## Economic Growth, Income Inequality, and the Rule of Law

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### Abstract

We consider 134 countries during the period 1984-2019 and find a significant positive relation between Rule of Law (law and order provided by police and courts, respect for private property rights) and GDP per capita. Notably, this positive relation is getting stronger with time. This positive relation is robust to alternative measurements of Rule of Law. Additionally, we document that lesser corruption in the political system is correlated with higher levels of GDP per capita. Besides the size of the national pie, which is measured by GDP, senior policy makers and the media across the globe are increasingly concerned about how this pie is sliced, that is, about income inequality. We find that countries with greater adherence to Rule of Law are characterized by *less* income inequality. These results highlight the importance of Rule of Law in generating economic growth *and* decreasing income inequality.

## 1. Introduction

Economic growth has been a dominant concern for senior global leaders and policy makers for the past century; understandably, the determinants of economic growth has preoccupied economists for the past several decades. Figure 1, based on the Maddison Project Database (2018), illustrates the share of world GDP by select countries and regions for the period, 1820-2008. Today, U.S. has the highest percentage of the world GDP compared to other countries. In 1820, the situation was quite different; China accounted for a third of the world GDP and the U.S. barely registered. Why such different economic growth rates for the U.S. and China during the past two centuries? Figure 2 illustrates the GDP per capita in 2010 dollars for the U.S., Argentina, and Australia for the period 1900-2008. Why such different economic growth rates for U.S. and Argentina for the past century?<sup>1</sup>

Economists have studied three broad categories of determinants of economic growth: geography, history (including culture and religion), and economic institutions. In an influential paper, Rodrik, Subramanian and Trebbi (2004) focus on the role of economic institutions on economic growth in 137 countries in 1995. They measure economic institutions as "Rule of Law" compiled by Kaufman et al (2002) for the World Bank; "The Rule of Law reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence." Rodrik et al consider Rule of Law, geography (distance from the equator),

<sup>&</sup>lt;sup>1</sup> One obvious difference between these two countries is based on geography: U.S. is in the northern hemisphere, Argentina is in the southern hemisphere. However, Australia has also enjoyed significantly higher economic growth rates than Argentina in the past century; yet, both countries are in the southern hemisphere.

openness to trade, and colonial history as potential determinants of economic growth. They find that *only* Rule of Law explains economic growth. We consider 134 countries during the period 1984-2019 and find a significant positive relation between Rule of Law and GDP per capita. Notably, this positive relation is getting stronger with time. We consider an alternative measure of Rule of Law developed by a commercial vendor, the PRS Group's International Country Risk Guide; the earlier positive relation between Rule of Law and GDP per capita is robust to this alternative measurement. Additionally, we document that lesser corruption in the political system is correlated with higher levels of GDP per capita.

Besides the size of the national pie, which is measured by GDP, senior policy makers and the media across the globe are increasingly concerned about how this pie is sliced, that is, about income inequality. We find that countries with greater adherence to Rule of Law are characterized by *less* income inequality. We find this to be a very robust relation – robust to alternative measures of income inequality, alternative measures of Rule of Law, and over different time periods. Also, we find that countries with greater GDP per capita are characterized by *less* income inequality; however, once we control for Rule of Law in the country, we do not observe this negative correlation between GDP per capita and income inequality. This further highlights the Rule of Law in attenuating income inequality.

The remainder of the paper is organized as follows. The next section briefly summarizes the literature on the determinants of a country's economic growth. Section three notes our sample, data, and describes our empirical results. The final section concludes with a summary and our conclusions.

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### 2. Economic institutions and economic growth

Solow (1956) postulated an economy's output growth as a positive function of physical and human capital growth. Under the twin assumptions of constant returns to scale and competitive factor markets, deviations of an economy's actual output growth from the implied growth would be attributed to changes in technology and institutional change, such as, abrupt changes in law and order (and property rights) brought about by armed conflict and political upheavals. Hence, the role of economic institutions in promoting economic growth.<sup>2</sup>

Where do economic institutions come from? In an insightful review of their earlier research, Acemoglu, Johnson, and Robinson (2005) propose a theory of political institutions: In brief, individuals have preferences over economic institutions since these institutions play a role in resource allocation. In general, people's preferences over economic institutions do not converge, since different institutions benefit different groups. Those who have political power get to choose the economic institutions. Political power can be *de jure* (based on the constitution and electoral rules) or *de facto* (based on the ability to generate non-violent and/or violent protests and demonstrations). Those with greater economic resources tend to wield more *de facto* political power. *De jure* and *de facto* political power jointly determine today's economic institutions and the future political institutions.

North (1991) provides a useful definition of economic institutions: "Institutions are the humanly devised constraints that structure political, economic and social

<sup>&</sup>lt;sup>2</sup> Adam Smith in *Wealth of Nations* provides an earlier characterization of this argument, "Commerce and manufactures can seldom flourish long in any state which does not enjoy a regular administration of justice, in which the people do not feel themselves secure in the possession of their property, in which the faith of contracts is not supported by law…"

interaction... Institutions provide the incentive structure of an economy; as that structure evolves, it shapes the direction of economic change towards growth, stagnation, or decline." Economic institutions involve the rule of law, and respect for and enforcement of private property rights.

As Solow has noted, economic growth has three primary determinants: physical capital growth, human capital growth, and technological innovation. If individuals are less confident their private property rights will be enforced, they are less likely to invest in physical capital (business facilities, manufacturing plants and equipment) since physical capital can be expropriated. This expropriation can be led by the state if the country does not have rule of law, or if the rule of law does not enforce respect for private property rights. If a country has rule of law but does not enforce respect for private property rights, then expropriation can occur in the form of looting by non-state individuals using physical force and threat of armed violence on the owners of the physical capital.

Human capital is more difficult to expropriate than physical capital. The primary reason most individuals invest in human capital (education, trade apprenticeship, professional training) is it enhances their ability to generate income and create wealth. Income and wealth can be expropriated almost as easily as physical capital. Hence, if individuals are less confident their private property rights over their income and wealth will be enforced, they are less likely to invest in human capital. The usual way most individuals use their human capital to generate income and create wealth is by starting businesses, selling to customers, employing workers, growing their busines, selling to more customers, hiring more employees; with this self-reinforcing positive impact on job

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and wealth creation. Hence, as individuals stop or decrease investing in their human capital, this has a negative multiplier effect on job creation and economic growth.

Technological innovation is a key driver of economic growth. Technological innovation is primarily driven by the intellectual and creative efforts of those with significant human capital. Hence, as individuals stop or decrease investing in their human capital, this dampens technological innovation which has a negative multiplier effect on job creation and economic growth.

#### 3. Data and empirical results

We use multiple sources of data. We obtain GDP per capita (GDPPC) from the International Monetary Fund, World Economic Outlook Database, October 2019. Data on Rule of Law (RuleOfLaw) and Control of Corruption (CC) are from The Worldwide Governance Indicators, 2019 Update.<sup>3</sup> RuleOfLaw reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. CC reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. We obtained an alternate set of data on country governance variables from The PRS Group's International Country Risk Guide (ICRG). Their Law and Order (LAW) index is focused on their assessment of

<sup>&</sup>lt;sup>3</sup> "The Worldwide Governance Indicators (WGI) are a research dataset summarizing the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, nongovernmental organizations, international organizations, and private sector firms." Kasufman, Kraay, and Mastruzzi (2010).

the strength and impartiality of the legal system, and the popular observance of the law. ICRG's corruption index (CORRUPT) is their assessment of corruption within the political system – patronage, nepotism, favor-for-favor, secret party funding, and close ties between politics and business. Higher index values of LAW and RuleOfLaw indicate better adherence to and effectiveness of rule of law. Higher index values of CORRUPT and CC reflect *less* corruption. We obtain the MILITARY index from ICRG; a higher MILITARY index reflects a smaller degree of military participation in politics. We use the GINI index constructed by The World Bank to measure income inequality.

Figure 3 illustrates the correlation between GDPPC and LAW for the 134 countries in our sample for each of the years between 1984 and 2019. The correlation between GDPPC and LAW is significantly positive for each of the years during 1984-2019. Also, there is a strong increasing secular trend of the correlation between GDPPC and LAW in this period; from 0.40 in 1984 to 0.70 in 2019.

Some salient examples of how Law and Order and GDP per capita are related:

- In 1990, India's GDP per capita ranked it at the 15.0 percentile compared to the GDP per capita of the other countries in the world; its Law and Order index was at 1. In the early nineties, India liberalized its international trade and deregulated its industries; by 2015 its Law and Order index was at 4.5, and its GDP per capita rank was at 26.1 percentile. A more relevant way of looking at the above data From 1990 to 2015, several hundred million Indians went from abject poverty to a quasi-middle class standard of living.
- China's case is even more dramatic: In 1984 its Law and Order index was at 3, and GDP per capita rank was at 3.3 percentile. After extensive adoption of free market policies, its Law and Order index was at 4.5 in 2006 and its GDP per capita rank was 31.3 percentile. Again, a more relevant way of looking at the above data From 1984 to 2006, almost a billion Chinese went from subsistence living to quasi-middle class standard of living.

- Argentina enjoyed a GDP per capita rank of 64.9 percentile and Law and Order index of 5 in 1999. Subsequently, with changes in their political regime, greater regulation and less free markets, their Law and Order index in 2017 stood at 2, and the GDP per capita rank at 57.1 percentile.
- Venezuela enjoyed a GDP per capita rank of 62.6 percentile and Law and Order index of 4 in 1999. Subsequently, first under Chavez and then under his successor Maduro they nationalized major industries, and significantly increased government spending. As oil prices fell, they resorted to printing money. This led to hyperinflation. Venezuela imposed price controls which led to severe shortages and social unrest. In 2017, Venezuela's Law and Order index was 1 and its GDP per capita rank was 37.6 percentile. While Venezuela's decline in GDP per capita is significant, it should be viewed in the light of the shattered lives of the tens of millions of Venezuelans during the past two decades.

Figure 4 illustrates the correlation between GDPPC and RuleOfLaw for the 134 countries in our sample for each of the years between 1996 and 2017. The correlation between GDPPC and RuleOfLaw is significantly positive for each of the years during 1996-2017. Also, similar to Figure 3, there is a strong increasing secular trend of the correlation between GDPPC and RuleOfLaw in this period; from 0.62 in 1996 to 0.76 in 2017. As Figures 3 and 4 suggest – LAW and RuleOfLAw are highly positively correlated; the average correlation between LAW and RuleOfLaw is 0.79.

Figure 5 illustrates the correlation between GDPPC and CORRUPT for the 134 countries in our sample for each of the years between 1984 and 2019. The correlation between GDPPC and CORRUPT is significantly positive for each of the years during 1984-2018. (As noted above, higher index values of CORRUPT reflect *less* corruption.) Also, there is a strong increasing secular trend of the correlation between GDPPC and CORRUPT in this period; from 0.40 in 1984 to 0.73 in 2019.

Figure 6 illustrates the correlation between GDPPC and CC for the 134 countries in our sample for each of the years between 1996 and 2017. The correlation between GDPPC and CC is significantly positive for each of the years during 1996-2017. (Recall, higher index values for CC reflect *less* corruption.) Also, similar to Figure 5, there is a strong increasing secular trend of the correlation between GDPPC and CC in this period; from 0.58 in 1996 to 0.77 in 2017. As Figures 5 and 6 suggest – CORRUPT and CC are highly positively correlated; the average correlation between CORRUPT and CC is 0.87.

Table 1 notes the sample summary statistics. The ICRG has constructed the Law and Order (LAW) index to vary from 0 (poor governance) to 6 (good governance); similar scale for the CORRUPT index, and MILITARY index. The World Bank Group has constructed the Rule of Law index to vary from approximately -2.5 (poor governance) to 2.5 (good governance); similar scale for the control of corruption (CC) index.

Before turning to the panel regression results, it would be instructive to look at Figure 7 that plots the GDP per capita and Law and Order (LAW) index for 2019 for 50 countries with the largest populations; countries are labeled with the three alphabet World Bank code. Similar positive relation is observed for our full sample of 134 countries, and for every year in our sample period of 1984-2019.

Table 2 summarizes the panel regression results where log (GDPPC) is the dependent variable. We document a significant positive relation between ICRG's law and order index (LAW), and log (GDPPC). This relation is robust to alternative measures of law and order, alternative measures of income inequality (ratio of income of highest quintile to lowest quintile), and for the sample of just the 50 most populous countries.

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Also, countries that are less corrupt and where the military is less involved in politics enjoy a significantly higher GDP per capita.

Table 3 summarizes the panel regression results where the GINI index is the dependent variable. We document a significant negative relation between GDP per capita and the GINI index (regression 1). Also, in regression 2 we observe a significant relation between the law and order (LAW) index and the GINI index. However, when both GDP per capita and LAW are included as explanatory variables in regression 3, only LAW is significant. This highlights the role of law and order in decreasing income inequality.<sup>4</sup> Conceptually, as law and order improves in a country, its citizens have greater confidence that they can enjoy the benefits of their investment in physical capital and human capital; increased incentive to invest in physical and human capital leads to more income for the broader citizenry resulting in less income inequality. Regressions 4 and 5 confirm the role of rule of law in decreasing income inequality using an alternative measure of rule of law.

#### 4. Summary and conclusions

Economic growth has been a dominant concern for senior global leaders and policy makers for the past century; understandably, the determinants of economic growth has preoccupied economists for the past several decades. We consider 134 countries during the period 1984-2019 and find a significant positive relation between Rule of Law ((law and order provided by police and courts, respect for private property rights) and GDP per capita. Notably, this positive relation is getting stronger with time. We consider an alternative measure of Rule of Law; the earlier positive relation between Rule of Law and GDP per capita is robust to this alternative measurement. Additionally, we document

<sup>&</sup>lt;sup>4</sup> Chong and Gradstein (2007) thoroughly document this relation between rule of law and income inequality for 130 countries during 1960-2000. They do not control for GDP per capita in their analysis.

that lesser corruption in the political system is correlated with higher levels of GDP per capita.

Besides the size of the national pie, which is measured by GDP, senior policy makers and the media across the globe are increasingly concerned about how this pie is sliced, that is, about income inequality. We find that countries with greater adherence to Rule of Law are characterized by *less* income inequality. We find this to be a very robust relation – robust to alternative measures of income inequality, alternative measures of Rule of Law, and over different time periods. Also, we find that countries with greater GDP per capita are characterized by less income inequality; however, once we control for Rule of Law in the country, we do not observe this negative correlation between GDP per capita and income inequality. This further highlights the Rule of Law in attenuating income inequality.

On the basis of the above empirical results we have the following policy recommendations. For political leaders in various countries around the globe: Focus on ensuring respect for private property rights, an effective police force, and fair courts; this will enhance economic prosperity of your citizens *and* diminish income inequality in your country. For the leadership of international organizations like the United Nations and World Bank: Encourage the political leaders of the countries around the world, especially the developing countries, to give top priority to ensuring respect for private property rights of their citizens, an effective police force, and fair courts; this will enhance economic prosperity for their citizens *and* diminish income inequality in their respective country.

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Figure 1, based on the Maddison Project Database (2018), illustrates the share of world GDP by select countries and regions for the period, 1820-2008.





Figure 2, based on the Maddison Project Database (2018), illustrates the GDP per capita in 1990 dollars for the U.S., Argentina, and Australia for the period 1900-2008.





Correlation between GDP per capita and Law and Order for the 134 countries in our sample for each of the years between 1984 and 2019. Law and Order index is from The PRS Group's International Country Risk Guide; this index is focused on their assessment of the strength and impartiality of the legal system, and the popular observance of the law. Higher index values of Law and Order indicate better adherence to and effectiveness of rule of law.





Correlation between GDP per capita (GDPPC) and RuleOfLaw for the 134 countries in our sample for each of the years between 1996 and 2018. Data on RuleOfLaw are from The Worldwide Governance Indicators, 2019 Update. RuleOfLaw reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Higher index values of RuleOfLaw indicate better adherence to and effectiveness of rule of law.





