



Subfactors of Rule of Law and Income Inequality: A Panel Data Approach in High Income Countries

Hukukun Üstünlüğü Alt Faktörleri ve Gelir Eşitsizliği: Yüksek Gelir Grubu Ülkelerde Panel Veri Yaklaşımı

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ABSTRACT

The relationship between the rule of law, income inequality and power has been widely discussed over the past century. The balance between the rule of law and income inequality is crucial to the fabric of society, yet this relationship has rarely been considered. This study aims to provide a quantitative analysis of how the rule of law is related to inequalities in per capita income and how this affects the welfare of a nation and of individuals. This will be achieved by integrating the field of economic law with political science. Focusing on wealthy countries, we use panel data methodology to analyse the impact of different sub-factors of the rule of law on income distribution. Using data from 31 high-income countries between 2012 and 2021, the study assesses the income distribution of the bottom 50% of the population and investigates whether government constraints, absence of corruption, open government, fundamental rights, civil justice and criminal justice are associated with the lowest income distribution. The results indicate that the enforcement of economic rules and the judicial system have a significant impact on income distribution. This underscores the need for well-structured legal frameworks that promote fair and inclusive economic outcomes.

Keywords: Rule of Law Subfactors, Income Inequality, High Income Countries

ÖZET

Hukukun üstünlüğü ve gelir eşitsizliği arasındaki ilişki, geçen yüzyılda geniş bir şekilde tartışılmıştır. Hukukun üstünlüğü ile gelir eşitsizliği arasındaki denge, toplumun yapısı için kritik öneme sahip olmasına rağmen, bu ilişki nadiren ele alınmıştır. Bu çalışma, hukukun üstünlüğünün kişi başına düşen gelirdeki eşitsizliklerle nasıl ilişkili olduğunu ve bunun bir ulusun ve bireylerin refahını nasıl etkilediğini nicel bir analizle ortaya koymayı amaçlamaktadır. Bu, ekonomik hukuk alanını siyaset bilimi ile birleştirerek gerçekleştirilecektir. Varlıklı ülkelere odaklanarak, panel veri metodolojisi kullanarak hukukun üstünlüğünün farklı alt faktörlerinin gelir dağılımı üzerindeki etkisini analiz ediyoruz. 2012 ve 2021 yılları arasında 31 yüksek gelirli ülkeden elde edilen veriler kullanılarak, nüfusun en alt yüzde 50'sinin gelir dağılımı değerlendirilmektedir ve hükümetin kısıtlamaları, yolsuzluğun olmaması, açık hükümet, temel haklar, sivil adalet ve ceza adaletinin en düşük gelir dağılımı ile ilişkili olup olmadığı araştırılmaktadır. Sonuçlar, ekonomik kuralların uygulanması ve yargı sisteminin gelir dağılımı üzerinde önemli bir etkiye sahip olduğunu göstermektedir. Bu, adil ve kapsayıcı ekonomik sonuçları teşvik eden iyi yapılandırılmış yasal çerçevelere olan ihtiyacı vurgulamaktadır.

Anahtar Kelimeler: Hukukun Üstünlüğü Alt Faktörleri, Gelir Eşitsizliği, Yüksek Gelir Grubu Ülkeler

ARTICLE INFOS

Article History

Received: May 07, 2024

Accepted: June 23, 2024

Article Type

Research Article

MAKALE BİLGİSİ

Makale Geçmişi

Başvuru Tarihi: 07 Mayıs 2024

Kabul Tarihi: 23 Haziran 2024

Makale Türü

Araştırma Makalesi

1. Introduction

Over the past century, discussions on the relationship between the rule of law and income inequality have expanded significantly. Despite the major importance of the rule of law and income inequality for society, the topic has not been fully examined. This research integrates economic law and political science to understand how income inequality and the rule of law interact with the welfare of nations and individuals. The mutual impact of income distribution and various aspects of the rule of law can contribute to the context of existing literature. The presence of accurate data and effective institutions not only defines a viable political area but also

adequately affects the legal and political determinants of certain property rights and distribution rights by the government. Political preferences involve the creation of a policy area, institutional decisions about policy-makers' organizing activities, and the broader decisions about which preferences are actually considered. How can law affect the economic sphere through the legal framework? Law, in a broader sense, is a system of norms accompanied by coercive sanctions created and implemented by state organization. The state's coercive attitudes toward specific issues, formed through orders, prohibitions, or authorizations, constitute the essence of positive legal regulation. Therefore, understanding governance requires tracing the historical roots and development process of state and

