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Judicial Independence: Why Does De Facto Diverge from De Jure?

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Judicial Independence: Why Does *De Facto* Diverge from *De Jure*?

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Abstract:

An independent judiciary has often been hailed as one of the most important aspects of the rule of law. Securing judicial independence (JI) via explicit constitutional rules seems straightforward and there is evidence that *de jure* and *de facto* JI are linked, at least in the long term. However, the realized degree of judicial independence often diverges significantly from the constitutionally guaranteed one. Based on theoretical conjectures and a worldwide panel dataset from 1950 to 2003, we find changes toward more parliamentary systems to be associated with a larger *de jure-de facto* gap, whereas the existence of procedures for amending the constitution are associated with a smaller gap. Relying on corruption levels as a proxy for the functionality of institutions, we find that higher corruption levels are associated with a wider gap between *de jure* and *de facto* JI.

Keywords: Judicial independence; constitutional compliance; *de jure*; *de facto*; *de jure-de facto* gap.

JEL Codes: H11, K38, P51.

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1. Introduction

An independent judiciary is one of the most basic traits of the rule of law. Under the rule of law, all persons are to be treated equally, the governing included. If government representatives are suspected of not complying with this basic principle, a neutral umpire is needed to evaluate government behavior: the judiciary. Judicial independence—and the rule of law more generally—have many beneficial consequences. Not only do they enable individuals to lead autonomous lives, they also help countries reach higher levels of economic growth and thus make everyone better off in economic terms.

Governments profit from faster economic growth in various ways: it makes them more popular but it also increases their leeway as higher incomes also imply higher tax receipts. This is why governments generally have an interest in an independent judiciary. Yet, there are many instances in which a truly independent judiciary can be a burden on government. For example, when the judiciary declares a newly passed law incompatible with the constitution. This is only one of many such possibilities: the judiciary might decide in favor of government critics or it might decide against government members in all types of cases, ranging from freedom of expression to criminal behavior. This is why the formally guaranteed level of judicial independence—its *de jure* level—often is not matched by its actually realized level—its *de facto* level.

Previous research identifies a number of factors conducive to *de facto* judicial independence. In this study, we add to the literature by asking what changes in the political system induce changes in the reported levels of *de facto* JI. In other words, we are interested in the dynamics that drive improvements or deteriorations in *de facto* levels of judicial independence. We find that systems becoming more parliamentary are associated with a larger gap between *de jure* and *de facto* JI than are systems becoming more presidential. Constitutional changes explicitly providing for ways to amend the constitution are associated with smaller gaps. One way to interpret this finding is that amendment rules create the possibility of adjusting the constitution to changed circumstances, which would make its implementation more likely to follow the letter of the law. Based on previous findings, we know that the interaction between formal and informal institutions can be quite important. Here, we find that dysfunctional informal rules are associated with a higher *de jure-de facto* gap, where dysfunctionality is proxied by high corruption levels.

This paper does more than simply contribute to the discussion on judicial independence and its determinants. It can be read as one particular instance of constitutional compliance: What are the factors that lead government to comply with formal constitutional constraints? This question is relevant far beyond the independence of the judiciary as compliance issues also loom large with regard to basic human rights, democratic participation rights, and so on.

The rest of the paper is organized as follows: Section 2 briefly summarizes preceding studies related to our question. Section 3 develops a number of theoretical conjectures regarding possible factors causing a government to comply—or not—with formal constitutional constraints. In Section 4, we describe the data used to answer the question. Section 5 contains our empirical results and Section 6 concludes.

2. Preceding Studies

In an early paper inquiring into the determinants of *de facto* judicial independence (JI), Hayo and Voigt (2007) find that while *de jure* and *de facto* JI are not very highly correlated, *de jure* JI is still the single best predictor for *de facto* JI.¹ At the time that paper was written, the only indicators for both *de jure* and *de facto* JI available for a fairly large number of countries were cross-sectional. In the meantime, panel data for both *de jure* and *de facto* JI have become available.

In a paper dealing with the relationship between *de jure* and *de facto* JI, Melton and Ginsburg (2014) question whether *de jure* JI really matters. Starting from the premise that, at the end of the day, constitutional constraints must be self-enforcing, they argue that provisions involving multiple players are most likely to be enforced because each player has an incentive to meticulously guard its own competences. They observe that both the selection and removal procedures for judges are often divided between executive and legislature, making representatives of each branch a guardian of the other. Other aspects often mentioned as conducive to JI will be less relevant as long as their enforcement is not secured via checks and balances.

The empirical findings reported in Melton and Ginsburg (2014) support the idea that none of the conventionally used variables proxying *de jure* JI are significantly correlated with *de facto* JI. However, when the strength of checks on the executive is interacted with selection and removal procedures, the authors find a significant

¹ However, not all variables included in the *de jure* indicator are codified at the constitutional level.

correlation with *de facto* JI. The institutional environment also appears to play a role in the sense that, *ceteris paribus*, the correlations between selection and removal procedures with the actually realized degree of JI are higher in autocracies than in democracies. These results provoke a number of follow-up questions: (1) What aspects of *de jure* JI are good predictors of *de facto* JI? Is it really true that only two variables are relevant here? (2) What additional conditions are necessary for *de jure* aspects to have any significant effect on *de facto*?

