Individualism, democracy, and contract enforcement

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A R T I C L E   I N F O

A B S T R A C T

We examine a potential link between culture and financial development by considering culture's influence on contract enforcement regulation. Specifically, we investigate the role of individualism in determining the variation in enforcement costs across countries. Individualism positively and significantly relates to efficient contract enforcement, an association that is independent of a particular political system. Interaction effects, however, suggest that democracy magnifies individualism's influence on the contract enforcement efficiency. These results provide insight into how culture can shape financial outcomes. It further suggests that culture serves as a constraint on policymakers, as any given policy or formal institutional structure will function very differently depending on the cultural environment.

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1. Introduction

The goal of this study is to examine how culture influences the amount of regulation adopted to legally enforce contracts. Prior studies show that private contract enforcement facilitates financial development and economic growth (North, 1990).[1] In fact, the firm itself exists as a "nexus of contracts" (Jensen and Meckling, 1976). With increased specialization and trading partners, as well as the geographic and legal dislocation of transactions, firms and the contracts from which they are created has become more sophisticated (Brewer and Venaik, 2010). As a result, a system of rules and regulations to resolve contracting disputes is often necessary to protect investors from expropriation. Contract enforcement regulation thus aids in economic exchange by reducing asymmetric information; however, overuse of such regulation may inhibit market activity (Djankov et al., 2003).

In most countries, complete disregard for the enforcement of contracts is seldom observed. What is observed, however, is significant variation in the cost of enforcement (Djankov et al., 2003). As these costs increase, so do the risks of conducting business in these countries. Aside from the direct costs associated with litigation, fear of opportunistic expropriation hinders investment.

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[1] Bae and Goyal (2009) and Jappelli et al. (2005) show that contract enforcement impacts access to credit. Cooley et al. (2004) find weak contract enforcement increases the sensitivity of firms to new technology, forcing them to choose less efficient technologies. Cumming and Knill (2012) find that the supply of venture capital and entrepreneurial spawning are enhanced when investors are confident that contracts will be enforced.

Knowing that enforcement is expensive in these high cost environments, agents on the losing side of a zero-sum contract are incentivized to default. The result is less access to long-term capital and less economic exchange.

Given the link between contract enforcement costs and financial outcomes, it is natural to ask, what determines the variation of cross-country cost of enforcement? Government court systems, at least in some form, provide contract enforcement. However, the variation in costs of enforcement implies that simply because a government provides a mechanism for enforcing contracts, these systems are not equal.

We seek to understand how national culture impacts efficient contract enforcement by examining the influence of individualism on court regulation to enforce commercial contracts. Hofstede (1980) describes culture as the tendency for individuals to prefer particular outcomes over other states of affairs, the "unwritten rules of the social game". Accordingly, we define culture as the set of beliefs and values individuals hold about the world and how it works, including norms of behavior that stem from these values. We focus on one dimension of a country's culture that is arguably related to contract enforcement – the degree of individualism versus collectivism.

Individualism reflects the concept that the self is an independent entity. Collectivism considers the self as interdependent connections of social relationships. Gorodnichenko and Roland (2016) theorize that individualism emphasizes personal freedom and achievement, awarding social status to individual accomplishments such as entrepreneurial discovery and innovation. Collectivism, on the other hand, focuses on social conformity and discourages individual achievement. Li and Zahra (2012) state that "in individualistic societies, formal institutions, in the form of political, economic and contractual rules, play a central role in enforcing contracts, mitigating transaction cost problems and providing the proper incentive structure for economic transactions" (p. 99).

We conjecture that individualism-collectivism influences the efficiency of contract enforcement. Specifically, we argue that it affects enforcement costs by influencing the adoption of contract regulation through two potential channels: 1) by directly influencing preferences over regulation, or 2) by indirectly shaping political institutions, which in turn influence regulation and the cost of contract enforcement.

First, individualism-collectivism may directly influence an individual's preference over social policy. People in more individualistic countries perceive a less regulated commercial market as an avenue for opportunity and personal achievement. They are more likely to engage in market production and exchange and are therefore incentivized to develop more efficient means of enforcing such transactions. As such, individualistic cultures prefer to regulate commercial contracting less intensively, reducing overall contract enforcement costs. Collectivist societies prefer social stability over individual opportunities for success, and thus prefer commercial regulation to establish social order. This additional regulatory oversight increases the cost to enforce a commercial contract. We therefore hypothesize that individualism-collectivism directly influences the efficiency of contract enforcement via preferences regarding individual opportunities for success versus social stability.

Second, the *Institutional Layers Hypothesis* considers the possibility that individualism indirectly affects contract enforcement through political institutions. Djankov et al. (2002) demonstrate that democracies adopt fewer business regulations, and Williamson (2000) illustrates that culture determines political institutions. Taken together, this implies that culture influences democracy, which in turn impacts contract enforcement regulation. Under this scenario, individualism affects contract enforcement only through its impact on democracy.

