



ELSEVIER

Contents lists available at ScienceDirect

## European Journal of Political Economy

journal homepage: [www.elsevier.com/locate/ejpe](http://www.elsevier.com/locate/ejpe)Leader characteristics and constitutional compliance<sup>☆</sup>Jerg Gutmann<sup>a,b,\*</sup>, Katarzyna Metelska-Szaniawska<sup>c</sup>, Stefan Voigt<sup>a</sup><sup>a</sup> Institute of Law & Economics, University of Hamburg and CESifo, Munich, Germany<sup>b</sup> University of Freiburg, Germany<sup>c</sup> Faculty of Economic Sciences, University of Warsaw, Poland

## ARTICLE INFO

## JEL classification:

K10  
K38  
K42  
P16  
P26  
P48  
Z10

## Keywords:

Constitutional compliance  
*de jure-de facto* gap  
Leader characteristics

## ABSTRACT

While research in constitutional economics has made important progress in recent decades, the factors determining whether a constitution is complied with have only received scant attention. We contribute to that narrow literature by studying how personal traits of political leaders are associated with constitutional compliance. Compliance levels of 943 political leaders between 1950 and 2010 can be explained by their education, entry into office, political experience, military background, and whether they are members of extreme left-wing parties. Specifically, under former military officers and Communist leaders, constitutional compliance is significantly lower. The combined effect of these two traits corresponds to the difference between democracy and nondemocracy. This implies a difficult normative question, which we discuss in our conclusion: Should constitutions set entry barriers for high political offices that are based on leader characteristics?

## 1. Introduction

Research in constitutional economics has made substantial progress in recent decades. Studies have confirmed the significance of constitutions for policy decisions and various economic outcomes (Voigt 2011, 2020 survey this literature). Some attention has also been devoted to constitutional change and the longevity of entire constitutions (e.g., Elkins et al., 2009; Hayo and Voigt 2010, 2013). More recently, questions of constitutional compliance have attracted the attention of researchers. Firstly, they concern how low compliance levels matter for governments' ability to credibly commit (Metelska-Szaniawska 2021). Secondly, they concern why constitutions set effective constraints in some countries, whereas governments of other countries do not pay much attention to the rules entrenched in their constitution (Chilton and Versteeg 2020; Law and Versteeg 2013; Voigt 2021).

Here, we contribute to the emerging literature on the determinants of constitutional compliance. We refer to the gap between *de jure* constitutional provisions and the way these provisions are actually implemented as the *de jure-de facto* gap. Voigt (2021) surveys the limited literature inquiring into the causes of this gap and proposes a general conceptual framework for how to analyze it. This framework focuses on the incentives of government actors to comply with the formal constraints spelled out in the constitution. Some

<sup>☆</sup> This research is part of a Beethoven project funded by the National Science Centre (NCN, #2016/23/G/HS4/04371), Poland and the Deutsche Forschungsgemeinschaft (DFG, #381589259), Germany. The authors thank the participants of the European Association of Law and Economics Conference, the European Public Choice Society Conference, the Public Choice Society Annual Meetings, and the 3<sup>rd</sup> Ariel Conference on the Political Economy of Public Policy for helpful comments and suggestions. The authors have no competing interests.

\* Corresponding author. Institute of Law & Economics, University of Hamburg and CESifo, Munich, Germany.  
E-mail addresses: [jerg.gutmann@uni-hamburg.de](mailto:jerg.gutmann@uni-hamburg.de) (J. Gutmann), [kmetelska@wne.uw.edu.pl](mailto:kmetelska@wne.uw.edu.pl) (K. Metelska-Szaniawska), [stefan.voigt@uni-hamburg.de](mailto:stefan.voigt@uni-hamburg.de) (S. Voigt).

<https://doi.org/10.1016/j.ejpoleco.2023.102423>

Received 30 November 2022; Received in revised form 22 April 2023; Accepted 20 June 2023

Available online 25 June 2023

0176-2680/© 2023 Elsevier B.V. All rights reserved.

government actors might increase their utility by not complying with these constraints. We study how personal traits of political leaders affect this *de jure-de facto* gap. Research interested in the relevance of personal traits of political leaders for macroeconomic performance has focused, in particular, on the education as well as the professional background of politicians. We here link these traits and others to constitutional compliance.<sup>1</sup>

Our empirical analysis combines a novel dataset measuring constitutional compliance (Gutmann et al., 2023) with data on a variety of traits of political leaders (Baturó 2016). The resulting information on the constitutional compliance of 943 political leaders between 1950 and 2010 provides evidence that leaders' education, entry into office, military background, and their membership in extreme left-wing parties matter for constitutional compliance. This leads to the difficult normative question whether constitutions should set entry barriers for high political offices that are based on such leader characteristics.

This article is structured as follows. In Section 2, we survey the strands of literature on the causes of constitutional compliance and on the effects of leader characteristics. Section 3 discusses our theoretical predictions. Section 4 presents the data used in our study with a focus on the novel Comparative Constitutional Compliance Database. In Section 5, we describe our empirical analysis and discuss the results before Section 6 concludes with a discussion of potential normative implications for entry barriers to political offices.

## 2. Literature review

While history is typically told with an emphasis on how personalities and ideas have shaped the development of humankind, both aspects were for a long time surprisingly absent from modern economic models (Rodrik 2014). This only began to change with a number of theoretical models, whose authors assumed that policy makers' characteristics, such as their policy preferences, talent or virtue, matter for policy outcomes (e.g., Besley and Coate 1997 or Osborne and Slivinski 1996; Persson and Tabellini 2002 is a survey).

The general economics literature has argued for some time that traits of decision-makers can help predict their decisions and performance. Bertrand and Schoar (2003) show that managers have different styles, which they apply across their jobs at different firms (see also Bandiera et al., 2020). Managers with an M.B.A, for example, pursue more aggressive business strategies. Kaplan et al. (2012) use a novel data set of assessments of CEO candidates of companies. They find that performance is strongly related to CEOs' general talent.