Drawing on data from the EU Justice Scoreboard, Gutmann and Voigt (2020) identify a puzzle: *de facto* JI on the national level (as perceived by the citizens of EU member states) is negatively associated with the presence of formal legislation usually considered conducive to judicial independence, that is, *de jure* JI. The negative association is more pronounced in the “old” member states than in the “young” ones in Central and Eastern Europe, implying that the relationship is not driven by countries that were striving to become members of the European Union and simply passed independence-enhancing legislation without changing anything on the ground. The negative association also holds across legal families. Since none of the more standard ways to resolve the puzzle work, the authors ask whether cultural traits could be the key. It turns out that countries with high levels of generalized trust exhibit increased levels of *de facto* JI and, at the same time, reduced levels of *de jure* JI. It seems that explicit legislation (in this case dealing with JI) serves as a substitute for high levels of trust when they are absent. The authors conclude that cultural traits are of fundamental importance for the quality of formal institutions, even in societies as highly developed as the EU member states. Thus, when informal institutions are not conducive to a high level of *de facto* JI, it seems obvious to try to achieve that goal by implementing formal ones.²

Given the findings of the study just reported, the next natural question is whether the relationship between *de jure* JI, *de facto* JI, and trust holds beyond Europe. This is exactly what Gutmann and Voigt (2019) did. Based on entirely different datasets, they not only replicated their previous findings with regard to Europe, but also found a very similar relationship for the Americas. In Africa, however, a new puzzle emerged: they found a highly significant positive correlation between *de jure* and *de facto* JI. In other words, in Africa, but not in Europe or the Americas, *de jure* JI is a good predictor for *de facto* JI. The counterintuitive results do not stop there: at the world level, *de jure* and *de facto* are almost perfectly uncorrelated. Yet, as soon as one distinguishes between democracies and non-democracies, a negative

² Aldashev et al. (2012) ask under what conditions the law can be used to shift informal institutions (called “customs” in their paper) towards the intended goal.

correlation is found for democracies and a positive one for non-democracies. Understanding these counterintuitive results requires a deeper look at environmental factors. One such factor could be colonial history. It appears that a history of colonization leads to an inversion of the coefficients: countries that have never been colonized have a negative correlation between *de jure* and *de facto* JI and a positive one between trust and *de facto* JI. In other words, the results found for Europe remain valid beyond Europe as long as the countries have never been colonized. Countries with a colonial history tend to have a positive correlation between *de jure* JI and *de facto* JI, but a negative one between trust and *de facto* JI.

Hayo and Voigt (2019) are specifically interested in the long-term dynamic relationship between *de jure* and *de facto* JI. Separating OECD from non-OECD countries, they find a positive long-run equilibrium only for the latter group. Thus, their findings are largely in line those reported above. Following up on a conjecture raised by Melton and Ginsburg (2014), the authors ask whether causality could also run from *de facto* to *de jure*, or, in other words, whether there is any evidence for actual independence levels being written into the law *ex post*. No evidence in favor of such reversed causality was found.

3. Possible Determinants of the Gap: Theory

3.1. Introductory Remarks

There is a simple answer to the question of why constitutional reality diverges from constitutional text: because an independent judiciary can be a formidable obstacle to government, limiting its policy options considerably. In many instances, a government might make itself better off by curtailing formally guaranteed judicial independence.

Because constitutional rules are the most basic layer of rules, there is no more basic layer that can be drawn on to sanction non-compliers. This implies that compliance with constitutional rules is expected to be high when the relevant actors cannot make themselves better off by *not* enforcing the rules, a phenomenon often been referred to as “self-enforceability.” In this section, we discuss a number of aspects that are likely to affect government behavior vis-à-vis the judiciary and thereby determine the *de facto* level of judicial independence.

We discuss four such aspects: (1) the *de jure* provisions guaranteeing judicial independence, (2) aspects of constitutional design beyond the judiciary proper, such as the separation of powers, (3) “environmental factors,” such as the dominant

culture of a country and its constitutional history, and (4) traits of the members of the executive.

3.2. *De Jure* Provisions

Institutional restrictions impose costs on politicians, thus: *the more encompassing the formal protection of JI, the stronger the temptation for government members to renege on the formal rules*. More competences allocated to an independent judiciary imply more constraints for the other government branches, and the tighter the constraints on the executive, the more likely its representatives are to simply ignore the relevant rules.

Our *de jure* JI indicator shows that judicial independence has become more entrenched over time. This suggests that older constitutions are more likely to be complied with than newer ones if the provisions regarding JI have remained unchanged. The difficulty of formally amending constitutions also becomes relevant here. It is argued that when it is very costly to amend constitutions, compliance with constitutional amendment rules becomes less likely (e.g., Gavison 2002, Elkins et al. 2009). If, say, an absolute majority of legislators agrees with a major part of the population that constitutional change is desirable, but very high supermajorities are needed to implement it, politicians might get away with simply ignoring constitutional constraints. However, empirically testing this hypothesis is fraught with difficulties. A cost of amendment variable is needed that can indicate how cumbersome—in terms of players consenting, necessary (super-)majorities, and so forth—constitutional amendment is. Various attempts to produce such a variable have been made (Lutz 1994, Lorenz 2005, Rasch and Congleton 2006). Unfortunately, the correlations between these indicators are very low, possibly indicating conceptual disagreement between the authors. Here, we include a variable measuring whether a country introduced an amendment possibility in its constitution and expect that *the inclusion of constitutional amendment rules will be associated with a lower de jure-de facto gap*. The enactment of constitutional amendment rules is surprisingly frequent. In the total sample ranging from 1950 to 2003, this constitutional change occurred 101 times. On 64 occasions, countries abolished the amendment rule again and, sometimes, this happens more than once. For India, for instance, we record six introductions of the amendment possibility and five abolishments.