Lastly, we examine the *Interactive Hypothesis* by testing whether individualism and democracy act independently or as complements to determine contracting costs. We argue that democracy provides a mechanism for individuals to express their cultural preferences. If democracy aggregates public preference (and individualistic countries prefer less contracting regulation), the interaction between democracy and individualism should increase individualism's influence on efficient contract enforcement. If democracies do not reflect public opinion, democracy should have no conditional effect.

To measure individualism, we utilize Hofstede's index. Hofstede (2001) illustrates that the individualism versus collectivism nexus explains a large portion of the differences in cross-country values.[2] To measure contracting regulation, we collect country-level data on the number of procedures, number of days, and the monetary cost to enforce a contract (Doing Business, World Bank, 2015b). We extract the first principal component of the three measures to create the contract enforcement index. Overall, this index captures the cost of enforcing contracts and represents outcomes from formal and informal rules and the enforcement of these rules.

Initial analysis does not distinguish how individualism impacts contract enforcement costs but rather focuses on its overall effect. Our results suggest that contract enforcement costs decrease significantly as a country's culture is more individualistic. For example, a one standard deviation increase in individualism, the difference between the Netherlands and Israel, reduces the time to enforce a contract by 75 days and the number procedures by two. According to the instrumental variable (IV) specification, a one standard deviation increase in individualism leads to a 0.67 standard deviation increase in the contract enforcement index (an increase in efficiency).[3]

Further analysis examining *how* individualism impacts contract enforcement—directly or indirectly through formal political institutions— reveals that individualism's impact on contract enforcement is independent of democracy. We therefore reject the hypothesis that individualism works only through a hierarchy of institutions, namely democracy (*Institutional Layers Hypothesis*).

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[2] According to the cross-cultural psychology literature, Hofstede's measure of individualism-collectivism is the main cultural dimension across countries (Heine, 2008). It is also validated in other studies (e.g., Beugelsdijk et al., 2015). Gorodnichenko and Roland (2011) empirically demonstrate that individualism is the only aspect of culture robustly related to economic development.

[3] Marginal effects are based on the results presented in Tables 2 and 5.

Combined, these two sets of results support the hypothesis that individualism directly affects the efficiency of contract enforcement.

We also find evidence that individualism's influence is enhanced by democracy, suggesting that democracies channel cultural preferences into policy outcomes, i.e., the *Interactive Hypothesis*. However, the marginal effects are only significant in highly democratic countries.

Collectively, these findings indicate that while democracy is not necessary for individualism to reduce contract enforcement costs, democracy can magnify the influence of individualism. These results are robust to the inclusion of controls for institutional quality, economic factors, and alternative measures of culture. They are also robust in IV regressions, suggesting that the findings are relatively insensitive to potential endogeneity biases. Overall, we interpret this as strong support for the hypothesis that individualism promotes efficient contract enforcement across countries.

This research provides a link between culture and contract regulation. We illustrate that culture influences economic behavior, leading to vastly different financial outcomes across countries. Identifying how culture affects economic outcomes should be seen as a way to understand the world and possible ways to improve it. However, identifying precise policy implications are difficult. We view our work as suggesting that culture serves as a constraint on policymakers, as any given policy or formal institutional structure will function very differently depending on the cultural environment.

This work contributes to the relatively small literature showing that culture affects financial regulation. For example, Stulz and Williamson (2003) find a strong causal association between religion and financial regulation. Licht et al. (2005) document that countries with cultures emphasizing social harmony and uncertainty avoidance adopt less formal shareholder protection. Cline and Williamson (2016) illustrate trust substitutes for formal financial regulation, thus serving as an alternative mechanism to provide shareholder protection.

Our work also closely relates to the growing literature linking culture and financial outcomes. Bryan et al. (2015) find that culture is a significant determinant of compensation contracts. In addition, Nash and Patel (2013) find that, due to agency issues, culture influences the preferences of investors supplying capital. Supporting this view, culture is linked to access to financing (Aggarwal and Goodell, 2014), corporate debt maturity (Zheng et al., 2012), foreign investment decisions (Beugelsdijk and Frijns, 2010; Anderson et al., 2011; Aggarwal et al., 2012), and trade credit (Ghoul and Zheng, 2016). Individualism is also shown to impact dividend policy (Shao et al., 2010), firm growth (Boubakri and Saffar, 2016), capital structure (Chui et al., 2002), attitudes toward risk (Li et al., 2013; Shao et al., 2013), and momentum profits (Chui et al., 2010).