societal policies. Analyzing economic data obtained from individuals' voluntary or coercive behaviors in participation provides insight into political behaviors. The theoretical analysis of political behaviors and outcomes arising from effective governance that considers law and economics serves the efficient design of incentives and resource allocation. Data represents the embodied form of abstract relationships regarding scientific dialogue among individuals. Hence, the desired use of collected data encompasses the range required to maintain cohesion. Accurate and effective data production provides individuals with correct behavioral guidance. Behavioral guidance within a structured legal and political system forms the concrete foundation of authority. Modern legal systems, especially through legislation, and modern political systems can be represented as extreme authorities in establishing and maintaining legal concepts. We aim to analyze whether the rule of law, arising from the state's enforcement mechanisms and conflict resolution systems, affects income inequality through legal and economic theories and discuss the results of our theoretical analysis. The purpose and scope of the study can be examined under two headings. The first concerns the concept and subject of the rule of law. According to Austin (1832), "law is an order," and he claimed that law emerged as a result of the ethical evolution of the people, developed voluntarily, and the final word in legislation belongs to the sovereign. Following Austin's ideas closely, Kelsen (1967) defined law as a norm or order with enforcement power applied as a result of legislative action by an authoritative organization.

2. Theoretical Background

In the context of constitutional law, many legal scholars have condensed the requirements of the rule of law into a set of principles that must be met by any functional governance system. These definitions range from Raz (1979) theory, which defines the rule of law as an 'independent political value,' to Dicey (1959) definition, which ensures 'every citizen has certain legal rights.' According to Freeman (2008) theoretical approach, the requirements of the rule of law concept are well established and accepted as a criterion by which the situation in all states can be measured. The concept of the rule of law is an old and highly debated notion in philosophy, law, and political theory. Among classical Greek philosophers, Plato (2000) and Aristotle (1998) recognized that protecting individual citizens from arbitrary government actions was crucial for a society's welfare and prosperity. There is no generally accepted concept of the rule of law that can be used to analyze the relationship between the rule of law and economic development or growth. This is simply a fact that the concept of the rule of law has been redefined in recent years in public and academic debates. In classical economic writings, authors like Mises (1949), Menger (1871) ve Hayek (1944) strongly emphasized the importance of the rule of law in their early works. Public choice theory, first developed in the late 1960s, also argues that the rule of law is of exceptional importance for welfare-enhancing government actions, as even a well-intentioned philosopher-king could expropriate a large part of his citizens without proper checks and balances. Many legal and economic theorists have recognized this situation and developed comprehensive theories about the rule of law. A specific economic theory has been developed that presents the rule of law as an integral part of economic science, establishing an economic environment that promotes investment as a fundamental element (Mueller, 1979). In this area, three economic traditions can be identified. A distinction is made between short-term and long-term rule of law. In the short term, the rule of law means a series of legal mechanisms that prevent the arbitrary use of government power. In the long term, the main

feature is legal certainty. People in a state of uncertainty have a constant belief that their situation aligns with the predictable application of laws when conflicts are resolved (Buchanan and Tullock, 1962). The World Bank defines the rule of law through six dimensions: corruption, judicial coordination, protection of property rights, contract enforcement, dispute resolution, and providing alternatives to dispute resolution (World Bank, 2017). The World Justice Project, a project that measures the rule of law as an index and publishes it regularly, has accepted the rule of law as a multidimensional concept consisting of applied laws, orders, and human rights laws. The rules are clear, society is fair, people can easily access justice, and corruption is under control. The rule of law implies that laws are fairly created and applied, and everyone in society is treated equally (Botero and Ponce, 2010). Many classifications have been proposed in the literature, but they generally overlap under a similar concept. The purpose of this section is to show that the concept of the rule of law is embedded in socio-economic theories of unfair income distribution, particularly in terms of labor and capital shares. The first step toward this goal is to provide a summary of contemporary socio-economic theoretical and empirical findings on the sources of income inequality. Income inequality is often the subject of political desires and is associated with issues related to distributional justice and economic efficiency. Significant progress has been made in economics to better understand the causes of income inequality, and substantial policy efforts have been made to mitigate these economic differences. These efforts have accepted the view that some degree of inequality is necessary to achieve valuable social goals, as it provides incentives for work and productivity. However, excessive income inequality is considered unjust. The basic idea is that more legal reforms providing more justice will be evaluated by the same government under similar conditions, producing greater target satisfaction in cases where justice comes before increased welfare. Such societies are more stable. When we consider basic justice as directly rewarding marginal productive contribution, they are more productive. They may involve a greater association of inputs in favor of labor because they do not abuse or allow excessive regulation of fair exchanges. Therefore, labor benefits from a greater percentage of each additional output. The theory of value of labor is valid. A natural hypothesis is that fairer protection of citizens' wealth and income through laws should result in a lower distribution of wealth distribution (Stiglitz, 2012). Institutional issues can both help and harm the wealthy under equal protection assumptions. In poor countries, the wealthy can gain through their properties and increase infrastructure spending and general regulations that will maximize economic growth. However, wealthy people do not need incentives to improve property rights and do not demand security from their rulers. Therefore, the rule of law cannot survive by itself. However, in democratic countries, they encounter situations with a reduced inequality gap under the rule of law (Acemoğlu and Robinson, 2012).