3.3. Constitutional Architecture

Separation of powers is a key design element of constitutions. The concept not only refers to the usual separation between the three branches of government, but extends to the division of competences among the various levels of government (federalism) and to independent agencies, such as a central bank. If more than one actor is needed to implement a policy decision, then each of these actors has incentives to make sure that the other actors do not overstep their competences, as this frequently implies a diminution of one's own competences. We thus expect that *a higher number of constitutional veto players increases the likelihood of constitutional compliance*.³

Research on the (economic) effects of the form of government, specifically parliamentary as opposed to presidential systems, shows that the form of government has a number of important effects on, for example, overall government spending, the budget deficit, and so on (Voigt 2020). The crucial difference between the two forms of government is that the executive in parliamentary systems is subject to a vote of no confidence, whereas this is not the case in presidential systems. Assuming that members of the executive prefer staying in office over being thrown out, the quasi-continuous monitoring of the executive by the legislature in parliamentary systems can imply that the executive is less likely to renege on constitutional constraints simply because it would jeopardize its own job by doing so. We hence hypothesize: *Ceteris paribus, the likelihood of constitutional compliance is higher in parliamentary than in presidential systems*.

Democracy enables citizens to get rid of their government in a peaceful and ordered manner. This implies that governments of democratic countries have more

³ It could be argued that some veto players might be indifferent to noncompliance, or even support it some of the time. Their interaction situation can then be described by the game proposed in Weingast (1997): I might insist on compliance with the constitution because not showing solidarity with those who renege on now might lead to non-solidarity of those at some other time when it is my rights that are being transgressed against. Here again, the question is whether or not some norms of solidarity exist. When testing this hypothesis empirically, it is worth making an explicit distinction between institutional and actual veto players. If a legislature is bicameral and each house needs to consent to new legislation, there are two institutional veto players. If this occurs in a system with highly disciplined parties and the same party holds a majority in both houses, then it might be advisable to count this as only one actual veto player. Fortunately, this distinction has found explicit recognition in some indicators, such as Henisz's (2000), and hence does not constitute a barrier to empirical testing. Another problem, potentially increasing in the number of veto players, is the volunteer's dilemma: if holding the executive accountable is costly, then all veto players might hope that another veto player is ready to bear these costs.

incentives than autocratic governments to invest in their popularity. Arguably, this popularity is endangered when the government violates formal rules. This leads us to hypothesize that *democracies are likely to reach higher degrees of convergence than are non-democracies*.

3.4. Environmental Factors

We call all potentially relevant factors that are independent from the constitution itself “environmental factors.” Among these factors are the geographic location of a country, its constitutional as well as its colonial history, and the values and norms prevalent among members of its society.

A connection between design factors and environmental factors can be referred to as a “constitutional culture.” Ferejohn et al. (2001, 10) define constitutional culture as “a web of interpretative norms, canons, and practices which most members of a particular community accept and employ (at least implicitly) to identify and maintain a two-level system of the appropriate sort.” They argue that in order to understand how constitutional text (i.e., the *de jure* constitution) is implemented, we need to look at how people actually think it should be operating (an environmental factor).

Reaching consensus among citizens that government has overstepped its competences (and then acting on this insight) seems more likely when the citizens share many values and norms. In other words, what is important is not the precision of the constitutional text alone—as Weingast (1997) would have it—but also the homogeneity of its interpretation. Vanberg (2011, 313) argues that when citizens share values, it enables them to coordinate their expectations regarding legitimate and illegitimate government action. Here again, the interaction between design and environmental factors is crucial in the sense that the written constitution can contain precise constraints that will become effective if citizens share expectations on how these written constraints should be interpreted and acted upon.

A precondition for interpreting government behavior as reneging on the constitution is the availability of information about the contents of the constitution on the one hand (i.e., the *de jure* constitution) and the actual behavior of government on the other. Having that information at one’s disposal allows an evaluation to be made as to whether government behavior is in compliance with the constitution or not. It might be difficult for individual citizens to gather the necessary information. However, we believe the media can provide relevant information, as well as offer

an assessment. We thus hypothesize that *a high degree of media freedom is conducive to a small de jure-de facto gap*.⁴

Inglehart and Welzel (2005) argue that self-expression values are the best predictors for effective democracy. “Effective democracy” is not identical with constitutional compliance, of course, but it can be argued that the two go hand in hand. It is hard to imagine a country with an effective democracy in which governments do not comply with the constitution.

As we argued above, informal institutions can play an important role in organizing societies and may act both as a substitute for as well as a complement to formal institutions. Measuring informal institutions is not easy (Voigt 2018). If informal institutions are dysfunctional, adding more constraints via formal institutions will not necessarily lead to better outcomes. Inglehart and Welzel (2005, 154), for instance, “see [corruption] as an indicator of ‘elite integrity’, or the extent to which power holders actually follow legal norms.” Using the incidence of corruption as a proxy for dysfunctional institutions leads us to hypothesize that *in societies characterized by a high level of corruption, that is, nonworking informal institutions, we will find a relatively larger deviation between de jure JI and de facto JI*. Thus, one can think of *de facto JI* as *de jure JI* conditional on the absence of corruption.

3.5. Traits of Government Members

The personalities of the governing could also matter for the *de jure-de facto* gap, as politicians might have a preference for rule-abidance. If the mechanism used to select and appoint political leaders rewards adherence to rules, the probability of noncompliance will be reduced.

Different selection mechanisms can lead to the selection of politicians with different traits. The underlying assumption is that there will be various types of politicians and these different types will draw different benefits from not complying with the constitution. Brennan and Hamlin (2000) assume dispositional heterogeneity among (political) actors that they make concrete by assuming that politicians can be driven by virtue or by self-interest. The authors then ask whether institutions can be designed such that virtuous individuals are more likely to run for and be elected to political office. They proceed in two steps. In the first (static) step, dispositions are assumed to be given. In the second (dynamic) step, institutions can affect the

⁴ Of course, the degree of media freedom is endogenous to government behavior itself. This needs to be taken into account when empirically assessing the conjectures.

distribution of dispositions among actors (i.e., institutions can be virtue-enhancing). This idea is concerned with the benefits of constitutional noncompliance in that some types of individuals are expected to realize higher benefits from renegeing than are others.

