individual or entity receives all income. Thus, increases in the Gini coefficient indicate more inequality. The calculated Gini coefficients reflect income inequality for the year 2010.

*Legal Origin:* La Porta *et al.* (1999, p. 40) show evidence that, compared to common law countries, French legal origin countries (i) are more interventionist, (ii) their governments are less efficient in terms of bureaucratic delays and tax compliance (iii) their bureaucrats earn higher wages that do not translate into greater government efficiency and (iv) “score worse on our democracy measures than the common

<sup>3</sup> Glaeser, Ponzetto & Shleifer (2007) argue that education raises the benefits of civic participation contributing to increase support for democracy relative to dictatorship.

law countries.” Accordingly, we allow for a fixed effect on French legal origin on the grounds that the dominant gap among legal families, in terms of protection of property rights and law enforcement, emerges between countries belonging to the French legal tradition on the one hand versus English, Germanic, and Scandinavian legal origin countries on the other (see [La Porta, Lopez-de-Silanes & Shleifer, 2008](#)), which is also our source for the country classification into legal families).

*Protection against Expropriation Risk:* We use an index of protection against the risk of expropriation from Political Risk Services, following Acemoglu *et al.* (2001), to proxy the country’s economic institutions’ quality, averaging the scores from 1985 to 1995. The main idea behind its inclusion is to cast light on the validity of the economic-institutional origins of the democratization hypothesis.

*Latitude:* Latitudinal bands farther removed from the equator generally exhibit higher income per capita and more consolidated democracies. Furthermore, Person & Tabellini (2009) provide evidence suggesting that democracy and GDP are positively correlated. In line with these findings, we include the absolute value of latitude to account for the modern, sturdy regularity of increased prosperity and democracy as one moves away from the equator in either direction Spoloare & Wacziarg (2013). A classical explanation for this regularity regarding income is advanced by Diamond (1997), who contends that the East-West orientation of Eurasia facilitated the spread of technologies across similar latitudes, benefitted by homogenous climatic conditions. [Latitude as used by ([La Porta \*et al.\* 1999](#))].

*Oil reserves:* This study also allows for an additional geographical covariate: oil resources. A relevant factor leading this research to account for the potentially confounding influence of oil is its plausibleness to impact income per capita markedly and augment fiscal independence. Furthermore, if the government receives the income generated from oil resources, fiscal independence increases, all else equal, potentially impairing the quality of democracy. For instance, Qatar, the United Arab Emirates, and Kuwait are

Data

high-income countries, mainly because of their vast oil wealth, and are not democracies. A final argument for incorporating oil into our specifications is its potential to instigate civil conflict, interstate belligerence, organized crime, and mass killing of civilians, adversely affecting economic development and democracy. Oil reserves are taken from Parker (1997) and applied as in Acemoglu *et al.* (2001).

*Continental fixed effects:* The analysis includes a complete set of fixed effects at the continent level to ensure that the estimates, specifically on the variables of interest, are not capturing the influence of unobserved continental heterogeneity. In particular, we are controlling for the confounding influence of unobserved time-invariant geographical, institutional, and cultural characteristics, which may exert a potential adverse effect directly, indirectly, or both on the quality of democracy. Therefore, allowing for continental fixed effects alleviates concerns related to omitted variable bias. Additionally, conditioning for unobserved heterogeneity diminishes measurement error concerns, particularly for institutions and cultural characteristics.

## Sensitivity Analysis using Additional Explanatory-Variables

*Genetic Diversity:* As a sensitivity check, we control for genetic diversity, another measure of population diversity, defined as the probability that two randomly selected individuals differ from one another relative to a spectrum of genetic traits, like eye and hair color. This exercise substitutes genetic diversity for ethnolinguistic fractionalization based on evidence unveiled by Ashraf & Galor (2013b). These scholars empirically show that genetic diversity is a fundamental determinant of contemporarily observed ethnic and cultural heterogeneity. We use country-level measures of genetic diversity developed by Ashraf & Galor (2013a).

*Local Democracy:* Local democracy is defined, at the country level, as “the fraction of individuals in each country with ancestors for which the local headman was elected through a democratic process, defined as either formal or

Data

informal consensus.” Giuliano & Nunn (2013, p.87). These authors find that the current population whose ancestors experienced local-level democracy is associated with more supportive beliefs and enhanced stability of democracy at the national level. They also find that this variable increases the quality of the rule of law and income per capita while reducing corruption. Therefore, we use Giuliano & Nunn’s (2013) calculated country measures based on local democracy.

*Openness:* We allow for openness in light of the evidence provided by Liu & Ornelas (2014). They show that participation in free trade agreements positively impacts democracies’ sustainability. Moreover, since participation in free trade agreements reduces authoritarian groups’ incentives to exploit rent-seeking behavior, unstable democracies would be chief beneficiaries of opening the economy. From the Economic Freedom of World 2018 index, we use the scores of area 4 titled: Freedom to trade internationally.

# 5

## Empirical Strategy

Our primary structural model is given by

$$D = X'\beta + \gamma FI + \epsilon_1 \quad (1)$$

$$FI = X'\alpha + \epsilon_2 \quad (2)$$

Where our dependent variable  $D$  is a measure of democracy or, in some cases, a key determinant of democracy (such as the rule of law) or an essential dimension of democracy (such as clean elections), our explanatory variable of interest is the fraction of total investment supplied by the government and state-owned enterprises, a proxy for fiscal independence,  $FI$ . The vector  $\epsilon = (\epsilon_1, \epsilon_2)$  contains the unobserved error terms of equations (1) and (2) above, respectively. The error terms  $\epsilon_1$  and  $\epsilon_2$  can be correlated with each other. Our goal is to estimate  $\gamma$ , the coefficient of fiscal independence, after controlling for a wide array of exogenous covariates included in matrix  $X$ . Our baseline specification controls for ethnolinguistic fractionalization, individualism,

years of schooling, legal origin, expropriation risk, latitude, oil reserves, the Gini coefficient, and continental fixed effects. As a robustness check, we replace ethnolinguistic fractionalization with population diversity and add free-trade policies and traditional local democracy to our model.

Since democracy and fiscal independence are endogenous, and no external instruments are available, our strategy to identify  $\gamma$  relies on the heteroscedasticity in the system, as proposed by Lewbel (2012, 2019). Specifically, let  $W$  be the matrix of exogenous controls, not including the continental fixed effects. Then  $W \subseteq X$ , and identification can be achieved if  $Cov(W, \epsilon_2^2) \neq 0$  and  $Cov(W, \epsilon_1 \epsilon_2) = 0$ , which are the fundamental identifying assumptions. If we denote the OLS residuals from the fiscal independence equation (equation two above) by  $\hat{\epsilon}_2$  and  $(W - \bar{W})$  are the control variables expressed in deviation with respect to their means, then the crucial identifying assumptions above imply that  $Z = (W - \bar{W})\hat{\epsilon}_2$  are valid instruments for fiscal independence. In other words,  $Cov(W, \epsilon_2^2) \neq 0$  and  $Cov(W, \epsilon_1 \epsilon_2) = 0$  imply that the standard instrumental-variables estimators using  $Z = (W - \bar{W})\hat{\epsilon}_2$  and  $X$  as instruments would yield consistent estimates for  $\gamma$ .

Our identification strategy has a crucial econometric advantage. The non-linearity of our identifying restriction allows us to test the instruments' exogeneity and, therefore, the procedure's validity. Following (Baum & Lewbel, 2019), we provide empirical support for three distinct conditions that imply a valid procedure. In other words, these three conditions explained below and symbolized as  $A_1$ ,  $A_2$ , and  $A_3$ , if satisfied, are sufficient conditions for the key identification assumptions,  $Cov(W, \epsilon_2^2) \neq 0$  and  $Cov(W, \epsilon_1 \epsilon_2) = 0$ , to hold. Therefore, if  $A_1$ ,  $A_2$ , and  $A_3$  are satisfied, our key identifying assumption is correct, the exclusion restrictions hold, and  $\hat{\gamma}_{IV}$  is a consistent estimator for  $\gamma$ . Because  $A_1$ ,  $A_2$ , and  $A_3$  are sufficient (as opposed to necessary) conditions, a lack of empirical support for these three conditions does not imply an invalid procedure. However, empirical support for them is direct evidence of the validity of our identification strategy.

We exploit this fact to empirically test our procedure's validity and, therefore, the consistency of our coefficient estimates. We elaborate on these three below. See ([Baum & Lewbel, 2019](#)) for further details.

The first condition,  $A_1$ , is that fiscal independence is endogenous because a common underlying unobserved error term affects democracy and fiscal independence. More specifically,  $\epsilon_1$  and  $\epsilon_2$  have the following structure:  $\epsilon_1 = cU + V_1$  and  $\epsilon_2 = U + V_2$ . Thus, classical measurement error satisfies  $A_1$  if the error component  $U$  is the measurement error. This factor structure could be either a more fundamental (and distinct) underlying omitted factor in both equations or a measurement error in our proxy for fiscal independence. The latter is a plausible explanation because the fraction of total investment supplied by the government and state-owned enterprises can only imperfectly indicate the true and unobserved fiscal independence level. Therefore, the true and underlying fiscal independence would simultaneously impact political development measures and our mismeasured proxy for fiscal independence, acting as an omitted factor in both equations and generating classical measurement error. Further, although  $A_1$  is not directly testable, this type of measurement error generates attenuation bias, and evidence consistent with  $A_1$  would be that the OLS estimator of  $\gamma$  is lower in magnitude than its corresponding IV estimators.