The principle of the rule of law states that state actions must comply with a set of predetermined principles in essence and procedures to be legitimately accepted. This situation provides an incentive for those outside to seek advantageous positions through the state against politicians who seek to capture wealth through the state. Institutions and the political system play a key role in maintaining a well-functioning socio-economic environment that ensures the realization of individuals' basic interests, guaranteeing their rights and freedoms. Individual freedom is the most cost-effective and significant phenomenon for states, limiting power. People are protected from state violence, and policies are neither

discriminatory nor arbitrary. Explicit constitutional constraints discipline politicians' behavior, limit their power, and restrict their ability to promote narrow group interests (Hayek, 1944). Two significant thinkers in law and economics, Cooter and Ulen (2012) and Becker (1971), have examined the issue of income inequality. Cooter and Ulen (2012) discussed the legitimacy of discrimination in the labor market. In the public economics approach, without the concept of the rule of law, wage discrimination practices based on race did not provide any positive welfare effects in promoting harmony among employees of the same company. Nobel laureate Becker (1971) argued that those who benefit from the welfare of states with discriminatory laws are only the wealthy. The model shows that the operation of the rule of law and other related legal institutions significantly affects the level of income inequality. Our focus is on how the quality of legal institutions, influenced by the operation of the rule of law, affects the extent of income inequality. Our primary focus is on examining the rule of law within the context of high-income countries based on the sub-factors under the WJP (2023). We provide an empirical background on the sub-factors for estimating the relationship between our main conceptual variables.

3. Literature Review

Empirical studies examining the relationship between the rule of law and income distribution are quite limited. The rule of law has been included as an explanatory variable in many studies, which has hindered the focus of studies on the relationship between the rule of law and income distribution. In this sense, the study fills a significant gap in the literature by empirically examining the relationship between the rule of law and income distribution in developed countries. Looking at the studies conducted, Haggard and Tiede (2011) examined the relationship between the rule of law and economic development in developing countries in the *World Development* journal. They point out the complex relationship between the rule of law and economic development in their studies. The concept of legal governance used in their study includes various components such as personal security, property rights, supervision of government activities, and prevention of corruption. Their findings suggest that these elements are not as strongly related as thought, and many developing countries exhibit different rule of law syndromes. These syndromes manifest in different levels of violence, corruption, and organizational efficiency in developing countries. Haggard and Tiede (2011) highlight the importance of comprehensive institutional and legal reform processes, contrary to the assumption that property rights are the main driver of economic development. They argue that controlling corruption has a significant impact on economic performance, at least as much as property rights, if not more, in certain countries. Establishing basic law and order presents significant challenges in many developing countries and is seen as one of the main barriers to economic development tools such as growth, income distribution, and economic policy. While the study does not take income distribution as a primary indicator, it includes it as a factor specific to developing countries. Ranasinghe and Restuccia (2018) focus on the economic inequality created by the impact of various institutions stemming from financial barriers and legal pressures. They emphasize that weak economic growth and the absence of good rule of law increase income inequality, further hindering economic development. The study highlights the importance of developing financial markets, borrowing funds, and enforcing legal rules to prevent crime, especially for the operation of companies in developing countries. Inconsistencies in these areas lead to significant differences in production and total income. When production in high-income

countries occurs below potential production levels, individual total production in poor countries drops significantly. This situation paves the way for widespread crime and resource scarcity. Lack of access to financial instruments is a problem for over 40% of businesses in Sub-Saharan Africa. This situation affects smaller and less wealthy businesses more and further increases income inequality. Any relationship between financial distress and crime reinforces negative feedback for both, creating a downward spiral that hinders economic growth and justice. Findings suggest that increasing access to financial resources and the rate of legal provisions enforcement significantly reduces income inequality, specifically in India. Quantitative data shows that improving institutional quality in any country can double production and lead to a significant reduction in wealth inequality. The study reveals that applicable financial institutions and appropriate legal frameworks promote fair economic growth.