Due to a lack of both theoretical and empirical insights, we simply propose a number of *ad hoc* conjectures regarding personal traits of leading politicians.

- (a) Leaders who achieved power through irregular means may also be more likely not to comply with the constitution. If a person has acquired power by breaking rules, why should he or she comply with the rules while governing?⁵
- (b) Leaders who once served in the military may be less likely to comply with the constitution. The underlying assumption is that a sizeable portion of military leaders are ready to place their own preferences regarding law and order above constitutional constraints that might appear slow and cumbersome to them. Many coups d'état are staged by military leaders, giving some *prima facie* plausibility to our hypothesis.
- (c) Female leaders may be more likely to comply with the constitution. There is some evidence (Dollar et al. 2001) that countries ruled by women suffer from less corruption, which could be interpreted as one proxy for rule compliance. There is also evidence that women are, in general, more risk averse, which could lead them to be more rule-compliant (Croson and Gneezy 2009).
- (d) Younger leaders may be less likely to comply with the constitution because securing tenure has a higher value for them than for older leaders. The argument is that the present value of being in power is higher for younger leaders. One might, however, also expect the exact opposite: if renegeing on the constitution increases the chances of being thrown out of office, younger leaders might be more careful not to renege.

The underlying assumption regarding all four conjectures is that the benefits to be derived from noncompliance are linked to actors' personal characteristics.

4. Data and Methodology

Operationalizing the testable hypotheses developed above is a challenge, as it is difficult to find (i) good indicators, which are (ii) moving over time, are available for (iii) a large number of countries, and (iv) for a long time period. We faced many

⁵ Hayo and Voigt (2016) find that reaching power through irregular means is significantly correlated with a change in the constitutionally guaranteed level of judicial independence.

tradeoffs along these four dimensions. Due to concerns about the panel-data structure of our analysis and the necessity for dynamic modeling, we wanted to make sure that our time dimension was large enough. We thus only included countries for which we had 10 or more consistent observations over time. We excluded countries showing gaps in the recorded indicators. If there were more than 10 observations before and after the period with missing values, we took the observations only from the later period, as the data quality tends to be better. Thus, we overweight more recent observations compared to earlier ones, for instance, 12% of our observations are from the 1950s and 29% from the 1990s. Moreover, we put a great deal of weight on obtaining a large cross section, which meant we could not use indicators that were either not available for a decade in terms of the time dimension or for only a few countries. In the end, we were able to cover 139 countries from 1950 to 2003, with observation periods ranging from 10 to 54 years and amounting to almost 5,000 observations. Table A1 in the Appendix provides a list of countries and observation periods. In spite of the large cross-sectional sample, due to missing observations, our data are not representative of the world; Africa is particularly underrepresented. Table A2 contains detailed variable definitions and Table A3 descriptive statistics.

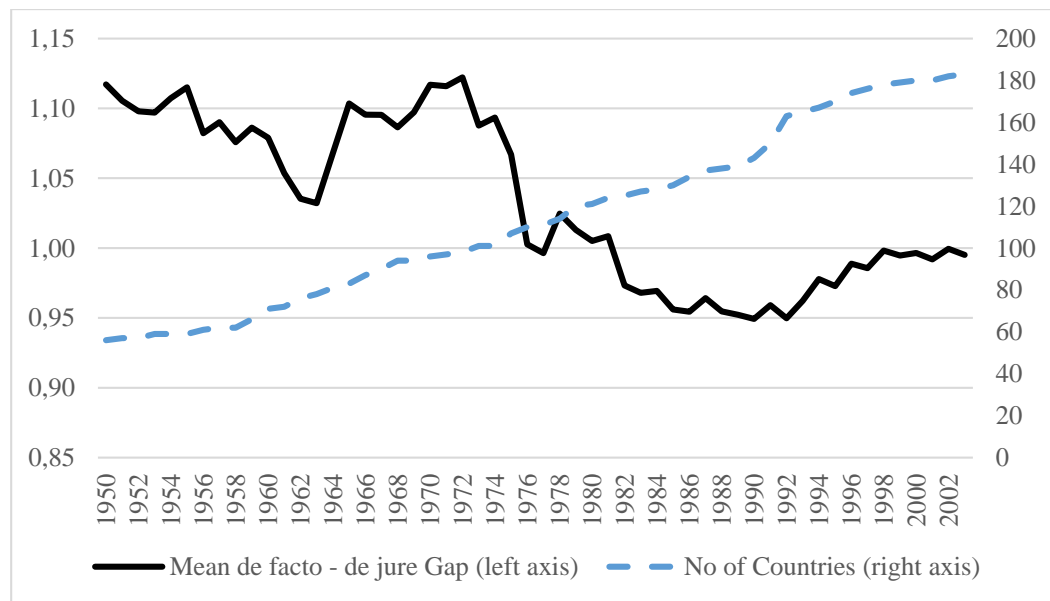
Given that our research question focuses on explaining the gap between *de facto* and *de jure* JI, we need appropriate time-based indicators to actually compute that gap. Hayo and Voigt (2014, 2016) use and extend the Comparative Constitutions Project (Elkins *et al.* 2009) and derive a time-varying indicator for *de jure* JI based on factor analysis. Hayo and Voigt (2019) update and reconstruct the *de jure* JI indicator, which we utilize for the present analysis. Linzer and Staton (2015) design a latent variable measurement model combining eight extant indicators to map out *de facto* JI across time. Holsinger *et al.* (2017) provide an update of this dataset and we employ the April 2019 version. The limiting factor for the sample underlying the regression analysis is not the JI indicators, but the explanatory variables, which do not encompass nearly as many observations.