2. Background and hypothesis development

The idea that culture influences economic outcomes dates back to early scholars, such as Hume, Montesquieu, and Weber. Weber (1905) discusses the spirit of capitalism as attitudes that encourage the striving for profit for profit's sake. His protestant work ethic is described as an important determinant of the emergence of capitalism in Northern Europe. McCloskey (2006) presents evidence that the Industrial Revolution occurred primarily due to a cultural shift in favor of entrepreneurship. More recently, empirical work has emerged documenting the role of culture in economic development (Guiso et al., 2006; Tabellini, 2008; Gorodnichenko and Roland, 2016).

2.1. Direct effect of culture

We first argue that culture has a direct effect on individual preferences for commercial contracting and enforcement. The conjecture that culture directly influences an individual's preference over social policy stems from work in cultural sociology and psychology (Hofstede, 1980). Schwartz (2006) argues that values define right and wrong in the world, creating reference points for what is desirable and natural in social relations. Culture therefore justifies behavior in line with these values.

Hofstede (2001) claims that individualism is the most important layer of a society's culture. The individualism-collectivism spectrum reflects fundamentally different views of the individual self. Where a society lies on this spectrum determines cultural attitudes and beliefs that emphasize either individual autonomy or the social group. Hofstede argues that individualism stresses personal freedom and individual responsibility. He contrasts an individualistic society as one where "everyone is expected to look out for themselves," with a collectivist society in which people are "integrated into strong, cohesive in-groups, which … protect them in exchange for unquestioning loyalty" (Hofstede, 2001, p. 225). Thus, collectivism discourages personal success and group dissent while encouraging conformity, loyalty, and respect for superiors.

Individualism nurtures contractual relationships that revolve around the fundamentals of exchange. Boubakri and Saffar (2016, p. 504) state that "by fostering norms of self-reliance and self-interest, and rewarding success and innovation, individualism provides individuals with incentives to accumulate wealth, invest, and grow." Taylor and Wilson (2012) offer empirical support for this claim by illustrating that individualism associates with higher levels of innovation and investment in R&D. Similarly, Gorodnichenko and Roland (2016) argue that individualist cultures award social status to personal achievements, such as entrepreneurial discovery, leading to innovation and growth.

We therefore posit that individualistic cultures, emphasizing personal achievement and status, place greater importance on commercial activity and market exchange. People in countries with more individualistic values perceive a less regulated commercial market as an avenue for opportunity and personal achievement. As such, market exchange can be seen as a form of self-expression and self-fulfillment (Storr, 2009).

Collectivist societies, on the other hand, emphasizing social stability over individual opportunity, prefer regulation to constrain individual behavior in favor of establishing social order. If collectivist cultures view business development as a trade-off to social stability, they will prefer more regulation and policies that limit commercial activity.

If individuals perceive contract regulation as a monitoring device over commercial transactions, individual preferences toward commercial activity will directly influence contract enforcement regulation and the costs associated with enforcing a business contract. In order to foster greater commercial activity, individualistic countries are more likely to place a higher value on efficient enforcement and regulate commercial contracting less intensively. Thus, these countries will choose policies in favor of more efficient contracting, namely fewer steps, procedures, and lower overall enforcement costs.

On the other hand, collectivist societies may fear that some market exchange erodes social bonds, and thus prefer to limit commercial activity. Concerns of potential market exploitation and market failures as a source of social disorder may dominate policy. If so, collectivist countries will rely on regulatory oversight as a means of mitigating the costs of social disorder (Djankov et al., 2003). In particular, collectivist societies will prefer greater contract enforcement regulation in order to monitor and limit potential social costs from commercial exchange. This results in more country-level regulatory procedures, increasing the time and costs to enforce a commercial contract through the court system.

This distinction between individualism-collectivism helps explain previous findings that individualistic cultures promote economic development and growth-enhancing institutions (Gorodnichenko and Roland, 2011, 2016; Davis, 2016). However, Landes (1998) discusses how culture influences economic development and economic outcomes affect culture. In fact, Hofstede and Hofstede (2005) argue that as countries become wealthier, they become more individualistic.[4] Consequently, the level of individualism is endogenous and our results should not be interpreted as causal; however, we address this concern with IV analysis in the empirical section below.

2.2. Indirect effect of culture - institutional layers hypothesis

It is plausible that culture's effect on contracting costs works only through its influence on the type of formal political institutions adopted, i.e., democracy versus autocracy. Thus, our second hypothesis is that individualism impacts contract enforcement costs indirectly through its influence on political institutions.

This argument is largely based on the work of North (1990) and Williamson (2000), who posit a hierarchy of institutional development. North (1990) defines institutions as both formal and informal rules of the game. Formal institutions include political, legal, and economic codified rules that regulate behavior. Informal institutions are norms, customs, and traditions that constrain and coordinate economic behavior. Culture resides as an informal institutional system that socially transmits information across generations (Guiso et al., 2006). In this framework, culture provides the foundation for the development of formal institutions, including political institutions.

