

Perceived Legitimacy of Anti-Pandemic Measures: Findings from West and East Germany, the Czech Republic, and Slovakia at the Peak of the COVID-19 Crisis

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ABSTRACT

This interdisciplinary study examines the cross-cultural differences between the perceived legitimacy of anti-pandemic measures during the peak of the COVID-19 crisis in three Central European countries and four independent samples (West Germany, East Germany, the Czech Republic, Slovakia). A total of 2,752 participants completed a newly developed 7-item scale which inquired whether governmental regulations were perceived as fair, justified, and based on science and whether the government considered citizens' needs and the interests of their country, etc. Analysis was done within the structural equation modeling framework. Scalar measurement invariance was successfully established between the studied countries, and a subsequent latent means comparison supported the hypothesis that German respondents would report higher legitimacy of the governmental anti-pandemic regulations than respondents from the Czech Republic and Slovakia. Additionally, as expected, the participants from the new German *Länder* (former East Germany) also manifested a consistent tendency to view governmental regulations as less legitimate than their Western fellow citizens. The results are discussed in terms of normative factors (i.e., the qualities of the authority which adopted the anti-pandemic measures, the qualities of the procedure through which these measures were adopted, and the qualities of the measures themselves) and psycho-socio-cultural factors (e.g., post-communist syndrome) and the influence of demographic variables.

Keywords: legitimacy; anti-pandemic measures; trust in government; COVID-19 pandemic; Central Europe

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With over six and a half million deaths (WHO, 2023) and counting, the ongoing COVID-19 pandemic is a serious global health threat. Among the preventive measures health experts introduced to the public were social distancing and quarantine, wearing facemasks, using physical barriers (shields), applying disinfectants, and finally vaccinations. Governments around the world introduced legal anti-pandemic measures to flatten the curve of active cases and thus reduce or at least slow down the spread of the disease to gain time to mobilize the required healthcare capacities. Regardless of the effectiveness and legal status, many people around the world did not comply with them (Petherick et al., 2021; Van Bavel et al., 2020).

Previous research has identified various psycho-sociological factors such as personality traits (e.g., Nowak et al., 2020), worries about COVID-19 (e.g., Lieberoth et al., 2021), self-efficacy (e.g., Jørgensen et al., 2021), social norms (e.g., Blackburn et al., 2023b), the obligation to obey the law (e.g., Kooistra et al., 2020), and conspiracy beliefs (e.g., Bruder & Kunert, 2022) which influenced a citizen's compliance with restrictions (for review, see e.g., Daoust, 2023; Li et al., 2022). Key situational factors were also identified in governments. Among them, trust in the government and the trustworthiness of its representatives were linked to desirable compliant behavior (Blackburn et al., 2023a; Han et al., 2021; Jørgensen et al., 2021; Lieberoth et al., 2021; Nivette et al., 2021; Shanka & Menebo, 2022; for a meta-analysis, see Devine et al., 2023) and, subsequently, to a decrease in COVID-19 mortality rates (Gavresi et al., 2023).

Surprisingly, the previous research on compliance with anti-pandemic measures focused primarily on trust in government and almost missed the more complex central concept that could also affect legal compliance: legitimacy (for a review, see Jackson, 2018).

One possible reason might be that legitimacy, by its nature, represents an interdisciplinary multidimensional concept and as far as we know there is no standardized instrument to measure legitimacy perceptions across diverse contexts. The few articles which explore the perceived legitimacy of anti-pandemic regulations tend to focus on specific cases, most often on communications regarding timeliness, consistency, and appeals to solidarity (Bélanger & Lavenex, 2021; Kornblit, 2022). However, to our knowledge, more comprehensive, interdisciplinary, and international comparisons of perceived legitimacy are still missing.

The Legitimacy of Government Measures

The legitimacy of government and its decisions are significant aspects of life in every society, but they become particularly vital in times of crisis. Being a multidisciplinary construct, legitimacy is understood differently in various fields. Generally, two major approaches can be distinguished: the empirical approach of social sciences and the normative approach of law and philosophy (Beetham, 1991; Jackson, 2018).

From the point of view of social sciences, legitimacy is an empirical construct whose purpose is to assess whether public institutions and their actions are, in fact, *justified* in the eyes of citizens (i.e., the general population). Legitimacy can be understood as the quality of the social authorities and institutions, in addition to their actions, on which people base their perceptions as proper and just. Perceived legitimacy is expected to lead to a sense of obligation to obey authority and improve compliance with rules and decisions. This is done voluntarily, not because of potential punishment or reward (Levi et al., 2009; Tyler, 2006). Because it is abstract in nature, perceived legitimacy is often conceptualized through its presumed outcomes (a sense of obligation to obey, etc.) or antecedents such as perceived procedural or distributive fairness. The two concepts refer to whether the decision-making procedures employed by authorities or the outcomes of these procedures are perceived as just (Hamm et al., 2017; Levi et al., 2009; Meares, 2017; Tyler, 2006). The psychology of

perceived legitimacy elaborates on the processes of internalization, rationalization, and other sources of responsible conduct (Jost & Major, 2001; Lindenberg et al., 2021; Tyler, 1997).

In contrast to social sciences, for lawyers (Fuller, 1969; Hart, 1994; Radbruch, 1946) and political philosophers (Hobbes, 1968; Locke 1887), legitimacy has traditionally been a purely normative construct. Its essence is to theoretically examine whether public institutions and their actions are *justifiable* (Hinsch, 2010). As Tyler (2006, p. 377) states,

“central to the idea of legitimacy is the belief that some decision made or rule created by these authorities is valid in the sense that it is entitled to be obeyed by virtue of who made the decision or how it was made.”

Considering Weber’s (1968) classification of legitimacy, it follows that in a democratic country governed by the rule of law, legitimacy would be (predominantly but not exclusively) driven by the process of creating and interpreting rules (a rational bureaucratic authority). In other words, legitimacy in these countries rests in the legal rules adopted, interpreted, and applied by the *democratic* institutions which respect the principle of *the rule of law*.

This general statement can be analytically divided into three categories of more specific normative requirements. The first category concerns the qualities of the authority which adopts the legal rule. To be legitimate (justifiable), a legal rule (in our case, anti-pandemic measures) must be adopted by (a) a trustworthy (i.e., stable and sufficiently efficient) government (Coglianese & Mahboubi, 2021), (b) established in a democratic manner, characterized especially by free, transparent and fair elections (Beetham, 1991; Manin, 1997; Rothstein 2009), and (c) endowed with an undisputed legal competence (power) to adopt such act (Raz, 1979).