The second condition,  $A_2$ , is that  $\epsilon_1^2$  is not correlated with  $W$ . Because equation (1) contains fiscal independence, our endogenous regressor of interest, we cannot use standard heteroscedasticity tests like Breusch-Pagan or White. However, we can empirically test that  $\epsilon_1$  is homoscedastic using ([Pagan & Hall, 1983](#)) test for heteroskedasticity in an instrumental variable regression. Thus, we report the p-values, denoted by  $p(PH)$ . A large p-value indicates that the null hypothesis of homoscedasticity (and thus condition  $A_2$ ) is plausible. Namely, the error component of the structural disturbance term,  $cU$ , is not correlated with the constructed instruments. Moreover, if condition  $A_2$  holds ensures the satisfaction of the second identifying assumption,  $Cov(W, \epsilon_1 \epsilon_2) = 0$ , which in turn, is a sufficient condition for

the procedure's validity as well as valid excludability of the constructed instruments.

Baum and Lewbel's third condition,  $A_3$ , tests directly the third identifying assumption, namely, that  $Cov(W, \epsilon_2^2) \neq 0$ . Satisfaction of condition  $A_3$  assures that the constructed instruments are relevant, i.e., correlated with  $FI$ . We can empirically test  $A_3$  using (Breusch & Pagan, 1979) heterogeneity test in the fiscal independence equation (2). This test is ideal because it targets the desired form of heteroscedasticity, i.e., a correlation between  $W$  and the squared error  $\epsilon_2^2$ . A rejection of the B-P null hypothesis provides direct evidence supporting the third fundamental identification assumption  $Cov(W, \epsilon_2^2) \neq 0$  that is, condition  $A_3$ . Therefore, we perform the Breusch-Pagan heterogeneity test in the fiscal independence equation and report the corresponding p-value, which we designate by  $p(B-P)$ .

We estimate  $\gamma$  using five econometric methods, ordinary least squares (OLS) as a benchmark, plus four instrumental variables (IV) estimators: two-stage least squares (2SLS), limited-information maximum likelihood (LIML), continuously updated estimator (CUE), and the two-step generalized method of moment's estimator (GMM2S). Following (Lewbel, 2012), we use  $Z = (W - \bar{W})\hat{\epsilon}_2$  as the excluded instruments for fiscal independence. If conditions  $A_1$ - $A_3$  hold, all IV estimators will be consistent for  $\gamma$ . However, the LIML method could yield better IV estimates (i.e., lower mean squared errors) under weak instruments than the 2SLS method. Similarly, under arbitrary heteroskedasticity, the CUE method is more efficient but requires numerical optimization methods that are not guaranteed to converge, especially using generated instruments in small samples, leading to near-perfect multicollinearity in some iterations.

The GMM2S method, in turn, generates closed-form, fast, and efficient estimates of  $\gamma$  and consistent estimates of the standard errors that are robust to arbitrary forms of non-spherical disturbances, making the robust GMM2S estimator ideal. The efficiency gains of the GMM2S estimator relative to the traditional IV estimators stem from the optimal use of the

covariance matrix of orthogonality conditions as a weighting matrix in the second and last step of the procedure.

In all cases, we compute the Hansen J statistic as a test for overidentifying restrictions and report the corresponding p-value as  $p(\text{OID})$ . The null hypothesis is that all instruments yield equal coefficient estimates. Failure to reject this null hypothesis (i.e., a high OID p-value) is a necessary condition for the method's validity but not sufficient because all the instruments could yield an equally incorrect coefficient estimate. Rejection of the null hypothesis indicates that some constructed instruments are invalid, but this could be because they produce a coefficient estimate that is only slightly different, i.e., statistically different but not by a large magnitude. Therefore, the Hansen OID test results are mostly inconclusive, and we use them with caution, focusing on the overall pattern of results rather than on any specific test.

We also conducted a conditional likelihood ratio (CLR) test as suggested by Moreira (2003) and Andrews, Moreira, & Stock (2006). The CLR test is fully robust to the presence of weak instruments. We perform the CLR test for the 2SLS and LIML estimation and report the corresponding p-values:  $p(\text{CLR})$ . When conditions  $A_1$ ,  $A_2$ , and  $A_3$  are not met, the CLR and OID tests provide additional validity evidence for our estimation strategy.

# 6

## Main Results

This section details the most relevant findings of this research. More precisely, results are centered on measures of six dependent variables, namely, democracy, the rule of law, judicial independence, freedom of speech, clean elections, and state ownership, which were formerly defined in the Data Section. The study presents findings focused on Electorate democracy, the rule of law, and judicial independence to save space. Discussion of robustness checks ensues, showing evidence on the six dependent variables mentioned above and applying the Generalized Method of Moments (GMM2S) estimator given its previously indicated desirable attributes. In addition, the study relies on political development determinants used in the literature to explain democracy and its essential pillars within a unified empirical structure.

In sum, we first show findings from our baseline specification followed by sensitivity checks that substitute genetic diversity for ethnolinguistic fractionalization while extending the baseline specification by incorporating

traditional local democracy and a measure of the economy's openness.

We use standardized coefficients to assess and compare the magnitude of the coefficient of interest relative to the coefficients of other variables. Therefore, we use asterisks to denote the attained statistical significance at the 1, 5, or 10 percent level. Alternative tables with non-standardized coefficients and p-values are available upon request.

## Baseline Results

This subsection discusses findings on a democracy measure and foundational variables of democracy earlier mentioned. The explanatory variables are fiscal independence, ethnolinguistic fractionalization, individualism/collectivism, years of education, legal origin, protection against the risk of expropriation, latitude, oil reserves, and Gini coefficient. The research also allows for continental fixed effects, which intend to allay concerns stemming from omitted and unobserved time-invariant continent-idiosyncratic variables associated with cultural, institutional, and geographical factors not accounted for by other covariates used in the analysis or that may be noisily measured.<sup>1</sup> Further, every table presents results from our battery of estimators described above.

### *Outcome variable: Electorate democracy of Freedom House*

Using a global sample comprising 70 countries for which data availability exists on a set of democracy determinants, **Table 1** documents a negative effect on democracy induced by fiscal independence, which is statistically significant and economically meaningful. More specifically, parameter estimates on fiscal independence across estimators are relatively stable, ranging from  $-0.342$  delivered by OLS to  $-0.442$  generated by the LIML estimator. Interestingly, all IV methods estimate regression coefficients that are somewhat

<sup>1</sup> For the estimation purpose, we partial out the continent dummies.

larger in absolute value than the OLS estimator, consistent with correction for attenuation bias.

Reassuringly, the statistical significance at the one percent level of the estimates on fiscal independence is corroborated by the negligible p-values associated with Moreira's (2003) conditional likelihood ratio (CLR) test, an inferential test robust to weak and strong identification. Moreover, the Hansen overidentification test fails to reject the null of conditional exogeneity of the IVs.

Additionally, the three sufficient though not necessary conditions for the instruments' exogeneity established in Baum & Lewbel (2019) are satisfied. As stated in the empirical strategy section, the first assumption, A<sub>1</sub>, which is not directly testable, is potentially satisfied in light of IV estimates generally more considerable in size than the OLS estimates, Table 1, congruous with a correction for attenuation bias stemming from measurement error.

The second assumption, A<sub>2</sub>, is that the common measurement error component in both the structural equation error and the first-stage reduced form equation error is homoscedastic. This assumption is satisfied because we fail to reject the null hypothesis of conditional homoscedasticity of the Pagan-Hall test, as displayed in Table 1.

The third assumption, A<sub>3</sub>, asserts that the error term's square in the first-stage regression correlates with the instruments vector. This assumption can be tested by applying the Breusch-Pagan test. If the null hypothesis of conditional homoscedasticity of the B-P tests is rejected, the third assumption is met, as shown in Table 1.

The findings based on the estimates on fiscal independence indicate that their effects on democracy are consequential. For more concretion, the estimate extracted by the GMM2S estimator of  $-0.435$ , if interpreted causally, implies that a one-standard-deviation increase of fiscal independence would decrease democracy quality by  $0.435$  standard deviations. Thus for Finland, New Zealand, and the U.S., the share of investment supplied by the government or state-owned enterprises (i.e., fiscal independence) is approximately 16 percent, and their Freedom House

democracy score is 7 (highly democratic). One standard deviation increase, plus 16 percentage points, in fiscal independence would yield a level of around 32 percent, consistent with the level of Namibia, Zambia, and Iran. The standard deviation of Freedom House's democracy score is about 0.4633. Meanwhile, their democracy levels would fall by approximately two units,  $(0.435)(4.633) = 2.015$ , corresponding to the democracy score of Albania, Mexico, and Senegal.

Parameter estimates on education and the risk of expropriation protection enter systematically positive and statistically significant at the one percent level. Thus, the education result lends support to the modernization hypothesis. Evidence from [Table 1](#) is also partially supportive of the “oil curse” hypothesis. Indeed, the estimated coefficients on the oil-proven reserves covariate enter negatively and statistically significant, generally at the one percent level generated by all estimators except for the LIML and the GMM2S, where the coefficient estimates are significant at the five percent level. Moreover, regression coefficients exhibit a low magnitude in absolute value, ranging among IV estimators from a low of 0.064 to a high of 0.106. As we will show, indicated support for the oil democracy-disruptive hypothesis is not robust.