Empirical research on the role of political leaders is of an even more recent vintage. In what became a seminal contribution to this literature, Jones and Olken (2005, 2009) show that the unexpected death of a country's leader affects conflict, change in political institutions, and economic growth. Brender and Drazen (2013) find a large effect of leaders on the composition of public expenditures in democracies, while Hayo and Voigt (2013) indicate that irregular leadership turnovers (such as heads of government dying or being exiled) increase the probability of switching to a more presidential form of government.<sup>2</sup> Studies in the field of international relations and comparative politics have identified many more effects of leader transitions, *inter alia*, on military conflict and coalitions, trade, voting in international organizations, and economic sanctions (e.g., Bobick and Smith 2013; Krustev and Morgan 2011; Mattes et al., 2015; McGillivray and Stam 2004; Smith 2016; Wolford 2007).

Among leader characteristics that potentially matter for political decisions and economic outcomes, education has received the most attention. Leaders' educational attainment is supposed to be related to macroeconomic performance because it influences leaders' competence, policy preferences, and even their dedication to promoting the public interest. Besley et al. (2011) confirm Jones and Olken's (2005) finding for an extended sample and put forward empirical evidence for more educated leaders being associated with higher growth rates. Congleton and Zhang (2013) obtain a similar result for 41 US presidents. François et al. (2020) find that greater educational attainment of dictators is associated with higher FDI, confirming that leaders' traits influence not only policy choices but also investors' expectations and, thereby, macroeconomic performance. Li et al. (2020) provide empirical evidence that a positive relationship exists between leaders' total years of education and economic liberalization in both democracies and autocracies, i.e., more educated leaders implement more liberalizing reforms during their tenure.

Leaders' training in the field of economics has also received some attention. Training in economics could impact policy decisions and economic outcomes by facilitating a better understanding of the trade-offs involved in designing public policy. In their study of 500 political leaders from 72 countries, Dreher et al. (2009) do not find a robust effect of economic education on market liberalizing reforms. Li et al. (2020), however, establish a robust positive relationship between leaders' training in economics or business administration and their implementation of liberalizing economic reforms in a significantly expanded sample of 137 countries. Clémenceau and Soguel (2017) find that finance ministers of Swiss cantons who are trained economists are more likely to make use of creative accounting.

Studies have also evaluated the effect of political leaders' work experience, in particular as economists or managers. Göhlmann and Vaubel (2007) show that central bankers who are former members of the central bank staff prefer significantly lower inflation rates than former politicians. Dreher et al. (2009) find that political leaders with prior business experience and former economists are more likely to implement market-liberalizing reforms. Jochimsen and Thomasius (2014) observe that finance ministers who gained financial expertise prior to their appointment achieve significantly lower deficits than others. Hayo and Neumeier (2016) show that leaders who

<sup>1</sup> In related work, Mehmood and Seror (2023) show that religious leaders gaining political offices in Pakistan have been detrimental to the quality of local courts.

<sup>2</sup> In a similar vein, some studies analyze the impact of single leaders on individual countries, such as Grier and Maynard (2016), who examine various effects of the rule of Hugo Chavez on the Venezuelan economy and society.

held blue-collar jobs prior to their political career produce larger public deficits. Neumeier (2018) finds that US state governors with a background in business are associated with faster economic growth and lower unemployment. François et al. (2020) put forward evidence that both dictators' education in economics and their prior business experience are associated with more FDI.

Other aspects of leaders' education and professional experience that have attracted the attention of researchers include foreign education and having a military background. Several studies observe that those who studied in Western democracies are likely to bring democratic values back home. Gift and Krcmaric (2017) show for a sample of 500 political leaders that democratization is more likely when they were educated at Western universities. Based on over 900 leaders of developing countries, Mercier (2016) finds a positive correlation between leaders' foreign education in high-income OECD countries and improvements in the level of democracy, but only for those leaders who rise to power in an autocratic setting.

Military training or even combat experience is often regarded as an important life experience, but also as an indicator of someone's personality. Military experience can form human capital in future political leaders with respect to their comprehension of military conflict as a policy tool. Moreover, military experience may increase the propensity of a leader to consider military means an adequate solution to political problems. Soft skills, such as discipline, and a preference for hierarchical decision-making may also be promoted during military service. Having served in the military or even fought in military combat may also be interpreted by voters as a credible signal of a politician's personality, particularly their commitment to public service. Horowitz and Stam (2014) study over 2500 leaders and confirm that those with a military background, but no combat experience, are most likely to initiate militarized disputes and wars.

Other leader characteristics identified by the literature as potentially relevant for policy decisions include age, length of political experience, and gender. The first two traits are related to the plausible future length of a leader's tenure. A shorter expected tenure is associated with a shorter time horizon, which could lead to more rent extraction rather than long-term oriented decisions. Therefore, leaders' age should be negatively correlated with economic growth. The opposite is expected regarding political experience prior to entering office, as career politicians may have longer time horizons. While some studies confirm these expectations (e.g., Atella and Carbonari 2017; Jong-a-Pin and Mierau 2022), others do not (e.g., François et al., 2020). Interestingly, while democracies used to select more politically experienced leaders, the difference compared to nondemocracies has declined dramatically since the early 2000s. Another form of political capital, which has been considered a potential threat to political competition, are political dynasties (Dal Bó et al., 2009). With regard to gender, Dollar et al. (2001) find that a larger share of female parliamentarians is associated with lower levels of corruption, while Chattopadhyay and Duflo (2004) argue in a study on India that participation of women in political decision-making results in better access to several types of public goods. Brollo and Troiano (2016) study close mayoral elections in Brazil and find that female mayors are less likely to engage in corruption. Fuchs and Richert (2018) demonstrate that female development ministers provide higher quality development assistance. Dube and Harish (2020) show that female monarchs were more likely to be involved in conflict. But this was partially due to an increased likelihood of being attacked. Hessami and Lopes da Fonseca (2020) review a wide range of effects of female political representation. Versteeg et al. (2020) find that all presidents who have evaded constitutional term limits over the last 20 years were male.