The second category focuses on the quality of the procedure whereby the legal rules are adopted. Hence, a legitimate legal rule shall be (d) adopted in a procedurally adequate

manner (Habermas, 1998; 1994; Raz, 1979), with sufficient safeguards, limitations, and judicial oversight (Coglianese & Mahboubi, 2021), a process which is perhaps even more important in turbulent times of crisis than in normal situations (Holmes, 2009), and (e) sufficiently communicated and reasoned (Coglianese & Mahboubi, 2021; Fuller, 1969; Kim & Kreps, 2020).

The third and final category of requirements concerns the qualities of the adopted legal rules themselves. Thus, a legitimate legal rule should (f) satisfy formal requirements such as prospectiveness, consistency, and relative stability (Finis, 1980; Fuller, 1969; Møller, 2018; Raz, 1979) to make it possible for citizens to obey, and (g) be substantively coherent with the key (constitutionally enshrined) values and principles of the given country (Rosenfeld, 2000).

It can be assumed that the qualities of the authority which adopted a legal regulation, the qualities of the procedure through which the regulation was adopted, and the qualities of the regulation itself can affect how legitimately will the regulation be perceived by the citizens. Moreover, we believe that these requirements are even more valid during a crisis of pandemic, which is an extraordinary situation under the pressure of time for certain necessary regulations to be in effect and complied with by the citizens to the highest degree possible.

However, it is not self-evident that theoretically *justifiable* legal rules are automatically *justified* in the general population. Hence, besides the empirical approach to perceived legitimacy adopted by social scientists, legal scholars have another method of empirical measurement in which the normative requirements of legitimacy are measured indirectly, for example through legal consciousness (Horák et al., 2021) and the rule of law (Horák & Lacko, 2023).

Hence, it can be concluded that both social scientists and legal scholars empirically assess the facets and normative requirements of perceived legitimacy at the general level.

However, none of these measures were designed and used to assess the perceived legitimacy of emergency measures adopted during the COVID-19 pandemic. Conversely, the measures specifically designed for the environment of the COVID-19 pandemic focused on selected facets of perceived legitimacy (predominantly trust) and were thus not able to assess the perceived legitimacy of anti-pandemic measures in a comprehensive, interdisciplinary manner. It follows that a considerable gap exists in our knowledge of the relationship between the emergency measures adopted during the COVID-19 pandemic and the citizens affected by them. Our study attempts to at least partially bridge this gap.

Current Study

The aim of this study is to examine the level of perceived legitimacy of government measures in Slovakia, the Czech Republic, and Germany (further divided into its former Eastern and Western parts) at the peak of the COVID-19 crisis. We examine these countries because they were jointly affected by a strong second COVID-19 wave and are geographically near each other. Yet, these countries differ, not only in legal aspects but also sociological and psychological factors potentially relevant to the level of perceived legitimacy of anti-pandemic measures.

Regarding the normative requirements of perceived legitimacy, the arguably most developed measurement tool in this context is the Rule of Law Index by the World Justice Project (2022). The scores reflect the general level of legitimacy understood as the theoretical justifiability of legal rules. The index annually evaluates how the rule of law requirements are satisfied in 140 countries around the globe; the index range is 0 to 1. In 2022, the Rule of Law Index for Germany was 0.84, the Czech Republic 0.73, and Slovakia 0.66. Similar findings were also reported by the OECD (2023). In their index of trust in government, Germany scored 60.5%, while the Czech Republic and Slovakia scored 28.4% and 21.6%,

respectively. Hence, we assume significant differences between the three countries, and specifically, we expect that Germans will indicate the highest perceived legitimacy, followed by the Czech Republic and Slovakia.

These countries, however, differ in their recent political histories, i.e., decades of communism. The Czech Republic, Slovakia, and East Germany were subjected to 40 years of communist authoritarianism from the end of WWII until the wave of democratic revolutions at the end of 1989. During that period, West Germany developed democratically, even though old Nazis continued to hold some important positions in the 1940s and 50s. Although communist regimes were toppled in these countries over 30 years ago, we still assume that some psychological, sociological, and cultural consequences persisted in these post-communist societies. Remnants of the communist regimes might be manifested in the poor interaction between political institutions and those citizens who still do not fully identify themselves with democratic rule. This assumption is based on the psychological theory of post-communist mentality and post-communist syndrome (Klicperova et al., 1997; 1999) which consists of a variety of symptoms, such as negative emotions, skepticism, black-and-white thinking, passivity, learned helplessness, and lack of civic conscience, among others. Hence, we assume a lower perceived legitimacy of governmental regulations in the Czech Republic, Slovakia, and East Germany than in West Germany.

In summary, in the first hypothesis, we expect that the omnibus effect is significant and the countries statistically differ in their level of perceived legitimacy [H1]. In the second hypothesis, we expect that both West and East Germany show higher levels of perceived legitimacy than the Czech Republic and that the Czech Republic shows a higher level of perceived legitimacy than Slovakia [H2]. In the third hypothesis, we expect that East Germany has a lower level of perceived legitimacy than West Germany [H3]. Finally, we

performed an exploratory analysis of demographic variables and their potential influence on perceived legitimacy. This study was not preregistered.

To corroborate our hypotheses, we used an original questionnaire scale to rate the perception of the legitimacy of governmental anti-pandemic measures. The scale was developed to cover multiple aspects of perceived legitimacy from perceived procedural and distributive fairness to trustworthiness. Basic psychometric qualities of the scale, its presumed unidimensionality, and the measurement invariance across countries were assessed prior to testing our hypotheses.

Method

Sample

We collected data from 2,752 participants in three independent samples, namely the Czech Republic ($n = 863$), Slovakia ($n = 666$), and Germany ($n = 1,223$; East Germany $n = 161$, West Germany $n = 1,006$). Participants from Berlin ($n = 56$) were removed from further analyses (since we were not able to distinguish between East and West Berliners). Women represented 49.31% ($n = 1,357$) of the sample. Most of the participants did not have a university education (74.96%, $n = 2,063$). Detailed descriptive statistics of the sample are shown in Table 1.

Table 1. *Descriptive Statistics of the Research Sample.*

		Czech Republic N (%)	Slovakia N (%)	West Germany N (%)	East Germany N (%)	Total N (%)
Gender	Women	424 (50.87)	338 (50.75)	491 (48.81)	73 (45.34)	1,357 (49.31)
	Men	439 (49.13)	328 (49.25)	515 (51.19)	88(54.66)	1,395 (50.69)
Age	18-24	77 (8.92)	107 (16.07)	56 (5.57)	5 (3.11)	251 (9.12)

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	25-34	176 (20.39)	124 (18.62)	134 (13.32)	14 (8.70)	456 (16.57)
	35-44	217 (25.15)	169 (25.38)	174 (17.30)	20 (12.42)	594 (21.58)
	45-54	190 (22.02)	113 (16.97)	247 (24.55)	45 (27.95)	607 (22.06)
	55 >	203 (23.52)	153 (22.97)	395 (39.26)	77 (47.83)	844 (30.67)
University education	No	626 (72.54)	467 (70.12)	802 (79.72)	128 (79.50)	2,063 (74.96)
	Yes	237 (27.46)	199 (28.88)	204 (20.28)	33 (20.50)	689 (25.04)

Note: East Germany is without Berlin participants.