Findings remain qualitatively intact using different measures of democracy frequently utilized in the democratization literature. In particular, the study allows for the following measures of democracy: Polity IV, Economic Intelligence Unit index of democracy, political rights index from Freedom House, as well as the following indexes from V-Dem Varieties of Democracy: Electorate democracy, liberal democracy, participatory democracy, deliberative democracy, egalitarian democracy, and the democracy liberal component index. Results are also robust to minimalist dichotomous democracy-dictatorship measures constructed by Cheibub *et al.* (2010) and Bjornskov & Rode (2020). These results are reported in the Appendix, [Tables A1](#) and [A6](#) to [A11](#).

### ***Outcome variable: index of equality before the law and individual liberty (Rule of Law)***

**Table 2** investigates the conditional effect of fiscal independence on the rule of law index, a keystone of democracy. The analysis conditions for the potentially confounding effect of covariates frequently emphasized in the democratization literature and aforementioned listed. As in **Table 1** on democracy, our findings on fiscal independence could be marred by unobserved heterogeneity bias stemming from the latent influence of time-invariant geographical, cultural, and institutional characteristics. The analysis allows for the potentially confounding effect of continental dummies to mitigate concerns stemming from unobserved heterogeneity bias.

Parameter estimates on fiscal independence, generated by the IV estimators, are negative and statistically significant at the one percent level. Moreover, the OLS estimate is negative and statistically significant, albeit at the five percent significance level. Reassuringly, the p-values discharged by Moreira's CLR inferential test are negligible, 0.002 for the 2SLS estimator and 0.01 for the LIML estimator, buttressing the high statistical significance of the IV regression coefficients on fiscal independence.

Further, all IV estimates are higher in absolute value than the OLS estimate, suggesting a correction for classical measurement error while satisfying A<sub>1</sub>, assumption 1. The estimated coefficients among IV estimates are moderately stable, ranging between - 0.407 furnished by the 2SLS estimator to - 0.487 supplied by the LIML estimator. The findings are also economically substantial. In particular, based on the regression coefficient provided by the GMM2S estimator in column 5, a one standard deviation increase in fiscal independence would lead to a reduction of 0.429 standard deviation in the rule of law. Moreover, the p-values of the Pagan-Hall, and Breusch-Pagan test accord well with satisfying A<sub>2</sub>, assumption 2, and A<sub>3</sub>, assumption 3 of Baum & Lewbel (2019), supporting the notion of consistent coefficients on fiscal independence.

Notably, estimates on education and protection against the risk of expropriation are systematically positive and statistically significant at the one percent level across estimators, thus exerting a beneficial impact on the rule of law. On the other hand, coefficients on oil-proven reserves generally enter negatively and are statistically significant at the five percent level, though small in magnitude. Instructively, the results obtained on the rule of law are qualitatively similar to those reported in [Table 1](#), where democracy features as the dependent variable.

The conditional detrimental effect of fiscal independence on the rule of law is also detected in several variables, which portray specific dimensions of equality before the law. In particular, fiscal independence exerts a deleterious impact on transparent laws with predictable enforcement, property rights for women and men, and an equal protection index conditioning for our extensive democracy determinants and continental dummies. These results are reported in the Appendix, [Table A2](#).

### *Outcome variable: judicial independence*

We use a latent judicial independence measure developed by ([Linzer, Drew & Staton, 2015](#)) and updated by ([Linzer, Holsinger, Reenock, & Staton 2019](#)). Using a sample of 70 countries across the five continents, [Table 3](#) establishes that the coefficients associated with fiscal independence, the variable of interest, are negative, statistically significant at the one percent level across estimators, economically relevant, and relatively stable. These findings, which partial out continental dummies, hold after accounting for our array of baseline confounders.

Results in [Table 3](#) that stand out are related to coefficients on protection against the risk of expropriation covariate. Indeed, estimates on the risk of expropriation covariate are positive and statistically significant at the one percent level while exhibiting remarkable stability, ranging from 0.516 extracted by the LIML estimator and 0.569 rendered by the GMM2S estimator.

Another worth mentioning results are the regression coefficients associated with latitude. Indeed, the regression estimates are positive and statistically significant at the one percent level, implying that countries farther removed from the equator display higher judicial independence levels.

Education estimates showcase a positive and statistically significant impact on judicial independence, while estimates on proven oil reserves are negative and statistically significant. Yet, significance levels oscillate for the IV estimators between ten percent, 2SLS and LIML, five percent, GMM2S, and one percent delivered by the CUE estimator. Further, the economic significance is moderate, given the low levels of the standardized parameter estimates.

Similar to the prior tables, the conditional null of the OID test is not rejected. Furthermore, the p-values of Moreira's CLR test are negligible, 0.002 for the 2SLS estimator and 0.001 for the LIML estimator. Also, conditions A<sub>2</sub> and A<sub>3</sub> of Baum & Lewbel (2019) satisfy the constructed instruments' potential validity, though A<sub>1</sub> is not fulfilled.

Lastly, additional sensitivity checks related to judicial variables confirm the evidence presented in this subsection. Specifically, concerning fiscal independence, our findings remain qualitatively unaltered to the following dependent variables: court-packing, compliance with high courts, compliance with the judiciary, the judicial independence measure of Glaser *et al.* (2004), and judicial constraints on the executive. These findings are reported in the Appendix, Table A3.

## Robustness Checks

In this subsection, we present robustness checks corresponding to the three dependent variables shown in Tables 1 to 3 (democracy, the rule of law, and judicial independence), plus three additional variables foundational for political development: Freedom of speech and clean elections, and state ownership. To save space, we only report findings generated by the GMM2S estimator. Each column adds two covariates to our baseline specifications: a measure

for the economy's trade openness policies corresponding to Area 4 of the EFW index and traditional local democracy developed by Giuliano & Nunn (2013). This sensitivity exercise also substitutes genetic diversity for ethnolinguistic fractionalization based on evidence unveiled by Ashraf & Galor (2013b). These scholars empirically show that genetic diversity is a fundamental determinant of contemporarily observed ethnic and cultural heterogeneity.

**Table 4** conveys the findings of our robustness checks exercise. Results based on the six dependent variables are shown in columns one to six; for example, in column 1, Electorate democracy (our primary measure of democracy). Column 2's dependent variable is the Equality Before the Law and Individual Liberty index, a proxy for law rule. Column 3, latent judicial independence; Freedom of Expression and Alternative Sources of Information index, Clean Election index, and State Ownership of the Economic are displayed in columns 4, 5, and 6, respectively.

Notably, parameter estimates of fiscal independence are negative, statistically significant at the one percent level, and economically influential across the six regressions. Protection against the risk of expropriation and openness of the economy exhibit coefficient estimates statistically significant in four regressions, while education enters statistically significant in three regressions. The findings on institutional surrogates and education's role arguably highlight the economic institutional proxies' greater relevance for political development dynamics. Evidence in the Appendix, **Table A5**, discloses our institutional economic surrogates predicting education, lending additional credence to the hypothesis, pointing to the economic game rules as foundational for democracies' quality. Importantly, coefficients on the oil covariate do not exert a discernible statistical effect on democracy and its essential pillars.

Additionally, the conditional null of the IVs exogeneity is rejected only in the state ownership regression, albeit at the ten percent level with a p-value of 0.085. Reassuringly in the six regressions, the Baum-Lowel sufficient conditions for consistency of the estimates are met. In particular, the p-

values of the Pagan-Hall associated with the structural equations' error term are systematically greater in magnitude than 0.1, and the p-values of the Breusch-Pagan test are close to zero. Further, coefficient estimates yielded by the GMM2S estimator are in absolute size greater than the corresponding OLS coefficients <sup>2</sup> when the dependent variables are democracy, the rule of law, judicial independence, and clean elections consistent with correction for attenuation bias.

However, the GMM2S estimates in Table 4 exhibit a smaller magnitude when compared to the estimates reported in the previous tables. Thus, for greater specificity, the GMM2S estimates from Table 4 are lower in absolute value than the GMM2S regression coefficients associated with all dependent variables. This behavior is potentially congruent with a correction for omitted variable bias. Interestingly, the correction attributable to attenuation bias and the one based on an omitted variable bias supports the error structure postulated in condition A1.

Finally, Appendix Table A4 shows qualitatively similar results concerning fiscal independence when the dependent variables are freedom of expression index, freedom of association index, and civil liberties. While Table A5 discloses additional corroborative findings related to political participation and clean elections using the participatory component index and civil society participation index as dependent variables. In particular, fiscal independence exerts a conditional negative impact on the willingness of the people to participate in the political process.

<sup>2</sup> Not reported but available upon request.

# 7

## Concluding Remarks

This research is premised on historical English constitutional evidence, strongly suggesting that it was necessary to impoverish the crown as a desideratum to subject the king to the law. The protracted dynamics of “starving the king” was pivotal to unleashing several milestone events that paved the way for the dawn of the rule of law, democracy, and the Industrial Revolution.

The parallel events transpiring in continental Europe provide additional reinforcing historical evidence on the salience for political development of the wealth distribution between the crown and the people. Commencing in the sixteenth century, France’s crown and Portugal and Spain’s polities became fiscally independent, which led to an intensification of absolutism, retarding the emergence of the rule of law and democracy.

Given the historical evidence, the next step is to establish if, in the modern context, the observed democratic heterogeneity, within and across measures, is related to the degree of state revenues directly supplied by the electorate’s

taxes. We unveil a novel empirical finding indicating that the quality of democracy and its critical supporting legal institutions, such as the rule of law, judicial independence, clean elections, and freedom of speech, among other democracy pillars, is conditionally determined by fiscal independence. Indeed, OLS and several IV estimators' results lend support to the hypothesis that variation in fiscal independence has a robust conditional effect on critical measures of political development while allowing for a host of confounders commonly used in the democratization literature.