Williamson (2000) outlines a tiered system of institutional hierarchy organized as a series of layers from fundamental to proximate. The fundamental layer constrains the development of specific, formal levels. Culture is part of the most fundamental layer, where informal or embedded institutions form the bedrock from which all other institutions are built. The second level contains formal institutions, including legal and political rules. Williamson's framework emphasizes that culture determines formal institutions, a conclusion supported by Roland (2004), Licht et al. (2005) and Stulz and Williamson (2003). Williamson (2000) also argues that formal institutions are likely to be short-lived if they conflict with culture. This hierarchy of institutional development is also embraced by Hofstede (2001) who argues that culture leads to the development of political structures. Collectively, this implies that culture bears a causal relationship to formal political institutions, which in turn impacts the formation of economic policy.

Licht et al. (2007) argue that individualism, through its emphasis on individual autonomy and choice, cultivates a demand for a transparent legal and political system as a means for social coordination. They explicitly state that individual "autonomy clearly and directly implies a norm of democratic accountability" (p. 665). Individualistic cultures value individual rights and freedoms that democracies tend to support, such as freedom of speech, press, and religion. Collectivist cultures, however, base norms of just conduct on social ties, obligations, and tradition rather than overarching rules. Collectivist societies prefer power from above in order to limit independent choices that are inconsistent with socially approved actions. Collectivism emphasizes circumscribing individual freedoms in the name of protecting wider interests of the social group. Thus, collectivism is more likely to support autocratic rule over democratic rights. Empirically, Licht et al. (2007) link individualism to better governance, including democratic accountability.

In a recent paper, Gorodnichenko and Roland (2015) illustrate that individualism is positively correlated with democratization. Their model predicts that starting from an initial autocratic regime, individualistic cultures have a higher chance of transitioning to a democracy. They empirically show a causal association between individualism and average levels and length of democracy.[5] Djankov et al. (2002) further demonstrate that democracies adopt fewer business regulations. Collectively, this implies that individualism influences contract enforcement costs indirectly through its effect on democracy. Thus, democracy may act as a mechanism through which individualism impacts contract enforcement. We therefore hypothesize that individualism influences contract enforcement indirectly through democracy, which we call the *Institutional Layers Hypothesis*.

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[4] Beugelsdijk et al. (2015) find that individualism has increased over time across countries but the relative difference between countries is stable and constant.

[5] Additional empirical evidence shows that culture has a causal association with democracy (Tabellini, 2008; Klasing, 2013).

2.3. Interactions between culture and institutions - interactive hypothesis

If culture exhibits a direct effect on contract enforcement costs beyond its influence on the development of formal political institutions, two additional possibilities exist. Individualism and democracy serve independent roles in determining contracting costs. Alternatively, individualism and democracy interact to determine contract enforcement costs i.e., the *Interactive Hypothesis*.

Greif (2006) explains how cultural preference toward social cooperation requires different formal institutional structures, illustrating the complementary association between formal and informal institutions. North (1990) supports this view, arguing that the same formal rules adopted in different countries with different cultures lead to a variety of economic outcomes. Thus, one particular formal institutional set will produce various policies depending on a country's culture. This implies that the functioning of political institutions is sensitive to cultural values in the determination of economic policy (Hayek, 1960).

In addition, the impact of cultural values on policy will depend on formal political institutions. Culture directly influences individual preferences, and political institutions determine the degree to which these preferences are translated into policy. Democracy is a mechanism for communicating and aggregating policy preferences (Caplan, 2007), particularly for the median voter (Downs, 1957). In oligarchic societies, however, policies are often selected to benefit economic and political elites without opposing pressure from the general populace. Since elites are more likely to prefer regulation for personal enrichment, less democratic societies may select higher cost mechanisms, such as more bureaucratic steps and procedures, to enforce contracts (Djankov et al., 2002; Acemoglu, 2008).

Thus, political theory predicts that democratic institutions will magnify the role of culture in the selection of social policy. Democracy amplifies the influence of individualism on contract enforcement if democracy provides a mechanism through which individuals can express cultural preferences. If individualistic cultures prefer less formal contracting regulation, and democracies reflect the majority of public opinion, then the interaction between individualism and democracy will increase the ability of individualism to promote efficient contract enforcement. However, if democracies do not reflect public interest, democracy will have no conditional effect.

2.4. Testable hypotheses

Our first hypothesis examines *if* individualism promotes efficient contract enforcement; however, we do not initially distinguish *how*. We therefore abstain from including controls for political institutions, capturing the total effect of individualism on contract enforcement. This means that individualism can work either directly or indirectly through its effect on formal institutions. Individualism can influence contract enforcement when cultural preferences are expressed as specific policies, capturing a direct effect. Alternatively, individualism can affect contracting regulation indirectly via democratic institutions. A positive and significant coefficient on individualism could be due to preferences for specific policies regarding contract enforcement or because individualism affects contracting regulation indirectly via formal institutions.