### 3. Theory

In a general cost-benefit framework (see also Voigt 2021), we can distinguish two types of constraints that may determine the size of the *de jure-de facto* gap, i.e., the level of constitutional compliance. One type of constraint is embedded in the content and structure of the constitution and the other type is due to environmental factors under which the constitution operates (e.g., a country's constitutional history, geography, or culture).

The costs of constitutional noncompliance can be grouped into three categories, depending on the type of actor imposing them. Firstly, veto players in any constitutional system constrain each other in overstepping their respective competences. The more veto players are established by the constitution, the lower the likelihood of a constitutional breach. Secondly, also foreign actors may impose costs on a noncomplying government (e.g., a loss of reputation in the international political arena or domestically). This is particularly effective in case of a country that is party to numerous international agreements or member of an international organization that monitors and sanctions breaches of the constitution. Thirdly, non-state actors (e.g., citizens or NGOs) may also cause costs that incentivize the government to comply with the constitution. The probability of being sanctioned for noncompliance by any of those actors depends, *inter alia*, on the availability of information concerning the content of the constitution, the precision of the constitutional provisions, the prevailing doctrine regarding their interpretation, as well as access to information about the government's *de facto* policies.

The benefits of noncompliance with the constitution also depend on three factors: the degree to which government preferences align with the text of the constitution, the degree to which the constitution constrains these actors, as well as the personal characteristics of the government actors constrained by the constitution. Here, we are particularly interested in the last category, i.e., the relevance of attributes of the effective political leaders of independent states. Next, we discuss some potentially relevant leader characteristics.

According to signalling theory (Spence 1973), having received a university degree could be interpreted as a valuable signal regarding a leader's ability to deliver results of a predefined quality within certain constraints. This proven competence might increase a politician's likelihood of complying with the constraints enumerated in the relevant constitution. Moreover, a university education

also implies foregone income for several years, which reflects an individual's willingness to give up quick profits in exchange for long-term returns to investment or in other words, it reflects patience. Patience has been shown to be the single most important trait conducive to economic prosperity (Falk et al., 2018). We expect patient leaders to comply more with the constitution, as constitutional compliance tends to sacrifice short-term gains in favor of even larger long-term benefits.<sup>3</sup> Education may further be conducive to a better understanding of constitutional rules in terms of their rationale, their functioning, and their value. It may allow leaders to solve the optimization problem of how to achieve political goals while remaining within the boundaries set by the constitution.

**H1.** Political leaders with higher education comply more with their country's constitution.

Training in economics should lead to a better appreciation of the (economic) benefits of rule compliance (e.g., Hayek 2011). An economist – unlike a lawyer – may, however, think about compliance with the constitution in terms of tradeoffs, rather than based on principle. In that sense, trained lawyers might be even more likely to comply with the constitution than economists. In addition, given their professional skills and their specialized knowledge of their country's legal system, leaders with legal training may be better equipped to avoid situations in which their behavior could be regarded as a violation of the constitution.

**H2/H3.** Political leaders who are trained economists / lawyers comply more with their country's constitution.

Aside from leaders' level of formal education and their field of study, the literature also discusses potential differences between leaders who were educated in the West and those educated in other foreign countries. Given that the rule of law and constitutionalism are more firmly established in the West, it can be expected that Western education in particular is conducive to constitutional compliance.

**H4.** Political leaders who are educated in the West comply more with their country's constitution.

The effect of political capital acquired before a leader enters office is theoretically more ambiguous. On the one hand, family ties and other close political networks can shield politicians from competition, giving them more scope for rent extraction, even if their actions violate the constitution. On the other hand, political capital in the form of experience could allow politicians – similar to the argument regarding legal training – to realize their political goals without overstepping constitutional constraints.

**H5.** Political leaders who come from a political dynasty comply less with their country's constitution.

**H6.** Political leaders who have more political experience comply more with their country's constitution.

A skill set of political leaders that is often emphasized, aside from formal education, is leaders' military experience. It is argued here that military experience is important for leadership skills beyond a politician's ability to lead a country in a military conflict. On the one hand, military training should encourage discipline and compliance with rules and orders. On the other hand, the military tends to emphasize hierarchy, but it may struggle with the fact that the leadership itself is bound by rules. Constitutions, especially those providing for the rule of law, often stipulate costly checks and balances, e.g., involving an independent judiciary. Members of the executive who are, due to their military training and socialization, used to a vertical chain of command might be more willing to violate horizontal constitutional constraints. Also, while modern militaries have systems of strict rules that cannot simply be overruled by command, this is not at all representative of the typical military in the 20<sup>th</sup> century.

**H7.** Political leaders with military experience comply less with their country's constitution.

Finally, political leaders with extreme ideologies may be less willing to comply with constitutions. Supreme values, which are preferred lexicographically to all other goals and believed to be absolutely true (Bernholz 2004, 2017), may declare some duties of government to be more important than even the survival of the state or its citizenry (Congleton 2020). Adherents to such ideologies would place the implementation of their own values above the rights of others (Gouda and Gutmann 2021). Therefore, leaders who are supported by extremist (left-wing or right-wing) parties are not expected to respect constitutions.

**H8.** Political leaders with an extreme political ideology comply less with their country's constitution.

#### 4. Data

In our empirical analysis, we rely on two data sources. The first is a novel dataset that measures politicians' compliance with their national constitution. The second dataset codes a large number of characteristics of countries' political leaders. We combine these two datasets into one panel dataset that covers 5631 country-year observations corresponding to the tenures of 943 political leaders over the period from 1950 to 2010.