Hongdao et al. (2018) present a study examining the moderator role of the rule of law in controlling corruption and economic development in China. Researchers find empirical evidence showing that corruption is a significant obstacle to economic development by reducing investment and human capital. They also argue that corruption hinders economic growth by increasing income inequalities and undermining sustainable development. Their empirical analysis confirms the critical role of the rule of law in reducing corruption and promoting economic growth. These findings show that economic development is not limited to combating corruption but also requires the establishment of a strong rule of law regime. This is shown to be mandatory for achieving sustainable economic growth. The study emphasizes the critical importance of developing the rule of law and combating corruption in transition economies like China for building sustainable economic growth and an equitable society. These findings provide significant contributions to the complex relationship between the rule of law and combating corruption and offer important policy recommendations for development strategies in transition economies. Lustgarten (1988), in his study, examines the concept of formal equality and its complexities and impacts on real-world inequalities. Lustgarten argues that ignoring the wide differences in people's economic and social conditions results in maintaining and possibly intensifying this inequality. He notes that the origins of this concept are rooted in classical philosophy and particularly in Marxist critiques of capitalist systems. He argues that the criticisms stem from the idea that social inequalities are not natural but socially constructed, thus requiring structural changes. Lustgarten explores the limits of more traditional liberal approaches that, alongside neoliberal systems, typically focus on negative civil liberties and a rule of law isolated from urgent needs. Lustgarten argues that a legal system that can address economic inequality is one that recognizes and counters the real-world challenges created by asymmetric power and resources. He argues that a socialist legal system would prioritize the protection of the rights of disadvantaged and vulnerable individuals, and that legal institutions would actively work to correct existing injustices. Accepting such arguments would require a complex combination of ideas demanding stronger procedural protections in law for people, ensuring that access to justice is not solely dependent on one's financial situation, including the economically and socially weak or vulnerable. Lustgarten's work highlights the complex relationship between equality and law. The key to building an egalitarian society lies not only in formal equality but also in a legal system that addresses material and social inequalities. Dimick (2016) presents a detailed examination of the widespread view that income inequality should be regulated solely

through taxation. This review is based on the double distortion thesis by Kaplow and Shavell (1994). This thesis argues that legal regulations for redistributing income through the tax system contribute to existing economic distortions, negatively affecting the economy's efficiency and the welfare of poor people. However, Dimick opposes this view, arguing that legal regulations can make economic activities more efficient and less unequal. Using examples from various markets, Dimick shows that legal intervention can provide both redistribution and efficiency simultaneously. He argues that legal sanctions can be more effective than taxes in situations where national concerns about income distribution and tax reform are significantly high. In conclusion, he emphasizes that taxation alone is not sufficient to effectively reduce economic inequality and that a combination of legal regulations and tax policies is necessary.

This view suggests adopting a more holistic and integrated approach to economic inequality.

4. Methodology

After reviewing the relatively scarce literature, the difference presented by this study lies in analyzing the relationship between the rule of law and income inequality using a previously unused dataset over a relatively recent time period and applying panel data techniques. The relationship between the rule of law and income distribution is analyzed in this study through 31 high-income countries. Country groups are based on the country classification by income groups published by the World Bank by Fantom and Serajuddin (2016).

Table 1

High Income Countries List

Australia	Norway	Poland
France	Germany	Portugal
Austria	Greece	Singapore
Belgium	Hong Kong	Slovenia
Canada	Hungary	Spain
Chile	Italy	Sweden
Croatia	Japan	United Arab Emirates
Czech Republic	Republic of Korea	United Kingdom
Denmark	Netherlands	United States
Estonia	New Zealand	

The countries selected in the study were chosen from those providing access to data on the variables of the rule of law and income distribution for the relevant time period. The study examines data from 2012 to 2021. The most significant reason for choosing 2012 as the starting year is the number of countries and the methodological change in the rule of law dataset before 2012 (WJP, 2023). The upper limit of the time range is 2021 due to the final data for all countries in the income distribution dataset being limited to 2021 (Chancel et al., 2021; WID, 2022). The study uses panel data techniques. Panel data analysis has more effective and advantageous aspects in controlling heterogeneity related to individuals, countries, or firms. Time series and cross-sectional analyses are not as successful in controlling heterogeneity as panel data analysis. Less multicollinearity, more degrees of freedom, and effectiveness make panel data more advantageous (Baltagi, 2005). Considering these criteria, panel data techniques are applied to the model.