Next, how individualism relates to contract enforcement is explored. The purpose is to uncover indirect channels through which individualism affects enforcement costs by understanding the link between the informal and formal institutions. To test the *Institutional Layers Hypothesis*, we directly control for democracy. If this hypothesis holds, individualism should only affect contract enforcement costs indirectly through its impact on political institutions. Thus, we reject the hypothesis if individualism remains significant in our specifications controlling for democracy. However, if individualism works only through its impact on democracy, the significance should be subsumed by democracy.

Failure to reject this hypothesis suggests that culture impacts contract enforcement beyond its role in shaping political institutions. In this case, two additional possibilities emerge. Individualism and democracy play largely independent roles in the determination of contracting regulation. Alternatively, individualism and democracy interact in the formation of contracting institutions. We test this *Interactive Hypothesis* by introducing an interaction term between individualism and democracy. A significant coefficient on the interaction term is interpreted as evidence supporting the hypothesis. In contrast, if the coefficient on individualism or democracy is significant, but the coefficient on the interaction term is insignificant, then formal and informal institutions have largely independent effects on contract enforcement.

3. Data

In this section we discuss the collection and measurement of key variables, including contract enforcement, individualism, and democracy. Additional variable description is provided in the next section and in Appendix A.

Differences in the effectiveness of courts results in significant variation in the costs of enforcing contracts. To measure contract enforcement costs, we collect data from the World Bank's Doing Business project (World Bank, 2015b).[6] The data captures the efficiency of the judicial system to enforce a commercial contract by tracking the cost, time, and procedures involved from the time the plaintiff files a private lawsuit until payment is received. Cost is the combined court costs, including enforcement expenses and attorney fees, calculated as a percent of the claim. Time records the number of days to enforce a contract from the day the plaintiff files until payment is received. Procedure is the number of necessary interactions (required by law and common practice) between the private parties and between the parties and a court officer to settle a dispute.

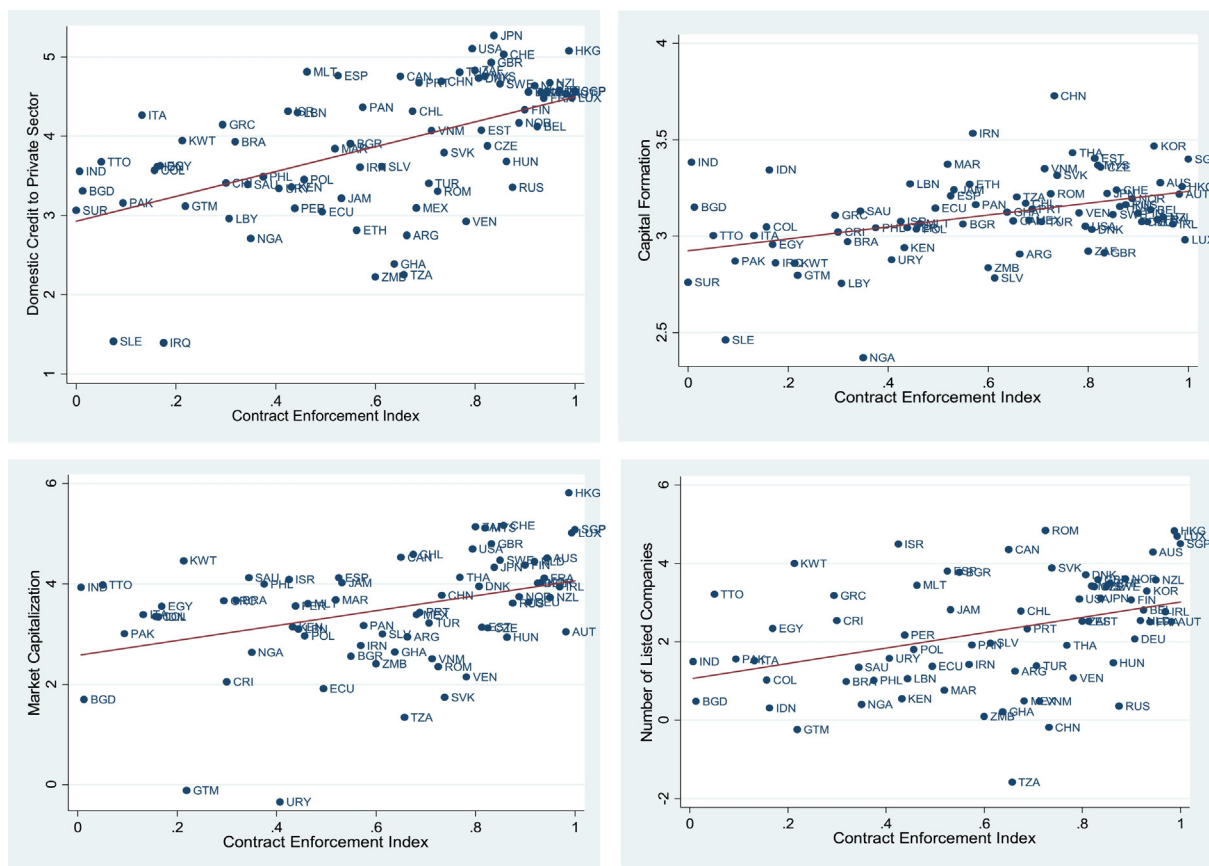[6] The World Bank's methodology originates from Djankov et al. (2003a).