Moreover, the analysis reveals that long-enduring-prosperous democracies and their essential complementary institutions emerge from the impulse provided by a culture of economic and political growth and formal economic institutions implanted. In particular, fiscal dependence on voters epitomizes a government that rules but does not own productive assets or, if it owns them, does not directly exploit them to elicit state revenues. Consequently, to obtain revenues, the state depends on taxation of the peoples' wealth, which is aggrandized in a well-functioning market economy. However, to the extent that this rule is not specifically constitutionally sanctioned nor legally coded, it appears to exert its influence on the constitutional design and corresponding laws among countries with the individualistic cultural dimension.<sup>1</sup>

Moreover, historically, fiscal independence led to absolutism, while modernly abets socialist practices typified in state ownership of productive assets. Interestingly, our measure of financial independence is also a proxy for the degree of socialism. Generally, the higher the fraction of government financing total investment, the more elevated the number of productive assets owned by the state. For example,

<sup>1</sup> To the best of our knowledge, we do not know of any country's constitution enshrining the financial dependency of the government on the electors. However, for some evidence of the cultural origin of fiscal dependence, see (Faria & Montesinos 2022).

the Venezuelan government finances eighty percent of total investment.

The second critical determinant of flourishing democracies unveiled in this study is a proxy for economic institutions, namely protection against expropriation, while the third is international trade and capital openness. Finally, the last critical variable uncovered is education, which is also rooted in economic institutions. Thus, the economic foundations of democratic rule uncovered in this paper lend credence to the contentions of Hayek and Friedman.

Additionally, this research sheds light on why oil discovery exerts an adverse effect on countries such as Venezuela while having a salutary impact on Norway. The answer suggested by the empirical evidence points to the crucial role mediated by the quality of economic institutions. Thus, the deleterious effects of oil on political development practically vanish when we include our complete set of economic institutions.

Lastly, as reported in this study, fiscal independence is a robust conditional predictor of proxies for political institutions. On the other hand, unreported and preliminary findings available upon request indicate that fiscal independence is also a conditional determinant of the Economic Freedom of the World index, a proxy for property rights economic institutions. We interpret this finding, which is also congruous with historical evidence, suggesting that fiscal independence is a hinge variable of political and economic development. When governments' revenues depend on the peoples' taxes, the state has a stake in taxpayers' wealth. Consequently, it will procure a market economy, leading to the affluence of citizens. This issue on the hinge role of fiscal independence, which is not fully clarified, is left as a future research topic.

# Tables

**Table 1. Dependent Variable: Electorate Democracy of Freedom House**

	OLS	2SLS	LIML	CUE	GMM2S
	(1)	(2)	(3)	(4)	(5)
Fiscal Independence	-0.342*** (0.013)	-0.401*** (0.013)	-0.442*** (0.015)	-0.427*** (0.007)	-0.435*** (0.008)
Ethno-linguistic Fractionalization	0.132 (0.652)	0.123 (0.581)	0.117 (0.583)	0.132 (0.456)	0.118 (0.498)
Hofstede individualism	-0.216 (0.009)	-0.235* (0.008)	-0.247* (0.008)	-0.039 (0.006)	-0.100 (0.006)
Total years of schooling	0.350*** (0.074)	0.330*** (0.068)	0.316*** (0.071)	0.377*** (0.048)	0.330*** (0.057)
Legal origin	0.064 (0.297)	0.066 (0.267)	0.067 (0.268)	-0.060 (0.224)	0.000 (0.230)
Expropriation risk	0.331** (0.138)	0.342*** (0.120)	0.349*** (0.119)	0.348*** (0.095)	0.335*** (0.104)
Latitude	0.086 (1.217)	0.105 (1.126)	0.118 (1.156)	0.050 (0.704)	0.044 (0.807)
Oil resources	-0.120*** (0.000)	-0.106*** (0.000)	-0.096** (0.000)	-0.064*** (0.000)	-0.079** (0.000)
Inequality - Gini index	-0.034 (0.027)	-0.034 (0.025)	-0.033 (0.025)	0.190 (0.021)	0.048 (0.023)
Continental Fixed Effects	Yes	Yes	Yes	Yes	Yes
Obs	70	70	70	70	70
R <sup>2</sup>	0.762				
p(OID)		0.330	0.346	0.491	0.330
p(CLR)		0.000	0.001		
p(PH)		0.251			
p(BP)		0.000	0.000	0.000	0.000

Table 1 uncovers estimates on fiscal independence and its effects on democracy while allowing for the potential confounding effects of standard determinants of democracy. Democracy is measured as the average of civil liberties and political rights indices from Freedom House, ranging from 1 = Least Free to 7 = Most Free. Point estimates of fiscal independence are negative, statistically and economically significant, and relatively stable across our four IV estimators. p(OID): p-value of the over-identification test. The study fails to reject the null of validity of the instrumental variables. p(CLR): p-value of the Conditional Likelihood Ratio test. The low p-values of 0.000 for the 2SLS estimator and 0.001 by the LIML estimator confirm the high significance levels of the estimates on fiscal independence. The IV estimates appear to correct for attenuation bias, congruous with A1. p(PH): p-value of Pagan Hall test indicates the failure to reject the null of the PH test, satisfying A2. p(B-P): p-value of Breusch Pagan test leads to rejection of the null, satisfying A3. Standardized coefficients are estimated, and robust (heteroskedasticity-adjusted) standard errors

Tables

are reported in parentheses. \*, \*\*, \*\*\* denotes statistical significance at 10%, 5%, and 1% level, respectively.

**Table 2.** *Dependent Variable: Index of equality before the law and individual liberty (Rule of Law)*

	OLS	2SLS	LIML	CUE	GMM2S
	(1)	(2)	(3)	(4)	(5)
Fiscal Independence	-0.323** (0.002)	-0.407*** (0.002)	-0.487*** (0.003)	-0.432*** (0.001)	-0.429*** (0.001)
Ethno-linguistic Fractionalization	0.085 (0.122)	0.072 (0.105)	0.059 (0.103)	-0.038 (0.083)	-0.040 (0.079)
Hofstede individualism	-0.175 (0.002)	-0.201 (0.001)	-0.226 (0.001)	-0.131 (0.001)	-0.091 (0.001)
Total years of schooling	0.457*** (0.013)	0.428*** (0.011)	0.401*** (0.011)	0.348*** (0.010)	0.367*** (0.008)
Legal origin	-0.068 (0.049)	-0.065 (0.044)	-0.062 (0.045)	-0.029 (0.035)	-0.082 (0.037)
Expropriation risk	0.414** (0.023)	0.429*** (0.020)	0.443*** (0.020)	0.637*** (0.019)	0.456*** (0.018)
Latitude	-0.125 (0.236)	-0.098 (0.221)	-0.072 (0.232)	-0.583*** (0.173)	-0.283** (0.156)
Oil resources	-0.186** (0.000)	-0.166** (0.000)	-0.147** (0.000)	-0.013 (0.000)	-0.190*** (0.000)
Inequality - Gini index	-0.111 (0.005)	-0.111 (0.005)	-0.110 (0.005)	-0.497** (0.006)	-0.149 (0.004)
Continental Fixed Effects	Yes	Yes	Yes	Yes	Yes
Obs	70	70	70	70	70
R2	0.625				
p(OID)		0.234	0.244	0.498	0.234
p(CLR)		0.002	0.010		
p(PH)		0.227			
p(BP)		0.000	0.000	0.000	0.000

Table 2 presents estimates on fiscal independence and its conditional effects on the index of equality before the law and individual liberty, a measure of the rule of law from the Varieties of Democracy (V-Dem) data set. The results indicate that parameter estimates on fiscal independence, generated by the IV estimators, are negative, statistically, and economically significant at the one percent level and relatively stable. The OLS estimate is negative and statistically significant, albeit at the five percent level. p(OID): p-value of the over-identification test. The study fails to reject the null in all four IV estimators. p(CLR): p-value of the CLR inferential test. The p-values are negligible, 0.002 for the 2SLS estimate and 0.01 for the LIML estimate. IV coefficient estimates are larger in magnitude than the OLS estimate, consistent with a correction for attenuation bias, and congruous with condition A1. p(PH): p-value of Pagan Hall test. The failure to reject the null in the PH test is congruous with satisfying condition A2. p(B-P): p-value of Breusch Pagan test. Rejection of the null in the B-P test satisfies assumption A3. Regression coefficients are standardized. Robust (heteroskedasticity-adjusted) standard errors are reported in parentheses. \*, \*\*, \*\*\* denotes statistical significance at 10%, 5%, and 1% level, respectively.

