

# **Economic consequences of respecting and violating constitutions revisited using a new set of indicators**

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## **Abstract:**

Constitutional (non-)compliance and its effects are increasingly analyzed in empirical studies. Gutmann et al. (2024) developed the Comparative Constitutional Compliance Database for 175 countries since 1900, while Lewczuk & Metelska-Szaniawska (2025) provided evidence of a positive relationship between constitutional compliance and GDP per capita using dynamic panel regressions. The latter study, however, fails to distinguish short- and long-run effects. In this paper, we construct a new set of indicators, inspired by Grier and Grier (2021), allowing us to capture the size and durability of changes in compliance, and revisit the question of economic consequences of respecting/violating constitutions using two matching-based approaches – linear regression adjustment (Acemoglu et al. 2019) and matching treated and untreated countries with similar compliance histories and covariates (Imai et al.2023). Our findings confirm and extend those of Lewczuk & Metelska-Szaniawska (2025), highlighting a new aspect – the long-run economic effects of respecting constitutions. We also contribute by enriching the available global database of constitutional (non-)compliance with a set of new indicators allowing to capture size and durability of changes, facilitating future work in this area.

**Keywords:** constitutional compliance; constitutional economics; law and economics; de jure–de facto gap

**JEL codes:** E02; H11; K11; K38; K42; O43; O57; P14; P48

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## Introduction

While recent years have witnessed an intensive development of studies interested in identifying the factors inclining government actors towards violating the constitution, or deterring them from it, the effects of this common phenomenon have not been given much attention. Current times have brought about numerous situations when constitutional practice of political actors diverged from the formal wording of constitutions. This encompasses not only documented cases of constitutional rights and freedoms violations, but also many other incidents of breaches of the constitution by the executive (e.g. in Turkey, Hungary, or Venezuela). Several developments under the Trump administration in the United States, as well as in Poland since 2015, have also raised controversy from the constitutional perspective. Studies of the factors explaining governments' inclination towards violating constitutions are incomplete if the effects of such violations have not been identified. In this paper, we aim to fill this crucial lacuna by providing a thorough investigation focused directly on long-run economic effects of constitutional non-compliance for the global sample of countries.

Empirical studies of constitutional (non-)compliance have till recently been significantly constrained by the measurement challenges due to unavailability of credible dataset covering a broad scope of cross-sectional data. This problem has been mitigated with the publication of the new Comparative Constitutional Compliance Database (Gutmann et al., 2024), which measures – on a yearly basis – governments' compliance with national constitutions for nearly all countries in the world since 1900, such studies became feasible. This database matches information on de jure constitutional rules with data on their de facto implementation in four areas – property rights and the rule of law, political rights, civil rights, and basic human rights.

This paper constitutes an extension of the study by Lewczuk & Metelska-Szaniawska (2025) on the short-run economic effects of constitutional non-compliance. We aim to deepen the understanding of the economic effects of constitutional (non-) compliance by proposing a new set of binary indicators of a country's transition into constitutional compliance (based on the data sourced from Comparative Constitutional Compliance Database – Gutmann et al., 2024) and by focusing on the long-run effect of the transition. We ask the following research question: *What is the long-run effect of constitutional non-compliance on economic development and the time path of this effect?* We rely on two matching-based approaches – linear regression adjustment (Acemoglu et al. 2019) and matching treated and untreated countries with similar compliance histories and covariates (Imai et al.2023).

The paper is structured as follows. In Section 1 we provide a literature survey allowing to sketch the background for the analysis of economic effects of (non-)compliance with constitutions and formulate our main research question. In Section 2 we introduce the binary measure of transition into constitutional compliance. In Sections 3-5 we provide the discussion of our modelling methodology and data sources, as well as present the obtained estimation results. The paper finishes with conclusions.

## 1. Economic effects of constitutional (non-)compliance

Within the scope of research on constitutional economics, a novel strand of literature focusing on the problem of discrepancy between formal provisions written down in constitutions and *de facto* constitutional practice has recently developed. This study inscribes into this discussion by advancing the theory related to the effects of the *de jure-de facto gap* (see *inter alia* Voigt 2021, Law & Versteeg 2013, Metelska-Szaniawska 2021, Chilton & Versteeg 2017, Bjørnskov & Mchangama 2019, Gutmann & Voigt 2020, Gutmann *et al.* 2023, Lewkowicz & Lewczuk 2023, Hayo & Voigt 2023). The logic is as follows: The economic and social effects of constitutional provisions (*de jure*) depend on the degree of their actual implementation (*de facto*), i.e., on constitutional compliance of the state actors. Low levels of constitutional compliance contribute to the rise of uncertainty which is detrimental to economic and social development (Voigt 2021). Lewczuk & Metelska-Szaniawska argue that given the role of the constitution as a mechanism to counteract time-inconsistency problems connected with drafting and implementing economic policy, i.e. in enhancing credible commitment of government agents, one should expect the existence of *de jure-de facto* gaps undermines the effectiveness of this mechanism and decreases the predictability of government's actions, which economic actors strive for (Lewczuk & Metelska-Szaniawska 2023).

Given the above, constitutional non-compliance results in adverse economic consequences, such as decreased pro-development activity of economic agents and lower GDP *per capita* levels. Furthermore, *de jure-de facto* gaps decrease government's legitimacy and weaken the constitution's role in resolving conflict and coordinating collective action around a focal solution, which is an equilibrium in a game between the state agents and citizens, increasing, in effect, the transaction costs of governing.