In the analysis, time effect and unit effect were first tested, and the unit effect statistic value of the panel data group was found to be significant. First, the time effect was defined and tested with the fixed effects test, random effects test, and Breusch and Pagan (1979)'s test for heteroscedastic disturbances in a linear regression model, and some results were obtained. The same tests were conducted by enabling the unit effect, and again, some results were obtained. When examining the obtained results, the tests where the unit effect was significant were found to be strongly significant.

Related Model:

$$\text{bottom50}_{ijt} = \beta_0 + \beta_1 \text{Factor1}_{it} + \beta_2 \text{Factor2}_{it} + \beta_3 \text{Factor3}_{it} + \beta_3 \text{Factor4}_{it} + \beta_3 \text{Factor5}_{it} + \beta_3 \text{Factor6}_{it} + \beta_3 \text{Factor7}_{it} + \beta_3 \text{Factor8}_{it} + \mu_i$$

Looking at the variables, the bottom50 variable is used as the dependent variable to measure income distribution. This variable represents the bottom 50% of the income distribution by Chancel et

al. (2021). This segment is the population segment receiving the least portion of the total income. The sub-factors constituting the rule of law are included in the model as independent variables. Factor 1: Constraints on Government Powers. This factor is based on the legislative, judicial, and independent audit and review bodies' control of government power, non-governmental oversight such as a free press and civil society, lawful power transitions, and the punishment of government illegal actions. Factor 2: Absence of Corruption. This factor is based on the absence of corruption in the executive, judiciary, police, and legislative bodies. Factor 3: Open Government. This factor considers published laws and government data, the right to information, civil participation, and complaint mechanisms. Factor 4: Fundamental Rights. This factor includes equal treatment and the absence of discrimination, the right to life and security, due process, and defendant rights, freedom of thought and expression, freedom of belief and religion, the absence of arbitrary interference in private life, freedom of assembly and association, and labor rights. Factor 5: Order and Security. This factor measures the absence of crime, the absence of internal conflict, and the non-acceptance of violence as a socially acceptable tool in addressing personal grievances. Factor 6: Regulatory Enforcement. This factor considers the effective enforcement of regulations, the absence of improper influence in regulatory enforcement, the absence of unreasonable delays, due process in administrative procedures, and respect for due process in civil justice. Factor 7: Civil Justice. This factor includes accessible and affordable civil justice, the absence of discrimination, freedom from corruption, the absence of improper government influence, the absence of unreasonable delays, effective enforcement of court decisions, and effective alternative dispute resolution mechanisms. Factor 8: Criminal Justice. This factor includes an effective criminal investigation system, a timely and effective criminal adjudication

system, an effective correctional system in reducing criminal behavior, the impartiality of the criminal justice system, the absence of corruption in the criminal justice system, the absence of improper government influence, and respect for due process and defendant rights (Botero and Ponce, 2010).

5. Analysis and Findings

The F Test, LM Test, LR Test, and Score Test were applied to test the presence of the time effect in the model. According to the results, the null hypothesis could not be rejected. This finding shows that there is no time effect in the model. The results indicate that the analyzed variables do not change over time, and the model does not have a time effect. This means that the data should be evaluated independently of the time factor, and the time effects do not need to be considered in the model.

Table 2
Time Effect Test Results

Test	Statistic Value	P-Value
F Test	0.40	0.9347*
LM Test	0.00	1.0000*
LR Test	0.00	1.0000*
Score Test	0.00	1.0000*

Note: * Indicates statistical significance at the 1% level.

Table 3
Unit Effect Test Results

Test	Statistic Value	P-Value
F Test	215.70	0.0000*
LM Test	935.03	0.0000*
LR Test	775.69	0.0000*
Score Test	2.9e+06	0.0000*

Note: * Indicates statistical significance at the 1% level.

Table 5
Basic Assumptions Test Results

Assumptions	Test Type	Statistic	P-Value
Heteroscedasticity	Modified Wald	3048.05	0.0000*
	Durbin-Watson	0.704673	0.0000*
Autocorrelation	Baltagi-Wu LBI	1.028418	0.0000*
	Friedman	12.113	0.9985*
	Frees	2.751	-
Frees Q Distribution Critical Values			
Inter-Unit Correlation	alpha= 0.10		0.2559
	alpha= 0.05		0.3429
	alpha= 0.01		0.5198

Note: * Indicates statistical significance at the 1% level.