**Table 3.** *Dependent Variable: Judicial Independence*

	OLS	2SLS	LIML	CUE	GMM2S
	(1)	(2)	(3)	(4)	(5)
Fiscal Independence	-0.309*** (0.002)	-0.288*** (0.002)	-0.274*** (0.002)	-0.402*** (0.001)	-0.300*** (0.001)
Ethno-linguistic Fractionalization	0.089 (0.080)	0.092 (0.072)	0.094 (0.072)	0.112* (0.062)	0.122* (0.065)
Hofstede individualism	-0.284** (0.001)	-0.277*** (0.001)	-0.273*** (0.001)	-0.185** (0.001)	-0.252*** (0.001)
Total years of schooling	0.272*** (0.009)	0.279*** (0.008)	0.284*** (0.009)	0.270*** (0.007)	0.274*** (0.008)
Legal origin	0.110 (0.040)	0.109 (0.036)	0.109 (0.036)	0.029 (0.027)	0.081 (0.030)
Expropriation risk	0.522*** (0.016)	0.518*** (0.014)	0.516*** (0.015)	0.547*** (0.012)	0.569*** (0.013)
Latitude	0.397*** (0.165)	0.390*** (0.150)	0.386*** (0.149)	0.327*** (0.136)	0.315*** (0.139)
Oil resources	-0.094 (0.000)	-0.099* (0.000)	-0.102* (0.000)	-0.090*** (0.000)	-0.115** (0.000)
Inequality - Gini index	0.160 (0.003)	0.160* (0.003)	0.160* (0.003)	0.195** (0.003)	0.178** (0.002)
Continental Fixed Effects	Yes	Yes	Yes	Yes	Yes
Obs	70	70	70	70	70
R2	0.825				
p(OID)		0.319	0.303	0.451	0.319
p(CLR)		0.002	0.001		
p(PH)		0.803			
p(BP)		0.000	0.000	0.000	0.000

Table 3 showcases estimates on fiscal independence and its effects on judicial independence, measured as a latent variable (Linzer & Staton, 2015) while allowing for our array of baseline confounders. The results indicate that the coefficients associated with fiscal independence, the variable of interest, are negative, statistically significant at the one percent level across estimators, economically relevant, and relatively stable. The conditional null of the OID test is not rejected, and the p-values of the CLR test are negligible, 0.002 for the 2SLS estimator and 0.001 for the LIML estimator. Also, conditions A2 and A3 of Baum & Lewbel (2019) are satisfied, suggesting the constructed instruments' validity and relevance. In particular, we fail to reject the null of the PH test, while the BP test null is rejected. Standardized coefficients are estimated. Robust (heteroskedasticity-adjusted) standard errors are reported in parenthesis. \*, \*\*, \*\*\* denotes statistical significance at 10%, 5%, and 1% level, respectively.

**Table 4. Robustness Checks**

	Index of equality before the law and individual liberty		Freedom of Expression and Alternative Sources of Information		Clean elections	State ownership
	Electorate democracy	(Rule of Law)	Judicial independence	index		
	(1)	(2)	(3)	(4)	(5)	(6)
Fiscal Independence	-0.320*** (0.013)	-0.289*** (0.002)	-0.385*** (0.002)	-0.330*** (0.002)	-0.529*** (0.002)	-0.492*** (0.006)
Genetic diversity	-0.022 (5.037)	0.047 (0.720)	0.008 (0.639)	-0.125 (0.765)	0.102 (0.756)	-0.401*** (3.741)
Total years of schooling	0.399*** (0.068)	0.244** (0.011)	0.144 (0.011)	0.216* (0.013)	0.159 (0.011)	0.087 (0.041)
Legal origin	0.080 (0.299)	-0.116 (0.035)	0.119* (0.033)	0.040 (0.043)	-0.184*** (0.030)	0.146* (0.184)
Hofstede individualism	-0.017 (0.008)	0.091 (0.001)	-0.152 (0.001)	0.219 (0.001)	0.164 (0.002)	0.082 (0.006)
Expropriation risk	0.195* (0.120)	0.355*** (0.017)	0.518*** (0.016)	0.114 (0.017)	0.298** (0.024)	0.088 (0.076)
Latitude	-0.176 (1.035)	-0.368*** (0.132)	0.260** (0.147)	-0.451*** (0.194)	-0.222** (0.158)	0.057 (0.945)
Oil resources	-0.067 (0.000)	-0.015 (0.000)	-0.019 (0.000)	-0.046 (0.000)	-0.002 (0.000)	-0.108 (0.000)
Inequality - Gini index	-0.010 (0.024)	-0.188 (0.004)	0.137 (0.003)	-0.273** (0.004)	-0.076 (0.005)	-0.048 (0.013)
Local democracy	-0.046 (0.254)	-0.077 (0.032)	-0.058 (0.035)	-0.173*** (0.035)	-0.142*** (0.034)	-0.038 (0.212)
Openness	0.070 (0.179)	0.345*** (0.018)	0.101 (0.022)	0.248** (0.031)	0.265*** (0.020)	0.207* (0.126)
Continental FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs	68	68	68	68	68	68
p(OID)	0.664	0.373	0.193	0.290	0.375	0.085
p(PH) from 2SLS	0.607	0.468	0.653	0.324	0.610	0.636
p(BP)	0.000	0.000	0.000	0.000	0.000	0.000

Table 4 unveils robustness checks corresponding to the three dependent variables shown in Tables 1 to 3 (columns 1-3) plus Freedom of Speech (column 4), Clean Elections (column 5), and State Ownership (Column 6), reporting only those findings generated by the GMM2S estimator. Lower values of state ownership correspond to a larger amount of government-owned assets. Genetic diversity replaces ethnolinguistic fractionalization in this exercise, while local democracy and openness covariates are included. The null of the over-identification test is rejected only in the state ownership regression, albeit at the ten percent level. The p-values of the Pagan-Hall, associated with the 2SLS estimator, do not reject the null, suggesting satisfaction of A2. The nearly zero p-values of the Breusch-Pagan test across the seven regressions

## Tables

strongly suggest rejecting the null. Standardized coefficients are estimated. Robust (heteroskedasticity-adjusted) standard errors are reported in brackets. \*, \*\*, \*\*\* denotes statistical significance at 10%, 5%, and 1% level, respectively.

# Appendix

This Appendix comprises 11 tables that disclose a wealth of additional evidence supporting the key result of this research: that fiscal independence from Electorate accountability causes a destructive effect on political development including the multiple dimensions of democracy and the quality of political institutions. The analysis in the first six **Tables (A1-A6)** employs a unified empirical framework applying the GMM2s estimator to our extended set of covariates,<sup>1</sup> including a measure of the country's openness and traditional local democracy. Additionally, we replace genetic diversity for ethnolinguistic fractionalization as a robustness check to our main results. In the last five **Tables (A7-A11)**, we further investigate the impact of fiscal independence on the binary (0-1) democratic indicator of Cheibub *et al.* (2010) and the most recent democracy measures of Bjørnskov & Rode (2020).

For more specificity, **Table A1** establishes that results are robust to nine different measures of democracy. **Tables A2 to A5** present evidence furnished by more disaggregated indicators of the rule of

<sup>1</sup> Only the results using the two-step Generalized Method of Moments (GMM2s) estimator are presented here. Qualitatively similar results using other econometric estimators, including the OLS, 2SLS, LIML, and CUE-GMM estimators, are available upon request.

## Appendix

law, judicial independence, freedom of expression, and clean elections. At the same time, [Table A5](#) also elucidates the role of our surrogates for economic institutions predicting education, consistent with the notion that education exerts a direct and indirect impact on political development. Reassuringly, generally, the results corroborate the main findings, despite more specific, less aggregated, dependent variables used in this Appendix. Finally, standardized coefficients are presented to compare the relative magnitude of the coefficient of fiscal independence. Therefore, we use asterisks (\*, \*\*, \*\*\*) to denote the statistical significance at the 10%, 5%, and 1% levels, respectively. The corresponding standard errors robust to heteroskedasticity are shown in parenthesis.

Table A1 results indicate that the coefficients associated with fiscal independence, the variable of interest, are negative, statistically significant at the five percent level or less, and economically relevant. Moreover, the null of the over-identification test is not rejected in any specification. Also, conditions A2 and A3 of Baum & Lewbel ([2019](#)) are satisfied, suggesting the constructed instruments' validity. In particular, we fail to reject the null of the PH test, except for the liberal component regression, where we reject the null at the ten percent level, while the null of the BP test is rejected.

# Appendix

**Table A1. Robustness checks to alternative democracy variables**

Robustness Checks. GMM2S Estimator	Dependent Variables:								
	Democracy (Polity IV)	Democracy (EIU)	Political Rights	Electorate Democracy	Liberal Democracy	Participatory Democracy	Deliberative Democracy	Egalitarian Democracy	Liberal Component
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Fiscal Independence	-0.263** (0.045)	-0.320*** (0.105)	-0.340*** (0.016)	-0.337*** (0.002)	-0.272*** (0.002)	-0.314*** (0.001)	-0.218** (0.002)	-0.152** (0.001)	-0.427*** (0.002)
Genetic diversity	-0.263*** (18.742)	-0.196*** (45.844)	0.042 (5.847)	-0.097 (0.633)	-0.059 (0.627)	-0.167** (0.477)	-0.082 (0.761)	-0.022 (0.600)	0.039 (0.666)
Total years of schooling	0.313*** (0.224)	0.251*** (0.693)	-0.409*** (0.078)	0.348*** (0.012)	0.304** (0.012)	0.363*** (0.008)	0.379*** (0.013)	0.416*** (0.012)	0.123 (0.011)
Legal origin	0.266** (1.198)	0.158** (2.873)	-0.086 (0.362)	0.001 (0.039)	-0.023 (0.034)	0.031 (0.030)	-0.029 (0.042)	-0.081 (0.030)	-0.043 (0.038)
Hofstede Individualism	-0.065 (0.027)	-0.037 (0.090)	-0.012 (0.009)	0.119 (0.002)	0.123 (0.002)	0.095 (0.001)	0.123 (0.002)	0.180 (0.002)	0.011 (0.001)
Expropriation Risk	0.131 (0.377)	0.452*** (1.013)	-0.157 (0.139)	0.133 (0.019)	0.234** (0.019)	0.161 (0.013)	0.136 (0.020)	0.242* (0.019)	0.424*** (0.017)
Latitude	-0.255 (4.364)	-0.069 (10.481)	0.255** (1.172)	-0.193 (0.154)	-0.107 (0.157)	-0.150 (0.122)	-0.143 (0.172)	-0.221* (0.144)	-0.174 (0.162)
Oil resources	-0.125 (0.000)	0.053 (0.000)	0.061 (0.000)	-0.088 (0.000)	-0.044 (0.000)	-0.106 (0.000)	-0.064 (0.000)	-0.035 (0.000)	0.009 (0.000)
Inequality - (Gini index)	-0.029 (0.065)	0.097 (0.185)	0.017 (0.027)	-0.107 (0.004)	-0.098 (0.004)	-0.068 (0.003)	-0.174 (0.004)	-0.198 (0.004)	-0.165 (0.004)
Local democracy	-0.033 (0.937)	-0.021 (2.519)	0.059 (0.268)	-0.076 (0.038)	-0.095 (0.040)	-0.059 (0.029)	-0.129* (0.043)	-0.095 (0.039)	-0.102* (0.032)
Openness	0.035 (0.664)	0.042 (1.739)	-0.063 (0.218)	0.051 (0.025)	0.139 (0.024)	-0.024 (0.019)	0.156 (0.027)	0.115 (0.021)	0.321*** (0.027)
Continental F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	68	68	68	68	68	68	68	68	68
p(OID)	0.207	0.301	0.697	0.365	0.331	0.349	0.497	0.263	0.816
p(PH)	0.380	0.899	0.532	0.825	0.492	0.652	0.789	0.802	0.084
p(B-P)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Table A2.** *Robustness checks to alternative variables associated with the rule of law*