Correlation between GDP per capita (GDPPC) and CORRUPT for the 134 countries in our sample for each of the years between 1984 and 2019. CORRUPT is the corruption index of The PRS Group's International Country Risk Guide; CORRUPT is their assessment of corruption within the political system – patronage, nepotism, favor-for-favor, secret party funding, and close ties between politics and business. Higher index values of CORRUPT reflect less corruption.





Correlation between GDP per capita (GDPPC) and control of corruption (CC) for the 134 countries in our sample for each of the years between 1996 and 2018. Data on CC is from The Worldwide Governance Indicators, 2019 Update. CC reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Higher index values of CC reflect less corruption.

# Figure 7



GDP per capita and Law and Order for the 50 most populous countries in our sample for 2019. GDPPC is in purchasing power parity dollars. Law and Order is from The PRS Group's International Country Risk Guide; this index is focused on their assessment of the strength and impartiality of the legal system, and the popular observance of the law. Higher index values of Law and Order indicate better adherence to and effectiveness of rule of law.

	Sample size	Mean	<u>Standard</u> <u>deviation</u>	<u>25 th</u> percentile	Median	<u>75 th</u> percentile
GDPPC	6933	12,987	15,898	2,305	6,658	17,233
LAW	4,838	3.7	1.4	2.5	4	5
CORRUPT	4,838	2.9	1.3	2	3	4
MILITARY	4,827	3.8	1.8	2	4	5
RuleOfLaw	4,170	0.0	1.0	-0.8	-0.1	0.8
CC (Control of Corruption)	3,903	0.0	1.0	-0.8	-0.2	0.7
GINI	2,547	36.7	9.2	29.7	34.8	42.4

## Table 1, Panel A: Sample summary statistics

						CC (Control of		
	GDPPC	LAW	CORRUPT	MILITARY	RuleOfLaw	Corruption)	G	INI
GDPPC	1							
LAW	0.697***	1						
CORRUPT	0.714***	0.727***	1					
MILITARY	0.593***	0.644***	0.565***	1				
RuleOfLaw	0.832***	0.826***	0.840***	0.729***	1			
CC (Control of								
Corruption)	0.821***	0.782***	0.889***	0.687***	0.964***		1	
		-						
GINI	-0.486***	0.627***	-0.393***	-0.485***	-0.504***	-0.451***		1
* p<0.05	** p<0.01	*** p<0.0	01					

GDP per capita (GDPPC) are from the International Monetary Fund, World Economic Outlook Database, October 2019, in purchasing power parity dollars. LAW is the Law and Order index of The PRS Group's International Country Risk Guide (ICRG); this index is focused on their assessment of the strength and impartiality of the legal system, and the popular observance of the law. Higher index values of LAW indicate better adherence to and effectiveness of rule of law. CORRUPT is the corruption index of The PRS Group's International Country Risk Guide; CORRUPT is their assessment of corruption within the political system – patronage, nepotism, favor-for-favor, secret party funding, and close ties between politics and business. Higher index values of CORRUPT reflect less corruption. We obtain the MILITARY index from ICRG; a higher MILITARY index reflects a smaller degree of military participation in politics. RuleOfLaw is from The Worldwide Governance Indicators, 2019 Update. RuleOfLaw reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Higher index values of RuleOfLaw indicate better adherence to and effectiveness of rule of law. Control of corruption (CC) is from The Worldwide Governance Indicators, 2019 Update. CC reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Higher index values of CC reflect less corruption. GINI index measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. A GINI index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

Panel A: All Countries					
	Log (GDPPC)				
	(1)	(2)	(3)	(4)	
LAW	0.538***	0.401***	0.276***		
	(12.738)	(6.069)	(4.312)		
CORRUPT		0.214***	0.112*		
		(3.309)	(1.843)		
MILITARY			0.231***		
			(4.605)		
Rule of LAW				0.899***	
				(17.613)	
Year FE	Yes	Yes	Yes	Yes	
Observations	4,467	4,467	4,467	3,399	
R-squared	0.436	0.459	0.511	0.544	