Fig. 1. The economic impact of contract enforcement. Contract enforcement index is the first principal component of cost, time, and procedures to enforce a contract. The index is scaled between 0 and 1, where a higher score indicates efficient enforcement. Four financial development measures are collected from WDI (World Bank, 2015a). Domestic credits to private sector are financial resources provided to the private sector by financial corporations as a percentage of GPD, in log form. Market capitalization is share price times the number of shares outstanding of domestically incorporated companies listed on the country's stock exchange, calculated as a percentage of GDP and in log form. Capital formations are financial outlays on additions to the fixed assets of the economy plus net changes in the level of inventories, calculated as a percentage of GDP and in log form. Number of listed companies is the log number of domestically incorporated companies listed on the country's stock exchanges at the end of the year per 1,000,000 people.

Each of the three measures of contract enforcement represents outcomes from the legal system, and captures the opportunity costs of enforcing commercial contracts. We therefore create an overall contract enforcement index, extracting the common variation among cost, time, and procedures to enforce. The index is rescaled between zero and one, with one representing the lowest cost and hence more efficient contract enforcement.[7] Data are collected and averaged from 2004 to 2014. This is our primary measure of contract enforcement.

Prior to examining the determinants of contract enforcement, we demonstrate that the index is associated with financial development. In Fig. 1, we present four scatter plots illustrating the relation between the contract enforcement index and financial market outcomes. These outcomes include domestic credit, stock market capitalization, capital formation, and the number of listed companies (WDI, World Bank, 2015a).

As shown, the contract enforcement index positively relates with all four measures of financial development. Consistent with the literature, countries with more efficient contract enforcement have greater access to credit, higher levels of capital investment, higher market capitalization, and a larger number of domestic firms. While this is by no means a comprehensive exercise, we view these illustrations as support for previously documented associations between contracting efficiency and financial development. In addition, we believe this exercise lends support for our index of contracting costs.

To capture a country's position on the individualism-collectivism continuum, we rely on Hofstede's (2001) measure of individualism, constructed from surveys designed to understand variation in corporate culture.[8] Hofstede uses factor analysis to identify four dimensions of cultural variation with individualism being the first and most important factor. The individualism-collectivism

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[7] This intuition is supported by results from principal component analysis, where the first principal explains 50% of the variance. In addition, the first principal has an eigenvalue greater than one.

[8] Hofstede measures individualism by asking questions to IBM employees around the world pertaining to how much someone values things like personal time, freedom, and fulfilling work.

Table 1
Summary statistics.

Contract enforcement index is the first principal component of cost, time, and procedures to enforce a contract. The index is scaled between 0 and 1, where a higher score indicates efficient enforcement. Cost to enforce is the cost of the claim as a percentage of claim amount. Time to enforce is number of days from the decision to file a lawsuit until the final court payment. Procedures to enforce is the number of procedural steps to enforce a contract through the court. Individualism is the degree to which individuals are integrated into groups, measured by the extent to which a society sees people primarily as individuals looking after themselves (high individualism) or as members of tightly knit communities (low individualism). Common law indicates English legal origin. Landlocked indicates a landlocked country. Rule of law measures access to an established and equitable legal system. Ethnic, Linguistic, and Religious frac measure the probability that two randomly selected individuals from a country's population will belong to the same ethnic group, speak the same language, and belong to the same religious group, respectively. Native is the percent of a country's population with native ancestry in 1500, and Communism is the proportion of the period from 1915 to 2000 that a country had a communist government. Natural resources are the sum of rents from a country's natural resources, measured as a percentage of GDP. Unemployment is the share of the labor force without work but available and seeking employment. FDI represents foreign direct investment measured as net inflows, as a percentage of GDP. Trade is the sum of exports and imports measured as a percentage of GDP. Democracy-Polity2 captures democracy versus autocracy and ranges from −10 to 10, with 10 representing a strong democracy. Democracy-Voice proxies for the degree to which the citizens of a country are able to participate in selecting their government. Log GDP pc is the log GDP per capita measured in 2011 international dollars. Detailed variable descriptions are provided in Appendix A.

Variable	Observations	Mean	Std. dev.	Min	Max
Contract enforcement index	78	0.59	0.29	0.00	1.00
Cost to enforce (% of claim)	78	28.50	18.83	9.40	131.17
Time to enforce (days)	78	610.25	312.88	137.50	1715.00
Procedures to enforce (number)	78	35.78	5.96	21.00	51.00
Individualism	78	41.83	22.98	6.00	91.00
Common law	78	0.32	0.47	0.00	1.00
Landlocked	72	0.10	0.30	0.00	1.00
Rule of law	76	9.79	4.63	0.00	16.00
Ethnic frac	78	0.38	0.25	0.00	0.86
Linguistic frac	77	0.33	0.28	0.00	0.90
Religious frac	78	0.43	0.25	0.00	0.86
Native	76	0.71	0.34	0.00	1.00
Communism	72	0.03	0.17	0.00	1.00
Natural resources	77	8.23	12.28	0.00	49.48
Unemployment	77	8.01	4.20	1.48	23.70
FDI	77	4.55	7.67	−4.41	59.91
Trade	77	82.26	59.90	22.08	360.89
Democracy-Polity2	76	5.82	5.42	−10.00	10.00
Democracy-Voice	78	0.34	0.93	−1.65	1.62
Log GDP pc	76	9.57	1.02	6.68	11.33
GDP pc	76	21,387	17,401	800	83,497

index is scaled between zero and 100, with 100 representing more individualism. The main advantage of this measure of individualism is that it is validated across a large number of studies (Hofstede, 2001).

We rely on two measures of political institutions to capture the level of democracy in a country, polity2 and voice. Polity2 represents competitiveness of political participation, open and fair competition in selecting political leaders, and constraints on executive power (Polity IV, Jaggers and Marshall, 2000). The index ranges from −10 to 10, with 10 representing strong democracy. Voice captures the degree to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, association, and the press (Worldwide Governance Indicators (WGI), Kaufmann et al., 2015). It is scaled from −2.5 to 2.5, with higher values corresponding to more democracy.

We also include institutional and economic control variables. These are legal origin, whether a country is landlocked, rule of law, ethnic, linguistic, and religious fractionalization, percent of the population with native ancestry, a country's history with communism, natural resource rents, unemployment, foreign direct investment inflows (FDI), and international trade.

Summary statistics are provided in Table 1. There are at most 78 countries included in the analysis; however, the sample size changes depending on the specification. Income levels range from Ethiopia ($800 GDP per capita) to Kuwait (over $83,000 GDP per capita). The average income is $21,387 with a standard deviation of $17,401.

On average, it takes 610 days to enforce a commercial contract, ranging from 138 in Singapore to 1715 days in Suriname. The average costs are 28.5% of the amount of the claim, with a standard deviation of 18.83%. To enforce a contract in Indonesia or Sierra Leone, it costs over 100% of the claim amount. It costs less than 10% in Luxembourg and Norway. The number of procedures ranges from 21 to 51 steps with a mean of about 36. The mean of the contract enforcement index is 0.59, with a standard deviation of 0.29. The countries with the most efficient contract enforcement include Hong Kong, Luxembourg, and Singapore. Those with the least efficient are Suriname, India, and Bangladesh. Italy also ranks in the bottom of the index, taking almost 1250 days to enforce a contract, which is more than double the sample average.

Individualism has a mean of 42, a standard deviation of 23, and ranges from 6 to 91. United States, Australia, United Kingdom, the Netherlands, and Hungary rank in the top five, suggesting that individuals in these countries place a priority on self-reliance. Guatemala, Ecuador, Panama, Venezuela, and Columbia score the lowest, implying that these countries possess a culture emphasizing group solidarity over individual choice. Appendix B provides a list of all countries included in the analysis along with values of the primary variables.

Table 2
Individualism and measures of commercial contract enforcement.

OLS regressions with measures of contract enforcement as the dependent variable and individualism as the primary independent variable. Cost to enforce is the cost of the claim as a percentage of the claim amount. Time to enforce is the number of days from the decision to file a lawsuit until the final court payment. Procedures to enforce is the number of procedural steps to enforce a contract through the court. Contract enforcement index is the first principal component of the three contract enforcement variables scaled between 0 and 1, where a higher score indicates efficient contract enforcement. Panel A reports the univariate model. Individualism is the degree to which individuals are integrated into groups, measured by the extent to which a society sees people primarily as individuals looking after themselves (high individualism) or as members of tightly knit communities (low individualism). Panel B controls for legal origins. Common law is a dummy indicating whether a country was colonized by Britain and English legal code was transferred (La Porta et al., 2008). Detailed variable descriptions are provided in Appendix A. Robust standard errors are reported in parenthesis. ***, **, and * denote significance at 1%, 5%, and 10%, respectively.