The theoretical approach to studying economic effects of constitutional (non-)compliance draws on the foundations of constitutional economics (e.g. Hayek 1960; Buchanan, Tullock 1962; Brennan, Buchanan 1985; North, Weingast 1989; Weingast 1993, 1997; Buchanan 1999; Sunstein 2001; Hadfield, Weingast 2012, 2014), which view the constitution as: (1) as a credible commitment mechanism; (2) a conflict-solving and coordination device; (3) the source of government's legitimacy *vis-à-vis* the citizens. *De jure-de facto* gaps undermine the effectiveness of the commitment mechanism, as well as hamper coordination and lead to legitimacy losses, increasing, thereby, the transaction costs of governing and giving rise to adverse economic and social effects.

This study constitutes an extension of Lewczuk & Metelska-Szaniawska (2025) on the economic effects of constitutional non-compliance, presenting a global study (for more than 150 countries) of economic effects of constitutional (non-)compliance in the period 1960-2019 and confirming that non-compliance with constitutions is associated with lower GDP per capita and this, in particular, in the area of property rights protection and the rule of law. In addition, they identify groups of countries, where (non-)compliance with constitutions is of particular relevance. Specifically, the obtained outcomes indicate that low- and lower-middle-income economies benefit most strongly from increased government credibility and legitimacy achieved when governments act in compliance with their countries' constitutions. However, this holds only for democratic states, while in autocracies, on the contrary, significant negative

effects of *de jure-de facto* gaps are found where income levels are high. Further, this study also finds that protection of property rights and the rule of law is the one area where constitutional compliance is particularly crucial for economic performance. The mechanism behind the significance of constitutional (non-)compliance for economic outcomes primarily involves investment-related channels. No consistent evidence of other mechanisms at play behind the adverse role of (non-)compliance with constitutions for economic outcomes are found.

In this paper, we aim to deepen the understanding of the economic effects of constitutional (non-) compliance by proposing a new set of binary indicators of a country's transition into constitutional compliance and by focusing on the long-run effect of the transition into constitutional compliance. As mentioned earlier, we ask the following research question: *What is the long-run effect of constitutional non-compliance on economic development and the time path of this effect?*

## **2. Indicator of transition into constitutional compliance**

In our study, we propose a set of new binary indicators capturing the significant year-over-year changes (transitions) in constitutional compliance. We develop our measures using a sample of the country-year level data on constitutional compliance sourced from the Comparative Constitutional Compliance Database (Gutmann et al. 2024) for the period 1960-2020. The Comparative Constitutional Compliance Database (Gutmann et al. 2024), which includes indicators for governments' compliance with 14 constitutional rules grouped into four legal areas: (1) property rights and the rule of law (encompassing indicators for property rights, judicial independence, equality before the law, and rule of law); (2) political rights (freedom of association, freedom of assembly, and the right to form parties); (3) civil rights (free media, free speech, free movement, and religious freedom); and (4) basic human rights (the right to life, freedom from slavery, and protection from torture). The construction of these indicators follows Voigt's (2021) conceptualization of constitutional (non-)compliance and involves matching information on *de jure* constitutional rules from the Comparative Constitutions Project (CCP – Elkins et al. 2021) with data on these rules' *de facto* implementation according to the Varieties of Democracy project (Coppedge et al. 2022). Compliance with a constitutional rule is coded 1 if the given rule is protected both *de jure* and *de facto*, 0 if the right is protected *de jure*, but not *de facto* (i.e. there exists a *de jure-de facto* gap), and 0.5 if a constitutional right is not protected *de jure*, irrespective of the *de facto* indicator. Individual scores for these 14 compliance indicators, as well as aggregated measures for the four above-mentioned categories of constitutional rules and an overall compliance indicator across all rules, are calculated using factor analysis for 175 countries over the time period 1900 to 2020. Wide country and time coverage are not the only advantages of this dataset. A major asset of this indicator construction is that all *de jure* and all *de facto* data, respectively, come from the same data source, avoiding problems of comparability due to differing coding rules and measurement strategies for compliance with different rights.

Given that the compliance indicators introduced in the Comparative Constitutional Compliance Database are continuous, they are not suitable for modelling the long-run economic effects of constitutional compliance. Therefore, we develop a novel set of binary measures allowing us to

conceptualize and quantify the significant jumps in constitutional compliance that we refer to as “transitions into constitutional compliance”.

As the starting point of our analysis we rely on the approach proposed by Grier and Grier (2021) for measuring “jumps” in economic freedom, and propose the following conditions that have to be met to identify the transition into constitutional compliance for country *c*:

1. the observed change needs to be greater than one standard deviation of constitutional compliance observed for country *c* in period 1960-2020, and
2. the change needs to sustain in the next five years.

The proposed approach allows us account not only for the magnitude of the observed change but also for its durability.