The indicator of constitutional compliance was developed by Gutmann et al. (2023) and is publicly available as part of the Comparative Constitutional Compliance Database. Gutmann et al.'s main indicators are constructed based on information from two data sources. They use data on *de jure* constitutional rules from the Comparative Constitutions Project by Elkins et al. (2009). This information is combined with *de facto* data on compliance with legal standards from version 12 of the Varieties of Democracy project (V-Dem). Gutmann et al. measure *de jure-de facto* gaps, i.e., the noncompliance with rules laid out in the constitution, regarding 14

<sup>3</sup> See Gutmann et al. (2021) for the effect of society-level cultural traits, like patience, on constitutional compliance.

rules commonly found in constitutions: (1) protection of private property rights, (2) judicial independence, (3) equality before the law, (4) rule of law, (5) freedom of association, (6) freedom of assembly, (7) the right to form parties, (8) media freedom, (9) freedom of speech, (10) freedom of movement, (11) religious freedom, (12) the right to life, (13) freedom from slavery, and (14) protection from torture.

According to their coding rule, compliance with a constitutional rule is coded 1 if that rule is protected both *de jure* and *de facto*. The compliance indicator is coded 0 if the right is protected *de jure*, but not *de facto*. If a constitutional right is not protected *de jure*, a value of 0.5 is assigned, irrespective of the *de facto* measure. *De jure* is coded based on whether a rule is part of the constitution, where sometimes it is sufficient that one of two alternative rules exists (e.g., either freedom of opinion or freedom of expression). *De facto* is coded based on whether V-Dem country experts see the protection of a right in one of the top two response categories. If there is more than one relevant V-Dem indicator available, each one of them has to be coded in the top two categories for the right to be considered *de facto* protected. Gutmann et al. (2023) aggregate the resulting 14 indicators first within four legal areas and then into one indicator of overall constitutional compliance. We use the latter indicator (cc\_total) in our empirical analysis.<sup>4</sup>

Our data on political leaders' characteristics comes from Baturó (2016). There are several publicly available datasets of leader characteristics. They differ in terms of the leader traits, the number and kinds of leaders, and the time period covered. Baturó (2016) is particularly suitable for our analysis, because it covers a long time period (and thus many political leaders) and a large number of relevant traits. A downside of the dataset is that it ends in 2010. The dataset provides significantly more information for our analysis in terms of the number of leaders and traits than, for example, the well-established datasets by Goemans et al. (2009) and Ellis et al. (2015) or the new dataset by Dreher et al. (2020).

Since the dataset by Baturó (2016) is recorded on the leader level, we need to transform it into country-year information, i.e., the level of aggregation on which constitutional compliance is measured. The important challenge here is how to deal with years in which there is a change in leadership. First, we disregard the first calendar year in each leader's term, except if it starts on January 1<sup>st</sup>. Moreover, we include the final calendar year of a leader's time in office in our dataset only if he or she remains in office for more than half of the year. This makes it very likely that these leaders are responsible for the level of constitutional compliance measured during the final months of their tenure.

As control variables, we account for leaders' gender, their age, and whether they entered political office in a regular fashion. Young political leaders face the prospect of many years in politics. For them, the long run gains of complying with the constitution, hence, are more likely to outweigh the benefits of transgression. Female leaders may be more likely to comply with the constitution, as there is some evidence that countries ruled by women suffer less from corruption (see Dollar et al., 2001). Evidence gained in experiments, which indicates that women are more risk-averse than men, offers an explanation for why they might hesitate to take bribes or renege on the constitution (Croson and Gneezy 2009). Leaders who gained power through irregular means should be less likely to comply with the constitution. Having acquired power by breaking rules, breaching the rules while governing should not undermine their legitimacy any further.<sup>5</sup> Finally, we include two country level control variables. Controlling for GDP per capita (Feenstra et al., 2015, v10.01) accounts for the fact that higher levels of income may make it easier to enforce and comply with constitutional rules. It is important to control for income, as richer societies may also choose different leaders, e.g., ones with higher formal education. Our second control variable on the country level indicates whether a country is democratic according to Bjørnskov and Rode (2020). This is important to consider, since Gutmann et al. (2023) have shown that democracies systematically comply more with the constitution, and we need to disentangle the effect of the type of leaders who come to power in democracies from the effect of a country being democratic. The indicator by Bjørnskov and Rode (2020) is based on a minimalist definition of (electoral) democracy. This is important, because other democracy indicators already include some information on compliance with constitutional constraints.

Table 1 summarizes our dataset. Political leaders are on average 58 years old. Most of them (98%) are male and almost 78% of them entered office in a regular fashion. The majority of the political leaders in our dataset have completed tertiary education (66%) and another 12% even hold a PhD. Thus, less than one quarter of the leaders have not finished higher education. In terms of their fields of study, 13% of leaders have studied economics and 29% studied law. Baturó (2016) classifies 4% of leaders as having received university education during the Cold War in the USSR or a Soviet satellite, 33% as having a Western foreign education (i.e., from North America, Western Europe, or Australia), and 41% as having a non-Western foreign education.

A leader's political capital is measured in terms of four indicators. 17% of all leaders come from a political family and 10% had an occupation as the relative of a previous ruler. These indicators measure family ties in politics. Political experience before entering office is measured in years and the average ruler had 11 years of experience before their time in office. Finally, 54% of leaders are classified as career politicians, which can be considered a proxy for both political ties and political experience.

In terms of professional experience, we account for whether leaders previously worked in academia (6%), in private business (8%), in the judiciary (1%), or in the military (21%). Professional experience in academia can be interpreted as another indicator of one's formal education. A career in private business may suggest similar decision-making skills as economic training, but the acquired skills might be of a more practical and less scientifically rigorous nature. Previous work in the judiciary is, of course, closely related to legal training, but the very small share of former judges among leaders (1%) indicates that a transition across the two branches of government is rather unusual, although legally trained individuals are heavily overrepresented among political leaders. 8% of all leaders come from a party that is Communist, Marxist-Leninist, Maoist, or similar. Finally, almost one in four leaders (24%) have a background

<sup>4</sup> The alternative indicator cc\_total\_lv produces virtually identical results, which are available on request.

