

Can Rising Inequality and State of Governance Help Explain Fragmentation of State Institutions?

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Introduction I

- According to Vilfredo Pareto, one of the first proposing the classical elite theory (Kolegar 1967),
"In every society, there is a class of people who have the highest insight in their branch of activity and to that class, can be given the name of the elite".
- Similarly C. Wright Mills stated that (Mills 2019),
"The power elite is composed of men (sic) whose positions enable them to transcend the ordinary environments of ordinary men and women; they are in positions to make decisions having major consequences".
- Stemming from the Italian school of elitism, which also lends heavily from Machiavellian treaties, the elite theory was formulated in response to counter Marxist views on politics and society. One of the implications of the theory is that wealth is the basis of power, and the upper class or the elites, in actual effect, control the government.
- By the definition and nature of the elites (ibid.), it is well established that their web of power spans far beyond themselves to other groups in society. The elites consistently intervene in public policy and public spheres to protect their interests.

Introduction II

- In broader terms, inequality can be of different types. (Rein and Miller 1974) distinguishes nine separate ways to interpret the standard of equality, namely,

<ul style="list-style-type: none"> ❶ One-hundred-percentism, ❷ The social minimum, ❸ Equalisation of lifetime income profiles, ❹ Mobility, ❺ Economic inclusion, 	<ul style="list-style-type: none"> ❻ Income shares, ❼ Lowering the ceiling, ❽ Avoidance of income & wealth crystallization and lastly ❾ International yardsticks.
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- Governance is a set of actions or manners in which a state or organization is to be run or governed. However, governance is strictly limited to the state in political theories and the national discourse. The actions of government, the elected representatives of the people, which set the course of the public, and in some cases, private matters of the state's citizens can be termed as governance.

Introduction III

- According to United Nations (Welch et al. 2006), core characteristics of good governance are,

<ul style="list-style-type: none"> ① Participation, ② Rule of Law, ③ Transparency, ④ Responsiveness, ⑤ Consensus Oriented, 	<ul style="list-style-type: none"> ⑥ Equity, ⑦ Effectiveness & Efficiency, ⑧ Accountability and ⑨ Strategic vision.
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- UN also defines (ibid.) governance as a set of actions comprising "traditions, institutions and processes" that determine how the power is being exercised, how the normal citizens get a voice, and how the decisions on important public concerned issues are made.
- As the title suggests, this study aims to study the inherent relationship running or inequality and governance with fragmentation of state institutions.

Related Literature I

- (Lister 2007) using inequality data as a proxy for the welfare state, finds a negative relationship between election turnout and inequality, thus confirming the public political behavior changing due to the role of welfare states.
- (Hellman and Kaufmann 2004) develops a proxy measure of influence inequality for both firm and country-level termed "crony bias" in politics and concludes that the influence of inequality strongly impacts the firm assessment of public institutions leading to firm behavior changes towards public institutions (courts and regulatory bodies), influential firms actively weakening state institutions.
- Economic and Political inequality and their relationship with institutions according to (Savoia, Easaw, and McKay 2010) is some inverse relationship. The empirical study attempts to study the impact of political and economic inequality on institutions. The paper poses the possibility of the mechanism of inequality impacting inequality of democratization indirectly.
- (Asongu and Odhiambo 2020) studies inequality threshold levels with the help GMM method. The findings provide inequality levels that nullify the positive impacts of governance on female labor force participation.

Related Literature II

- Ethnic issues and structure in Lithuania are discussed in (Kasatkina and Beresnevičiūtė 2010). The ethnic composition in politics and government roles in Lithuania and the inequality distribution across ethnic groups are discussed in (ibid.).
- (Ansell and Samuels 2010) discusses inequality and democratization from a contractarian political framework. It differs from the conventional income inequality approach leading to democratization. Rather it proposes that land inequality is a better predictor of democratization. The study also suggests that democratization is a function of rising economic groups seeking protection from the government.
- (Nau 2013) provides us with some fascinating theoretical and realistic aspects of the income distribution, mainly economic elite income from investment portfolios. The paper argues that such income must be included in the methodological aspects.
- The Malthusian dynamic model developed to explain productivity, inequality, property rights, and population in (Dow and Reed 2013) matches the historical and archaeological evidence in search of "Origins of Inequality."

Related Literature III

- (Iyekekpolo 2020) researches the birth of the Boko Haram insurgency group in Nigeria and mentions economic poverty, historical north-south identity fractionalization, and inequality causing grievances in northern Nigeria. The study differs from these factors and argues in favor of the statement that factions of political elites gave relevance to the insurgent group.
- (Gould 1989) investigates the power and position in a social structure, especially for community elites. The study concludes that position in a social network structure provides influence irrespective of other significant factors. It also empirically proves that power derived from position and resources undermine each other.

Data Selection, Preparation & Choice of Indicators I

- As defined by (FFP 2017), the factionalization of elites is the fragmentation of state institutions along various socioeconomic dimensions. The index specifies the factionalization that happens along these dimensions,
 - ① Ethnicity,
 - ② Economic Class,
 - ③ Clan,
 - ④ Race,
 - ⑤ Religion,
 - ⑥ Brinkmanship and
 - ⑦ Gridlock Among Elites in Society.

This indicator measures power struggles, political competition, political transition, and the presence of a credible electoral process. It captures the political and economic power and state of a given society's elites or the ruling class. fragmentation of state institutions along various groups.

- Freedom House (House 2022) provides a comprehensive data set with specific indicators following a delicate, methodologically sound, and elaborate process.

Data Selection, Preparation & Choice of Indicators II

- Political rights score is based on three subcategories, electoral process, political pluralism & participation, and lastly, functioning of government. Similarly, the civil liberties category is also divided into four subcategories. They are freedom of expression & belief, association & organizational rights, the rule of law and personal autonomy & individual rights.
- The Positive Peace Index (Institute for Economics & Peace – IEP 2022) provides positive peace scores for countries based on other indicators, some common with the Fragile States Index and Freedom House data.
- We choose $n=158$ for the study to analyze the global trend for the longest period and the maximum number of countries. The countries by income group and region data are extracted from World Bank Development Indicators (World Bank 2010). Freedom status is extracted from Freedom house House 2022.

Data Selection, Preparation & Choice of Indicators III

Table 1: Variables and Sources

Variable	Indicator	Source
FactionalizedElite	Factionalized Elites	Fragile States Index
EconInequality	Uneven Economic Development	Fragile States Index
ExcluSocioEcon	Exclusion by Socio-Economic Group	Varieties of Democracy (V-Dem)
EqualOpp	Equality of Opportunity	Freedom House
GenderEqual	Gender Inequality Index	UNDP
GroupGrievance	Group Grievance Indicator	Fragile States Index
LawSupportEqual	Law to Support Equal Treatment of Population Segments	Freedom House
ElectProcess	Electoral Process	Freedom in the World
GovEffective	Government Effectiveness: Estimate	WB
RuleLaw	Rule of Law	Freedom House
StatePopRel	State Legitimacy	Fragile States Index
PubServ	Public Services	Fragile States Index
AccesstoPubServ	Access to Public Services	Varieties of Democracy (V-Dem)
Region	Region	WB Development Indicators
IncomeGroup	Income Group	WB Development Indicator
FreedomStatus	Freedom Status	Freedom in the World

Model Specification I

- The study utilizes the dynamic panel data regression method for quantitative analysis.
- One major issue of static panel data analysis to its dynamic counterpart model is that static models are more prone to misspecification due to autocorrelation in fixed effect error terms.
- Dynamic panel models are better specified because they contain dynamics in the estimated part rather than in the error terms.
- Here, in the models, α_0 is the constant term. Due to the scope of this research paper, constant terms are of little interest to us. $\alpha_2, \dots, \alpha_{13}$ all are the target partial slope coefficients.
- In this dynamic panel model, $FactionalizedElite_{i,t-1}$ is one period lagged variable and the associated α_1 parameter estimates the model's dynamic component and is assumed to be endogenous.

Model Specification II

Model Specification

$$\begin{aligned}
 \text{FractionalizedElite}_{it} = & \alpha_0 + \alpha_1 \text{FractionalizedElite}_{i,t-1} \\
 & + \alpha_2 \text{EconInequality}_{it} + \alpha_3 \text{GenderEqual}_{it} + \alpha_4 \text{EqualOpp}_{it} \\
 & + \alpha_5 \text{LawSupportEqual}_{it} + \alpha_6 \text{ExcluSocioEcon}_{it} \\
 & + \alpha_7 \text{GroupGrievance}_{it} + \alpha_8 \text{ElectProcess}_{it} + \alpha_9 \text{GovEffective}_{it} \\
 & + \alpha_{10} \text{RuleofLaw}_{it} + \alpha_{11} \text{StatePopRel}_{it} + \alpha_{12} \text{PubServ}_{it} \\
 & + \alpha_{13} \text{AccesstoPubServ}_{it} + \alpha_{14} \text{Year}_t + \alpha_{15} \text{Region}_i + \mu_{it}
 \end{aligned} \tag{1}$$

Year_t = Yearly Fixed Effects

Region_i = Regional Fixed Effects

$i = \overset{th}{i}$ number of country, $(1, \dots, 158)$

$t = \overset{th}{t}$ time period, $(2009, \dots, 2020)$, $t \geq 2010$

ϵ_{it} = Stochastic Disturbance Term

Econometric Estimation I

Table 2: 2-Step System-GMM Estimation Results

	Global	Low In- come	Lower Middle Income	Upper Middle Income	High In- come	Not Free	Partially Free	Free
L1FactionalizedElite	0.784*** (0.135)	0.714 (0.607)	0.756*** (0.163)	0.794*** (0.172)	0.848*** (0.171)	0.756*** (0.0949)	0.744*** (0.0560)	0.827*** (0.0563)
EconInequality	0.0772 (0.113)	0.149 (0.403)	0.117 (0.120)	-0.161 (0.142)	-0.0665 (0.190)	-0.0597 (0.0546)	-0.0511 (0.0868)	-0.0330 (0.0624)
GenderEqual	-0.0446 (0.372)	0.395 (.)	0.567 (0.375)	0.175 (0.532)	-0.0340 (0.171)	-0.173 (0.234)	0.224* (0.103)	0.106 (0.154)
EqualOpp	-0.0184 (0.198)	1.616 (1.469)	-0.133 (0.665)	-0.0958 (0.0978)	-0.104 (0.747)	-0.0182 (0.0748)	- (0.127)	0.0847 (0.159)
LawSupportEqual	-0.354 (0.231)	-1.491 (1.210)	0.134 (0.427)	0.133 (0.243)	-0.0323 (0.269)	-0.168 (0.284)	-0.346 (0.241)	-0.0788 (0.196)
ExcluSocioEcon	0.0498 (0.280)	0.689 (2.581)	0.348 (0.385)	-0.301 (0.222)	-0.0251 (0.414)	0.0507 (0.201)	-0.0690 (0.0892)	-0.0680 (0.153)
GroupGrievance	0.140 (0.0811)	0.0157 (0.584)	-0.0176 (0.153)	0.142 (0.115)	0.149 (0.0829)	0.0871 (0.0584)	0.144* (0.0704)	0.184** (0.0686)

Econometric Estimation II

ElectProcess	0.0332 (0.0447)	-0.0479 (0.0954)	-0.0360 (0.0563)	0.0158 (0.0490)	-0.0418 (0.158)	-0.0104 (0.0242)	- 0.00758 (0.0293)	-0.158 (0.111)
GovEffective	0.0352 (0.204)	0.00435 (2.276)	-0.227 (0.357)	0.0145 (0.184)	0.460 (0.343)	0.0317 (0.178)	0.300 (0.214)	0.126 (0.157)
RuleofLaw	-0.127* (0.0567)	0.206 (0.587)	0.0633 (0.108)	-0.0306 (0.0917)	-0.0183 (0.124)	-0.0126 (0.0618)	-0.0432 (0.0302)	0.0586 (0.0486)
StatePopRel	0.0809 (0.0763)	0.592 (0.486)	0.333 (0.251)	0.124 (0.0801)	-0.0901 (0.104)	0.175 (0.113)	0.150 (0.0810)	0.0723 (0.0474)
PubServ	-0.0285 (0.0875)	-0.709 (0.399)	-0.156 (0.206)	0.128 (0.107)	0.00946 (0.129)	-0.0408 (0.0844)	-0.0999 (0.0777)	-0.0227 (0.0615)
AccesstoPubServ	-0.0405 (0.304)	-0.519 (2.171)	-0.950 (0.709)	-0.356 (0.487)	0.246 (0.260)	0.459 (0.247)	0.0128 (0.238)	-0.0895 (0.229)
_cons	1.295 (1.752)	-0.826 (9.050)	0.824 (2.217)	1.293 (2.680)	0.191 (3.455)	0.0426 (1.270)	0.934 (0.866)	0.732 (1.281)
N	1738	286	484	473	484	510	587	641
hansen	42.06	2.243	18.76	15.84	24.97	31.61	50.90	32.59
hansen_df	48	46	45	54	56	54	50	49
hansenp	0.714	1	1.000	1.000	1.000	0.994	0.438	0.966
ar2	0.666	0.105	0.323	-1.039	1.116	1.188	0.154	-0.466
ar2p	0.506	0.916	0.747	0.299	0.264	0.235	0.878	0.641

Standard errors in parentheses

Yearly and regional fixed effects have been removed for this table.

A number of appropriate instrumental variables have been utilized including their squared terms as well as yearly and regional fixed effects.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Econometric Estimation III

Table 3: OLS and Fixed Effect Lagged Variable Results

	Global OLS	Global FE	Low Income OLS	Low Income FE
L1FactionalizedElite	0.954*** (157.54)	0.649*** (24.57)	0.866*** (34.23)	0.573*** (11.10)
	Lower Middle In- come OLS	Lower Middle In- come FE	Upper Middle In- come OLS	Upper Middle In- come FE
L1FactionalizedElite	0.933*** (56.59)	0.582*** (10.71)	0.966*** (86.43)	0.628*** (16.62)
	High Income OLS	High Income FE	Not Free OLS	Not Free FE
L1FactionalizedElite	0.965*** (102.02)	0.943*** (62.87)	0.936*** (56.49)	0.569*** (10.48)
	Partially Free OLS	Partially Free FE	Free OLS	Free FE
L1FactionalizedElite	0.924*** (67.84)	0.546*** (7.10)	0.961*** (101.17)	0.673*** (13.33)
	Free & High In- come OLS	Free & High In- come FE	Partially Free & Lower Middle in- come OLS	Partially Free & Lower Middle in- come FE
L1FactionalizedElite	0.955*** (88.63)	0.746*** (16.87)	0.926*** (43.45)	0.606*** (4.37)

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Econometric Estimation IV

- We have used a 2-step system GMM estimation method in the lights of Arellano and Bond 1991; Arellano and Bover 1995; Blundell and Bond 1998; Roodman 2009.
- The result of the dynamic panel model table in section 2 does not report yearly and regional fixed effects, although they have been estimated in the regressions.
- Many instrumental variables have been used in each model, including their squared terms and regional and yearly fixed effects in various combinations, to obtain an efficient and consistent estimation of the endogenous variable parameter.
- In each case, the α_1 parameters lie in the middle range of pooled and fixed effects estimation results. The Arellano-Bond test for AR (2) is not significant in each of our panels (above the 5% threshold).
- Since we deployed the two-step system GMM method, we disregard the Sargan test for overidentification restriction.
- The Hansen overidentification test lies at well above significant values confirming that the candidate matrix consisting of instrumental variables is valid for each panel.
- Due to a low number of periods ($T=12$), this paper does not resort to the panel co-integration test.

Analysis I

- Although small in scale, the global panel model confirms our prediction and estimates a positive relationship with the dependent variable. A one-unit increase in economic inequality would lead to a 0.0772-unit increase in the fragmentation of state institutions. Gender equality, equality of opportunity, and laws supporting equality show negative relationships with the dependent variable.
- Among our variables of inequality measures, only group grievances show statistical significance.
- Exclusion by socioeconomic status and group grievance shows a positive result. From the governance measures in our model, electoral process, government effectiveness, and state population relationship positively affect factionalized elites.
- At the same time, the rule of law, public service, and access to public services show negative relationships. Only the rule of law variable has statistical significance.
- From the income group decomposition of our analysis, for low and lower-middle-income countries, economic inequality shows a positive relationship but, to some higher degree, nearly double the coefficient value from the global panel.

Analysis II

- Gender inequality shows a positive relationship contrary to the global panel. More importantly, the difference among coefficients is very high (about ten and fourteen times greater than the global panel in low and lower-middle-income panels, respectively). This kind of situation is similar to the case of exclusion by socioeconomic status. The coefficients for low and lower-middle-income countries are 0.689 and 0.345 (nearly 17 times and nine times greater than the global panel).
- Group grievances have a much lower impact on factionalized elites in low and lower-middle-income countries (about one-tenth positively and about one-eighth negatively to the global panel, respectively).
- Equality of opportunity and laws supporting equality have the highest values for the low-income panel. Equality of opportunity has a positive 1.616 value in the low-income panel, contrary to a minimal negative value in the global panel. However, in the lower-middle-income groups, it takes a similar sign to the global panel, although to more than a sevenfold increase.
- Law supporting equality has a negative 1.491 in the low-income group, nearly five times the global panel. In contrast, the lower-middle-income group has a positive value and less than half of the absolute parameter value in the lower-middle-income panel.

Analysis III

- In stark contrast to global, low-income, and lower-middle-income countries, economic inequality shows a negative relationship with the dependent variable. Economic inequality has similar in magnitude for the high-income panel but opposite to the direction in the global panel, and upper middle income has more than double that of the global panel in absolute terms.
- Equality of opportunity shows a similar (negative) sign with the global panel, but the magnitude is about five-fold higher in the upper-middle and high-income countries. Gender equality has a similar negative sign in the global panel, but the coefficient is lower by 30% in the high-income panel. However, upper-middle-income countries show a coefficient of 0.175, about half and one-third of low and lower-middle-income countries.
- Law supporting equality shows signs (negative) to the global panel for high-income countries but has positive and similar values for lower middle and upper middle-income panels.
- Exclusion by socioeconomic status has a negative coefficient value, while all other country groups and global panels have a positive value. However, it has a value closer to zero in the high-income panel but has -0.301 in the upper-middle-income one.

Analysis IV

- Contrary to global, low, and lower-middle-income countries, economic inequality has negative estimates for all the groups by freedom status.
- The coefficient value for free countries is nearly half and two-thirds for not-free and partially free countries.
- Gender inequality is negatively valued for not-free countries, while partially free and free countries have positive values. Gender equality is significant for partially free countries, more than double that of free countries.
- Equality of opportunity's impact on the dependent variable is negative for both partially and not free countries. The estimate for the not-free panel is almost the same as that of the global model. The estimate for free countries is greater than the global panel's by four and half times in absolute terms.
- Comparing all the panels, equality of opportunity takes a positive estimate for only low-income and free countries, even though the estimate for low-income countries is nearly nineteen times greater.

Analysis V

- Like the global, low, and high-income countries' panel, the law supporting equality's effect is negative for all three panels by freedom status. The estimates for not free panel are double that of free countries, and partially free's is more than double that of not free countries.
- The exclusion by socioeconomic status estimates for global and not-free countries are positive and about the same. At the same time, partially free and free panels have negative estimates and are also about the same.
- Group grievance is positive for all three freedom panels but statistically significant for the free and partially free panels. The free panel's estimate is more than double that of not free countries. The partially free panel has a parameter value in the middle range of the other two estimates.
- Electoral process's impact on the dependent variable is negative in all three panels by freedom status but positive in the global and upper-middle-income panel. According to income status, the negative estimate of the parameter for the high-income panel lies between that of low and lower-middle-income countries. Free countries take the highest estimate in absolute terms for any of our panels from table 2.

Analysis VI

- Government effectiveness takes positive values for all panels except the lower-middle-income panel. The positive estimate by the freedom status panel for partially free is nearly ten times greater than that of not free countries and about two and half times greater than free's.
- Rule of law as one of the state institutions has a statistically significant and negative estimate for the global panel. It takes negative value for partially free and not free countries but is positive for free countries. The estimate for free and partially free flip their estimates in signs for one another.
- State population relation has positive estimates for all three panels by freedom status. It takes the highest estimate for not free panel, while partially free takes more than double that of a free panel.
- Public service and access to public service even though have similarities in their definition, they do not produce asymmetric estimates for three freedom status panels. Public service is negative for all the panels, while access to public service is negative for only free countries. Access to public service has the highest parameter estimate for any other estimates of the two variables for three panels.

Analysis VII

Table 4: 2-Step System-GMM Estimation Results for Selected Groups

	Free and High Income	Partially Free and Lower Middle Income
L1FactionalizedElite	0.771*** (0.0604)	0.725 (0.397)
EconInequality	0.0714 (0.0611)	0.0521 (0.257)
GenderEqual	-0.0662 (0.112)	0.178 (1.723)
EqualOpp	0.00689 (0.105)	-0.332 (1.299)
LawSupportEqual	0.0995 (0.123)	0.0373 (0.273)
ExcluSocioEcon	-0.596 (0.386)	0.658 (1.330)
GroupGrievance	0.0635 (0.0646)	0.317 (0.441)
ElectProcess	-0.155 (0.101)	0.0200 (0.126)
GovEffective	-0.0153 (0.0523)	-0.218 (0.842)
RuleofLaw	0.0662 (0.0422)	0.103 (0.150)
StatePopRel	0.137** (0.0458)	0.154 (0.290)
PubServ	0.0199 (0.0230)	0.203 (0.499)
AccesstoPubServ	0.390 (0.245)	-0.672 (1.523)
_cons	0.657 (1.210)	-2.182 (9.127)
N	404	248
hansen	10.62	7.710
hansen_df	55	122
hansenp	1.000	1
ar2	0.871	-0.139
ar2p	0.384	0.890

Standard errors in parentheses

Yearly fixed effects have been removed for this table.

Appropriate instrumental variables have been utilized

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Analysis VIII

Aside from these parameter estimates, two distinct groups of countries with enough sample size provide some more insights. The first group of countries in table 4 consists of 37 of our sample of free and high-income countries. The partially free and lower-middle-income group consists of 31 countries in our sample.

- Among our variables of interest, only the state population relationship significantly affects the dependent variable in the first group of countries.
- The economic inequality parameter for both groups are somewhat similar in magnitude, indicating that the impact of economic inequality on the fragmentation of state institutions is positive and similar for both groups.
- Gender equality has a negative sign for the free and high-income group while a positive sign for the partially free and lower-middle-income group.
- The equality of opportunity estimate is slightly over zero for the first panel. However, in absolute terms, it is negative for the second one and considerably higher (more than fifty times) than the first panel.
- Law supporting equality has a positive estimate for both panels, but the first one has nearly triple the estimate of the second panel.

Analysis IX

- Even though exclusion by socioeconomic status estimate for both groups lies close to one another in absolute terms, they differ by a positive sign for the second panel and a negative sign for the first panel.
- Group grievance is positive for both panels but is higher (about five times) in the second group than in the first one.
- In absolute terms, the electoral process has more than seven times the impact in the case of free and high-income countries, but the impact is negative. At the same time, it is positive for partially free and lower-middle-income countries.
- The impact of access to public service for the second panel is negative, while positive in the first panel and about 1.7 times in the first panel.
- The rule of law is positive for both panels. It is about double in the second panel than that of the first panel.
- The state population relationship is almost similar in both panels but statistically significant in the first.
- Public service is also positive for both panels but about ten times greater for the second panel.

Discussion I

- One-third of our sample belonging to low and lower-middle-income countries show a positive impact of economic inequality on the dependent variable. The positive impact is observed in the global panel too. The estimate is negative for all other panels in table 2.
- This result can be explained by the fact that in the deteriorating economic equality of society, wealth and power is accumulated in the hand of the elites. As the inequality rises, a single group or a single faction of elites may increasingly gather more wealth and power than the rest of the factions and come out as the leader.
- In support of our proposed explanation, examples can be drawn from historical events like the Banu Saud tribe ruling the current Kingdom of Saudi Arabia, the Alawite sect of the Kalbiyya tribe dominating politics of Syria (President Bashar Al-Assad hailing from this clan), Rajapaksa family in Sri Lanka and various powerful clans and tribes in world history.
- When a faction would come out as the most powerful, they also come out as a leader, so this division would inevitably rule others.

Discussion II

- Considering income groups decomposition, low and lower-middle-income groups show such strong estimates than upper-middle and high-income panels that they cancel out the estimates for the last two panels. The estimate takes negative values for all three freedom status panels, but the global estimate is positive.
- So, the political grouping in our analysis exhibits a negative relationship between economic inequality and the factionalization of elites, while the economic grouping exhibits mixed results.
- Gender equality is significant in our partially free sample. The global sample shows a negative estimate, while the high-income and not-free panel exhibit negative estimates. The fascinating insight from the result is the positive estimates for income groups.
- It is as if the not high-income society being more gender equal drives up the elite struggles or causes fragmented state institutions. We can be gravely mistaken if we do not consider the root of elite behavior in society. The elitist behavior and power dominance played by the elites are all founded on patriarchal roots.

Discussion III

- Elitism is a way of expressing patriarchal rule by men over society and women. So, women being more gender equal than before poses a power risk to the patriarchal elites in the society, who might consider women as new elites and thus drive up the internal struggle.
- The opposite case is observed in the high-income panel. The countries' economic nature can explain gender equality driving down state institution fragmentation.
- The high-income countries are mainly in the West and global north. They have developed economies characterized by high literacy, a more liberal outlook on lifestyle, and a different and more accommodating socioeconomic environment for gender equality. So, an initiative to ensure gender equality may lead to some degree of defragmentation or consolidation of state institutions.
- Equal opportunity and law supporting equal opportunities show negative estimates in the global sample. Both are negative in the high-income panel.

Discussion IV

- The estimate for equality of opportunity is very high in the lower-income panel compared to other panel estimates. However, the law supporting equality is negative but also very high in the same panel. Understandably, the law supporting would lead to less power being obtained by the elites. So, their tools of discrimination being seized from them may subsequently lead to reducing the struggle among them. Both variables take negative estimates in the high-income panel but show dissimilar signs in other income groups. In the freedom status panel, these two variables have negative signs in all the panels but the free panel's equality of opportunity.
- Exclusion by socioeconomic status is positive in the global panel. This indicator is positive in not-free, low, and lower-middle-income panels. As our study aims to study the fragmentation of state institutions, exclusion by socioeconomic status would drive up our dependent variable. These exclusions increase the fragmentation process in these panels. However, the parameter estimates take negative value for upper middle, high income, partially free, and free panels. These estimates again bring us to new questions.

Discussion V

- Group grievance, on the other hand, clearly shows a positive relationship with the dependent variable across panels except for lower-middle-income. The group grievance indicator used in this study is defined by the "divisions and schisms" between various social groups, especially from political and social attributes. So, it is well explained that group grievance would raise factionalization among elites, thus causing more fragmentation of state institutions. This explanation is confirmed by the statistically significant parameter estimate in partially free and free panels.
- From the governance indicators, public service and access to public service both have negative estimates for global, low, and lower-middle-income panels. As the masses access essential public services like health, education, and social security, they equip themselves and improve society. An educated population is more challenging to control than an uneducated one by the elites. So, it is reasonable to believe that access to public services and the presence of public services cause to reduce the monopoly power of the elites by empowering the mass. However, the two variables have positive parameters for the high-income panel while public service has a positive estimate for upper middle-income, additionally giving us again conflicting results.

Discussion VI

- According to freedom status, public service has negative estimates for all three panels in line with our estimate. Access to public service has a negative estimate for free countries.
- If the state population relation parameter had taken mostly negative estimates, we would be confident in our conclusion that an increase in the perceived legitimacy of the ruling class has a positive impact on the fragmentation of state institutions. This rise in perceived legitimacy seems to be positively linked with institutional fragmentation. As the perceived legitimacy of the ruling class by the general people rises, so rises the fragmentation of state institutions.
- One possible underlying explanation could be that rise in perceived legitimacy causes factions of elites to compete for significant seats. So, they compete more for the leading positions as the public has better faith in them, thus making their growth in influence more effortless.
- Rule of law is mostly negative across panels, significant in the global panel, but positive in low, lower-middle-income, and free panels. Since the rule of law ensures supremacy of law in every sector of public life, the negative estimates make sense that betterment in the rule of law would lead to a reduced fragmented institution. This analogy remains invalid for the positive estimates.

Discussion VII

- Government effectiveness, on the other hand, gives positive estimates. Generally, a betterment in governance implies inclusive governance. So it would be reasonable for us to expect these estimates across panels to take exclusively negative estimates but they provide conflicting results.
- Electoral process, as a political indicator in our study, takes rightfully negative estimates across all panels by freedom status. An improvement in the electoral process reduced the fragmentation of state institutions.
- Surprisingly, the global and the upper-middle-income panels have positive estimates.
- We assume that free and high income is preferred than not free and low income.
- In table 4, Gender equality, equality of opportunity, exclusion by socioeconomic status, the electoral process, and access to public services show opposite signs for the parameter estimates.
- These two panels have parameter estimates with similar signs for economic inequality, the law supporting equality, group grievance, government effectiveness, the rule of law, state population relations, and public services.

Discussion VIII

- If we consider the free and high-income panel at a steady state marked by political and economic prosperity and, by extension, more coherent state institutions than the partially free and lower-middle-income panels, this gives us a transitional pathway for the countries.
- For free and high-income countries, government action to ensure gender equality decreases institutional fragmentation, while this measure would increase fragmentation in the second panel. Equality of opportunity would reduce the fragmentation process in partially free and lower-middle-income countries, whereas it would rise slightly in free and high-income countries.
- A rise in exclusion by socioeconomic status would increase fragmentation in the partially free and lower-middle-income panels but very surprisingly reduce fragmentation in free and high-income panels.
- Betterment in the electoral process would reduce fragmentation in the free and high-income panels while increasing fragmentation in the partially free and lower-middle-income panels. Lastly, increased access to public service would lead to rising fragmentation in the free and high-income panels but reduce in the partially free and lower-middle-income panels.

Limitations

Despite our best efforts to analyze the given sample and our estimates' methodological and diagnostic soundness, our study has some limitations. Some of the limitations that may raise some issues with this study are,

- This study is limited to only a decade of data points, so the scope of testing any panel co-integration is minimal. As a result, we have forgone this option.
- We also discard any possibility of testing the stationarity of variables.
- Since the linear dynamic panel data analysis method provides much better estimates than static panel methods; the specification bias may remain even though the endogenous variable in our model captures it.
- The variables estimated are mostly non-significant across panels.
- The analysis is done under the assumption of causality without any test of causality in sample data (due to the low period in the sample).
- Parameter estimates with different signs need further exploration and study to establish the exact reasons for their behavior.

Conclusion

- From the panel data estimates, we cannot conclusively point strictly positive or negative impact on the fragmentation of state institutions by rising inequality or deteriorating governance. Thus, we fail to establish a generalized statement confirming their impact on the dependent variable.
- The inequality measures negatively impact high-income, not-free, and partially free countries. Inequality measures show positive estimates for low and lower-middle-income countries as well as two selected groups, free & high-income and partially free & lower-middle-income countries. These exhibit mixed results for global and free panels.
- On the other hand, governance measures positively impact upper middle income and the two selected groups of countries. These show mostly negative impacts in lower-middle-income countries. The estimates are mixed in the global panel, low and high income, free, not free, and partially free countries.
- Countries by income status exhibit mostly positive impacts of inequality measures on the fragmentation of state institutions, while countries by freedom status exhibit mostly negative impacts. Governance measures show mixed impacts among countries by income and freedom status.

Thank you so much

The data and code are available in the following link.

<https://github.com/azmeer54/Can-Rising-Inequality-and-State-of-Governance-Help-Explain-Fragmentation-of-State-Institutions>