Table 2: Log (GDPPC) regressions. This table displays panel regressions for 134 countries. Dependent variable is Log (GDPPC). Standard errors are clustered by country and year. All variables are winsorized at the 1 and 99 percentiles. Robust t-statistics in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Panel B: Countries with 1996 population greater than 10 million						
	Log (GDPPC)					
	(1)	(2)	(3)	(4)		
LAW	0.506***	0.334***	0.197**			
	(8.122)	(3.682)	(2.216)			
CORRUPT		0.304***	0.166**			
		(3.463)	(2.214)			
MILITARY			0.264***			
			(3.894)			
Rule of LAW				0.885***		
				(14.251)		
Year FE	Yes	Yes	Yes	Yes		
Observations	2,302	2,302	2,302	1,219		
R-squared	0.423	0.471	0.544	0.568		

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

GDP per capita (GDPPC) are from the International Monetary Fund, World Economic Outlook Database, October 2019, in purchasing power parity dollars. LAW is the Law and Order index of The PRS Group's International Country Risk Guide (ICRG); this index is focused on their assessment of the strength and impartiality of the legal system, and the popular observance of the law. Higher index values of LAW indicate better adherence to and effectiveness of rule of law. CORRUPT is the corruption index of The PRS Group's International Country Risk Guide; CORRUPT is their assessment of corruption within the political system – patronage, nepotism, favor-for-favor, secret party funding, and close ties between politics and business. Higher index values of CORRUPT reflect less corruption. We obtain the MILITARY index from ICRG; a higher MILITARY index reflects a smaller degree of military participation in politics. RuleOfLaw is from The Worldwide Governance Indicators, 2019 Update. RuleOfLaw reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Higher index values of RuleOfLaw indicate better adherence to and effectiveness of rule of law.

	Pa	anel A: All cou	Intries			
	GINI Coefficient					
	(1)	(2)	(3)	(4)	(5)	
Log (GDPPC)	-3.552***		-0.357		-1.073	
	(-5.932)		(-0.532)		(-0.951)	
LAW		-4.110***	-3.944***			
		(-10.088)	(-7.593)			
RuleOfLaw				-3.768***	-2.916**	
				(-5.732)	(-2.195)	
Year FE	Yes	Yes	Yes	Yes	Yes	
Observations	2,210	1,908	1,902	1,399	1,370	
R-squared	0.176	0.389	0.390	0.205	0.213	
*** p<	0.01, ** p<0.03	5, * p<0.1				
Panel B	: Countries wit	h 1996 populat	tion greater that	n 10 million		
Dependent variable =		(	GINI Coefficie	ent		
	(1)	(2)	(3)	(4)	(5)	
Log (GDPPC)	-2.375***		0.646		-1.063	
	(-3.012)		(0.783)		(-0.713)	
LAW		-3.659***	-3.974***			
		(-5.930)	(-5.544)			
RuleOfLaw				-3.050**	-2.240	
				(-2.867)	(-1.154)	
Year FE	Yes	Yes	Yes	Yes	Yes	
Observations	1,159	1,075	1,072	634	634	
R-squared	0.091	0.304	0.309	0.137	0.143	
*** D<	0.01, ** p<0.05	5, * p<0.1				

Table 3: **GINI regressions**. Dependent variable is the GINI index of the respective country. This table displays panel regressions for 134 countries. Standard errors are clustered by country and year. All variables are winsorized at the 1 and 99 percentiles. Robust t-statistics in parentheses.

GINI index measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. A GINI index of 0 represents perfect equality, while an index of 100 implies perfect inequality. GDP per capita (GDPPC) are from the International Monetary Fund, World Economic Outlook Database, October 2019, in purchasing power parity dollars. LAW is the Law and Order index of The PRS Group's International Country Risk Guide (ICRG); this index is focused on their assessment of the strength and impartiality of the legal system, and the popular observance of the law. Higher index values of LAW indicate better adherence to and effectiveness of rule of law. RuleOfLaw is from The Worldwide Governance Indicators, 2019 Update. RuleOfLaw reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Higher index values of RuleOfLaw indicate better adherence to and effectiveness of rule of law.