Heteroscedasticity tests whether an error with changing variance is present and determines whether the model has homoscedasticity. The Modified Wald test developed by Mizan and Maxwell (1997) was used to test heteroscedasticity in this study. The test statistic value is 3048.05, and the probability value is statistically significant at the 1% level. This result shows that heteroscedasticity is present in the model, meaning the variance of the error terms is not constant,

Various test results conducted to test the presence of unit effects indicate that the unit effect is significant in the model. The F Test found a statistical value of 215.70 and a probability value of $p:0.0000$, making it significant at the 1% level. The LM Test found a statistical value of 935.03 and a probability value of $p:0.0000$, making it significant at the 1% level. The LR Test found a statistical value of 775.69 and a probability value of $p:0.0000$, supporting the presence of unit effects. The Score Test found a statistical value of $2.9e+06$ and a probability value of $p:0.0000$, indicating the significance of unit effects. These results indicate that considering unit effects in the analyzed data is important, and the model should include unit effects for accurate analysis. The significance of unit effects in the model suggests that each observation can differ independently from the independent variables, and considering these differences is critical for the accuracy of the analysis. Therefore, the Hausman (1978) Test will be applied to determine whether the fixed or random effects estimators are more appropriate for the use of unit effects. Hausman (1978) Test will be applied to determine whether the fixed or random effects estimators are more appropriate for the use of unit effects.

Table 4
Hausmann Test Results

H Test Statistic	P-Value
77.22	0.0000*

Note: * Indicates statistical significance at the 1% level.

The results of the Hausman test show that there is a significant difference between the fixed effects model and the random effects model. The Hausman test statistic is found to be 77.22, and the probability value is $p:00000$, which is statistically significant at the 1% level. This result indicates that the fixed effects model should be preferred over the random effects model. Preferring the fixed effects model indicates that the model better captures unit-specific fixed effects and these effects should not be ignored. Therefore, using the fixed effects model in the analyses will ensure more accurate and reliable results.

which can affect the reliability of the model's estimates. Autocorrelation tests whether the error terms are correlated with themselves. The Durbin-Watson Test and Baltagi-Wu LBI Test developed by Badi H Baltagi and Wu (1999) ve Bhargava, Franzini, and Narendranathan (1982) were used in this study. The Durbin-Watson test statistic value is 0.704673, and the Baltagi-Wu LBI test statistic value is 1.028418. Values below 2 indicate the presence of

significant autocorrelation. This confirms the presence of autocorrelation. The presence of autocorrelation suggests that the model's estimates may be misleading and this issue needs to be addressed. Inter-unit correlation tests whether there is correlation among units in the panel data set. The Friedman (1937) ve Frees (1995) Frees tests were used in this study. The Friedman test statistic value is 12.113, and the probability value is 0.9985, making it not statistically significant at the 1% level. This shows no correlation among units. The Frees test, with a statistic value of 2.751, evaluates inter-unit correlation. According to the Q distribution critical values used in the Frees test, alpha: 0.10 is 0.2559, alpha: 0.05 is 0.3429, and alpha: 0.01 is 0.5198. The test statistic is significant at the 95%

level (2.751 > 0.3429), indicating the presence of significant inter-unit correlation in the model.

To address the issues of deviations from assumptions such as heteroscedasticity, autocorrelation, and inter-unit correlation in the model, and to increase the reliability of the model's estimates, the test developed by Driscoll and Kraay (1998) will be applied. This test is widely used in panel data analyses and aims to correct deviations from assumptions, thereby enhancing the reliability of estimates. Applying the Driscoll and Kraay test will strengthen the model's robustness and ensure more reliable and valid results. This test will address existing problems like heteroscedasticity and autocorrelation in the model.

Table 6
Driscoll-Kraay Test Results

Variable	Coefficient	Standard Error	P> t
Top10	-	-	-
WJP Rule of Law Index: Overall Score	0	-	-
Factor 1: Constraints on Government Powers	-0.0004273	.0128403	0.974
Factor 2: Absence of Corruption	.0195649	.0127078	0.158
Factor 3: Open Government	-0.0075643	.0097218	0.456
Factor 4: Fundamental Rights	-0.0042551	.0141784	0.771
Factor 5: Order and Security	-0.0154801	.0089579	0.118
Factor 6: Regulatory Enforcement	.0489738	.0207643	0.043**
Factor 7: Civil Justice	-0.0102879	.0152427	0.517
Factor 8: Criminal Justice	-0.0285355	.0145878	0.082**
Constant	.1894653	.012994	0.000*
F Statistic (P-Value)	113.82 (0.000)		
R ²	0.0654		

Note: * Indicates statistical significance at the 1% level.
Note: ** Indicates statistical significance at the 5% level.
Note: *** Indicates statistical significance at the 10% level.