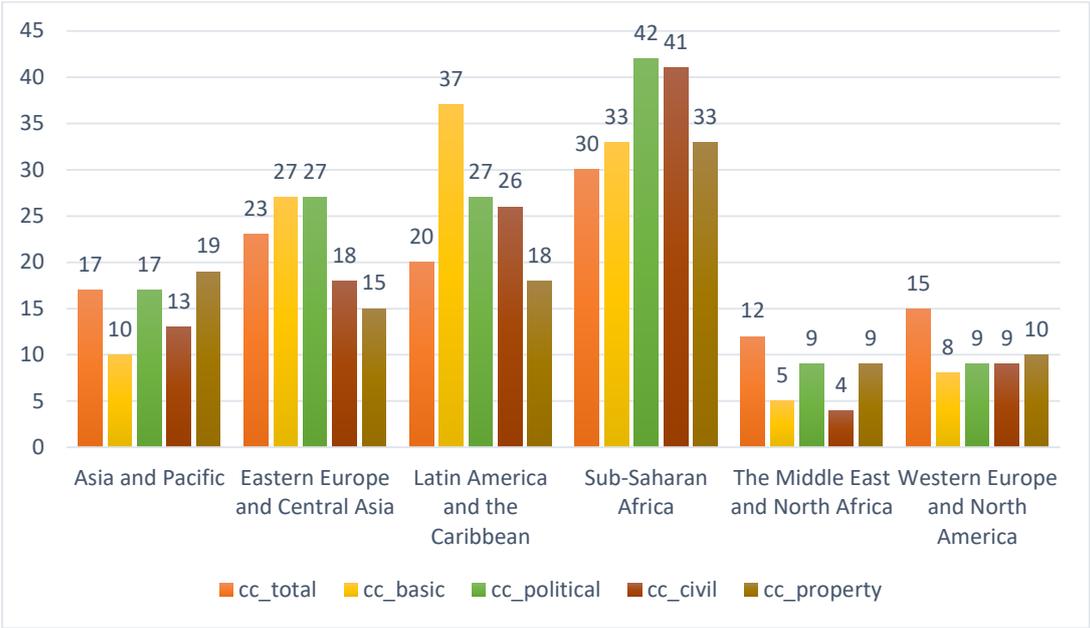
Table 1 and Figure 1 present the descriptive statistics of the abovementioned measure calculated for constitutional compliance at the total level, as well as for the areas of basic human rights, political rights, civil rights, as well as and property rights and the rule of law.

**Table 1** Transition into constitutional compliance measure – descriptive statistics

	<i>constitutional compliance</i>				
	<i>total</i>	<i>basic</i>	<i>political</i>	<i>civil</i>	<i>property and rule of law</i>
number of identified transitions in period 1960-2020	117	120	131	111	104
country with the highest number of transitions	North Macedonia (3)	Guyana (5)	Armenia (4), Turkey (4)	Bosnia and Herzegovina (3), Cambodia (3), Dominican Republic (3), Malawi (3), North Macedonia (3)	Nepal (3), Seychelles (3), Turkey (3)
year with the highest number of transitions	1990 (10), 2000 (10)	2000 (7), 2002 (7)	1990 (11)	1990 (11)	2000 (8)

Source: Authors’ own elaboration.

**Figure 1** Transition into constitutional compliance measure per political regions of the world



Source: Authors’ own elaboration.

The main conclusions stemming from the abovementioned descriptive analysis are as follows:

- most shifts are observed for constitutional compliance in terms of political rights (131) and this result is driven mainly by countries from Sub-Saharan Africa region,
- transition into constitutional compliance in terms of property rights is the least frequent in our sample. It is relatively most common in countries of Asia and the Pacific, Western Europe and North America,
- regions for which the majority transitions into constitutional compliance (for various categories of rights) is reported are Latin America, as well as the Caribbean and Sub-Saharan Africa,
- the periods characterised with the greatest number of transitions reported are:
  - 1990: Benin, Bulgaria, Chile, Cote d'Ivoire, Hungary, Malta, Nicaragua, Niger, Panama, Uruguay,
  - 2000: Barbados, Bosnia and Herzegovina, Burkina Faso, Croatia, Indonesia, Jamaica, Mauritania, Morocco, Vanuatu, and Vietnam.

*[For the final version of the paper we plan to develop and analyze alternative measures of a country's transition into (and from) constitutional compliance, in particular:*

- *approaches not relying on the assumption of durability of the change,*
- *approaches relying on alternative measures of magnitude of the change such as:*
  - *accounting only for the maximum increase in constitutional compliance in country c observed in the period covered in the data sample,*
  - *accounting for the changes greater than one or two standard deviations of constitutional compliance observed for the geopolitical region in which country c is located.]*

### 3. Methodology

Our empirical approach follows five methodological approaches. The three – the linear regression adjustment approach – was proposed by Acemoglu et al. (2019) in their study on the effect of the transition to democracy on GDP per capita. We argue that a similar empirical framework may be applied to analyze the impact of increased constitutional compliance on economic development. In our first approach, we rely on the linear regression adjustment approach to form a counterfactual. GDP per capita changes  $s$  years after the transition into constitutional compliance for countries that have not experienced such transition are estimated using ordinary least squares regression with the following set of explanatory variables: year fixed effects and four lags of GDP per capita (for years  $t-1$ ,  $t-2$ ,  $t-3$ , and  $t-4$ ). The linear regression is used only to estimate the counterfactual, while the linear dynamics for GDP per capita are not imposed - the counterfactual is estimated separately for each  $s$ . This is a semiparametric strategy – the parametric process for GDP per capita is not specified. The effect of transition to constitutional compliance on GDP per capita  $s$  years after transition to constitutional compliance is computed as:

$$\beta^s = E[CC_{ct} = 1, CC_{ct-1} = 0] - E[X_{ct}|CC_{ct} = 1, CC_{ct-1} = 0]\pi^s,$$

where  $\Delta y_{ct}^s(cc)$  denotes the potential change in GDP per capita level at time  $t+s$  for country  $c$  experiencing a shift in or out of constitutional compliance at time  $t$ , denoted by  $cc \in \{0,1\}$ .  $CC_{ct} = 1, CC_{ct-1} = 0$  implies that country  $c$  experienced a shift into constitutional compliance at  $t$ .  $X_{ct}$  represents the year fixed effects and four lags of GDP per capita (for years  $t-1$ ,  $t-2$ ,  $t-3$ , and  $t-4$ ), and  $\pi^s$  is the ordinary least squares estimate of the counterfactual cumulative ( $s$ -year) growth for countries that experienced a transition into constitutional compliance at time  $t$ .

In an alternative approach, we rely on the framework proposed by Imai et al. (2023). This matching method allows us to control for different covariates and to base the analysis on past similarities. While matching methods applied to constitutional matters are well-established in the literature (Chilton & Versteeg, 2016; Callais & Young, 2021; Callais & Young, 2024), they lack analysis of the temporal aspect of data. Considering the data as cross-sectional and ignoring the time aspect, they result in lower quality of estimates.

Our proposed method may be called “history-based panel matching” as it is essentially a matching approach applied to panel data ensuring that both treated and control units share a similar history. Our goal is to estimate the average treatment effect (ATE) and the average treatment effect on treated (ATT) over several periods after treatment. Let  $F$  denote the number of post-treatment periods for which the effects will be calculated. Thus,  $F$  will be an integer greater than or equal to 0. Let  $L$  be the number of periods before treatment in which the matched units must have the same history. For example, let the treatment history in countries A, B, C, and D be as in Table 2.

**Table 2.** The example of the countries with (dis)similar treatment history

Year / Country	A	B	C	D
2001	0	0	1	0
2002	0	0	0	1
2003	0	0	0	0
2004	1	0	0	0
2005	1	0	0	1

Source: Authors' own elaboration.

Seeking to calculate ATT or ATE in 2004, it will be necessary to match state A, which received the treatment, with other states in that year. If  $L = 3$  is selected, the states should have an identical history in years  $t-1, t-2, t-3$ , i.e., 2001-2003. It is easy to see that state A can then be compared only to state B, which had an identical history of treatments as A during the period in question. If  $L = 2$ , only the same history of treatment in 2002-2003 would have to be taken care of, so that state A can then be compared to both states B and C. If  $L = 1$ , then country A would be compared with all the others in the example, namely B, C, and D. It can be seen that the proper selection of  $L$  is crucial for modelling in this approach. Imai et al. (2023) emphasize that this is the epitome of the classic bias-variance trade-off. The larger  $L$  is, the better the states will be matched. At the same time, this can reduce the number of matched states and lower the precision of the estimates. In their provided code Imai et al. (2023) use  $L = 1$  or  $L = 4$ . ATT is calculated as follows:

$$ATT(F, L) = \mathbb{E} \left( Y_{i,t+F} \left( X_{i,t} = 1, X_{i,t-1} = 0, \{X_{i,t-l}\}_{l=2}^L \right) - Y_{i,t+F} \left( X_{i,t} = 0, X_{i,t-1} = 0, \{X_{i,t-l}\}_{l=2}^L \right) \mid X_{i,t} = 1, X_{i,t-1} = 0, Z \right)$$

where:

$Y_{i,t+F}(\dots)$  is the log of GDP per capita (the outcome variable) of country  $i$  in time  $t+F$ ;

$\{X_{i,t-l}\}_{l=2}^L$  is the vector of observed treatment values up to  $L$  years in the past,

$Z$  is the vector of different observed characteristics.

The notation is somewhat approximate since the matching based on the historical values of the treatment is conducted exactly, while other characteristics are used to calculate the covariate balance (such as Mahalanobis distance or propensity score). ATE is calculated similarly, only the expected value would not be conditioned on the past values of  $X$ .

#### 4. Data

Our dataset consists of a sample of 180 countries, for which data is available, for the period 1960-2020. As explained in Section 2, our primary source of data on constitutional compliance is the Comparative Constitutional Compliance Database (Gutmann et al. 2024).

What is more, we source the data on GDP per capita (in constant 2015 USD) from the *World Development Indicators* dataset (World Bank 2024). In our second approach based on Imai et al. (2023) we account for a number of control variables related to the variety of economic, social, political, and institutional indicators. The summary of all variables used in our empirical study is presented in Table 3 below.

**Table 3.** List of variables and data sources

Variable name	Definition	Source
<i>GDP per capita (in log)</i>	Continuous variable. Natural logarithm of GDP per capita (in constant 2015 USD)	World Bank (2024)
<i>cc_total</i>	Binary variable. It takes value 1 if the country experienced a transition into constitutional compliance between period $t-1$ and $t$ . For a detailed description of the measure see Section 2.	Authors' own elaboration based on Gutmann et al. (2024).
<i>cc_basic</i>	Binary variable. It takes value 1 if the country experienced a transition into constitutional compliance with respect to the basic human rights protection between period $t-1$ and $t$ . For a detailed description of the measure see Section 2.	Authors' own elaboration based on Gutmann et al. (2024).
<i>cc_political</i>	Binary variable. It takes value 1 if the country experienced a transition into constitutional compliance with respect to the political rights protection between period $t-1$ and $t$ . For a detailed description of the measure see Section 2.	Authors' own elaboration based on Gutmann et al. (2024).
<i>cc_civil</i>	Binary variable. It takes value 1 if the country experienced a transition into constitutional compliance with respect to the civil rights protection between period $t-1$ and $t$ . For a detailed description of the measure see Section 2.	Authors' own elaboration based on Gutmann et al. (2024).
<i>cc_property</i>	Binary variable. It takes value 1 if the country experienced a transition into constitutional compliance with respect to the	Authors' own elaboration based on Gutmann et al. (2024).

	property rights and rule of law protection between period $t-1$ and $t$ . For a detailed description of the measure see Section 2.	
<i>pop_penn</i>	Continuous variable indicating the population (in millions).	Penn World Table – Feenstra et al. (2015).
<i>DD_category_regime</i>	String variable taking 6 values: civilian dictatorship, military dictatorship, royal dictatorship, presidential democracy, parliamentary democracy, and mixed democracy.	Bjørnskov & Rode (2020)
<i>v2x_polyarchy</i>	Continuous variable. It takes values from 0 to 1, where 0 means no electoral democracy and 1 is the highest possible adherence to the ideal of polyarchy.	Varieties of Democracy (V-Dem) Project – Coppedge et al. (2024)

Source: Authors' own elaboration.

## 5. Results

Figure 2 and Table 4 present the semiparametric estimates of the effect of the shift into constitutional compliance on GDP per capita (log) over various time horizons calculated based on the linear regression adjustment approach.

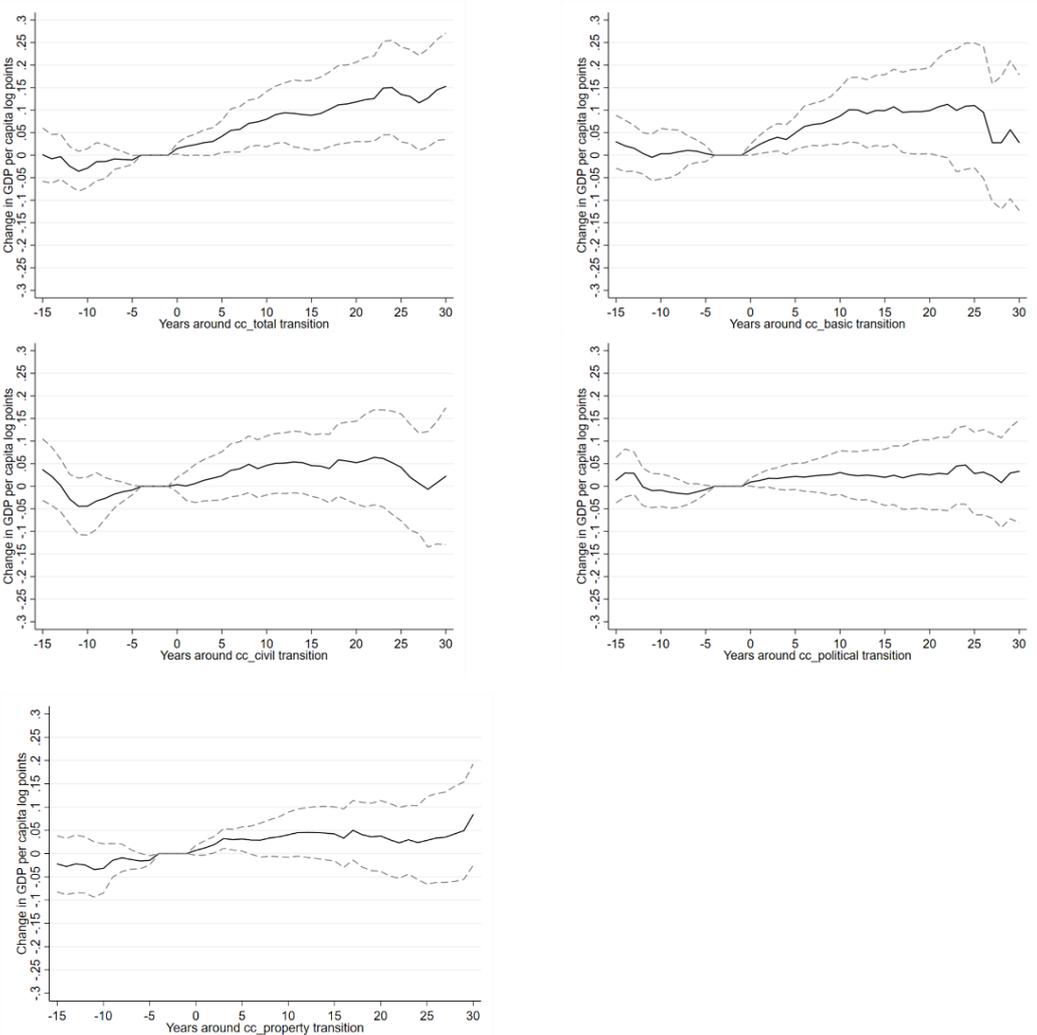
**Table 4.** Linear regression adjustment estimation results

	-5 to -1 years	0-4 years	5-9 years	10-14 years	15-19 years	20-24 years	25-29 years
	<i>cc_total</i>						
average effect on log GDP	-0.002	0.023	0.06	0.089	0.102	0.133	0.131
	(0.001)	(0.011)	(0.024)	(0.034)	(0.042)	(0.049)	(0.054)
	<i>cc_basic</i>						
average effect on log GDP	0.001	0.029	0.066	0.096	0.099	0.105	0.063
	(0.002)	(0.012)	(0.023)	(0.036)	(0.044)	(0.060)	(0.070)
	<i>cc_political</i>						
average effect on log GDP	-0.001	0.015	0.023	0.025	0.023	0.034	0.024
	(0.001)	(0.009)	(0.018)	(0.027)	(0.035)	(0.041)	(0.046)
	<i>cc_civil</i>						
average effect on log GDP	-0.002	0.008	0.037	0.051	0.049	0.057	0.014
	(0.001)	(0.018)	(0.030)	(0.034)	(0.038)	(0.052)	(0.059)
	<i>cc_property</i>						
average effect on log GDP	-0.003	0.02	0.032	0.044	0.04	0.029	0.038
	(0.001)	(0.008)	(0.018)	(0.026)	(0.032)	(0.037)	(0.050)

Note: Robust standard errors obtained via bootstrapping in brackets.

Source: Authors' calculations.

**Figure 2.** Linear regression adjustment estimation results



Note: The solid line plots the estimated average effect on GDP per capita on countries that experienced the transition into constitutional compliance (in log points), with a 95 percent confidence interval in dashed lines. Source: Authors’ calculations.

The obtained results suggest that the significant effect of transition into constitutional compliance on GDP per capita may be observed for:

- the measure of total constitutional compliance (*cc\_total*) – the significant effect appears 6 years after transition and sustains up to the end of 30-year horizon included in our study,
- the measure of constitutional compliance in the area of basic human rights (*cc\_basic*) – the positive effect appears in the next year post-transition and is observed for subsequent 18 years,
- the measure of constitutional compliance in the area of property rights and rule of law protection (*cc\_property*) – the positive effect is observable for the period of 3-6 years after transition.

We do not find a significant effect of constitutional compliance in the area of civil or political rights protection.

Similar results are yielded by the second method. The estimation of the effect of the increase in constitutional compliance was conducted for up to 10 years ahead. Tables 5 and 6 present the results. In Table 5 we show the outcomes of the estimation only with the 4 past values of GDP as covariates. It directly follows the methodology of Lewczuk & Metelska-Szaniawska (2025). Table 6 depicts the results obtained while controlling for more possible confounders – political regime, the extent to which the electoral democracy is achieved, and the population.

**Table 5.** History-based panel matching estimation results – limited covariates

	t+0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
	<i>cc_total</i>										
average effect on log GDP	0.029	0.043	0.055	0.068	0.072	0.082	0.090	0.103	0.117	0.126	0.133
	(0.018)	(0.03)	(0.035)	(0.040)	(0.043)	(0.045)	(0.049)	(0.052)	(0.056)	(0.059)	(0.062)
	<i>cc_basic</i>										
average effect on log GDP	0.006	0.013	0.024	0.033	0.032	0.050	0.057	0.061	0.067	0.071	0.074
	(0.010)	(0.017)	(0.021)	(0.024)	(0.028)	(0.033)	(0.035)	(0.038)	(0.041)	(0.045)	(0.048)
	<i>cc_political</i>										
average effect on log GDP	-0.004	-0.009	-0.002	-0.003	0.000	0.004	0.006	0.009	0.014	0.016	0.016
	(0.014)	(0.027)	(0.029)	(0.032)	(0.035)	(0.037)	(0.039)	(0.042)	(0.044)	(0.046)	(0.048)
	<i>cc_civil</i>										
average effect on log GDP	-0.008	-0.022	-0.017	-0.014	-0.009	-0.005	0.000	0.002	0.008	0.011	0.018
	(0.018)	(0.026)	(0.030)	(0.032)	(0.033)	(0.035)	(0.037)	(0.039)	(0.040)	(0.043)	(0.045)
	<i>cc_property</i>										
average effect on log GDP	0.009	0.016	0.026	0.041	0.038	0.045	0.048	0.057	0.067	0.077	0.086
	(0.007)	(0.012)	(0.015)	(0.019)	(0.022)	(0.025)	(0.028)	(0.032)	(0.034)	(0.037)	(0.041)

Note: Robust standard errors obtained via bootstrapping in brackets.

Source: Authors' calculations.

**Table 6.** History-based panel matching estimation results – extended covariates

	t+0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
	<i>cc_total</i>										
average effect on log GDP	0.029	0.043	0.055	0.068	0.072	0.082	0.090	0.103	0.117	0.126	0.133
	(0.018)	(0.03)	(0.035)	(0.040)	(0.043)	(0.045)	(0.049)	(0.052)	(0.056)	(0.059)	(0.062)
	<i>cc_basic</i>										
average effect on log GDP	0.006	0.013	0.024	0.033	0.032	0.050	0.057	0.061	0.067	0.071	0.074
	(0.010)	(0.017)	(0.021)	(0.024)	(0.028)	(0.033)	(0.035)	(0.038)	(0.041)	(0.045)	(0.048)

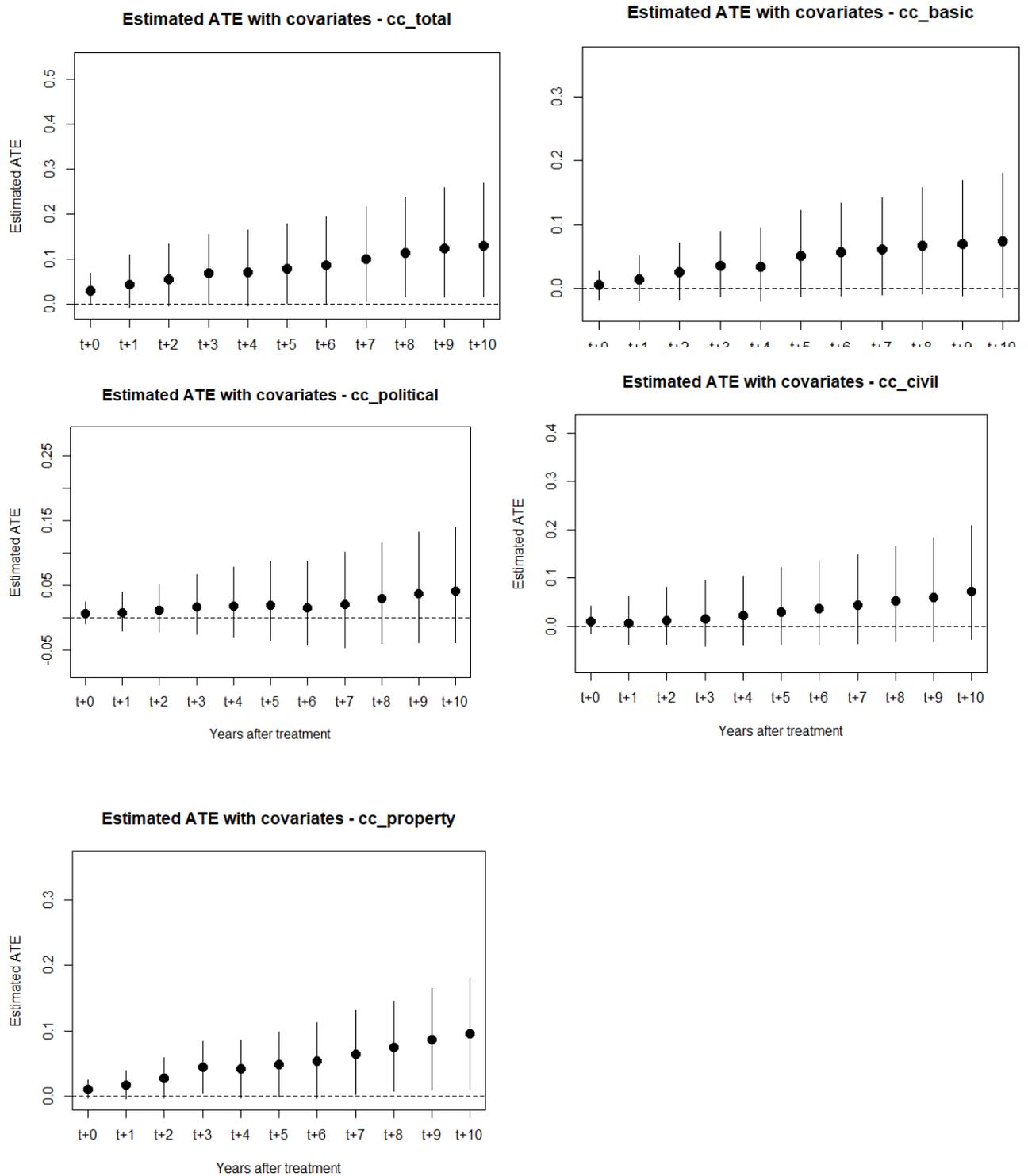
	<i>cc_political</i>										
average effect on log GDP	-0.004	-0.009	-0.002	-0.003	0.000	0.004	0.006	0.009	0.014	0.016	0.016
	(0.014)	(0.027)	(0.029)	(0.032)	(0.035)	(0.037)	(0.039)	(0.042)	(0.044)	(0.046)	(0.048)
	<i>cc_civil</i>										
average effect on log GDP	-0.008	-0.022	-0.017	-0.014	-0.009	-0.005	0.000	0.002	0.008	0.011	0.018
	(0.018)	(0.026)	(0.030)	(0.032)	(0.033)	(0.035)	(0.037)	(0.039)	(0.040)	(0.043)	(0.045)
	<i>cc_property</i>										
average effect on log GDP	0.009	0.016	0.026	0.041	0.038	0.045	0.048	0.057	0.067	0.077	0.086
	(0.007)	(0.012)	(0.015)	(0.019)	(0.022)	(0.025)	(0.028)	(0.032)	(0.034)	(0.037)	(0.041)

Note: Robust standard errors obtained via bootstrapping in brackets.

Source: Authors' calculations.

Further details may be inferred from the Figure 3. It presents the estimation results and the 95% confidence interval. From both Figure 3 and Tables 5 and 6 it can be concluded that the change in total constitutional compliance indeed has a positive impact on log GDP in a few following years after the treatment. The strength of the effect seems to increase as time passes. The same conclusion may be drawn from the positive shifts in constitutional compliance of property rights and the rule of law. The estimates of basic and civil rights are close to the statistical significance but don't pass the threshold of 5% (however, they may be significant with a p-value of 10%). The increase in political constitutional compliance did not result in higher GDP.

**Figure 3.** History-based panel matching estimation results.



Source: Authors' calculations.

## **Conclusions**

*[to be included in the final version of the manuscript]*

## References

- Bjørnskov, C., & Mchangama, J. (2019). Do social rights affect social outcomes?. *American Journal of Political Science*, 63(2), 452-466.
- Brennan, G., & Buchanan, J. M. (1985). *The reason of rules: Constitutional political economy*. Cambridge University Press, Cambridge.
- Buchanan, J. M., & Tullock, G. (1962). *The calculus of consent: Logical foundations of constitutional democracy* (Vol. 100). University of Michigan Press, Ann Arbor.
- Buchanan, JM., (1999). *The Logical Foundations of Constitutional Liberty*, The Collected Works of James M. Buchanan, Liberty Fund.
- Callais, J., & Young, A. (2021). Does constitutional entrenchment matter for economic freedom? *Contemporary Economic Policy*, 39(4), 808–830. <https://doi.org/10.1111/coep.12533>
- Callais, J., & Young, A. (2024). Revolutionary Constitutions: Are they revolutionary in terms of constitutional design? *Public Choice*, 200(3–4), 423–455. <https://doi.org/10.1007/s11127-023-01094-5>
- Chilton, A. S., & Versteeg, M. (2016). Do Constitutional Rights Make a Difference? *American Journal of Political Science*, 60(3), 575–589. <https://doi.org/10.1111/ajps.12239>
- Chilton, A., & Versteeg, M. (2017). Rights without resources: the impact of constitutional social rights on social spending. *The Journal of Law and Economics*, 60(4), 713-748.
- Coppedge, M., Gerring, J., Knutsen, C. H, Lindberg, S. I., Teorell, J., Altman, D., Bernhard, M., Cornell, A., Fish, M. S., Gastaldi, L., Gjerløw, H., Glynn, A., Grahn, S., Hicken, A., Kinzelbach, K., Marquardt, K. L., McMann, K., Mechkova, V., Neundorf, A., Paxton, P., Pemstein, D., Rydén, O., von Römer, J., Seim, B., Sigman, R., Skaaning, S-E., Staton, J., Sundström, A., Tzelgov, E., Uberti, L., Wang, Y., Wig, T., Ziblatt, D. (2024). "V-Dem Codebook v14" Varieties of Democracy (V-Dem) Project.
- Elkins, Z., Ginsburg, T., Melton, J., (2009). *The endurance of national constitutions*. Cambridge University Press, Cambridge.
- Grier, K. B., & Grier, R. M. (2021). The Washington consensus works: Causal effects of reform, 1970-2015. *Journal of Comparative Economics*, 49(1), 59-72.
- Gutmann, J., & Voigt, S. (2020). Judicial independence in the EU: a puzzle. *European Journal of Law and Economics*, 49(1), 83-100.
- Gutmann, J., Metelska-Szaniawska, K., & Voigt, S. (2023). Leader characteristics and constitutional compliance. *European Journal of Political Economy*, 102423.
- Gutmann, J., Metelska-Szaniawska, K., & Voigt, S. (2024). The comparative constitutional compliance database. *The Review of International Organizations*, 1-21.
- Hadfield, G. K., & Weingast, B. R. (2012). What is law? A coordination model of the characteristics of legal order. *Journal of Legal Analysis*, 4(2), 471-514.

- Hadfield, G.K., Weingast, B.R., (2014). Constitutions as coordinating devices [in:] Galiani, Sebastian, Sened, Itai Institutions, Property Rights, and Economic Growth: The Legacy of Douglass North. Cambridge University Press, Cambridge.
- Hayek, F. A., (1960). *The constitution of liberty*. University of Chicago Press, Chicago.
- Hayo, B., & Voigt, S. (2023). Judicial independence: Why does de facto diverge from de jure?. *European Journal of Political Economy*, 79, 102454.
- Imai, K., Kim, I. S., & Wang, E. H. (2023). Matching methods for causal inference with time-series cross-sectional data. *American Journal of Political Science*, 67(3), 587-605.
- Law, D. S., & Versteeg, M. (2013). Sham constitutions. *Calif. L. Rev.*, 101, 863.
- Lewczuk, A., & Metelska-Szaniawska, K. (2025). Economic effects of (non-) compliance with constitutions. *Journal of Comparative Economics*, 53(1), 227-242.
- Lewkowicz, J., & Lewczuk, A. (2023). Civil society and compliance with constitutions. *Acta Politica*, 58(1), 181-211.
- Metelska-Szaniawska, K. (2021). Post-socialist constitutions: The de jure–de facto gap, its effects and determinants. *Economics of transition and institutional change*, 29(2), 175-196.
- North, D., Weingast, B., (1989). Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England. *J. Econ. Hist.* 49 (4), 803–832.
- Sunstein, C. R., (2001). *Designing democracy: What constitutions do*. Oxford University Press.
- Voigt, S., (2021). Mind the gap: Analyzing the divergence between constitutional text and constitutional reality, *International Journal of Constitutional Law* 19(5), 1778–1809.
- Weingast, B. R. (1993). Constitutions as governance structures: The political foundations of secure markets. *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft*, 286-311.