Using time-series methods, Hayo and Voigt (2019) find evidence for up to 87 countries that *de jure* and *de facto* JI are co-integrated and, thus, constitute a long-term equilibrium. Moreover, causality appears to be running from *de jure* JI to *de facto* JI. Since the present sample is unsuitable for computing reliable stationarity tests, we simply assume that the co-integration result holds, which allows us to work with variables in levels rather than first differences. However, the dimensions of the two indicators in their raw form are unhelpful for computing a gap measure. Therefore, we standardize the two judicial indicators, that is, subtract their

respective mean and divide by their respective standard deviation. As a consequence, both indicators now have a mean of zero and a unit variance. Our gap indicator, JI Gap, is computed as the absolute difference between the standardized *de jure* JI and *de facto* JI indicators.

Figure 1 illustrates the development of JI Gap based on its sample average at each point in time.

Figure 1: Average JI Gap and Number of Sample Countries Across Time



When shown as a world average, JI Gap has a downward trend across time. However, there are also periods during which it rises, for example, from the mid-1960s to the early 1970s. As shown by the right-hand side axis of Figure 1, the number of countries in our sample increases over time, which suggests that this hike in JI Gap is due to a country effect. In fact, this was a period when many former colonies became independent, especially in Africa (see Table A1 in the Appendix). The less pronounced increase in JI Gap from the early 1990s onwards results from transition countries entering our dataset. We find that the average JI Gap starts stabilizing at the end of the sample period, which is when the share of new sample countries compared to total countries declines severely.

As explanatory variables, we employ various indicators referring to the hypotheses developed above and five dummy variables covering the decades 1950 to 1990. As discussed above, we include an indicator for parliamentary political systems (Scartascini *et al.* 2018). To capture veto power in the political system, we consider an indicator based on counting the number of veto players (Henisz 2017). We include a dummy variable measuring whether the constitution contains at least one

provision for amending the constitution, based on Elkins *et al.* (2009). Press freedom is proxied by an ordinal indicator put forward by Whitten-Woodring *et al.* (2015). We include the Polity2 indicator from the Polity IV database to capture the degree of democracy in a country (Marshall 2013). Our political corruption indicator is from the Variety-of-Democracies dataset (Coppedge *et al.* 2018) and takes on values between 0 and 1. We include a number of leader characteristics as well as indicators measuring how they obtained and yielded their power (Goemans *et al.* 2009), in the form of dummy variables. In particular, whether (i) leaders came into power or were (ii) removed through foreign intervention. More generally, we include additional dummies indicating whether they entered office via (iii) regular or (iv) irregular means. We measure whether they belong to (v) the military or are (vi) male. Finally, we control for the (vii) leader's age. In total, we have 13 explanatory variables plus five decade dummies on the right-hand side of our regression explaining JI Gap. To allow these variables to affect JI Gap, they are included with a one-year lag.

5. Empirical Analysis

We commence our analysis by running a least-square dummy variable model on JI Gap. As Model (1) in Table 1 shows, there are significant coefficients for Parliamentary System and Amendment of Constitution. The former suggests that the gap between *de jure* JI and *de facto* JI increases as countries become more parliamentary and decreases when countries introduce the possibility of adjusting the constitution.

Table 1: Estimating the Determinants of JI Gap

	Models			
	(1) LSDV	(2) LSDV	(3) LSDV	(4) GMM
JI Gap _{t-1}	n.a.	0.93*** (0.01)	0.99*** (0.04)	0.98*** (0.02)
JI Gap _{t-2}	n.a.	n.a.	-0.05 (0.04)	-0.04 (0.04)
JI Gap _{t-3}	n.a.	n.a.	-0.04*** (0.01)	-0.06** (0.03)
Parliamentary System _{t-1}	0.21*** (0.07)	0.03*** (0.01)	0.03*** (0.01)	0.04*** (0.01)

Number of Veto Players _{t-1}	-0.03 (0.09)	0.00003 (0.03)	-0.01 (0.03)	-0.01 (0.02)
Amendment of Constitution _{t-1}	-0.15** (0.07)	-0.15** (0.07)	-0.02** (0.01)	-0.02** (0.01)
Degree of Press Freedom _{t-1}	-0.05 (0.07)	-0.001 (0.01)	-0.001 (0.01)	-0.01 (0.01)
Degree of Democracy _{t-1}	-0.0003 (0.01)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.001)
Degree of Corruption _{t-1}	0.50 (0.39)	0.09* (0.05)	0.09* (0.05)	0.10*** (0.03)
<i>Leader came into power through:</i>				
• Foreign Intervention _{t-1}	-0.18 (0.18)	-0.04** (0.02)	-0.04** (0.02)	-0.04 (0.03)
• Irregular Means _{t-1}	-0.05 (0.08)	-0.02* (0.01)	-0.02 (0.01)	-0.02* (0.01)
<i>Leader lost power through:</i>				
• Foreign Intervention _{t-1}	0.12 (0.09)	0.02 (0.01)	0.02 (0.01)	0.02 (0.03)
• Irregular Means _{t-1}	0.11 (0.08)	0.02 (0.01)	0.02 (0.01)	0.02** (0.01)
Military Leader _{t-1}	-0.01 (0.07)	-0.003 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Female Leader _{t-1}	0.06 (0.07)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)
Leader's Age _{t-1}	-0.004 (0.002)	-0.0002 (0.0003)	-0.0003 (0.0003)	-0.0003 (0.0003)
1950s	-0.01 (0.07)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
1960s	0.05 (0.07)	0.03** (0.01)	0.02** (0.01)	0.02** (0.01)
1970s	0.05 (0.04)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)