Robustness Checks GMM2S Estimator	Dependent Variables:			
	Transparent laws with predictable enforcement	Property rights for women	Property rights for men	Equal protection index
	(1)	(2)	(3)	(4)
Fiscal Independence	-0.179*** (0.007)	-0.379*** (0.007)	-0.614*** (0.008)	-0.293*** (0.002)
Genetic diversity	-0.061 (5.404)	-0.045 (3.477)	-0.148 (3.456)	0.202* (0.987)
Total years of schooling	0.079 (0.071)	0.057 (0.044)	-0.002 (0.039)	0.163 (0.012)
Legal origin	-0.063 (0.248)	-0.074 (0.164)	-0.119 (0.155)	-0.159 (0.052)
Hofstede individualism	0.073 (0.010)	0.055 (0.005)	0.185 (0.005)	-0.124 (0.002)
Expropriation risk	0.366** (0.134)	0.348** (0.079)	0.252* (0.069)	0.465*** (0.025)
Latitude	-0.057 (1.058)	-0.052 (0.687)	0.175 (0.531)	-0.013 (0.196)
Oil resources	0.031 (0.000)	-0.062 (0.000)	0.021 (0.000)	0.194** (0.000)
Inequality - Gini index	-0.340** (0.025)	-0.290 (0.018)	-0.139 (0.013)	-0.117 (0.004)
Local democracy	-0.186** (0.271)	-0.080 (0.165)	-0.019 (0.155)	0.092 (0.047)
Openness	0.498*** (0.128)	-0.132 (0.102)	-0.156 (0.094)	0.260** (0.032)
Continental F.E.	Yes	Yes	Yes	Yes
Obs	68	68	68	68
p(OID)	0.306	0.381	0.378	0.113
p(PH) from 2SLS	0.909	0.411	0.367	0.697
p(B-P)	0.000	0.000	0.000	0.000

Table A2 discloses robustness checks corresponding to four dependent variables measuring different dimensions of the rule of law. The results indicate that the coefficients associated with fiscal independence, the variable of interest, are negative, statistically significant at the one percent level, and economically relevant. The null of the over-identification test is not rejected in any specification. Also, conditions A2 and A3 of Baum & Lewbel (2019) are satisfied, suggesting the constructed instruments' validity. In particular, we fail to reject the null of the PH test, while the null of the BP test is rejected. Standardized coefficients are estimated. Robust (heteroskedasticity-adjusted) standard errors are reported in brackets. \*, \*\*, \*\*\* denotes statistical significance at 10%, 5%, and 1% level, respectively.

**Table A3.** *Robustness checks to alternative measures of the judiciary and its independence*

Robustness Checks GMM2S Estimator	Dependent Variable:				
	Compliance		Compliance		Judicial
	Court	with high	with	Judicial	constraints on
	Packing (V-Dem) (1)	court (V-Dem) (2)	judiciary V-Dem (3)	Independence (Glaeser <i>et al.</i> ) (4)	the executive (V-Dem) (5)
Fiscal Independence	-0.407*** (0.007)	-0.236** (0.010)	-0.340** (0.014)	-0.605*** (0.003)	-0.360*** (0.002)
Genetic diversity	-0.006 (3.616)	0.043 (3.833)	0.041 (3.806)	-0.024 (1.968)	0.094 (0.949)
Total years of schooling	-0.295** (0.056)	0.279** (0.058)	0.210 (0.063)	-0.074 (0.021)	0.119 (0.012)
Legal origin	0.004 (0.208)	-0.078 (0.216)	-0.057 (0.183)	0.347*** (0.052)	-0.071 (0.045)
Hofstede individualism	-0.102 (0.007)	0.057 (0.007)	-0.094 (0.007)	0.103 (0.002)	0.036 (0.002)
Expropriation risk	0.724*** (0.077)	0.357*** (0.088)	0.420*** (0.086)	-0.141 (0.036)	0.432*** (0.019)
Latitude	0.044 (0.862)	-0.116 (0.985)	-0.226 (1.002)	0.021 (0.367)	-0.170 (0.225)
Oil resources	0.105 (0.000)	-0.024 (0.000)	-0.076 (0.000)	0.073 (0.000)	-0.000 (0.000)
Inequality - Gini index	-0.450** (0.023)	-0.212 (0.023)	-0.008 (0.023)	-0.482*** (0.006)	-0.027 (0.005)
Local democracy	-0.204** (0.170)	-0.210** (0.237)	-0.037 (0.241)	-0.149 (0.098)	-0.111 (0.046)
Openness	0.343*** (0.128)	0.350** (0.174)	0.348*** (0.166)	0.097 (0.046)	0.357*** (0.038)
Continental F.E.	Yes	Yes	Yes	Yes	Yes
Obs	68	68	68	50	68
p(OID)	0.030	0.394	0.207	0.047	0.066
p(PH) from 2SLS	0.787	0.911	0.429	0.386	0.259
p(B-P)	0.000	0.000	0.000	0.000	0.000

Table A3 shows robustness checks corresponding to five dependent variables measuring different dimensions of judicial independence. The results indicate that the coefficients associated with fiscal independence, the variable of interest, are negative, statistically significant at the five percent level or less, and economically relevant. The null of the over-identification test is not rejected for compliance with the high court and compliance with the judiciary. However, the OID null is rejected at the ten percent level or less in the other specifications. Conditions A2 and A3 of Baum & Lewbel (2019) are satisfied, suggesting the validity of the constructed instruments. In particular, we fail to reject the null of the PH test, while the null of the BP test is rejected. Standardized coefficients are estimated. Robust (heteroskedasticity-adjusted) standard errors are reported in brackets. \*, \*\*, \*\*\* denotes statistical significance at 10%, 5%, and 1% level, respectively.

**Table A4.** *Robustness checks to alternative measures of freedom of expression*

Robustness Checks GMM2S Estimator	Dependent Variable:		
	Freedom of expression index (V-Dem)	Freedom of association thick index (V-Dem)	Civil Liberties (Freedom House)
	(1)	(2)	(3)
Fiscal Independence	-0.259*** (0.002)	-0.347*** (0.002)	-0.256*** (0.011)
Genetic diversity	-0.108 (0.773)	-0.210* (0.977)	0.016 (4.573)
Total years of schooling	0.160 (0.013)	0.293*** (0.011)	-0.376*** (0.061)
Legal origin	0.011 (0.042)	0.160 (0.063)	-0.058 (0.256)
Hofstede individualism	0.213 (0.001)	-0.093 (0.002)	0.012 (0.007)
Expropriation risk	0.160 (0.019)	0.164 (0.017)	-0.209** (0.105)
Latitude	-0.398*** (0.190)	-0.274* (0.191)	0.088 (0.953)
Oil resources	-0.045 (0.000)	-0.110 (0.000)	0.064 (0.000)
Inequality - Gini index	-0.270* (0.004)	-0.074 (0.003)	-0.003 (0.023)
Local democracy	-0.143** (0.036)	-0.034 (0.043)	0.036 (0.251)
Openness	0.260** (0.031)	-0.012 (0.038)	-0.102 (0.144)
Continental F.E.	Yes	Yes	Yes
Obs	68	68	68
p(OID)	0.344	0.398	0.407
p(PH) from 2SLS	0.412	0.123	0.479
p(B-P)	0.000	0.000	0.000

Table A4 presents robustness checks corresponding to three dependent variables measuring different dimensions of freedom of expression. The results indicate that the coefficients associated with fiscal independence, the variable of interest, are negative, statistically significant at the one percent level, and economically relevant. The null of the over-identification test is not rejected in any specification. Also, conditions A<sub>2</sub> and A<sub>3</sub> of Baum & Lewbel (2019) are satisfied, suggesting the constructed instruments' validity. In particular, we fail to reject the null of the PH test, while the null of the BP test is rejected. Standardized coefficients are estimated. Robust (heteroskedasticity-adjusted) standard errors are reported in brackets. \*, \*\*, \*\*\* denotes statistical significance at 10%, 5%, and 1% level, respectively.