<sup>5</sup> Hayo and Voigt (2016) find that reaching power through irregular means is significantly correlated with adverse changes in the constitutionally guaranteed level of judicial independence.

**Table 1**  
Descriptive statistics.

	N	Mean	SD	Min	Max
Constitutional compliance	5631	0.02	1.02	-1.86	1.97
Democracy	5631	0.47	0.50	0	1
Log-income p.c.	5631	8.62	1.17	5.50	12.54
Female	5631	0.02	0.15	0	1
Age	5631	57.95	10.91	18	90
Irregular entry	5631	0.22	0.41	0	1
Tertiary education	5631	0.66	0.47	0	1
Ph.D.	5631	0.12	0.33	0	1
Education: Economics	5631	0.13	0.34	0	1
Education: Law	5631	0.29	0.46	0	1
Soviet education	5606	0.04	0.20	0	1
Western education	5618	0.33	0.47	0	1
Foreign education	5595	0.41	0.49	0	1
Political family	5631	0.17	0.38	0	1
Ruler's relative	5631	0.10	0.30	0	1
Career politician	5627	0.54	0.50	0	1
Political experience	5629	11.29	9.78	0	52
Career: Academia	5631	0.06	0.24	0	1
Career: Business	5631	0.08	0.27	0	1
Career: Judiciary	5631	0.01	0.07	0	1
Career: Military	5631	0.21	0.41	0	1
Extreme left party	5396	0.08	0.27	0	1
Revolutionary or opposition	5631	0.24	0.43	0	1

in a revolutionary movement or anti-colonial struggle or were active in the political opposition or trade unions of a nondemocratic country. We consider this trait because these leaders have previously agitated against the political regime of the country. However, it is not clear whether this implies a lack of respect for the country's constitutional order after they themselves have come to power.

## 5. Empirical analysis

In our empirical analysis, we run simple linear regression models to explain constitutional compliance in a country based on attributes of its *de facto* political leader. All model specifications include constitutional system-, country-, and year-fixed effects. Country- and -year-fixed effects ( $\mu$  and  $\vartheta$ ) account for any unobservable time-invariant country characteristics and a general time trend in constitutional compliance. As explained in Section 3, the benefits of violating the constitution do not only depend on leader characteristics, but also on the constitution itself. Thus, we hold the traits of the constitution constant by including constitutional system-fixed effects ( $\lambda$ ), as defined by Elkins et al. (2009). Standard errors are clustered on the political leader level, as this is the aggregation level on which leader traits, i.e., our variables of interest, are measured. Equation (1) summarizes our estimation approach:

$$\text{Compliance}_{i,t} = \beta \times \text{LeaderAttr}_{i,t} + \gamma \times X_{i,t} + \lambda_{i,t} + \mu_i + \vartheta_t + \varepsilon_{i,t} \quad (1)$$

Note that readers leaning towards a conservative interpretation of our results may read them as conditional correlations. In that

**Table 2**  
Education.

	(1)	(2)	(3)	(4)	(5)
Democracy	0.887*** (0.083)	0.886*** (0.083)	0.876*** (0.082)	0.894*** (0.083)	0.884*** (0.082)
Log-income p.c.	0.040 (0.042)	0.041 (0.042)	0.054 (0.041)	0.032 (0.039)	0.045 (0.038)
Female	-0.066 (0.089)	-0.065 (0.089)	-0.048 (0.087)	-0.065 (0.089)	-0.049 (0.087)
Age	-0.001 (0.001)	-0.00 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)
Irregular entry	-0.281*** (0.072)	-0.282*** (0.070)	-0.273*** (0.070)	-0.282*** (0.073)	-0.276*** (0.070)
Tertiary education		0.011 (0.044)			0.017 (0.051)
Ph.D.		-0.015 (0.060)			0.014 (0.068)
Education: Economics			0.002 (0.044)		0.005 (0.043)
Education: Law			0.095** (0.034)		0.080* (0.035)
Soviet education				-0.050 (0.089)	-0.045 (0.088)
Western education				0.168** (0.063)	0.156* (0.062)
Foreign education				-0.169** (0.064)	-0.155* (0.062)
Within R <sup>2</sup>	0.35	0.35	0.36	0.37	0.37
Countries	156	156	156	156	156
Leaders	943	943	943	926	926
Observations	5631	5631	5631	5570	5570

Note: OLS regression coefficients with cluster-robust standard errors in parentheses. Standard errors are clustered on the leader-level. All models include constitution-, country-, and year-fixed effects. \*\*\*p < 0.001, \*\*p < 0.01, \*p < 0.05.

case, our results tell us under which kinds of leaders constitutional compliance is higher or lower. In other words, leader traits would only be predictors and not necessarily the cause of the observed systematic variation. In the following, we use neutral language and leave it to the reader, whether they prefer a causal or non-causal interpretation of our findings. As we consider a causal interpretation justified, we discuss policy implications of such an interpretation of our results.

Table 2 shows our baseline results (Column 1) and the relationship between leader education and constitutional compliance (Columns 2 to 5). While income per capita is not related to significantly higher constitutional compliance, democracies are confirmed to exhibit compliance levels that are almost one standard deviation higher than those of nondemocracies (see also Gutmann et al., 2023). Although we find no effect of formal education *per se* or training specifically in economics, our results are consistent with Hypothesis 3, as constitutional compliance is significantly higher when leaders have a legal education (almost 10% of a standard deviation). Our findings also corroborate Hypothesis 4, as leaders with a foreign Western education are associated with higher constitutional compliance (more than 15% of a standard deviation). Foreign education of a leader in non-Western countries, in contrast, is associated with reduced constitutional compliance. In sum, our results reject Hypotheses 1 and 2, whereas Hypotheses 3 and 4 find support in the data.