Measures

This study understood the perceived legitimacy of anti-pandemic government measures as an empirical construct and assessed it with a newly developed self-report scale created by Jan Šerek. The scale contains eight items and covers various aspects of perceived legitimacy; the wording of all items in English is given in Table 2 (national versions used in our study can be found online: <https://osf.io/kmsfx/>). The items capture different yet overlapping foundations of perceived legitimacy (e.g., Levi et al., 2009; Tyler, 2012): (a) procedural fairness, specifically the government's interest in citizens' needs (Items 3 and 4) and transparency of reasons on which decisions are based (i.e., so-called transparency in rationale, cf. de Fine Licht & Naurin, 2022; Item 6); (b) distributive fairness (i.e., whether the outcomes were perceived as just; Item 2); (c) outcome favourability (i.e., whether the outcomes were perceived as positive (cf. Skitka et al., 2003; Item 1); (d) the trustworthiness of the government, particularly its honesty (Item 5) and competence (Item 7). The set of items also covers societal hierarchy, from the neediest to the interests of politicians and the national interests. At the same time, the scale refers to all three categories of normative requirements that are believed to produce legitimacy, that is, the qualities of the authority

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(e.g., honesty and competence, Items 5 and 7), the qualities of the procedure (e.g., transparency, Item 6), and the qualities of the measures themselves (e.g., lacking coherence with key principles of democratic rule, Item 8).

Each statement is responded to on a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Item 4 on the influence of lobbyists was removed from the analysis (see the section on measurement invariance for justification). The 7-item version showed satisfactory internal consistency (McDonald's omega) in all samples (SK: $\omega = .888$, CZ: $\omega = .901$, DE East $\omega = .904$, DE West $\omega = .891$) and average variance extracted (CZ: $AVE = .641$, SK: $AVE = .609$, DE West $AVE = .644$, DE East $AVE = .653$). Unidimensional confirmatory (single-group) factor analyses indicated that the scale yielded sufficient fit indices in all countries ($RMSEAs \leq .074$, $CFIs \geq .983$, $TLIs \geq .973$, $SRMRs \leq .023$).

In addition to this scale, we asked participants about their gender, age, and education (university level or below).

Table 2. *Items wording, descriptive statistics, and factor loadings*

No	Wording		DE West	DE East	CZ	SK
1	Considering all the pros and cons, I believe that the measures the government is currently taking against the pandemic are personally beneficial to me.	<i>M</i>	3.85	3.34	3.35	3.30
		[95% <i>CI</i>]	[3.74, 3.95]	[3.09, 3.59]	[3.22, 3.48]	[3.16, 3.44]
		<i>SD</i>	1.70	1.59	1.88	1.82
		Λ	.799	.779	.754	.743
2	The government's anti-pandemic measures are broadly fair, so those most affected will get the most help.	<i>M</i>	3.62	3.31	2.90	2.65
		[95% <i>CI</i>]	[3.52, 3.73]	[3.04, 3.58]	[2.78, 3.01]	[2.53, 2.77]
		<i>SD</i>	1.67	1.73	1.73	1.57
		Λ	.835	.849	.817	.761
3	I think the government is taking the needs of citizens into account when taking anti-pandemic measures.	<i>M</i>	3.65	3.23	3.01	2.78
		[95% <i>CI</i>]	[3.55, 3.76]	[2.97, 3.49]	[2.89, 3.13]	[2.65, 2.91]
		<i>SD</i>	1.70	1.66	1.76	1.68

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		Λ	.913	.909	.875	.898
4	I think the government takes into account the interests of influential groups (e.g., industry) through its so-called lobbyists when taking measures against the pandemic.	<i>M</i>	4.65	4.73	5.13	4.25
		[95% <i>CI</i>]	[4.55, 4.75]	[4.47, 4.98]	[5.01, 5.24]	[4.10, 4.39]
		<i>SD</i>	1.56	1.66	1.75	1.83
		Λ	.087	.017	-.353	-.137
5	In the fight against the pandemic, the government always has the interests of the [NAME OF THE COUNTRY] in mind.	<i>M</i>	4.03	3.48	3.08	3.06
		[95% <i>CI</i>]	[3.92, 4.14]	[3.20, 3.75]	[2.96, 3.21]	[2.93, 3.20]
		<i>SD</i>	1.74	1.76	1.86	1.78
		Λ	.827	.897	.890	.873
6	Whenever the government takes new measures against a pandemic, it always justifies them to the citizens.	<i>M</i>	4.14	3.80	2.98	2.94
		[95% <i>CI</i>]	[4.04, 4.25]	[3.54, 4.06]	[2.86, 3.11]	[2.81, 3.06]
		<i>SD</i>	1.66	1.65	1.82	1.63
		Λ	.745	.782	.747	.752
7	It is evident that the government always makes decisions on a professional, scientific basis.	<i>M</i>	4.09	3.83	2.66	2.66
		[95% <i>CI</i>]	[3.98, 4.19]	[3.57, 4.09]	[2.55, 2.78]	[2.53, 2.79]
		<i>SD</i>	1.64	1.66	1.70	1.64
		Λ	.717	.769	.839	.775
8	The current pandemic "state of emergency" is more beneficial for the government than for the citizens (it empowers the government to make uncontrolled international agreements and gives it more power over the people).	<i>M</i>	4.16	4.53	5.15	4.86
		[95% <i>CI</i>]	[4.04, 4.27]	[4.23, 4.82]	[5.02, 5.28]	[4.70, 5.02]
		<i>SD</i>	1.86	1.87	1.88	2.08
		Λ	-.386	-.545	-.509	-.475

Note: M = Mean, CI = Confidence intervals, SD = Standard deviation, Λ = factor loading. Presented factor loadings are estimated from the original 8-item model and not from the final 7-item model.

Procedure

The questionnaire was translated using a back-and-forth method. The wording of individual items was discussed extensively, and the result was checked by a multilingual psychologist. Data in the Czech and Slovak Republics and Germany were collected by reputable agencies: MEDIAN, Ltd. (for Czechs and Slovaks) and Bilendi SA (for Germans). We used quota sampling representative of main demographics (for Czechs and Slovaks: age,

gender, household income, and NUTS-2 regions; for Germans: age, gender, and population size in the pertinent federal state) and the CAWI procedure. This study was approved by the Czech Academy of Sciences Ethical Board (PSU-199/Brno/2021). The respondents received a small financial reward (approximately two to three dollars) for participation. All data were collected March 9–29, 2021, which was a period of elevated COVID-19 incidence in Central Europe (i.e., second wave).

Data Analysis

The main analysis was performed using structured mean modeling (latent means comparison; Sörbom, 1974) under a multigroup structural equation modeling (MG-SEM) framework. The *p*-values of the final effects of latent means comparison were corrected with the Holm-Bonferroni method to reduce Type I error. The exploratory analysis (i.e., exploration of the associations between demographic variables and outcomes) was also done in MG-SEM. For the main analysis, we applied maximum likelihood estimation with robust (Huber-White) standard errors (MLR) and Full Information Maximum Likelihood (FIML) to handle missing values. For exploratory regression analysis, we applied a weighted least square mean and variance adjusted (WLSMV) estimator with the pairwise approach to handle missing values due to the ordinal nature of some predictors. In evaluating the model fit, we followed the criteria for the configural model proposed by Hu and Bentler (1999). For a meaningful comparison of latent means across countries, the established measurement invariance is necessary. Measurement invariance assesses whether the latent construct is equivalently measured and contains the same meaning across various cultural groups (Lacko et al., 2022; cf. Boehnke, 2022). Hence, the (partial) scalar measurement invariance (i.e., fixed factor structure, factor loadings, and factor intercepts) were first established; for regression analysis, the (partial) metric measurement invariance was sufficient (Lacko et al.,

2022). To evaluate the metric and scalar invariance, we used the criteria proposed by Chen (2007). Data analysis was performed in *R* (v4.2.0; R Core Team, 2022), with the packages *lavaan* (Rosseel, 2012), *semTools* (Jorgensen et al., 2021), *assertr* (Fischetti, 2021) and *MVN* (Korkmaz et al., 2014). Data and *R* syntaxes are available online (see <https://osf.io/kmsfx>).

Results

Assumptions of Analysis

In the first step, we analyzed and removed multivariate outliers. Using Mahalanobis distance ($df = 6$, $MAD = 3.70$, participants with $MD > 22.39$ were identified as outliers), we identified and removed 66 multivariate outliers before further analysis.

In the second step, we verified the assumption of multivariate normality. The data showed multivariate non-normality, as indicated by the Henze-Zirkler test ($HZ = 18.194$, $p < .001$). All items also showed univariate non-normality; all Shapiro-Wilk tests were statistically significant (Ws between .898 and .927, $ps < .001$). We, therefore, applied the MLR and WLSMV estimators.

Measurement Invariance

In the third step, the measurement invariance across countries was assessed. We corroborated the configural, metric, and scalar measurement invariance with successively more restrictive multi-group confirmatory factor analyses. First, we tried the model with eight items, but this model had problems with the factor structure, $\chi^2(80) = 577.955$, $p < .001$, $CFI = .954$, $TLI = .936$, $RMSEA = .103$ [90% CI : .095, .111], $SRMR = .045$. Item 4 generally had the smallest factor loadings, which sometimes were even of opposite valency across groups (λ s were between -.35 to .09; see Table 2). It is possible that this item (especially the term “lobbyists”) has a different meaning for West/East Germans and Czechs/Slovaks. Hence, we removed it from the final model. We then proceeded with the 7-item model, which exhibited

a better fit than the 8-item version, $\Delta\chi^2 = 339.18$, $\Delta AIC = 10,113$, $\Delta BIC = 10,183$, $\Delta df = 24$, $p < .001$. However, the model was still not ideal, especially because it had a relatively high *RMSEA*, $\chi^2(56) = 246.207$, $p < .001$, $CFI = .982$, $TLI = .972$, $RMSEA = .076$ [90% *CI*: .067, .086], $SRMR = .022$.

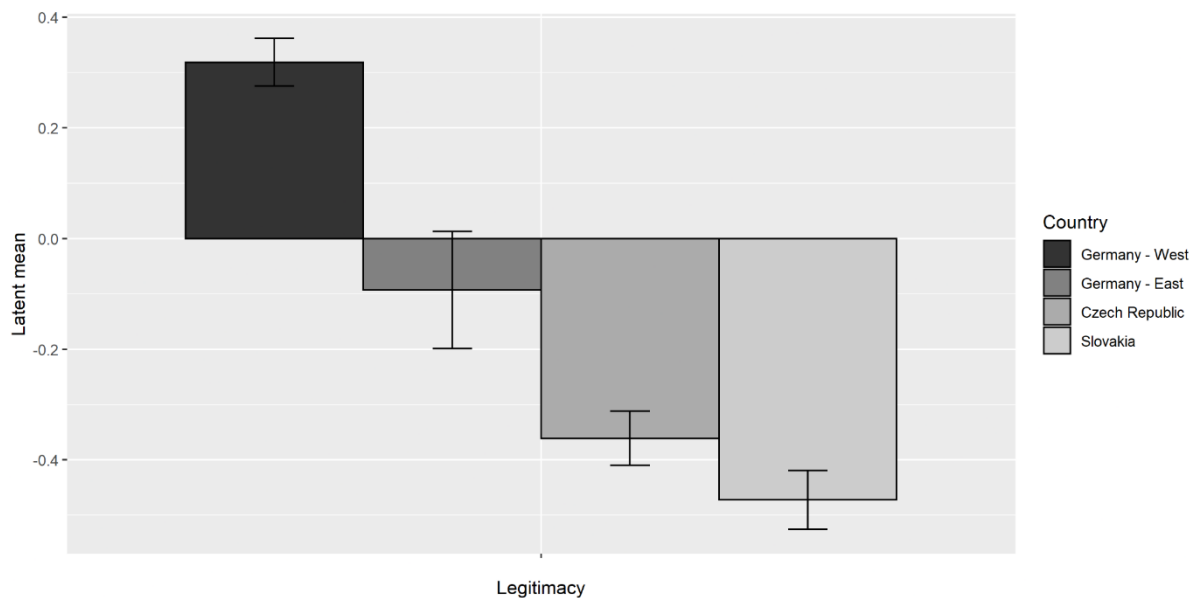
Therefore, we examined the modification indices, which suggested that allowing a residual covariance between Items 6 and 7 could improve the model (CZ: $mi = 24.74$, $ecp = .22$; SK: $mi = 29.36$, $ecp = .26$; GER W: $mi = 31.68$, $ecp = .24$; GER E: $mi = 2.39$, $ecp = .15$). This specification improved the model significantly, $\Delta\chi^2 = 62.95$, $\Delta AIC = 78$, $\Delta BIC = 55$, $\Delta df = 4$, $p < .001$. More importantly, we consider this specification plausible from a theoretical point of view, because both items shared an unmeasured component probably based on expert, scientific argument (e.g., general trust in science). Hence, we proceeded to the final analyses with the 7-item version, with one permitted residual covariance.