1980s	-0.04 (0.04)	-0.002 (0.01)	-0.003 (0.01)	-0.004 (0.01)
1990s	-0.03 (0.03)	-0.005 (0.01)	-0.004 (0.01)	-0.004 (0.01)
Constant	2.44*** (0.22)	0.17*** (0.05)	0.22*** (0.05)	0.26*** (0.05)
Country dummies included	Yes	Yes	Yes	Yes
Number of observations	4,807	4,807	4,529	4,529
R^2	0.77	0.97	0.97	n.a.
Joint significance regressors (excluding country dummies)	Chi ² (18) = 46.1***	Chi ² (19) = 19,270***	Chi ² (21) = 13,530***	Chi ² (21) = 4,901***
Joint significance country dummies	Chi ² (139) = 10,630***	Chi ² (139) = 357***	Chi ² (139) = 2,182***	Chi ² (139) = 1,799***
Autocorrelation test order (1)	N(0,1) = 4.3***	N(0,1) = 1.9*	N(0,1) = -1.2	N(0,1) = 0.6
Autocorrelation test order (2)	N(0,1) = 4.2***	N(0,1) = 2.5**	N(0,1) = -0.9	N(0,1) = -0.04
Sargan test	n.a.	n.a.	n.a.	Chi ² (1815) = 1,354
Model reduction test of insignificant regressors	n.a.	n.a.	Chi ² (13) = 13.1	Chi ² (13) = 16.0

Note: Robust standard errors are used (GMM: small-sample corrected robust standard errors (Windmeijer 2000)).

However, as diagnostic testing shows, the model suffers from autocorrelation, causing the estimators to be (asymptotically) inefficient and suggesting a dynamically mis-specified equation. Model (2) of Table 1 includes a lagged dependent variable to address these issues, which is significantly positive. Parliamentary Political System and Amendment of Constitution remain significant and, in addition, we now find that Corruption contributes significantly to an increase in JI Gap. Thus, a higher degree of political corruption widens the difference between *de jure* JI and *de facto* JI. When a leader was imposed from the

outside of a country, JI Gap declines and a similar result is found with regard to leaders acquiring power through irregular procedures. Finally, the JI Gap appears to have widened in the 1960s.

Additional diagnostic testing indicates that one lag is not sufficient to remove significant evidence of autocorrelation and our inferences are still questionable. As it turns out, see Model (3) in Table 1, we need three lags of the dependent variable to alleviate the serial-correlation issue. Although most of the effects discussed in the model with one lagged dependent variable survive, the significance of leaders acquiring power through irregular procedures is lost.

However, these estimates suffer from the so-called Nickell bias (1981), which should actually be called “Nickell inconsistency,” as even under the best conditions, the lagged dependent variable estimator is only consistent but not unbiased. The problem arises when the estimator’s consistency depends on the number of cross-sectional units going to infinity rather than the observations across time. While one can make the argument that in our sample it is highly unlikely that consistency runs across countries, as surely the number of countries cannot become infinitely large, the cross-sectional dimension clearly dominates our sample. Thus, to address potential consistency concerns, we re-estimate the relationship using the general method of moments (GMM) in the form of the combined GMM estimator proposed by Arellano and Bover (1995) and Blundell and Bond (1998). Model (4) in Table 1 provides one-step GMM estimates of the model with three lags of the dependent variable. As before, the model residuals show no significant evidence of autocorrelation and the instruments pass the Sargan orthogonality test at any level of significance. Reassuringly, we find the same variables to be statistically significant that we obtained using Model (3).

Before concluding that the remaining variables have no explanatory power with regard to JI Gap, we test them jointly against zero, which is basically a test for collinearity. Neither in Model (3) nor Model (4) of Table 1 can we reject the joint zero restriction. Thus, to improve estimation efficiency, we re-estimate the models containing the significant variables noted above. Model (5) of Table 2 provides the reduced form of Model (3) and Model (6) of Table 2 for Model (4).

Finally, there may be an issue with regard to the GMM estimates, as they often have undesirable small-sample properties and can be sensitive to the more or less arbitrary choice of instruments. Kiviet (1995) suggests that in small samples, a standard-error correction yields more reliable estimation results than GMM and puts forward a consistent dynamic LSDV approach. In Model (7), we use Bruno’s

(2005) extension for unbalanced panels with Arellano Bond initialization, bootstrapped standard errors, and a bias correction up to order $O(1/NT^2)$. Again, our previous results are robust.

Table 2: Reduced Models for Estimating the Determinants of JI Gap

	Models			
	(5) LSDV	(6) GMM	(7) LSDV- Dynamic	(8) LSDV- Dynamic Bootstrapped
JI Gap _{t-1}	1.0*** (0.03)	1.0*** (0.05)	1.1*** (0.001)	1.1*** (0.03)
JI Gap _{t-2}	-0.05 (0.04)	-0.04 (0.06)	-0.08*** (0.02)	-0.05 (0.05)
JI Gap _{t-3}	-0.04*** (0.01)	-0.06** (0.03)	-0.04*** (0.02)	-0.04 (0.04)
Parliamentary System _{t-1}	0.03*** (0.01)	0.03*** (0.01)	0.03*** (0.01)	0.02*** (0.01)
Amendment of Constitution _{t-1}	-0.01 (0.01)	-0.02* (0.01)	-0.01** (0.01)	-0.01 (0.01)
Degree of Corruption _{t-1}	0.09** (0.05)	0.10* (0.05)	0.09*** (0.03)	0.07** (0.03)
<i>Leader came into power through:</i>				
Foreign Intervention _{t-1}	-0.04** (0.02)	-0.05** (0.03)	-0.05* (0.03)	-0.04* (0.02)
1960s	0.02** (0.01)	0.02** (0.01)	0.02*** (0.01)	0.02** (0.01)
Country dummies included	Yes	Yes	Yes	Yes
Number of observations	4,529	4,529	4,518	4,518
Sargan test	n.a.	Chi ² (1,828) = 1,373	n.a.	n.a.

Note: LSDV: robust standard errors; GMM: small-sample corrected robust standard errors (Windmeijer 2000); LSDV-Dynamic and LSDV-Dynamic Bootstrapped: bootstrapped standard errors.

There is a problem with the inconsistency-corrected LSDV dynamic panel data estimator in the current context, however, as it only allows for one lagged dependent variable. However, we need the third lag of JI Gap to remove all statistical evidence of autocorrelation. We thus resort to the bootstrap-corrected fixed-effects estimation estimator proposed by Everaert and Pozzi (2007), which is computationally much more demanding than the Kiviet (1995) estimator but necessitates fewer statistical assumptions. For instance, we allow for cross-sectional heteroscedasticity when re-sampling errors. As Model (8) in Table 2 shows, however, most of the previous results hold, except that the Constitutional Amendment indicator becomes close to insignificant (p -value: 0.105).

Interpreting the coefficients is not straightforward as, by themselves, they do not provide a clear idea about either the absolute or relative magnitude of the estimated effects. To illustrate the impact of the significant variables on JI Gap, we compute the average contribution a variable makes to closing the gap. Matters are further complicated by the dynamic nature of the model in the form of lagged dependent variables, as we have to distinguish between the short- and the long-term effect of a variable. However, the latter are only about 10% higher than the former.

Using the estimates from Model (6) of Table 2 to compute the quantitative effects, we find that switching towards a parliamentary system increases the gap between *de jure* JI and *de facto* JI by 3.1% in the short term (3.4% in the long term). If a country allows for constitutional amendment, on average, JI Gap is reduced by 2% (2.3%). A one-unit increase in corruption widens JI Gap by 10.2% (11.3%) compared to its mean. One could proxy a typical change in corruption by its standard deviation (0.31). Hence, a typical hike in corruption increases JI Gap by 3.2% (3.7%). A third way to provide a yardstick for the magnitude of the effect is to compute an elasticity at the means of the variables, which is about 0.04 (0.05), that is, inelastic. Roughly, a 10% hike in corruption widens the gap between *de jure* JI and *de facto* JI by 0.4% (0.5%). Foreign intervention when appointing leaders, on average, narrows JI Gap by 5.1% (5.7%). Finally, in the 1960s, JI Gap increased by 2% (2.3%). All in all, none of the significant variables have a strong effect on the gap between *de jure* JI and *de facto* JI, but their influence is not negligible either.

6 Conclusion and Outlook

In this paper, we identified the dynamics that contribute to the gap between the level of judicial independence guaranteed by a country's constitution and the level of judicial independence actually realized. We find that changes toward more parliamentary systems and increases in corruption are associated with larger gaps,

whereas making it possible to amend the constitution is associated with a smaller gap.

Our interest in this study is on the effects of constraints spelled out in a country's constitution. Thus, we ignore the potential role statutory law has in determining the *de facto* degree of judicial independence in a given country at a given point in time. Analyzing the relevance of statutory law in this context would be interesting, but data collection is extremely difficult. Moreover, due to missing data, we have not even been able to test all the hypotheses contained in our theory section. This must be left for future research based on new data collection efforts.

One potentially relevant dimension for the determination of the *de jure-de facto* gap is completely absent from this paper, namely, the relevance of other nation-state governments and international organizations. These could be relevant in a variety of ways: a government tinkering with the independence of its judiciary could lose reputation not only among the governments of other nation-states but also among potential foreign investors. If the expected losses are large enough, judicial independence might be respected. Another potentially relevant mechanism is international organizations based on treaties that provide for some monitoring and sanctioning mechanism. The European Union does have such a mechanism as do various other international organizations, such as the Council of Europe and the Inter-American Human Rights System. The EU mechanism has been subject to much criticism but it is unclear to what degree it has, indeed, failed (or worked).

Finally, most of the theoretical conjectures mentioned in this study are not confined to the judiciary. There are many ways in which the executive can renege on constitutional constraints and they are in no way confined to the judiciary.

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Table A1: List of Countries and Observation Periods