The models in Table 3 evaluate the relevance of political capital, in terms of either family ties or experience in politics, for constitutional compliance. Coming from a political family or being a career politician show no significant effect. However, the number of years of political experience is associated with increased constitutional compliance. Accordingly, 10 years of experience in politics are associated with an increase in compliance by 5% of a standard deviation. These results reject Hypothesis 5 and corroborate Hypothesis 6.

Table 4 shows our results regarding the relationship between constitutional compliance and previous occupation or leader ideology. We find no significant relationship between the level of constitutional compliance and a previous civilian occupation in academia, business, or the judiciary. However, political leaders who are former members of the military are associated with significantly lower constitutional compliance (almost 15% of a standard deviation). Even larger is the negative effect associated with leaders who are members of an extreme left-wing party. In this case, constitutional compliance is reduced by about 70% of a standard deviation. This effect is far larger than that of any other leader trait and closer in size to the difference between democracy and non-democracy. It could be questioned if this association is specific to the leader's ideology or if it is only the result of communist leaders often being involved in revolutionary movements. Thus, we control for leaders' past involvement in a revolutionary movement or in opposition or trade unions in a nondemocracy. This leader trait, however, is not associated with reduced constitutional compliance. It really seems to be the political orientation of Communist politicians that is linked to dramatically reduced constitutional compliance. Our findings are, therefore, consistent with Hypotheses 7 and 8.

## 6. Conclusion

To sum up our findings, although a leader's formal education and training in economics are not associated with higher constitutional compliance, legal education and university studies in Western countries are linked to significantly more compliance. While we do not find that members of political families comply less with the constitution, politically more experienced leaders exhibit higher compliance levels. Regarding a leader's military experience, we find that it seems to undermine constitutional compliance, which is consistent with the more general observation in the literature that military regimes suffer from poor governance. Finally, extreme left-wing ideology of a leader is associated with a dramatic reduction in constitutional compliance, underlining the dangerous consequences of allowing supreme values into politics (see, e.g., Bernholz 2017; Gouda and Gutmann 2021). If interpreted as causal, these results raise the question whether constitutions could be more effective if access to political offices would be more rigorously regulated. Whereas requirements with respect to education or political experience might unnecessarily reduce access to political offices and, thus, political competition and the legitimacy of the political system, excluding former members of the military from top political offices might be both realistic and effective. The fact that extreme left-wing ideology seems to conflict with constitutional compliance

**Table 3**  
Political capital.

	(1)	(2)	(3)	(4)	(5)
Democracy	0.887*** (0.083)	0.887*** (0.083)	0.888*** (0.083)	0.872*** (0.082)	0.868*** (0.081)
Log-income p.c.	0.041 (0.042)	0.040 (0.042)	0.040 (0.042)	0.044 (0.042)	0.045 (0.042)
Female	-0.068 (0.089)	-0.064 (0.091)	-0.066 (0.089)	-0.044 (0.085)	-0.039 (0.085)
Age	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.002 (0.001)	-0.002 (0.001)
Irregular entry	-0.280*** (0.072)	-0.281*** (0.072)	-0.281*** (0.075)	-0.267*** (0.072)	-0.278*** (0.075)
Political family	0.009 (0.032)				0.018 (0.035)
Ruler's relative		-0.011 (0.067)			-0.039 (0.079)
Career politician			-0.009 (0.036)		-0.064 (0.043)
Political experience				0.005** (0.002)	0.006*** (0.002)
Within R <sup>2</sup>	0.35	0.35	0.35	0.36	0.36
Countries	156	156	156	156	156
Leaders	943	943	942	941	940
Observations	5631	5631	5627	5629	5625

Note: OLS regression coefficients with cluster-robust standard errors in parentheses. Standard errors are clustered on the leader-level. All models include constitution-, country-, and year-fixed effects. \*\*\*p < 0.001, \*\*p < 0.01, \*p < 0.05.

**Table 4**  
Career and ideology.

	(1)	(2)	(3)	(4)
Democracy	0.857*** (0.083)	0.834*** (0.077)	0.888*** (0.083)	0.801*** (0.076)
Log-income p.c.	0.043 (0.040)	0.032 (0.043)	0.040 (0.042)	0.040 (0.041)
Female	-0.077 (0.089)	0.001 (0.082)	-0.066 (0.089)	-0.014 (0.081)
Age	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Irregular entry	-0.221** (0.071)	-0.217** (0.066)	-0.280*** (0.073)	-0.152* (0.060)
Career: Academia	-0.118 (0.066)			-0.144* (0.067)
Career: Business	0.102* (0.046)			0.079 (0.044)
Career: Judiciary	-0.071 (0.099)			-0.023 (0.083)
Career: Military	-0.142** (0.050)			-0.150** (0.048)
Extreme left party		-0.679*** (0.165)		-0.717*** (0.171)
Revolutionary or opposition			0.008 (0.047)	0.031 (0.045)
Within R <sup>2</sup>	0.37	0.38	0.35	0.40
Countries	156	151	156	151
Leaders	943	887	943	887
Observations	5631	5394	5631	5394

Note: OLS regression coefficients with cluster-robust standard errors in parentheses. Standard errors are clustered on the leader-level. All models include constitution-, country-, and year-fixed effects. \*\*\*p < 0.001, \*\*p < 0.01, \*p < 0.05.

could be interpreted as motivation to consider elements of militant democracy or militant constitutionalism in the design of political institutions (see, e.g., Gutmann and Voigt 2023).

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Data availability

Data will be made available on request.