The model's F statistic is found to be 113.82, and the probability value is 0.0000. This shows that the model is statistically significant overall. The R² of the model is 0.0654, indicating that the model explains 6.54% of the variance in the dependent variable. This result shows that the explanatory power of the variables used in the model is limited, and the model has limited success in predicting the dependent variable. The constant coefficient of the model is 0.1894653, and the standard error is 0.012994. The probability value is 0.000, making the constant coefficient statistically significant at the 1% level. This result shows that the basic level of the model is statistically significant and that the basic level of the dependent variable is distinct.

Factor 1: Constraints on Government Powers. This variable represents measures to limit the government's powers. The coefficient value is -0.0004273, and the standard error is 0.0128403. The probability value is 0.974, indicating that this variable is not statistically significant. Factor 2: Absence of Corruption. The coefficient of this variable is 0.0195649, and the standard error is 0.0127078. The probability value is 0.158, indicating that this variable does not have a statistically significant impact on the dependent variable. The reduction or increase in corruption does not have a significant impact on the dependent variable. Factor 3: Open Government. The coefficient of this variable is -0.0075643, and the standard error is 0.0097218. The probability value is 0.456,

indicating that this variable does not have a statistically significant impact on the dependent variable. The impact of open government practices on the dependent variable is not significant. Factor 4: Fundamental Rights. The coefficient of this variable is -0.0042551, and the standard error is 0.0141784. The probability value is 0.771, indicating that this variable does not have a statistically significant impact on the dependent variable. The increase or decrease in the protection of fundamental rights does not have a significant impact on the dependent variable. Factor 5: Order and Security. This variable represents order and security. The coefficient value is -0.0154801, and the standard error is 0.0089579. The probability value is 0.118, indicating that this variable does not have a statistically significant impact on the dependent variable. Changes in the level of order and security do not significantly affect the dependent variable. Factor 6: Regulatory Enforcement. This variable represents the effectiveness of regulatory enforcement. The coefficient is 0.0489738, and the standard error is 0.0207643. The probability value is 0.043, making this variable statistically significant at the 5% level. This result shows that the increase in the effectiveness of regulatory enforcement has a positive impact on the dependent variable. Making regulatory enforcement more effective contributes to the increase of the dependent variable. Factor 7: Civil Justice. This variable represents civil justice. The coefficient is -0.0102879, and the standard error is 0.0152427. The probability

value is 0.517, indicating that this variable does not have a statistically significant impact on the dependent variable. Changes in the level of civil justice do not significantly affect the dependent variable. Factor 8: Criminal Justice. This variable represents criminal justice. The coefficient is -0.0285355, and the standard error is 0.0145878. The probability value is 0.082, making this variable statistically significant at the 10% level. This result shows that the increase in the effectiveness of criminal justice has a negative impact on the dependent variable. Making criminal justice more effective leads to a decrease in the dependent variable.

6. Conclusion

The study provides empirical data showing the significant impact of the sub-factors of the rule of law on income inequality in high-income countries. The study shows that the sub-factors of the rule of law, including criminal justice and regulatory enforcement, have a significant impact on income distribution. More specifically, effectively implemented regulations are associated with more equitable income distribution, while strong criminal justice systems help reduce income inequality. These results emphasize the need to develop legal and regulatory institutions that promote fair economic development. More research is needed to examine the continuously changing relationships between legal systems and economic outcomes and to identify policy measures that help reduce income inequalities. The study's findings strengthen broader discussions about the impact of governance on economic progress and highlight the vital importance of the rule of law for social and economic justice and achieving fairness in income distribution.