Country	Start	End	Country	Start	End	Country	Start	End	Country	Start	End	Country	Start	End	Country	Start	End
Afghanistan	1989	2000	China	1950	2002	Germany	1950	2003	Lesotho	1993	2003	Papua New Guinea	1976	2001	Togo	1979	2003
Albania	1950	2001	Colombia	1950	2003	Ghana	1982	2003	Liberia	1986	2002	Paraguay	1950	2003	Tunisia	1959	2003
Algeria	1976	2003	Comoros	1975	2001	Greece	1975	2003	Libya	1951	2003	Peru	1950	2003	Turkey	1978	2001
Angola	1975	2003	Congo	1992	2003	Guatemala	1950	2003	Lithuania	1992	2002	Philippines	1950	2003	Turkmenistan	1992	2003
Argentina	1950	2003	Costa Rica	1950	2003	Guinea	1990	2003	Luxembourg	1950	2003	Poland	1950	2003	Ukraine	1991	2003
Australia	1950	2003	Croatia	1993	2003	Guinea-Bissau	1974	2002	Madagascar	1961	2001	Portugal	1950	2003	United Arab Emirates	1971	2003
Austria	1950	2003	Cuba	1959	2003	Guyana	1950	2003	Malawi	1965	2003	Romania	1950	2003	United Kingdom	1950	2003
Azerbaijan	1991	2002	Cyprus	1960	2002	Haiti	1950	2003	Malaysia	1958	2002	Saudi Arabia	1992	2003	United States	1950	2003
Bahrain	1973	2003	Czechoslovakia	1950	2003	Hungary	1957	2003	Mali	1974	2001	Senegal	1981	2003	Uruguay	1950	2003
Bangladesh	1986	2003	Denmark	1950	2003	India	1950	2003	Mauritania	1985	2003	Singapore	1965	2003	Uzbekistan	1992	2003
Belarus	1994	2003	Djibouti	1977	2003	Indonesia	1959	2003	Mauritius	1968	2002	Slovak Republic	1993	2003	Venezuela	1950	2003
Belgium	1950	2003	Dominican Republic	1950	2003	Iran	1950	2003	Mexico	1950	2003	Slovenia	1992	2001	Yemen South	1970	1989
Benin	1979	2003	Egypt	1953	2003	Iraq	1950	2002	Moldova	1992	2003	Solomon Islands	1978	2000	Yugoslavia	1950	2002
Bhutan	1971	2001	El Salvador	1950	2003	Ireland	1950	2003	Mongolia	1992	2003	Somalia	1979	1990	Zambia	1964	2001
Bolivia	1950	2003	Equatorial Guinea	1969	2003	Israel	1950	2003	Morocco	1962	2003	South Africa	1950	2003	Zimbabwe	1980	2003
Botswana	1966	2003	Estonia	1992	2001	Italy	1950	2003	Mozambique	1976	2003	South Korea	1950	2002			
Brazil	1950	2003	Ethiopia	1987	2003	Jamaica	1950	2003	Namibia	1991	2003	Soviet Union	1950	1990			
Bulgaria	1950	2003	Fiji	1970	2003	Japan	1952	2003	Nepal	1962	2001	Spain	1950	2003			
Burkina Faso	1988	2003	Finland	1950	2003	Jordan	1950	2003	Netherlands	1950	2003	Sri Lanka	1950	2003			
Burundi	1992	2002	France	1950	2003	Kazakhstan	1993	2003	New Zealand	1950	2003	Suriname	1950	2003			
Cambodia	1988	2003	Gabon	1961	2003	Kenya	1964	2001	Nicaragua	1950	2003	Swaziland	1968	2003			
Cameroon	1961	2003	Georgia	1992	2002	Kuwait	1992	2003	Niger	1992	2003	Sweden	1950	2003			
Canada	1950	2003	Colombia	1950	2003	Laos	1956	2003	North Korea	1950	2003	Taiwan	1950	2003			
Cape Verde	1980	2003	Comoros	1975	2001	Latvia	1992	2001	Norway	1950	2003	Tajikistan	1994	2003			
Chile	1950	2003	Congo	1992	2003	Lebanon	1950	1989	Panama	1950	2003	Tanzania	1963	2003			

Table A2: List of Variables (Definitions and Sources)

JI Gap (dependent variable): Continuous variable. It measures the absolute difference between the standardized <i>de jure</i> and <i>de facto</i> JI values. Sources: <i>De jure</i> JI is from Hayo and Voigt (2019) and <i>de facto</i> JI from Holsinger et al. (2017).
Parliamentary System: Dummy variable indicating whether a country has a parliamentary system. Source: Scartascini et al. (2018).
Number of Veto Players: Continuous variable. Source: Henisz (2017).
Amendment of Constitution: Dummy variable indicating possibility of amending the constitution in a specific year. Source: Elkins et al. (2009).
Degree of Press Freedom: Ordered variable. Source: Whitten-Woodring and van Belle (2015).
Degree of Democracy: Ordered variable. Polity2 indicator from the Polity IV database. Source: Marshall (2013).
Degree of Corruption: Continuous variable. Indicator from the Variety-of-Democracies dataset. Source: Coppedge et al. (2018).
Leader came into power through: <ul style="list-style-type: none"> • Foreign Intervention • Irregular Means Dummy variables. Source: Goemans et al. (2009).
Leader lost power through: <ul style="list-style-type: none"> • Foreign Intervention • Irregular Means Dummy variables. Source: Goemans et al. (2009).
Military Leader: Dummy variable. Source: Goemans et al. (2009).
Male Leader: Dummy variable. Source: Goemans et al. (2009).
Leader's Age: Source: Goemans et al. (2009).
1950s–1990s: Decade dummies.

Table A3: Descriptive Statistics of Variables Listed in Table A2

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
JI Gap	4,946	0.98	0.78	0.00003	3.85
Parliamentary System	4,946	0.22	0.41	0	1
Number of Veto Players	4,946	0.23	0.22	0	0.73
Amendment of Constitution	4,946	0.55	0.50	0	1
Degree of Press Freedom	94,946	1.75	0.86	1	3
Degree of Democracy	4,946	1.13	7.63	-10	10
Degree of Corruption	4,946	0.44	0.31	0.01	0.97
Leader came into power through:					
• Foreign Intervention	4,946	0.02	0.13	0	1
• Irregular Means	4,946	0.18	0.38	0	1
Leader lost power through:					
• Foreign Intervention	4,946	0.01	0.08	0	1
• Irregular Means	4,946	0.14	0.35	0	1
Military Leader	4,946	0.20	0.40	0	1
Male Leader	4,946	0.97	0.16	0	1
Leader's Age	4,946	64	11.7	0	1
1950s	4,946	0.12	0.32	0	1
1960s	4,946	0.16	0.36	0	1
1970s	4,946	0.20	0.40	0	1
1980s	4,946	0.24	0.43	0	1
1990s	4,946	0.29	0.45	0	1