This configural model fit the data well, $\chi^2(52) = 172.560$, $p < .001$, $CFI = .988$, $TLI = .981$, $RMSEA = .063$ [90% *CI*: .052, .073], $SRMR = .019$, and the constraining factor loadings across groups did not significantly worsen the model, $\Delta CFI = .003$, $\Delta TLI = -.001$, $\Delta RMSEA = -.001$, $\Delta SRMR = .020$. The metric invariance was successfully established, and this model was used to examine the associations between outcome and demographic characteristics. However, the scalar invariance was not established since the model was significantly worsened, $\Delta CFI = .033$, $\Delta TLI = .028$, $\Delta RMSEA = .037$, $\Delta SRMR = .029$. Therefore, we corroborated partial scalar invariance. We released two items (6 and 7) based on the Lagrange Multiplier test ($\chi^2 = 113.87$ and $\chi^2 = 52.18$, respectively), which led to a sufficient partial scalar measurement invariance, $\Delta CFI = .009$, $\Delta TLI = .007$, $\Delta RMSEA = .011$, $\Delta SRMR = .011$. These two items were therefore freely estimated, while the remaining items were constrained. This model was used for latent means comparison.

Latent Means Comparison

A latent means comparison was performed on the model with established partial scalar measurement invariance. The data fit the model well: $\chi^2(81) = 337.939$, $p < .001$, $CFI = .976$, $TLI = .975$, $RMSEA = .072$ [90% CI: .066, .081], $SRMR = .050$. Inspection of the latent means revealed that participants in Slovakia ($M_1 = -.472$ [95% CI: $-.575, -.368$], $SE = .053$) and the Czech Republic ($M_1 = -.361$ [95% CI: $-.457, -.264$], $SE = .049$) reported a lower level of perceived legitimacy than participants in East ($M_1 = -.093$ [95% CI: $-.301, .115$], $SE = .106$) and West Germany ($M_1 = .318$ [95% CI: $.234, .401$], $SE = .043$). The differences in latent means between the countries are shown in Figure 1.

Figure 1. *Latent Means.*



Note: Error bars represent standard errors.

We then analyzed whether these differences were statistically significant. Chi-square difference tests showed a significant omnibus effect, i.e., significant differences between countries in their level of perceived legitimacy: $\Delta\chi^2 = 141.36$, $\Delta AIC = 154$, $\Delta BIC = 136$, $\Delta df = 3$, $p < .001$. H1 was supported. All pairwise comparisons (with two exceptions – the comparison of Czechs and Slovaks, and the comparison of Czechs and East Germans)

showed statistically significant differences, with small-to-medium effect sizes. Therefore, H3 was supported and H2 was partially supported since comparisons between Czechs and Slovaks, and between Czechs and East Germans were statistically insignificant. The largest differences were observed between Czechs/Slovaks and West Germans ($d = -.50$, and $d = -.61$, respectively). Small differences were observed between Czechs/Slovaks and East Germans ($d = -.19$, and $d = -.29$, respectively), and between West and East Germans ($d = .31$). All pairwise comparisons are presented in Table 3.

Table 3. *Pairwise Comparisons.*

Pairwise comparison	ΔM_1 [95% <i>CI</i>]	<i>SE</i>	p_{Holm}	<i>d</i>
Czech Republic - Slovakia	.111 [-.034, .255]	.074	.133	.082
Czech Republic - West Germany	-.679 [-.850, -.548]	.067	< .001	-.503
Czech Republic - East Germany	-.268 [-.504, -.032]	.120	.052	-.193
Slovakia - West Germany	-.789 [-.926, -.653]	.070	< .001	-.606
Slovakia - East Germany	-.379 [-.618, -.140]	.122	.006	-.290
West Germany - East Germany	.410 [.178, .643]	.119	.002	.314

Note: ΔM_1 = latent means difference, *CI* = confidence intervals, *SE* = standard error, p_{Holm} = *p*-value corrected by Holm-Bonferroni method, *d* = Cohen's *d*.

Regressions

Our exploratory analysis investigated the potential associations between perceived legitimacy and demographic characteristics (gender, education, age). First, we tested whether the countries differed in these associations by comparing two MG-SEM models (one with regression coefficients freely estimated, the second with these coefficients constrained to be equal). The chi-square difference test suggested that an omnibus effect indeed exists between countries: $\Delta\chi^2 = 26.744$, $\Delta df = 9$, $p = .002$. Hence, we proceeded with MG-SEM, with established metric invariance. This model fit the data well: $\chi^2(142) = 308.081$, $p < .001$, $CFI = .973$, $TLI = .984$, $RMSEA = .042$ [90% *CI*: .036, .049], $SRMR = .032$.

LEGITIMACY OF ANTI-PANDEMIC MEASURES

We found that university education was associated significantly with the outcome in West Germany ($\beta = .09, p = .006$). University-educated West Germans showed a higher perceived legitimacy. We also found that age was associated significantly with the outcome in the Czech Republic ($\beta = .28, p < .001$); older Czechs tended to show a higher level of perceived legitimacy. The remaining associations were statistically insignificant (Table 4).

Table 4. *Multi-Group Regression Analysis.*

West Germany			
Variable	β	<i>SE</i>	<i>p</i>
Age	.040	.002	.222
Gender	.038	.064	.251
University	.094	.081	.006
East Germany			
Variable	β	<i>SE</i>	<i>p</i>
Age	.136	.006	.094
Gender	.028	.159	.727
University	.130	.191	.097
Czech Republic			
Variable	β	<i>SE</i>	<i>p</i>
Age	.278	.003	< .001
Gender	.007	.072	.837
University	-.023	.076	.488
Slovakia			
Variable	β	<i>SE</i>	<i>p</i>
Age	-.040	.003	.346
Gender	-.040	.080	.336
University	.079	.088	.060

Note: β = standardized beta regression coefficient, *SE* = standard error, *p* = *p*-value.

Discussion

The legitimacy of the law was challenged in many countries during the COVID-19 pandemic. While research on trust in governments has been extensive, the perceived legitimacy of the anti-pandemic measures did not gain much research attention. In this article, we followed the established line of theoretical research on legitimacy and proposed a new measurement instrument for assessing the level of perceived legitimacy and one which captures its important facets. We based our hypotheses on previous cross-cultural comparisons of the rule of law (World Justice Project, 2022) and trust in government (OECD, 2023), and also on the theory of post-communist mentality (Klicperova et al. 1997; 1999). We compared the level of perceived legitimacy in three European countries and four independent samples (West Germany, East Germany, the Czech Republic, and Slovakia).

In H1, we expected a statistically significant omnibus effect which was supported since we found statistically significant differences among countries in their level of perceived legitimacy. Our main findings showed that West Germans reported the highest perceived legitimacy, followed by East Germans, Czechs, and Slovaks. However, H2 was only partially supported. In H2 we expected higher levels of perceived legitimacy of East and West Germany than the Czech Republic and subsequently, a higher level of perceived legitimacy of the Czech Republic than Slovakia. Nevertheless, assumed pairwise differences were not observed between the Czech Republic and Slovakia (the effect size was negligible) nor between the Czech Republic and East Germany (the effect size was small). In H3 we expected that West Germany would show a higher level of perceived legitimacy compared to East Germany, that was supported by a significant difference between East and West Germany.

In the exploratory part of our analysis, we also found that university-educated Western Germans and older Czechs reported higher perceived legitimacy. The remaining

associations were statistically insignificant. An interesting observation is that these associations between demographic variables and perceived legitimacy differed between countries (i.e., effects were moderated by the participant's country). These findings are discussed below from two perspectives: the normative factors of the perceived legitimacy of anti-pandemic measures which rest at the side of the government and the psycho-socio-cultural factors of the perceived legitimacy of anti-pandemic measures which lie at the side of the citizens.

Normative Factors

Derived from the normative theories of legitimacy (i.e., justifiability), the seven above-described requirements provide clues to specific factors present in the countries studied at the time of our survey. The first requirement, i.e., trustworthy, stable, and efficient government, was satisfied only partially in the Czech Republic and Slovakia. In the Czech Republic, the government of Andrej Babiš was a minority government, holding power only with support from the Communist Party, and was actively contested by a strong opposition which succeeded to block extension of a state of emergency (Guasti & Bílek, 2022; Horák et al., 2021). In Slovakia, the government was in permanent crisis because Prime Minister Matovič chose to import the Sputnik vaccine, even though it had not been approved by medical authorities or his coalition partners (Guasti & Bílek, 2022). By contrast, no evidence points towards the German grand coalition government having gone through any major conflicts or political crises during the pandemic. Since the political instability and crises lower the citizens' trust in the government and consequently also the perceived legitimacy of its policies (Martin et al., 2022), we believe that the mentioned crises and weaknesses of the Czech and Slovak government coalitions, abundantly covered by the media, might have

lowered the citizens' perceived legitimacy of anti-pandemic measures adopted by these governments.

The second requirement, i.e., free, transparent, and fair democratic elections, is relevant only to the Czech Republic since the other two countries did not have any problems with their electoral systems at the time. In the Czech Republic, the Constitutional Court (2021a) quashed the electoral system to the Chamber of Deputies for unconstitutional disproportionality (Antoš & Horák, 2021). Since the citizens' acceptance of (and identification with) political representation are positively affected by free and fair elections (Goodwin-Gill, 2006), the above-mentioned judgment might have questioned the perceived legitimacy of not only the Czech Government itself but also its anti-pandemic measures.

Concerning the third requirement, i.e., undisputed legal competence or power to adopt emergency measures, Germany again chose the least problematic procedure by adopting (or rather amending) a special act of law (Infektionsschutzgesetz, 2000), entrusting the power to adopt emergency measures to both the federal and local governments. In Germany, the legally delineated competencies do not appear to have had any significant problems or been overstepped. The Czech and Slovak Republics, however, experienced serious problems: the Czech Ministry of Health adopted a wide array of emergency measures which were subsequently quashed or declared illegal by the Czech Supreme Administrative Court (e.g., 2021a; 2021b). Similar problems were observed in Slovakia (Píry, 2020; Patakyová, 2020). The lawfulness of public authorities (i.e., acting within the limits delineated by law) is understood as an important predictor of their perceived legitimacy (Tankebe, 2012). Analogously, it can be assumed that the Czech and Slovak citizens might have perceived the anti-pandemic measures as less legitimate knowing that authorities overstepped their powers when adopting them.

Regarding the fourth requirement, i.e., procedural safeguards, limitations, and judicial oversight, Germany remained true to their own good governance principles (Coglianese & Mahboubi, 2021; Saurer, 2020; 2021), whereas both the Czech Republic and Slovakia demonstrated rather significant procedural shortcomings. In the Czech Republic, the government of Andrej Babiš unconstitutionally prolonged a state of emergency despite disagreement in the Chamber of Deputies (Horák et al., 2021; Kysela, 2022). The Czech Supreme Administrative Court (2021c) also held that the Ministry of Health had adopted emergency measures unlawfully. In Slovakia, any possibilities of judicial review of emergency measures were *de facto* excluded (Patakyová, 2020). The only exception was a constitutional review by the Slovak Constitutional Court, which, however, remained rather self-restrained (Pirošíková, 2022).

Both of these situations could have had a negative impact on the perceived legitimacy of anti-pandemic measures. In the Czech Republic, the citizens knew that they were protected by the courts. However, the judgments repeatedly confirmed their suspicions that the way in which the Government had acted was unlawful and thereby might have lowered the legitimacy of the anti-pandemic measures (Tankebe, 2012). In Slovakia on the other hand, the lower perceived legitimacy might have stemmed from the fact that people who are denied or have limited access to courts show negative feelings about the courts and the law (Zimmerman & Tyler, 2010).

The problems demonstrated by the Czech and Slovak governments also concern the fifth requirement, i.e., sufficient communication and reasoning. Unlike their German counterparts, whose governance and communications were primarily based on science and (although rather demanding for ordinary citizens) at a generally good level (Han et al., 2020; Hanson et al., 2021; Weingart et al., 2022), the governance and rhetoric from the Czech and Slovak governments at the onset of the crisis can be described as technocratic populism

(Buščíková & Baboš, 2020). This, in combination with a high degree of goodwill and altruism in society as the pandemic grew (Klicperova-Baker et al., under review), was successful and helped the countries largely avoid the first COVID-19 wave (Kudrnáč & Klusáček, 2022). However, technocratic populism soon backfired, and both the Czech and Slovak governments received ongoing criticism from the opposition, experts, the media, and the public for their chaotic, inconsistent, and often confusing communications and lack of systematic approach based on scientific knowledge and expert advice (Klimovský et al., 2021; Steuer, 2021). Moreover, in the Czech Republic, individual emergency measures were often quashed or declared unlawful by the Czech Supreme Administrative Court (e.g., 2021d, 2021e) for insufficient, illogical, or even completely absent reasoning. Since the proper communication strategy is an important predictor of perceived legitimacy (Hanson et al., 2021; Weingart et al., 2022) and trust in government (Han et al., 2021), the failure of both the Czech and Slovak governments to explain to their citizens why they should have followed the anti-pandemic measures and how these measures could have helped to avert the pandemic, might have lowered the perceived legitimacy of the measures in these two countries.

The sixth requirement represents the formal characteristics which make the legal rules possible for citizens to obey. During a crisis, these characteristics project themselves as the intelligibility and predictability of emergency measures. The emergency measures in Germany reasonably satisfied these requirements by explicitly (and in advance) setting different levels of emergency restriction according to pandemic developments (Derka, 2022). By contrast, the Czech and Slovak emergency measures changed rapidly and lacked clarity and comprehensiveness (Grinc & Derka, 2022; Steuer, 2021). For example, the Czech anti-pandemic measures, even though unlawful, changed so rapidly that the administrative courts were unable to quash them, because at the time of the judgment they had been already (often several times) replaced with new measures (Grinc & Derka, 2022). One more problem

specific to the Czech Republic stemmed from the concurrent functioning of three different yet overlapping emergency regimes introduced by three different Acts (Parliament of the Czech Republic, 2000a; 2000b; 2021) which empowered different institutions to adopt emergency measures with differently set limitations and judicial review mechanisms (Dienstbier et al., 2022). Consequently, emergency measures in the Czech Republic, and to a lesser degree in Slovakia, were almost unintelligible to citizens, and government policies were unpredictable. It is assumed that citizens who are familiar with legal regulation and understand it well should report higher perceived legitimacy (Horák & Lacko, 2023). Furthermore, if the people do not understand the authorities' decisions and actions, they report lower trust (Tyler & Huo, 2002). Hence, the rather chaotic and rapidly changing regulatory environment during the COVID-19 pandemic might have caused the perceived legitimacy of anti-pandemic measures to be lower in the Czech Republic and also in Slovakia than in Germany.

The seventh requirement is coherence with the key (constitutionally enshrined) values and principles of the given country. Although Germany experienced over 1,000 court challenges (for a disproportionate interference with constitutional rights), most of them were unsuccessful. Exceptions were a few judgments based on the equality clause (e.g., Higher Administrative Court of the Saarland, 2020). In the Czech Republic, several measures were found not only discriminatory (Supreme Administrative Court of the Czech Republic, 2021f; Constitutional Court of the Czech Republic, 2021b) but also in violation of constitutional rights (Constitutional Court of the Czech Republic, 2021b). The citizens' perception of laws as unjust (axiologically unacceptable) is generally associated with lower trust in government (Hendley, 2012) and also lower legitimacy of legal authorities (Tyler & Huo, 2002). Hence, the conflict between common values enshrined in the Constitution and the anti-pandemic measures might have lowered the perceived legitimacy of these measures in the eyes of

Czech citizens. Slovakia missed the review by the administrative courts altogether, and so nothing was reported. We can reiterate, however, that the absence of judicial review itself might explain the lower perceived legitimacy of the anti-pandemic measures in Slovakia (Zimmerman & Tyler, 2010).

These more detailed normative observations show that Germany suffered significantly fewer problems during the COVID-19 crisis than the Czech Republic and Slovakia. However, these normative factors only partially explain our findings. On the one hand, they suggest why we found no significant difference between the Czech Republic and Slovakia and why there was a significant difference between West Germany and these two countries. On the other hand, other factors need to be considered to explain the significant difference between West and East Germany and no significant difference between East Germany and the Czech Republic.

Psycho-Socio-Cultural Factors

We believe that these “other” factors rest with the citizens under the anti-pandemic measures rather than the public authorities and their actions, i.e., that they are of psycho-socio-cultural nature. We drew our hypotheses from the different historical experiences of participating countries. Unlike West Germany, the other three regions—East Germany, the Czech Republic, and Slovakia—had in the past been ruled under communist authoritarianism. From this perspective, our findings, which showed a significant difference between West Germans and the other three samples (including East Germans, who now share the same federal government and media with Western lands) are in line with previous research which indicates that post-communist countries achieved lower vaccination rates (Martens, 2022; Pronkina et al., 2023) and demonstrated less trust in government (Braun & Trüdinger, 2023; Epperly, 2019). It is therefore possible that the historical experience of communism could, to

some extent, have decreased the perceived legitimacy of anti-pandemic measures in our study.

Previous psychological research has identified many cross-cultural differences between Western European and post-communist European countries (East Germany included) affecting the perception of legitimacy in post-communist areas. For example, Varnum with colleagues (2008; see also Lacko et al., 2020) reported that people in post-communist countries tend to be more holistic and less analytic, have more collectivistic values (Kolman et al., 2003), higher values of security, and conformity (Boehnke et al., 1994), and tend to embrace hierarchy and embedded values rather than egalitarianism and (intellectual and affective) values of autonomy (Schwartz & Bardi, 1997). Theoretically, in the case of anti-pandemic measures, legitimacy should not be perceived as lesser in post-communist countries since these citizens should naturally support the measures and policies which embrace collective welfare. Yet, this is certainly not what we observed during the peak of the COVID-19 pandemic.

An explanation might rest in that these findings are too general and abstract and therefore can be invalidated by more specific factors which relate more closely to the perceived legitimacy of anti-pandemic measures or were already linked to legitimacy (e.g., power distance; see Tyler et al., 2000). For example, it was found that citizens of post-communist countries manifest lower egalitarianism (emphasis on the transcendence of selfish interests; Schwartz & Bardi, 1997), higher power distance (Bakacsi et al., 2002; Kolman et al., 2003; however, see also Bašnáková et al., 2016) and higher external locus of control (Varnum, 2008, see table 1). Compared to their Western counterparts, they also tend to have higher risk aversion in pursuing financial gain, higher risk-seeking in incurring financial loss (Schaewitz et al., 2022), show less willingness to share gains with others who loosed (Brosig-Koch et al., 2011), and are inclined to see others as non-cooperative (Heineck & Süßmuth,

2013). They also prefer the satisfaction of economic interests at the expense of moral interests (Welsch, 2022; see also van Hoorn & Maseland, 2010), show less civic participation (Pop-Eleches & Tucker, 2013), are more anti-democratic and anti-capitalistic (Pop-Eleches & Tucker, 2014), and show higher non-democratic skepticism and passive indifference (Klicperova-Baker & Kostal, 2015; 2018; Vainshtein, 1994). Their experience of communist authoritarianism seems to have taught many to distrust, disobey, and become alienated from the government.

Hence, citizens of these countries might experience a certain conflict. On the one hand, they are more interdependent and put emphasis on external circumstances, but on the other hand, they might feel isolated from the government and its regulations and restrictions and underestimate their own influence in coping with the pandemic. They also tend to prioritize their own welfare and interest, do not trust others much, and tend to have less respect for moral and legal rules. This conflict can be illustrated in that even though they have stronger preferences for public policies which entail redistribution (Alesina & Fuchs-Schündeln, 2007), they are not willing to pay for such policies (Pfarr et al., 2013).

The overall quality of life and economics also appears to be an important factor. People in post-communist countries are generally less satisfied with their lives (Djankov et al., 2016). It was found that historical experience with communism is negatively manifested on the Human Development Index (HDI; Sookias et al., 2018). Specific to our study, Germany (as a whole) has an HDI of 0.84, the Czech Republic 0.76, and Slovakia 0.68 (Human Development Reports, 2023). Significant differences in the overall economics are still observable between West and East Germany (Krause, 2019). It is therefore logical that these citizens probably felt higher vulnerability to (and consequently also discontent with) restrictions which had a negative economic impact.

Many of these findings could be subsumed under the underlying concept sometimes referred to as “homo sovieticus” (e.g., Shiller et al., 1992) or post-communist syndrome, (e.g., Klicperova et al., 1997; Klicperova-Baker et al., 1999), which describes generalized negativity, distrust and an antagonistic perception of “us” (the citizens) versus “them” (the government). Post-communist syndrome might explain why we found a significant difference in the reported legitimacy of anti-pandemic measures between West Germany and post-communist areas, and why the differences between East Germany and the Czech Republic, also between the Czech Republic and Slovakia, were insignificant. Nevertheless, the post-communist syndrome cannot be understood as the only factor which decreased the perceived legitimacy of anti-pandemic measures. Epperly (2019) found that distrust in governments typical for post-communist countries was not caused primarily by historical communism but rather the generally poor performance of these governments. This brings us back full circle to the normative factors analyzed above. Our results can be explained in their wholeness and complexity only by the interplay of both normative and psycho-socio-cultural factors.

The Role of Demographic Variables

In the exploratory part of the analysis, we also examined whether demographic variables were associated with perceived legitimacy. We identified only a few significant relationships, but all in the anticipated direction. For example, older Czechs reported higher perceived legitimacy, an observation consistent with the older population being at most risk from the effects of a COVID-19 infection. A pattern similar to the one in the Czech Republic (but statistically insignificant) was also observed in West and East Germany (but not in Slovakia). The effect size in the Czech Republic was probably strengthened because the electorate of the government of Andrej Babiš consisted mostly of people aged 55 years and over (Median, 2019). Interestingly, the literature describes rather mixed effects in this

respect: typically, it is reported that older people are the most compliant with restrictions (e.g., Almutairi et al., 2020; Dai et al., 2020) or that age has no effect (Clark et al., 2020) or the opposite is true (Barber & Kim, 2021).

Our data also indicate that university-educated Western Germans reported higher legitimacy, which is consistent with the findings that people with higher education tended to be more compliant with anti-pandemic measures (Almutairi et al., 2020; Yıldırım et al., 2021). This might have been influenced by the German government's open, scientifically based but also rather academic and challenging communications (Han et al., 2020; Hanson et al., 2021; Weingart et al., 2022). A similar (but insignificant) trend was also found in East Germany and Slovakia, but not in the Czech Republic. Surprisingly, gender was not associated with perceived legitimacy at all, which does not correspond to previous findings suggesting that women tend to be more compliant with anti-pandemic measures than men (e.g., Almutairi et al., 2020; Barber & Kim, 2020; Clark et al., 2020; Dai et al., 2020; Nivette et al., 2021).

Limitations and Future Directions

Let us first focus on the limitations regarding the generalizability of our findings a) beyond the single phase of the COVID-19 pandemic and b) the examined cultural context of Germany, the Czech Republic, and Slovakia. As for the former limitation, trust in government, compliance, and legitimacy during the COVID-19 pandemic are subject to temporal instability. As the crisis unfolds, all these factors and their predictors can undergo dynamic changes (Six et al., 2021). Our findings are, therefore, related primarily to the second wave of the COVID-19 pandemic of March 2021. For an examination of temporal changes in perceived legitimacy, future research should involve longitudinal methodological designs.

Regarding the latter limitation, our findings are based on Central European samples, and the transferability of findings to other cultural contexts, especially beyond the scope of liberal democracies, should be cautious. Across liberal democracies, however, emergency governance generally follows a similar logic. The executive is temporarily endowed with strong discretionary powers to effectively mitigate and avert an emergency, while the legislature and judiciary have limited ability to control or review emergency decisions and measures by the executive (Ferejohn & Pasquino, 2004). Also, even though the anti-pandemic measures differed across countries in their stringency, they were similar concerning the type of restrictions they imposed on citizens (e.g., school or workplace closures, cancellation of public events, stay-at-home requirements, restrictions on international travel; cf. Charemza et al., 2023). Furthermore, the presented scale already demonstrated a sufficient level of measurement invariance and its successful adaptation to other cultural contexts (at least across liberal democracies) is presumable. Hence, we believe that replications of our results beyond Central European samples should be possible.

Yet, both normative and psycho-socio-cultural factors which might explain the findings in respective countries naturally vary across diverse cultural regions. For example, political polarization was not observed at such a high level in examined countries but is generally high in the USA. It was found that political polarization leads to a decrease in compliant behavior and vaccination acceptance (e.g., Dolman et al., 2023; Pennycook et al., 2022). A recent meta-analysis supported the mentioned cultural uniqueness, as it found that the link between trust in government and compliance in the USA was in the opposite direction during the presidency of Donald Trump (Devine et al., 2023). Hence, taking into account specific normative and psycho-socio-cultural factors seems desirable while interpreting cross-country differences in perceived legitimacy in other cultural contexts.

Second, in our attempt to demonstrate the differences between East and West Germany, the small sample size for East Germany was a limitation. Even though the current sample (without Berliners) was sufficient for modeling latent means comparisons in MG-SEM, we were able to capture only bigger effect sizes due to the limited power. Germany is also a federation of 16 relatively autonomous states, and their pandemic measures were diverse. Future research could therefore also study the differences in perceived legitimacy between individual states within a country.

Finally, we did not measure or incorporate other potentially confounding variables which may have affected the results, nor did we measure other outcomes such as willingness to comply or actual behavior. A variety of variables can be included among possible covariates, for instance, personality traits (Nowak et al., 2020), fear of COVID-19 (Lieberoth et al., 2021), conspiracy beliefs (Bruder & Kunert, 2022), self-efficacy (Jørgensen et al., 2021), national identity (Van Bavel et al., 2022) or anti-intellectualism (Merkley & Loewen, 2021). Especially in the USA, political orientation and partisanship appear among important variables that could confound cross-country differences (for a review, see Daoust, 2023). Future research can build on our evidence of normative and psycho-socio-cultural differences in addition to the culturally invariant perceived legitimacy scale to study these topics.

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