### References

- Atella, Vincenzo, Carbonari, Lorenzo, 2017. Is gerontocracy harmful for growth? A comparative study of seven European countries. *J. Appl. Econ.* 20 (1), 141–168.
- Bandiera, Oriana, Prat, Andrea, Hansen, Stephen, Sadun, Raffaella, 2020. CEO behavior and firm performance. *J. Polit. Econ.* 128 (4), 1325–1369.
- Baturo, Alexander, 2016. Cursus honorum: personal background, careers and experience of political leaders in democracy and dictatorship – new data and analyses. *Polit. Govern.* 4 (2), 138–157.
- Bernholz, Peter, 2004. Supreme values as the basis for terror. *Eur. J. Polit. Econ.* 20 (2), 317–333.
- Bernholz, Peter, 2017. *Totalitarianism, Terrorism and Supreme Values*. Springer, Berlin.
- Bertrand, Marianne, Schoar, Antoinette, 2003. Managing with style: the effect of managers on firm policies. *Q. J. Econ.* 118 (4), 1169–1208.
- Besley, Timothy, Coate, Stephen, 1997. An economic model of representative democracy. *Q. J. Econ.* 112 (1), 85–114.
- Besley, Timothy, Montalvo, Jose G., Reynal-Querol, Marta, 2011. Do educated leaders matter? *Econ. J.* 121 (554), F205–F227.
- Bjørnskov, Christian, Rode, Martin, 2020. Regime types and regime change: a new dataset on democracy, coups, and political institutions. *The Review of International Organizations* 15 (2), 531–551.
- Bobick, Talya, Smith, Alastair, 2013. The impact of leader turnover on the onset and the resolution of WTO disputes. *Review of International Organizations* 8 (4), 423–445.
- Brender, Adi, Drazen, Allan, 2013. Elections, leaders, and the composition of government spending. *J. Publ. Econ.* 97, 18–31.
- Brollo, Fernanda, Troiano, Ugo, 2016. What happens when a woman wins an election? Evidence from close races in Brazil. *J. Dev. Econ.* 122, 28–45.
- Chattopadhyay, Raghabendra, Duflo, Esther, 2004. Women as policy makers: evidence from a randomized policy experiment in India. *Econometrica* 72 (5), 1409–1443.
- Chilton, Adam, Versteeg, Mila, 2020. *How Constitutional Rights Matter*. Oxford University Press, New York.
- Clémenceau, Maxime, Soguel, Niels, 2017. Does personal background influence a finance minister to cook the books? An investigation of creative accounting in Swiss cantons. *Appl. Econ.* 49 (10), 941–953.
- Congleton, Roger D., 2020. Governance by true believers: supreme duties with and without totalitarianism. *Constitut. Polit. Econ.* 31 (1), 111–141.
- Congleton, Roger D., Zhang, Yongjing, 2013. Is it all about competence? The human capital of U.S. presidents and economic performance. *Constitut. Polit. Econ.* 24, 108–124.
- Crosan, Rachel, Gneezy, Uri, 2009. Gender differences in preferences. *J. Econ. Lit.* 47 (2), 448–474.
- Dal Bó, Ernesto, Dal Bó, Pedro, Snyder, Jason, 2009. Political dynasties. *Rev. Econ. Stud.* 76 (1), 115–142.
- Dollar, David, Fisman, Raymond, Gatti, Roberta, 2001. Are women really the fairer sex? Corruption and women in government. *J. Econ. Behav. Organ.* 46 (4), 423–429.
- Dreher, Axel, Lamla, Michael J., Lein, Sarah M., Somogyi, Frank, 2009. The impact of political leaders profession and education on reforms. *J. Comp. Econ.* 37, 169–193.
- Dreher, Axel, Fuchs, Andreas, Kammerlander, Andreas, Kaplan, Lennart, Robert, Charlotte, Unfried, Kerstin, 2020. *Light of Their Life: Country Leaders' Spouses and Regional Favoritism*. Mimeo.
- Dube, Oindrila, Harish, S.P., 2020. Queens. *J. Polit. Econ.* 128 (7), 2579–2652.
- Elkins, Zachary, Ginsburg, Tom, Melton, James, 2009. *The Endurance of National Constitutions*. Cambridge University Press, Cambridge.
- Ellis, Cali M., Horowitz, Michael C., Stam, Allan C., 2015. Introducing the LEAD data set. *Int. Interact.* 41 (4), 718–741.
- Falk, Armin, Becker, Anke, Dohmen, Thomas, Enke, Benjamin, Huffman, David, Sunde, Uwe, 2018. Global evidence on economic preferences. *Q. J. Econ.* 133 (4), 1645–1692.

- Feenstra, Robert C., Inklaar, Robert, Timmer, Marcel P., 2015. The next generation of the Penn world table. *Am. Econ. Rev.* 105 (10), 3150–3182.
- François, Abel, Panel, Sophie, Weill, Laurent, 2020. Educated dictators attract more foreign direct investment. *J. Comp. Econ.* 48 (1), 37–55.
- Fuchs, Andreas, Richert, Katharina, 2018. Development minister characteristics and aid giving. *Eur. J. Polit. Econ.* 53, 186–204.
- Gift, Thomas, Krcmaric, Daniel, 2017. Who democratizes? Western-educated leaders and regime transitions. *J. Conflict Resolut.* 61 (3), 671–701.
- Goemans, Henk E., Gleditsch, Kristian S., Chiozza, Giacomo, 2009. Introducing Archigos: a dataset of political leaders. *J. Peace Res.* 46 (2), 269–283.
- Göhlmann, S., Vaubel, Roland, 2007. The educational and professional background of central bankers and its effect on inflation: an empirically analysis. *Eur. Econ. Rev.* 51, 925–941.
- Gouda, Moamen, Gutmann, Jerg, 2021. Islamic constitutions and religious minorities. *Publ. Choice* 186 (3–4), 243–265.
- Grier, Kevin, Maynard, Norman, 2016. The economic consequences of Hugo Chavez: a synthetic control analysis. *J. Econ. Behav. Organ.* 125, 1–21.
- Gutmann, Jerg, Voigt, Stefan, 2023. Militant Constitutionalism: A Promising Concept to Make Constitutional Backsliding Less Likely? *Publ. Choice* 195 (3–4), 377–404.
- Gutmann, Jerg, Lewczuk, Anna, Lewkowicz, Jacek, Voigt, Stefan, 2021. Culture and Constitutional Compliance. mimeo.
- Gutmann, Jerg, Metelska-Szaniawska, Katarzyna, Voigt, Stefan, 2023. The Comparative Constitutional Compliance Database, the Review of International Organizations. DOI: 10.1007/s11558-023-09491-7.
- Hayek, Friedrich A., 2011. *The Constitution of Liberty: the definitive edition*. The University of Chicago Press, Chicago.
- Hayo, Bernd, Neumeier, Florian, 2016. Political leaders' socioeconomic background and public budget deficits: evidence from OECD countries. *Econ. Polit.* 28 (1), 55–78.
- Hayo, Bernd, Voigt, Stefan, 2010. Determinants of constitutional change: why do countries change their form of government? *J. Comp. Econ.* 38 (3), 283–305.
- Hayo, Bernd, Voigt, Stefan, 2013. Endogenous constitutions: politics and politicians matter, economic outcomes don't. *J. Econ. Behav. Organ.* 88, 47–61.
- Hayo, Bernd, Voigt, Stefan, 2016. Explaining constitutional change. *Int. Rev. Law Econ.* 48, 1–13.
- Hessami, Zohal, Lopes da Fonseca, Mariana, 2020. Female political representation and substantive effects on policies: a literature review. *Eur. J. Polit. Econ.* 63, 101896.
- Horowitz, Michael C., Stam, Allan C., 2014. How prior military experience influences the future militarized behavior of leaders. *Int. Organ.* 68, 527–559.
- Jochimsen, Beate, Thomasius, Sebastian, 2014. The perfect finance minister: whom to appoint as finance minister to balance the budget. *Eur. J. Polit. Econ.* 34, 390–408.
- Jones, Benjamin F., Olken, Benjamin A., 2005. Do leaders matter? National leadership and growth since world war II. *Q. J. Econ.* 120 (3), 835–864.
- Jones, Benjamin F., Olken, Benjamin A., 2009. Hit or miss? The effect of assassinations on institutions and war. *Am. Econ. J. Macroecon.* 1 (2), 55–87.
- Jong-a-Pin, Richard, Mierau, Jochen O., 2022. No country for old men: aging dictators and economic growth. *Econ. Modell.* 107, 105714.
- Kaplan, Steven, Klebanov, Mark, Sorensen, Morten, 2012. Which CEO characteristics and abilities matter? *J. Finance* 67 (3), 973–1007.
- Krustev, Valentin L., Morgan, T. Clifton, 2011. Ending economic coercion: domestic politics and international bargaining. *Conflict Manag. Peace Sci.* 28 (4), 351–376.
- Law, David S., Versteeg, Mila, 2013. Sham constitutions. *Calif. Law Rev.* 101, 863–952.
- Li, Jingheng, Xi, Tianyang, Yao, Yang, 2020. Empowering knowledge: political leaders, education, and economic liberalization. *Eur. J. Polit. Econ.* 61, 101823.
- Mattes, Michaela, Leeds, Brett Ashley, Carroll, Royce, 2015. Leadership turnover and foreign policy change: societal interests, domestic institutions, and voting in the United Nations. *Int. Stud. Q.* 59 (2), 280–290.
- McGillivray, Fiona, Stam, Allan C., 2004. Political institutions, coercive diplomacy, and the duration of economic sanctions. *J. Conflict Resolut.* 48 (2), 154–172.
- Mehmood, Sultan, Seror, Avner, 2023. Religious leaders and rule of law. *J. Dev. Econ.* 160, 102974.
- Mercier, Marion, 2016. The return of the prodigy son: do return migrants make better leaders? *J. Dev. Econ.* 122, 76–91.
- Metelska-Szaniawska, Katarzyna, 2021. Post-socialist constitutions: the de jure–de facto gap, its effects and determinants. *Economics of Transition and Institutional Change* 29 (2), 175–196.
- Neumeier, Florian, 2018. Do businessmen make good governors? *Econ. Inq.* 56 (4), 2116–2136.
- Osborne, Martin J., Slivinski, Al, 1996. A model of political competition with citizen candidates. *Q. J. Econ.* 111 (1), 65–96.
- Persson, Torsten, Tabellini, Guido, 2002. *Political Economics: Explaining Economic Policy*. MIT Press, Cambridge.
- Rodrik, Dani, 2014. When ideas trump interests: preferences, worldviews, and policy innovations. *J. Econ. Perspect.* 28 (1), 189–208.
- Smith, Alastair, 2016. Leader turnover, institutions, and voting at the UN General Assembly. *J. Conflict Resolut.* 60 (1), 143–163.
- Spence, Michael, 1973. Job market signaling. *Q. J. Econ.* 87 (3), 355–374.
- Versteeg, Mila, Horley, Timothy, Meng, Anne, Guim, Mauricio, Guirguis, Marilyn, 2020. The law and politics of presidential term limit evasion. *Columbia Law Rev.* 120 (1), 173–248.
- Voigt, Stefan, 2011. Positive constitutional economics II: a survey of recent developments. *Publ. Choice* 146 (1–2), 205–256.
- Voigt, Stefan, 2020. *Constitutional Economics: A Primer*. Cambridge University Press, Cambridge.
- Voigt, Stefan, 2021. Mind the gap: analyzing the divergence between constitutional text and constitutional reality. *Int. J. Constitut. Law* 19 (5), 1778–1809.
- Wolford, Scott, 2007. The turnover trap: new leaders, reputation, and international conflict. *Am. J. Polit. Sci.* 51 (4), 772–788.