References

- Acemoğlu, D., and Robinson, J. A. (2012). *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Publishing Group.
- Aristotle. (1998). *Politics* (C. D. C. Reeve, Trans.). Indianapolis: Hackett Publishing Company.
- Austin, J. (1832). *The Province of Jurisprudence Determined*. London: John Murray.
- Baltagi, B. H. (2005). *Econometric Analyses of Panel Data*. Chichester: John Wiley.
- Baltagi, B. H., and Wu, P. X. (1999). Unequally Spaced Panel Data Regressions with AR (1) Disturbances. *Econometric theory*, 15(6): 814-823.
- Becker, G. S. (1971). *The Economics of Discrimination* (2nd ed.). Chicago: University of Chicago Press.
- Bhargava, A., Franzini, L., and Narendranathan, W. (1982). Serial Correlation and the Fixed Effects Model. *The Review of Economic Studies*, 49(4): 533-549.
- Botero, J. C., and Ponce, A. (2010). Measuring the Rule of Law. Retrieved from Breusch, T. S., and Pagan, A. R. (1979). A Simple Test for Heteroscedasticity and Random Coefficient Variation. *Econometrica*, 47(5): 1287-1294.
- Buchanan, J. M., and Tullock, G. (1962). *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor: University of Michigan Press.
- Chancel, L., Piketty, T., Saez, E., and Zucman, G. (2021). *World Inequality Report. 2022*. Retrieved from Cooter, R. D., and Ulen, T. (2012). *Law and Economics* (6th ed.). Boston, MA: Addison-Wesley.
- Dacey, A. V. (1959). *Introduction to the Study of the Law of the Constitution* (10th ed.). London: Macmillan.
- Dimick, M. (2016). Should the Law Do Anything About Economic Inequality? *Cornell Journal of Law and Public Policy*, 26(1): 1-66.
- Driscoll, J. C., and Kraay, A. C. (1998). Consistent Covariance Matrix Estimation with Spatially Dependent Panel Data. *The Review of Economics and Statistics*, 80(4), 549-560. doi:10.1162/003465398557825
- Fantom, N. J., and Serajuddin, U. (2016). *The World Bank's Classification of Countries by Income*. Retrieved from
- Freeman, M. D. A. (2008). *Lloyd's Introduction to Jurisprudence* (8th ed.). London: Sweet & Maxwell.
- Frees, E. W. (1995). Assessing Cross-Sectional Correlation in Panel Data. *Journal of Econometrics*, 69: 393-414.
- Friedman, M. (1937). The Use of Ranks to Avoid the Assumption of Normality Implicit in the Analysis of Variance. *Journal of the American Statistical Association*, 32: 675-701.
- Haggard, S., and Tiede, L. (2011). The Rule of Law and Economic Growth: Where are We? *World Development*, 39(5): 673-685. doi:https://doi.org/10.1016/j.worlddev.2010.10.007
- Hausman, J. A. (1978). Specification Tests in Econometrics. *Econometrica: Journal of the Econometric Society*, 1251-1271.
- Hayek, F. A. (1944). *The Road to Serfdom*. Chicago: University of Chicago Press.
- Hongdao, Q., Mumtaz, A., Mukhtar, H., Rahman Saleem, H. A., and Azam, S. (2018). Corruption Prevention and Economic Growth: Mediating Effect of Rule and Law. *International Journal of Social Science Studies*, 6(2):128-143. doi:https://doi.org/10.11114/ijss.v6i2.2946
- Kaplow, L., and Shavell, S. (1994). Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income. *The Journal of Legal Studies*, 23(2): 667-681.
- Kelsen, H. (1967). *Pure Theory of Law* (M. Knight, Trans.). Berkeley: University of California Press.
- Lustgarten, L. (1988). Socialism and the Rule of Law. *Journal of Law and Society*, 15(1): 25-41. doi:https://doi.org/10.2307/1410118
- Menger, C. (1871). *Principles of Economics* (J. D. a. B. F. Hoselitz, Trans.). Glencoe, IL: Free Press.
- Mises, L. v. (1949). *Human Action: A Treatise on Economics*. New Haven: Yale University Press.
- Mizan, R., and Maxwell, L. K. (1997). Modified Wald Test for Groupwise Heteroskedasticity. *Economics Letters*, 56(1): 61-68.
- Mueller, D. C. (1979). *Public Choice*. Cambridge: Cambridge University Press.
- Plato. (2000). *The Republic* (T. Griffith, Trans.). Cambridge: Cambridge University Press.
- Ranasinghe, A., and Restuccia, D. (2018). Financial Frictions and the Rule of Law. *Journal of Development Economics*, 134: 248-271. doi:https://doi.org/10.1016/j.jdeveco.2018.05.009
- Raz, J. (1979). *The Authority of Law: Essays on Law and Morality*. Oxford: Oxford University Press.
- Stiglitz, J. E. (2012). *The Price of Inequality: How Today's Divided Society Endangers Our Future*. New York: W.W. Norton & Company.
- WID. (2022). *World Inequality Database*. Retrieved from: https://wid.world/data/
- WJP. (2023). *Behind the Numbers*. In *WJP Rule of Law Index* (pp. 181-189): World Justice Project.
- World Bank, R. (2017). *World Development Report 2017: Governance and the Law*. Retrieved from Washington, DC: