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## **ECONOMIC AND INSTITUTIONAL DETERMINANTS OF THE RULE OF LAW: A NEW EMPIRICAL EXPLORATION**

### **Abstract**

The rule of law has proved to be significant in economic and social development and the functioning of political systems. At the same time, determinants of the rule of law remain far from transparent. Our study focuses on a novel set of economic and institutional factors potentially shaping the rule of law. The quantitative research is based on econometric and machine-learning apparatus and covers a global sample of countries. The output of our study exposes the crucial role of the quality of the law, access to justice and impartial public administration to assure the rule of law. Apart from the contribution to the literature, our conclusions may be helpful for policymakers.

## KEYWORDS

rule of law, legal system, judicial system, civil society, institutional economics, law & economics

## SŁOWA KLUCZOWE

rządy prawa, system prawny, sądownictwo, społeczeństwo obywatelskie, ekonomia instytucjonalna, ekonomiczna analiza prawa

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## 1. INTRODUCTION

For decades, the rule of law has been considered a crucial factor for economic and social development<sup>1,2,3,4</sup>. Notably, the rule of law appears to be a multidimensional concept that covers both security of individuals, property or transactions, as well as boundaries imposed on governments<sup>5</sup>. The literature regarding the rule of law is dynamically evolving in economic, social, legal and political science. However, due to the complexity of this concept, some ambiguities have appeared, even concerning the approaches towards measuring the rule of law<sup>6,7,8</sup>. The sphere of determinants of the rule of law seems to be even vaguer these days.

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<sup>1</sup> P. Boettke, R. Subrick, *Rule of Law, Development, and Human Capabilities*, Supreme Court Economic Review 2003.

<sup>2</sup> R. Rigobon, D. Rodrik, *Rule of law, democracy, openness, and income. Estimating the interrelationships*, "Economics of Transition and Institutional Change" 2005.

<sup>3</sup> S. Haggard, A. MacIntyre, L. Tiede, *The Rule of Law and Economic Development*, "Annual Review of Political Science" 2008.

<sup>4</sup> S. Haggard, L. Tiede, *The Rule of Law and Economic Growth: Where are We?*, "World Development" 2011.

<sup>5</sup> *Ibidem*.

<sup>6</sup> S-E. Skaaning, *Measuring the Rule of Law*, "Political Research Quarterly" 2010.

<sup>7</sup> T. Ginsburg, Pitfalls of Measuring the Rule of Law, "Hague Journal on the Rule of Law" 2011.

<sup>8</sup> M. Versteeg, T. Ginsburg, *Measuring the Rule of Law: A Comparison of Indicators*, "Law & Social Inquiry" 2017.

Taking the issues mentioned above into consideration, the research question of our study is: *What are the determinants of the rule of law? Can we distinguish the following two main groups of factors that matter in this context – the contents of the law and other structural provisions?* The paper aims to empirically examine the importance of legal, political, social and economic prerequisites for the rule of law using econometric and machine learning tools. The contribution of our study is twofold. Firstly, we contribute to the literature regarding the rule of law by exposing its drivers. Through this, we obtain empirical evidence on the conditions that have to occur so that the rule of law is observable and may bring consequences known from the previous literature. Secondly, we apply novel quantitative tools like machine learning in our quantitative analysis.

Our article has the following structure: Section 2 contains the literature review on potential determinants of the rule of law. In Section 3, we present the data, variables, practical design and results. Finally, Section 4 covers the conclusions.

## 2. LITERATURE REVIEW

To start with, what potentially matters for the rule of law is the quality of law in terms of its transparency<sup>9,10,11</sup>. We presume that transparent laws are relevant in this context in two dimensions. Firstly, clear, coherent, well-publicized and stable laws are relatively easier to comprehend both from the perspective of the government and citizens<sup>12,13</sup>. That mitigates from unintentional breaches of the law, and those intentional ones would appear as more explicit. Thanks to the transparency of law, people are more aware of the current institutional settings and can oversee the executive's actions<sup>14</sup>. Transparent laws are also desired by the judiciary, as they are closely tied with challenges accompanying adjudicating.

What may also be crucial for the execution of the law is access to justice. In order to assure that citizens believe in the efficiency of legal systems, fair, easy

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<sup>9</sup> L. Mader, *Evaluating the Effects: A Contribution to the Quality of Legislation*, "Statute Law Review" 2001.

<sup>10</sup> S. Prechal, M. de Leeuw, *Dimensions of Transparency: The Building Blocks for a New Legal Principle?*, "Review of European Administrative Law" 2007.

<sup>11</sup> G. Hadfield, *The levers of legal design: Institutional determinants of the quality of law*, "Journal of Comparative Economics" 2008.

<sup>12</sup> W. Mock, *An Interdisciplinary Introduction to Legal Transparency: A Tool for Rational Development*, "Dickinson Journal of International Law" 2000.

<sup>13</sup> M. Fenster, *The Opacity of Transparency*, "Iowa Law Review" 2000.

<sup>14</sup> T. Hale, *Transparency, Accountability, and Global Governance*, "Global Governance" 2008.

and efficient access to courts and legal procedure should be provided<sup>15</sup>. Access to justice, also taken as a fundamental human right<sup>16,17</sup>, seems to be a direct channel of potential discrepancies between legal principles and practice<sup>18</sup>. Indeed, limited access to justice makes the whole legal system lame and ineffective. Societies with deficient access to justice have, in practice, weaker instruments to systematically control politicians' legal accountability drawn as the consequences of violations to the rule of law.

Education, in turn, may be assumed as a factor that raises the general ability of citizens to follow and understand the valid law and the actions of the executive. In that meaning, education should lead to higher levels of the rule of law, as the officials are expected to be more aware of the accountability of their political activity by a well-educated society<sup>19</sup>. A conscious society, thanks to education, is more likely to affect the validity of the law and shape politics. It may be stated that education raises the cognitive ability of society and the competencies of political agents. Thus, educated politicians should exhibit the increased ability and willingness to make decisions pertaining to the rule of law<sup>20</sup>.

As the rule of law is often understood as actions of government officials, another factor playing a vital role in this matter is the impartiality of public administration. An apolitical public administration, whose functioning is mainly aimed at regulatory enforcement<sup>21</sup>, is expected to strengthen strict and fair execution of the law, contributing to the rule of law. An administration that is free from political abuse and corruption is also relevant for a high quality of governance<sup>22</sup>. Administrative efficiency is taken as one of the idiosyncratic features of the rule of law<sup>23</sup>.

Civil society, commonly understood as a field for collective action around shared interests and purposes or values, distinct from government and commercial agents<sup>24</sup>, is expected to fulfil some civic goals. In this matter, civil society may inform people about the current political actions, also in the legal context, and, thus, serve as a medium between the executive and citizens<sup>25</sup>. In the face of

<sup>15</sup> S. Bottomley, S. Bronitt, *Law in Context*, Alexandria 2012.

<sup>16</sup> M. Versteege, T. Ginsburg, *Measuring the Rule of Law...*, *passim*.

<sup>17</sup> F. Francioni (ed.), *Access to Justice as a Human Rights*, Oxford 2007.

<sup>18</sup> D. Rhode, *Access to Justice*, Oxford 2004.

<sup>19</sup> H. Rindermann, *Relevance of education and intelligence for the political development of nations: Democracy, rule of law and political liberty*, "Intelligence" 2008.

<sup>20</sup> H. Rindermann, *Relevance of education...*, *passim*.

<sup>21</sup> M. Versteege, T. Ginsburg, *Measuring the Rule of Law...*, *passim*.

<sup>22</sup> B. Rothstein, J. Teorell, *What Is Quality of Government? A Theory of Impartial Government Institutions*, "Governance: An International Journal of Policy, Administration, and Institutions" 2008.

<sup>23</sup> H. Rindermann, *Relevance of education...*, *passim*.

<sup>24</sup> M. Edwards, *Civil Society*, Cambridge 2009.

<sup>25</sup> M. Edwards, *Civil Society...*, *passim*.

strong civil society organizations, politicians should be more prone to performing accountable and lawful governance<sup>26</sup>, as any harm to the rule of law would be met with resistance<sup>27</sup>. Another point is that civil society may easily contribute to publicizing the unlawful behaviour of political actors, which affects voters' preferences.

The level of the rule of law also seems to be dependent on the political regime. Empirical studies show that the rule of law and democracy tend to be mutually reinforcing<sup>28</sup>. That is in line with intuitive expectations that democratic systems provide a better ground for good institutions and the rule of law. This supposition is also backed up by the theory, proving that this must be in the interests of politicians to respect legal limits on their behaviour<sup>29</sup>. As in autocracies, when political actors are not accounted for during elections, the executive members have fewer incentives to obey the law.

Last but not least, the level of general uncertainty covering the economy or geopolitics may be relevant for the rule of law. A high level of uncertainty is likely to affect the predictability of policies and actions of the government, concerning also their respect for the law<sup>30</sup>. Quantitative studies show that uncertainty shocks bring sharp recessions and recoveries<sup>31</sup>. In such circumstances, the executive may face a relatively high temptation to violate the law for the sake of economic prosperity or their particular political goals dependent on instant policy decisions.

### 3. EMPIRICAL ANALYSIS

#### 3.1. DATA AND VARIABLES

In our research, we use the publicly available "Varieties of Democracy" database consisting of variables related to the quality of democracy across the world<sup>32</sup> and "World Uncertainty Index" data, a new measure of the uncertainty based on text mining of the country reports from the Economist Intelligence

<sup>26</sup> J. A. Scholte, *Building Global Democracy? Civil Society and Accountable Global Governance*, Cambridge 2011.

<sup>27</sup> D. J. Elazar, *Covenant and Civil Society. The Constitutional Matrix of Modern Democracy*, Ditcot 2017.

<sup>28</sup> R. Rigobon, D. Rodrik, *Rule of law...*, *passim*.

<sup>29</sup> B. Weingast, *The Political Foundations of Democracy and the Rule of Law*, "The American Political Science Review" 1997.

<sup>30</sup> G. Alexander, *Institutionalized Uncertainty, The Rule of Law, and The Sources of Democratic Stability*, "Comparative Political Studies" 2002.

<sup>31</sup> N. Bloom, *The Impact of Uncertainty Shocks*, "Econometrica" 2009.

<sup>32</sup> M. Coppedge [et al.], *V-Dem Codebook v10*, Gothenburg 2020.

Unit<sup>33</sup>. Our final dataset consists of data for 103 countries between the years 1970–2015. The final number of countries and time horizon we refer to in our research is subject to data availability. The selection of potential determinants of the rule of law is based on a literature review presented in the previous section. Therefore, in our dataset, we have the following variables: *regime*, which describes the regime type (the more democratic the regime type is, the higher the category number), *region*, which is another categorical variable that describes which geographical region a given country belongs to, and *gdp\_per\_capita* as a measure of wealth. There are also factors more closely related to the concept of the rule of law, including transparency of the law (*transparent\_laws*), easy and equal access to justice (*access\_to\_justice*), the impartiality of public administration (*public\_adm*) and robustness of civil society (*civil\_society*) (see Table A1 for a complete description of the variables). We also refer to *education*, which is the average number of years of schooling. The World Uncertainty Index (WUI) is calculated for quarters, as it is based on quarterly reports. Relying upon these quarterly values, we calculated their means as an annual representation of this variable. Thus, in our dataset, we have a variable *wui\_mean*, the above-mentioned average of quarterly WUI for a given country in a given year. The descriptive statistics for the variables included in our final database can be found in Table A2. Our dependent variable is *rule\_of\_law*, which is a measure of the rule of law defined as transparent, independent, predictable, impartial and equal enforcement of laws and the extent to which legal rules are obeyed by government officials<sup>34</sup>.

**Table A1. List of variables**

Variable name	Description	Data source
<i>access_to_justice</i>	Access to justice – do citizens enjoy secure and effective access to justice? Interval from 0 to 1.	Coppedge et al. (2020)
<i>civil_society</i>	Core civil society index – how robust is civil society? Interval from 0 to 1.	Coppedge et al. (2020)
<i>country</i>	Country name.	Coppedge et al. (2020)
<i>education</i>	What is the average years of education among citizens older than 15?	Coppedge et al. (2020)
<i>gdp_per_capita</i>	GDP per capita.	Coppedge et al. (2020)
<i>id</i>	Three-letter ID for each country.	Coppedge et al. (2020)

<sup>33</sup> H. Ahir, N. Bloom, D. Furceri, *The world uncertainty index*, Stanford 2018.

<sup>34</sup> M. Coppedge [et al.], *V-Dem...*, *passim*.

Variable name	Description	Data source
<i>public_adm</i>	Rigorous and impartial public administration – are public officials rigorous and impartial in the performance of their duties? Ordinal variable converted to interval.	Coppedge et al. (2020)
<i>regime</i>	Regimes of the world – the RoW measure – how can the political regime overall be classified considering the competitiveness of access to power (polyarchy) as well as liberal principles? Categorical variable with 4 levels; the higher the level, the more democratic the country.	Coppedge et al. (2020)
<i>region</i>	In which politico-geographic region is this country located? Categorical variable.	Coppedge et al. (2020)
<i>rule_of_law</i>	Rule of law index – to what extent are laws transparently, independently, predictably, impartially, and equally enforced, and to what extent do the actions of government officials comply with the law? Interval from 0 to 1.	Coppedge et al. (2020)
<i>transparent_laws</i>	Transparent laws with predictable enforcement – are the laws of the land clear, well-publicized, coherent (consistent with each other), relatively stable from year to year and enforced in a predictable manner? Ordinal variable converted to interval.	Coppedge et al. (2020)
<i>wui_mean</i>	World Uncertainty Index defined as mean of quarterly index values.	Ahir et al. (2018)
<i>year</i>	Year.	Coppedge et al. (2020)

Source: Own elaboration.

**Table A2. Descriptive statistics**

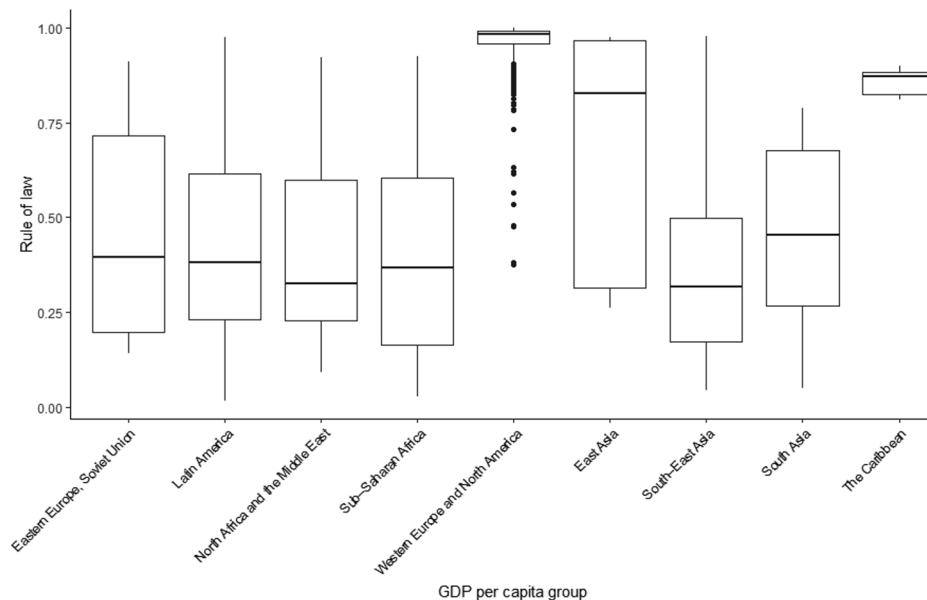
Variable name	Observations	Mean	Standard deviation	Minimum	Maximum
<i>access_to_justice</i>	4738	0.5785	0.2925	0.0020	0.9910
<i>civil_society</i>	4738	0.5949	0.3091	0.0110	0.9790
<i>education</i>	4738	6.234	3.4135	0.1000	13.6100
<i>gdp_per_capita</i>	4738	10536	12151.57	134	81923

Variable name	Observations	Mean	Standard deviation	Minimum	Maximum
<i>public_adm</i>	4738	0.2433	1.6038	-3.7300	3.6090
<i>rule_of_law</i>	4738	0.5278	0.3165	0.0180	0.9980
<i>transparent_laws</i>	4738	0.5463	1.5891	-3.6810	3.4710
<i>wui_mean</i>	4738	0.0423	0.0417	0.0000	0.3625

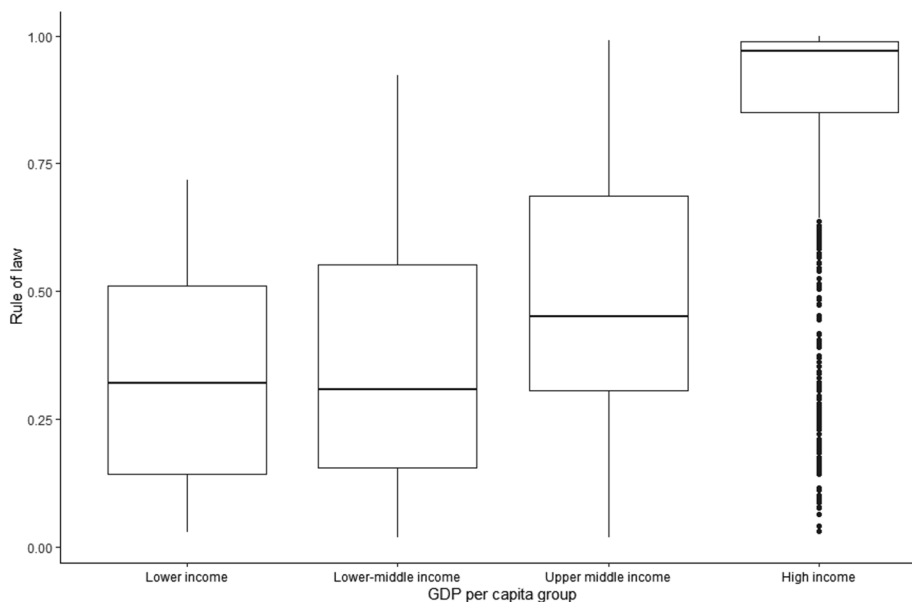
Source: Own elaboration.

The level of the rule of law in various income, regime, and geographical groups can be explored in Figures A1, A2, A3. In Figure A1, we can see that Western European countries seem to be the most law-abiding despite many outliers with low values of the rule of law index. Caribbean countries seem to be law-abiding as well. Another interesting region is Asia, where we can observe a very high variance of values of this indicator, with both very high and very low values being scored. Income groups were created based on the 2015 World Bank GDP *per capita* criteria. Figure A2 suggests that higher values of the rule of law index can be observed for high-income countries; however, many outliers with low indicator values can be found in this group.

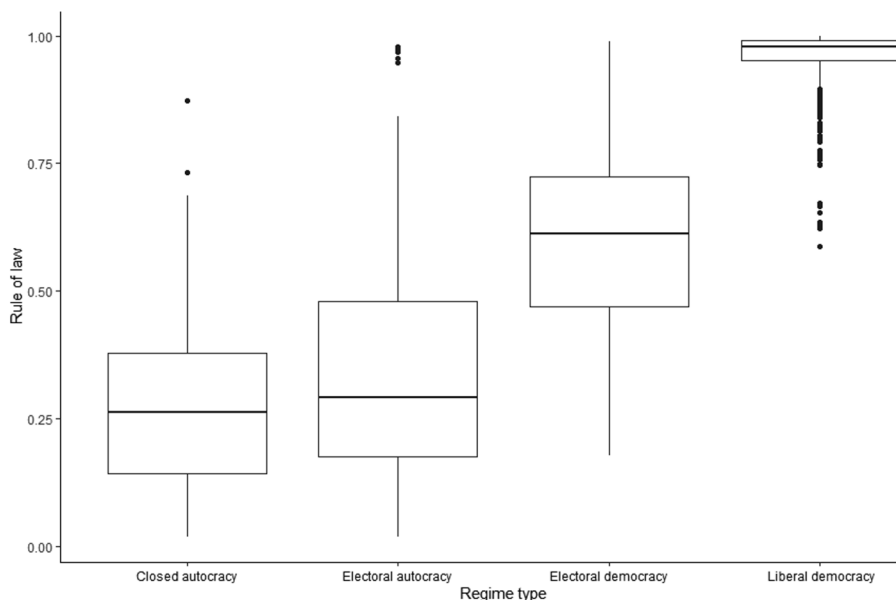
On the other hand, there seems to be no difference in the rule of law level between lower and lower-middle-income countries. The variable *regime* has four categories that describe whether the country is more or less democratic, with higher values indicating the more democratic countries. In Figure A3, we can see that democratic countries score much higher values in terms of the rule of law index, especially liberal democracies. We can notice from these three figures that the highest values of the rule of law index are observed for countries in West Europe and North America, from high-income countries and liberal democracies, which generally coincides with the available literature. The overall tendency is that wealthier and more democratic countries have higher values of the rule of law index. However, in countries that belong to law-abiding groups, there are also outliers with evidently lower values of this index. It is worth noting that there are autocracies with a relatively high rule of law index, but the general trend is as stated above, and liberal democracies seem to be the most lawful countries. Before modelling, we also checked the character of the relationship between the dependent variable and independent variables. It turned out that *wui\_mean* has a cubic relationship and *education* has a quadratic relationship with the rule of law, as shown in Figures A4 and A5. The strength of the positive effect of education increases after achieving some level of this variable.

**Figure A1. Rule of law and geographical group division**

Source: Own elaboration.

**Figure A2. Rule of law and income group division**

Source: Own elaboration.

**Figure A3. Rule of law and regime-type division**

Source: Own elaboration.

### 3.2. EMPIRICAL DESIGN

For modelling, we decided to use a fixed-effects model due to potential endogeneity issues. Generally, there might be some region or country-level specific factors that could impact the rule of law. These may result from the history of the region or country, which would be troublesome to include in the data. We run different variants of the regression with assorted sets of variables. The first is the base design, where we estimate parameters of the model of the following functional form:

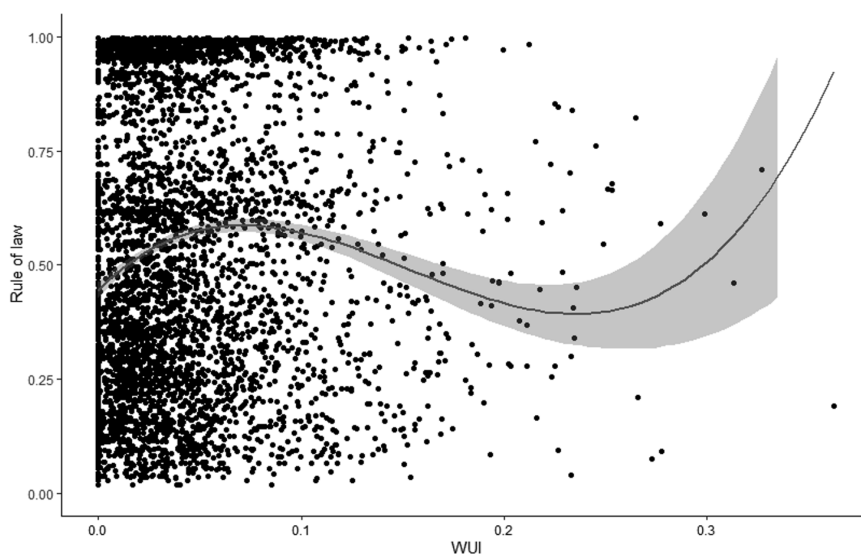
$$\begin{aligned} rule\_of\_law_{it} = & wui\_mean_{it} + wui\_mean^2_{it} + wui\_mean^3_{it} + transparent\_laws_{it} \\ & + access\_to\_justice_{it} + regime_{it} + public\_adm_{it} + civil\_society_{it} \\ & + education_{it} + education^2_{it} + \epsilon_{it} + \alpha_i \end{aligned}$$

Based on the literature review presented earlier and the exploratory data analysis, we expect the following effects of variables included in the model on the rule of law:

- *wui\_mean*: nonlinear relationship visualized in Figure A4;
- *transparent\_laws*: positive effect of higher transparency of the law;
- *access\_to\_justice*: positive effect of higher access to justice;
- *regime*: higher values of the rule of law for more democratic countries;
- *public\_adm*: positive effect of public officials being rigorous and impartial;
- *civil\_society*: positive effect of more robust civil society;

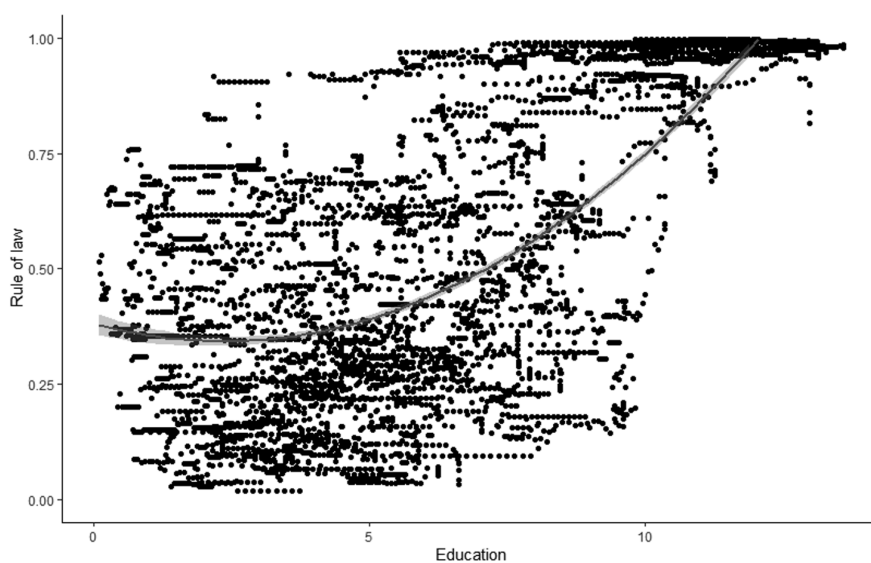
– *education*: quadratic relationship, after achieving some level of education in society, a positive effect resulting from increased education on the rule of law should be observed, visualized in Figure A5.

**Figure A4. Rule of law and WUI**



Source: Own elaboration.

**Figure A5. Rule of law and education**



Source: Own elaboration.

In the following specifications, we also included the two versions of GDP *per capita*. The first approach relies on the variable *lgdp*, which is the logarithm of GDP *per capita*. In the second one, we use the variable *group*, a categorical variable dividing countries into income groups based on World Bank criteria. In general, we expect that the higher values of variables describing the country's wealth will positively affect the level of the rule of law.

To further examine the rule of law determinants, we also used the random forest algorithm known for its effectiveness in finding interactions between variables and nonlinearity, which might be very helpful in our case. It finds them by creating a series of decision trees with randomly sampled variables, and then, in regression problems like ours, it averages the results of all the trees. This technique allows us to address the potential nonlinear dependencies between dependent and independent variables. However, a random forest is perceived as a black-box algorithm, which means that very good results can be achieved in terms of prediction, but it does not provide the necessary explanations of why a model made such a decision. To interpret the prediction factors, we decided to use the following two techniques. The first is a permutation feature importance, measured for a given variable as the increase in prediction error after permuting it. If we shuffle the values of a given variable randomly, then the effect is similar to this variable being wholly removed, as the variable with random values should have predictive power equal to zero<sup>35</sup>. In the second, we use the SHAP, interpretability tool based on Shapley values known from game theory. Shapley values are a solution to the problem of dividing the prize between players according to their contribution. For this purpose, it is necessary to make all possible combinations of cooperating players (also containing only one player) and then calculate the average marginal output increase for each player. The SHAP adapts this solution to machine learning where the model is the game, variables are the players and model output is the prize. Furthermore, it has an implementation designed to explain decision tree-based methods, significantly decreasing computation time. Thanks to the rich theory behind that method, the SHAP is considered a satisfactory method of explaining machine-learning algorithms<sup>36,37</sup>.

### 3.3. RESULTS

Table A3 contains the results of our regressions, and, in Figure A6 and A7, we can see permutation importance and Shapley values plots, based on which

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<sup>35</sup> C. Molnar, *Interpretable machine learning*, Morrisville 2020.

<sup>36</sup> C. Molnar, *Interpretable machine...*, *passim*.

<sup>37</sup> P. Biecek, T. Burzykowski, *Explanatory model analysis: explore, explain, and examine predictive models*, Boca Raton 2021.

we can derive conclusions about the main determinants of the rule of law. The results of our regressions used to explain the rule of law quality factors confirm the positive effect of transparent laws suggested by the literature, which make it easier to interpret and enforce the law<sup>38,39</sup>, adequate secure access to justice, as good law is worthless if you cannot benefit from it due to the lack of access to justice<sup>40</sup>, create a robust civil society that increases awareness of citizens about the rule of law, which allows them to defend it more efficiently<sup>41</sup>, build up a rigorous and impartial public administration that is a guarantee of the application of good law fairly in everyday situations<sup>42,43</sup>. The dependence between education and the rule of law index is nonlinear, significant, and consistent with our analysis. The literature says that the higher the education level, the higher the rule of law<sup>44</sup>, but the results of our analysis suggest that society needs to achieve some education level before it starts to benefit from it in terms of the rule of law quality. All the categorical variable levels describing regime type are significant; the more democratic the country, the higher the rule of law index. Considering the effect of wealth, both implementations containing information about GDP per capita suggest a distinct positive relationship between wealth and the rule of law. The nonlinear relationship between WUI and the rule of law is significant.

On the other hand, permutation importance (Figure A6) and the Shapley values (Figure A7) calculated for the random forest model undermine the importance of this variable. However, they confirm the importance of law transparency, impartial public administration, education and access to justice for the rule of law quality. From the Shapley values, we can further conclude that they are essential, and the higher values of the variables describing them have a positive impact on the rule of law. As we can see, our analysis confirmed and clarified the main factors of the rule of law and the exact way they affect it. It seems that it is important to implement good law that secures the rule of law by providing fair access to justice and defines the way problems should be solved. There is also a second group of factors that can be described as structural provisions, which can help educate society, so it is aware of potential threats to its rights.

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<sup>38</sup> L. Mader, *Evaluating the Effects...*, *passim*.

<sup>39</sup> G. Hadfield, *The levers...*, *passim*.

<sup>40</sup> S. Bottomley, S. Bronitt, *Law...*, *passim*.

<sup>41</sup> M. Edwards, *Civil Society...*, *passim*.

<sup>42</sup> S-E. Skaaning, *Measuring...*, *passim*.

<sup>43</sup> M. Versteeg, T. Ginsburg, *Measuring the Rule of Law...*, *passim*.

<sup>44</sup> H. Rindermann, *Relevance of education...*, *passim*.

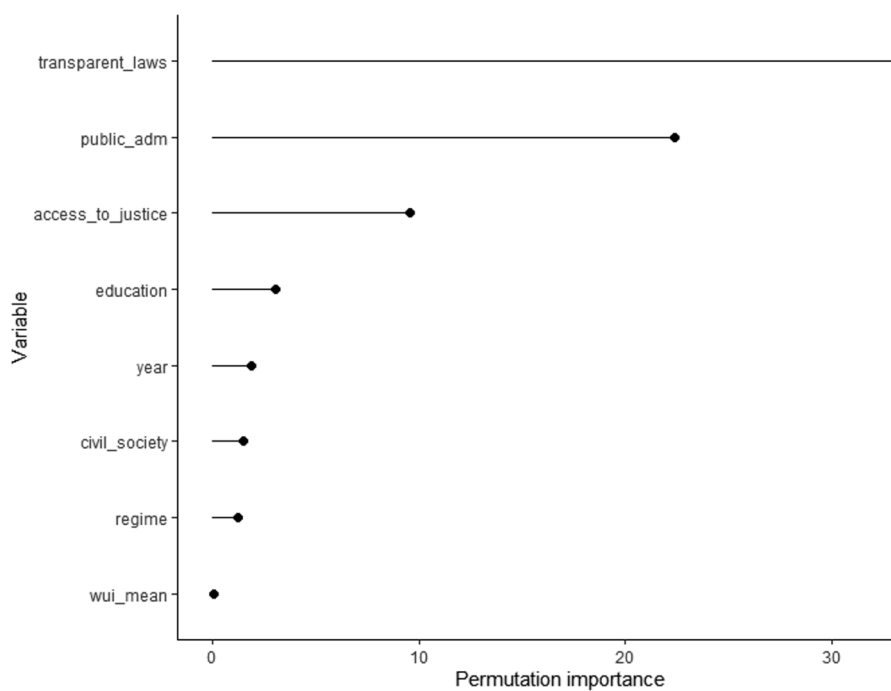
**Table A3. Regressions results**

	<i>Dependent variable:</i>			
	rule_of_law			
	(1)	(2)	(3)	(4)
wui_mean	-0.216** (0.087)	0.047** (0.022)	-0.222** (0.087)	-0.223** (0.087)
wui_mean <sup>2</sup>	2.800*** (0.964)		2.889*** (0.964)	2.872*** (0.964)
wui_mean <sup>3</sup>	-6.635** (2.679)		-6.908*** (2.680)	-6.887** (2.678)
transparent_laws	0.039*** (0.002)	0.039*** (0.002)	0.039*** (0.002)	0.038*** (0.002)
access_to_justice	0.151*** (0.013)	0.151*** (0.013)	0.150*** (0.013)	0.148*** (0.013)
electoral_autocracy	-0.008** (0.003)	-0.008** (0.003)	-0.008** (0.003)	-0.008** (0.003)
electoral_democracy	0.059*** (0.005)	0.059*** (0.005)	0.060*** (0.005)	0.060*** (0.005)
liberal_democracy	0.063*** (0.009)	0.063*** (0.009)	0.065*** (0.009)	0.065*** (0.009)
public_adm	0.063*** (0.002)	0.063*** (0.002)	0.062*** (0.002)	0.063*** (0.002)
group(lower-middle-income)			0.009** (0.004)	
group(upper-middle-income)			0.017*** (0.006)	
group(high-income)			0.017** (0.008)	
lgdp				0.010*** (0.003)

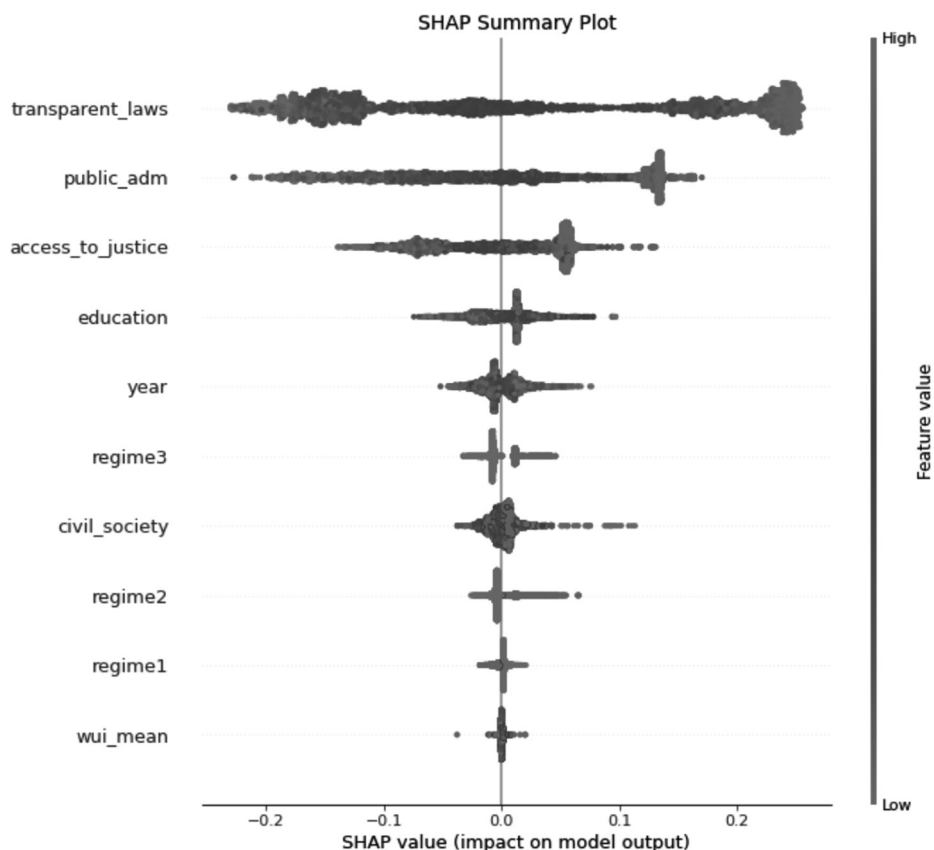
civil_society	0.042*** (0.009)	0.040*** (0.009)	0.043*** (0.009)	0.047*** (0.009)
education	-0.034*** (0.002)	-0.034*** (0.002)	-0.035*** (0.002)	-0.034*** (0.002)
education <sup>2</sup>	0.002*** (0.0002)	0.002*** (0.0002)	0.002*** (0.0002)	0.002*** (0.0002)
Observations	4,738	4,738	4,738	4,738
R <sup>2</sup>	0.743	0.743	0.744	0.744
Adjusted R <sup>2</sup>	0.737	0.736	0.737	0.737
F Statistic	1,114.499*** (df = 12; 4623)	1,334.188*** (df = 10; 4625)	893.079*** (df = 15; 4620)	1,031.446*** (df = 13; 4622)
Note:	*p<0.1; **p<0.05; ***p<0.01			

Source: Own elaboration.

**Figure A6. Permutation importance plot (random forest model)**



Source: Own elaboration.

**Figure A7. SHAP summary plot (random forest model)**

Source: Own elaboration.

## 4. CONCLUSION

The study's main aim was to contribute to the literature on the rule of law by empirically examining its potential determinants on a global sample of countries. Our analysis confirms the importance of all mentioned in the literature rule of law factors. Moreover, using random forest explanation methods, we can conclude that the essential determinants of the rule of law are law transparency, impartial public administration, access to justice and education level. As we can see, some of them, like transparent laws, can be perceived as the contents of the law, while access to justice, education level and impartial public administration can be described as other structural provisions. Therefore, maintaining

a high level of the rule of law requires not only the creation of legal solutions and mechanisms but also strong institutions that provide citizens with education and political awareness required to build a robust civil society that can defend itself, or at least react quickly to any danger to the rule of law.

We believe that our research not only brings value to the existing literature in institutional economics and law and economics but might also be helpful for policymakers. Regular quantitative studies regarding the rule of law covering more country-specific nuances could provide vital grounds for data-driven decisions.

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