**Table A5. Robustness checks to clean elections as a participation process and drivers of education.**

	Participatory component Index (V-Dem)	Civil Society Participation Index (V-Dem)	Average years of schooling (Barro&Lee)
	(1)	(2)	(3)
Fiscal Independence	-0.518*** (0.001)	-0.340*** (0.001)	-0.161*** (0.012)
Genetic diversity	-0.337*** (0.482)	-0.236** (0.721)	-0.113 (7.441)
Total years of schooling	-0.169 (0.001)	0.252** (0.009)	
Legal origin	0.234*** (0.005)	0.222*** (0.034)	0.160*** (0.329)
Hofstede individualism	0.261*** (0.030)	-0.011 (0.001)	0.172 (0.014)
Expropriation risk	0.264*** (0.010)	0.199* (0.015)	0.315*** (0.152)
Latitude	-0.179 (0.114)	-0.282** (0.134)	0.304*** (1.485)
Oil resources	-0.159** (0.000)	-0.107 (0.000)	0.071 (0.000)
Inequality - Gini index	-0.137 (0.002)	-0.494*** (0.002)	-0.086 (0.033)
Local democracy	0.052 (0.021)	-0.09 (0.036)	0.101 (0.358)
Openness	-0.287** (0.019)	0.128 (0.026)	0.051 (0.194)
Continental F.E.	Yes	Yes	Yes
Obs	68	68	68
p(OID)	0.650	0.276	0.849
p(PH) from 2SLS	0.236	0.594	0.634
p(B-P)	0.000	0.000	0.000

Table A5 reports robustness checks corresponding to clean elections highlighting the dimension of political participation in columns (1) and (2). Additionally, this exercise presents findings related to institutional roots of education in column (3) to save space. The results indicate that the coefficients associated with fiscal independence, the variable of interest, are negative, statistically significant at the one percent level, and economically relevant. Moreover, column (3) findings establish the effect of surrogates for economic institutions on education. The null of the over-identification test is not rejected. Also, conditions A2 and A3 of Baum & Lewbel (2019) are satisfied, suggesting the constructed instruments' validity. In particular, we fail to reject the null of the PH test, while the null of the BP test is rejected. Standardized coefficients are estimated. Robust (heteroskedasticity-adjusted) standard errors are reported in brackets. \*, \*\*, \*\*\* denotes statistical significance at 10%, 5%, and 1% level, respectively.

## Appendix

In **Tables A6-A11**, Fiscal Independence (FI) is obtained from the Economic Freedom of the World **2020** Annual Report, Area 1 (Size of Government), Component 1C (government investment as a share of total investment). When possible, missing observations in the 2020 Annual report were completed with the 2019 Annual report. All regressions include continental fixed effects.

**Table A6. Dependent Variable is: Bjørnskov-Rode Dichotomous Democracy Indicator in 2020)**

	(1) OLS	(2) 2SLS	(3) LIML	(4) CUE	(5) GMM2S
FI2015	-0.253** (0.004)	-0.305** (0.005)	-0.354* (0.007)	-0.686*** (0.003)	-0.374*** (0.004)
ELF	0.362** (0.219)	0.352*** (0.201)	0.343*** (0.207)	0.143 (0.172)	0.255** (0.164)
Idv.	-0.335 (0.004)	-0.351** (0.003)	-0.367** (0.003)	-0.323** (0.002)	-0.281** (0.002)
Education	0.283 (0.030)	0.294* (0.028)	0.304* (0.028)	0.312** (0.026)	0.413*** (0.022)
Legal Orig.	0.084 (0.120)	0.088 (0.106)	0.092 (0.107)	0.038 (0.107)	-0.002 (0.093)
Exp. Risk	0.299 (0.053)	0.291 (0.049)	0.284 (0.051)	-0.061 (0.038)	0.179 (0.039)
Latitude	-0.199 (0.514)	-0.202 (0.457)	-0.204 (0.452)	-0.129 (0.343)	-0.321** (0.314)
Oil Res	-0.128 (0.000)	-0.105 (0.000)	-0.082 (0.000)	0.059 (0.000)	-0.079 (0.000)
Inequality	-0.369* (0.010)	-0.374** (0.009)	-0.378** (0.009)	-0.228 (0.009)	-0.338** (0.008)
Obs	70	70	70	70	70
R <sup>2</sup>	0.480				
p(OID)		0.170	0.174	0.451	0.170
p(CLR)		0.091	0.073		
p(PH)		0.259	0.254	0.331	0.434
p(B-P)		0.134	0.134	0.134	0.134

Standardized beta coefficients; Standard errors in parentheses

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

**Table A7.** *Bjørnskov-Rode Democracy (5-year overlapping average ending in 2020)*

	(1) OLS	(2) 2SLS	(3) LIML	(4) CUE	(5) GMM2S
Fl2015	-0.238** (0.004)	-0.395*** (0.004)	-0.524** (0.007)	-0.598*** (0.003)	-0.453*** (0.004)
ELF	0.367** (0.212)	0.338** (0.196)	0.314** (0.206)	0.265** (0.179)	0.255** (0.160)
Idv.	-0.215 (0.003)	-0.265* (0.003)	-0.306** (0.003)	-0.221* (0.002)	-0.300** (0.002)
Education	0.345** (0.027)	0.377** (0.025)	0.404** (0.027)	0.291* (0.027)	0.452*** (0.021)
Legal Orig.	0.061 (0.110)	0.073 (0.102)	0.082 (0.107)	-0.059 (0.096)	0.030 (0.090)
Exp. Risk	0.216 (0.043)	0.193 (0.040)	0.175 (0.043)	-0.011 (0.037)	0.141 (0.036)
Latitude	-0.364* (0.408)	-0.372** (0.353)	-0.379** (0.352)	-0.018 (0.329)	-0.336** (0.290)
Oil Res	-0.162 (0.000)	-0.091 (0.000)	-0.033 (0.000)	0.038 (0.000)	-0.051 (0.000)
Inequality	-0.428** (0.010)	-0.442** (0.008)	-0.453** (0.008)	0.099 (0.011)	-0.346** (0.008)
Obs	70	70	70	70	70
R <sup>2</sup>	0.545				
p(OID)		0.169	0.209	0.446	0.169
p(CLR)		0.022	0.007		
p(PH)		0.194	0.237	0.000	0.214
p(B-P)		0.134	0.134	0.134	0.134

Standardized beta coefficients; Standard errors in parentheses

\* p&lt;0.10, \*\* p&lt;0.05, \*\*\* p&lt;0.01

**Table A8.** *Dependent Variable is: Bjørnskov-Rode Dichotomous Democracy Indicator in 2010*

	(1) OLS	(2) 2SLS	(3) LIML	(4) CUE	(5) GMM2S
Fl2005	-0.206* (0.003)	-0.383*** (0.004)	-0.501** (0.005)	-0.762*** (0.004)	-0.470*** (0.003)
ELF	0.327** (0.195)	0.316** (0.177)	0.308** (0.183)	0.367*** (0.159)	0.172* (0.130)
Idv.	-0.150 (0.002)	-0.193 (0.002)	-0.222* (0.002)	-0.158 (0.002)	-0.161 (0.002)
Education	0.166 (0.020)	0.136 (0.019)	0.116 (0.020)	0.020 (0.018)	0.126 (0.016)
Legal Orig.	0.098 (0.107)	0.093 (0.097)	0.089 (0.099)	0.043 (0.089)	0.098 (0.081)
Exp. Risk	0.169 (0.038)	0.179 (0.033)	0.186 (0.034)	0.376*** (0.033)	0.070 (0.026)
Latitude	-0.492*** (0.342)	-0.446*** (0.323)	-0.415** (0.347)	0.022 (0.349)	-0.456*** (0.236)
Oil Res	0.017 (0.000)	0.093 (0.000)	0.144 (0.000)	0.156 (0.000)	0.087 (0.000)
Inequality	-0.441** (0.008)	-0.448*** (0.008)	-0.453*** (0.008)	-0.249 (0.010)	-0.471*** (0.006)
Obs	71	71	71	71	71
R <sup>2</sup>	0.633				
p(OID)		0.182	0.214	0.362	0.182
p(CLR)		0.026	0.006		
p(PH)		0.084	0.099	0.001	0.039
p(B-P)		0.000	0.000	0.000	0.000

Standardized beta coefficients; Standard errors in parentheses

\* p&lt;0.10, \*\* p&lt;0.05, \*\*\* p&lt;0.01

**Table A9.** *Bjørnskov-Rode Democracy (5-year overlapping average ending in 2010)*

	(1) OLS	(2) 2SLS	(3) LIML	(4) CUE	(5) GMM2S
Fl2005	-0.264** (0.003)	-0.465*** (0.004)	-0.634** (0.006)	-0.683*** (0.003)	-0.623*** (0.002)
ELF	0.246* (0.178)	0.233** (0.161)	0.222* (0.171)	0.059 (0.126)	0.106 (0.125)
Idv.	-0.116 (0.002)	-0.165 (0.002)	-0.206* (0.002)	-0.185** (0.001)	-0.130 (0.002)
Education	0.198 (0.022)	0.164 (0.021)	0.135 (0.023)	0.115 (0.019)	0.107 (0.017)
Legal Orig.	0.055 (0.092)	0.049 (0.083)	0.044 (0.088)	-0.057 (0.070)	-0.040 (0.067)
Exp. Risk	0.127 (0.034)	0.139 (0.030)	0.148 (0.031)	0.159 (0.025)	0.129 (0.023)
Latitude	-0.494*** (0.334)	-0.442*** (0.315)	-0.398** (0.348)	-0.432*** (0.239)	-0.423*** (0.210)
Oil Res	0.020 (0.000)	0.107 (0.000)	0.180 (0.000)	0.105 (0.000)	0.129** (0.000)
Inequality	-0.413** (0.008)	-0.421** (0.008)	-0.428** (0.008)	-0.432*** (0.006)	-0.403*** (0.006)
Obs	71	71	71	71	71
R2	0.642				
p(OID)		0.271	0.337	0.505	0.271
p(CLR)		0.007	0.001		
p(PH)		0.060	0.106	0.110	0.102
p(B-P)		0.000	0.000	0.000	0.000

Standardized beta coefficients; Standard errors in parentheses

\* p&lt;0.10, \*\* p&lt;0.05, \*\*\* p&lt;.01

**Table A10.** *Cheibub et al.(2010) Binary (0-1) democracy indicator in 2008 (last available year)*

	(1) OLS	(2) 2SLS	(3) LIML	(4) CUE	(5) GMM2S
Fl2005	-0.330** (0.004)	-0.535*** (0.005)	-0.742** (0.008)	-1.493*** (0.006)	-0.637*** (0.003)
ELF	0.273* (0.211)	0.259** (0.192)	0.246* (0.207)	-0.042 (0.231)	0.145 (0.139)
Idv.	-0.201 (0.002)	-0.251* (0.002)	-0.302** (0.002)	-0.263** (0.002)	-0.259** (0.002)
Education	0.179 (0.024)	0.144 (0.024)	0.109 (0.027)	-0.157 (0.027)	0.116 (0.019)
Legal Orig.	0.055 (0.112)	0.048 (0.103)	0.042 (0.109)	0.267* (0.134)	0.040 (0.083)
Exp. Risk	0.078 (0.041)	0.089 (0.036)	0.101 (0.037)	-0.195 (0.046)	0.083 (0.025)
Latitude	-0.302 (0.437)	-0.248 (0.390)	-0.195 (0.418)	-0.055 (0.335)	-0.299** (0.279)
Oil Res	0.046 (0.000)	0.134 (0.000)	0.224* (0.000)	0.470*** (0.000)	0.138** (0.000)
Inequality	-0.410** (0.009)	-0.419** (0.008)	-0.427** (0.009)	-0.637*** (0.009)	-0.453*** (0.007)
Obs	71	71	71	71	71
R <sub>2</sub>	0.599				
p(OID)		0.291	0.395	0.734	0.291
p(CLR)		0.004	0.001		
p(PH)		0.004	0.024	0.112	0.010
p(B-P)		0.000	0.000	0.000	0.000

Standardized beta coefficients; Standard errors in parentheses

\* p&lt;0.10, \*\* p&lt;0.05, \*\*\* p&lt;.01

**Table A11.** *Average Democracy during 2005-2008 from Cheibub et al. (2010).*

	(1)	(2)	(3)	(4)	(5)
	OLS	2SLS	LIML	CUE	GMM2S
FI2005	-0.341** (0.004)	-0.563*** (0.005)	-0.858** (0.011)	-0.744*** (0.004)	-0.644*** (0.004)
ELF	0.144 (0.200)	0.129 (0.180)	0.110 (0.203)	0.190* (0.153)	0.097 (0.145)
Idv.	-0.088 (0.003)	-0.143 (0.002)	-0.214 (0.002)	-0.190 (0.002)	-0.138 (0.002)
Education	0.209 (0.026)	0.171 (0.026)	0.121 (0.031)	-0.105 (0.023)	0.086 (0.021)
Legal Orig.	0.012 (0.095)	0.006 (0.086)	-0.003 (0.096)	-0.015 (0.065)	-0.056 (0.062)
Exp. Risk	0.043 (0.037)	0.055 (0.031)	0.072 (0.034)	0.187 (0.029)	0.121 (0.025)
Latitude	-0.421* (0.427)	-0.363* (0.390)	-0.287 (0.449)	-0.215 (0.315)	-0.362** (0.289)
Oil Res	0.027 (0.000)	0.123 (0.000)	0.251 (0.000)	0.150* (0.000)	0.142** (0.000)
Inequality	-0.377* (0.009)	-0.386** (0.008)	-0.399** (0.009)	-0.421*** (0.007)	-0.379** (0.007)
Obs	71	71	71	71	71
R <sup>2</sup>	0.616				
p(OID)		0.217	0.246	0.366	0.217
p(CLR)		0.002	0.000		
p(PH)		0.005	0.082	0.452	0.030
p(B-P)		0.000	0.000	0.000	0.000

Standardized beta coefficients; Standard errors in parentheses

\* p&lt;0.10, \*\* p&lt;0.05, \*\*\* p&lt;.01

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# Reviews

*“Few researchers examine the impact of political structures on economic performance. This project is an exception. The authors find that fiscal independence leads to excessive spending and exerts an adverse impact on rule of law, freedom of speech, and various other political and civil rights. During the current age of large government spending, these findings will conflict with the views of many. This is all the more reason why they deserve to be heard.”*

**James Gwartney**

*Professor Emeritus and Gus A. Stavros Eminent Scholar Chair at  
Florida State University.*

*“This book proves what is historically true: the greater citizens' freedom to carry out their activities, the greater the development for all. The meddling of bureaucrats always tends to slow down development. Less state, more growth.”*

**Oscar Garcia Mendoza**

*Venezuelan Distinguished Banker. Leader of the most profitable and  
serious Bank in Venezuela.*

*“This book explains why in all prosperous democracies, governments are financially (fiscally) dependent on voters. Democracy is at risk when the government is independent from citizens' taxes. To empower the population, the government must depend on the taxes of the citizens.”*

**Jesús Ramírez, LA PATILLA**

*“This groundbreaking study confirms what Venezuelans already knew intuitively based on our experience of the last 50-plus years, observing firsthand the decay and eventual destruction of the political and economic institutions of our oil-producing nation: governments that own or control the majority of the productive assets of the country, the commanding heights, and therefore are not dependent or beholden to its citizens for its income, will, in the end, not care for them, making a true democracy unattainable, no matter the efforts of a good portion of its population. Fascinating is the authors’ analysis of over 1500 years of English constitutional history during which its subjects (and later, eventually citizens) effectively managed to “starve the king,” spurring outcomes that are directly linked to the emergence of the rule of law, a gradual democratization process, accompanied by a legal system (common law) that is second to none in history, giving rise to unparalleled economic development based on the Industrial Revolution in Britain and nations, like the United States, in which the same principles were laid down at the constitutional level shortly after their independence.”*

**Erik Halvorssen**

*“This book discloses the foundations of the narrow corridor, the freedom space determined by the state on one side, and the electors on the other. This corridor exists in some countries because the Leviathan is shackled given its financial dependency on the electors’ taxes and the electorate exerts collective action, that is, political participation, induced by the costs of taxation.”*

**Antonio Turco-Rivas Jr.**

*Director - Kanno Spaces, and Babson College - Franklin W. Olin  
Graduate School of Business*

*“Kudos to scholars Acevedo, Faria, Montesinos, and Navarro, who address the vital issue of government accountability to the electors, resorting to abundant historical and empirical evidence. The findings are presented in the context of democracy and its pillars, such as the rule of law, judicial independence, freedom of speech, clean elections, and civil liberties. Moreover, the study casts light on the Modernization hypothesis, the structure of government spending, and its potentially detrimental effect on democracies’ quality.*

*A crucial issue in the monograph is the salience of a government financially dependent on electors’ taxes to generate accountability. The authors argue, supported by evidence, that when the state lives off the people’s taxes, it becomes compelled to increase the supply of accountability. At the same time, the political participation of electors motivated by taxation costs augments the accountability demand.*

*Accordingly, this research on political economy and economic policy highlights the importance of active citizens’ participation in demanding accountability before their representatives at local, regional, and national levels, a practice little used, especially in Latin American countries.*

*This excellent study has disruptive findings that allow a better understanding of democracies’ heterogeneity worldwide. The investigation also discovers numerous pernicious effects on democracy and its pillars stemming from governments capable of obtaining revenues independently of the citizens.*

*Democracy has its rules, and the behavior of politicians frequently violates them, for which it is necessary to be vigilant to prevent this from happening. Therefore, this document invites the reader to learn and deepen the importance of solid political and economic institutions, checks and balances among the branches of government, and a legal framework promoter of societies’ welfare.”*

**Rocio Guijarro**  
Cedice Libertad Manager

*“Absolute monarchy results when the crown owns all or at least two-thirds of the landed wealth; aristocracy, when the nobles own a similar share. When the people possess two-thirds or more, the result is democracy.”*

*[James Harrington 1656, 1992.  
The Common Wealth of Oceana; and a System of Politics. pp.271-272.]*

*“English constitutional evolution.....provides a classic illustration of how private wealth restrains public authority.”  
[Richard Pipes 2000, Property and Freedom. p.123]*

## **Fiscal Independence from Electorate Accountability**

**Rafael Acevedo** (Creighton University, USA)

**Hugo J. Faria** (University of Miami, USA)

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# Rafael Acevedo

## Hugo J. Faria

## Hugo M. Montesinos-Yufa

## Carlos Navarro

*"Few researchers examine the impact of political structures on economic performance. This project is an exception. The authors find that fiscal independence leads to excessive spending and exerts an adverse impact on rule of law, freedom of speech, and various other political and civil rights. During the current age of large government spending, these findings will conflict with the views of many. This is all the more reason why they deserve to be heard."*

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