Panel A: Univariate model				
	(1)	(2)	(3)	(4)
	Cost to enforce (% of claim)	Time to enforce (days)	Procedures to enforce (number)	Contract enforcement index
Individualism	−0.22**	−3.31**	−0.09***	0.01***
	(0.095)	(1.442)	(0.025)	(0.001)
Constant	37.53***	748.53***	39.71***	0.35***
	(5.703)	(77.718)	(1.290)	(0.061)
Observations	78	78	78	78
Adj. R^2	5%	6%	12%	9%

Panel B: Control for legal origins				
	(1)	(2)	(3)	(4)
	Cost to enforce (% of claim)	Time to enforce (days)	Procedures to enforce (number)	Contract enforcement index
Individualism	−0.21**	−3.30**	−0.09***	0.01***
	(0.092)	(1.451)	(0.025)	(0.001)
Common law	10.60**	16.27	−1.49	−0.01
	(4.971)	(77.640)	(1.450)	(0.068)
Constant	34.03***	743.17***	40.20***	0.35***
	(5.276)	(77.149)	(1.266)	(0.057)
Observations	78	78	78	78
Adj. R^2	12%	3%	12%	18%

4. Empirical results

Ideally, to address the central question, panel data would be available across a large sample of countries. However, Hofstede's individualism is not available over time, thus our analysis is limited to the cross-section. Nonetheless, Roland (2004) emphasizes that culture evolves very slowly, suggesting that time series analysis sheds little additional light. Another concern is endogeneity; therefore, we emphasize the difficulty in claiming strong causal inferences and address this potential bias using an instrumental variable approach in a later section.

4.1. Overall effect of individualism and contract enforcement

Before turning to the main model specifications, Panel A of Table 2 presents univariate results from regressing individualism on cost, time, and procedures, as well as the overall contract enforcement index. As shown in columns (1)–(4), individualism significantly relates to all three individual contracting measures as well as to the overall index. This suggests that individualistic cultures have lower enforcement costs, take less days, and use fewer procedures to enforce a commercial contract. For example, a one standard deviation increase in individualism reduces the monetary cost to enforce by approximately 5 percentage points.

The association between individualism and the contract enforcement index is illustrated in Fig. 2. The observed correlation indicates that the result is not driven by outliers. Countries that are more individualistic and enforce contracts efficiently include the United States, Australia, New Zealand, Hungary, the Netherlands, Denmark, Great Britain, and France. Collectivist countries with little contract enforcement include Pakistan, Guatemala, Sierra Leone, Bangladesh, and Trinidad and Tobago. This clustering of countries suggests some commonality but also indicates that the association between individualism and contract enforcement is not driven by a particular region.

Recall that we first seek to examine the effect of individualism on contract enforcement in the broadest possible manner, allowing for both direct and indirect effects. To obtain an estimate of the total effect of individualism, we control for exogenous measures of institutional quality rather than institutional quality itself. Specifically, in Table 2, Panel B, we include a common law dummy controlling for legal origin, an exogenous proxy for legal institutional quality. Common law countries tend to regulate markets less than civil law countries where governments have a higher proclivity to intervene in the economy (La Porta et al., 1999, 2008).

In all specifications, individualism remains significant in reducing the cost, time, and procedures to enforce a contract. Individualism also positively relates to the contract enforcement index. For example, a one standard deviation increase in individualism, the difference between the Netherlands and Israel, leads to approximately a 0.23 increase in the contract enforcement index, an
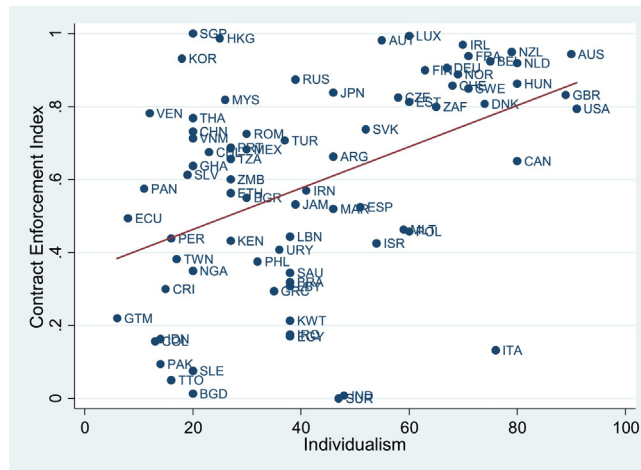
Fig. 2. Individualism and contract enforcement. Individualism is the degree to which individuals are integrated into groups, measured by the extent to which a society sees people primarily as individuals looking after themselves (high individualism) or as members of tightly knit communities (low individualism). Contract enforcement index is the first principal component of cost, time, and procedures to enforce a contract. The index is scaled between 0 and 1, where a higher score indicates efficient enforcement.

increase of about a 0.75 of a standard deviation, or the difference between Venezuela and Singapore. Common law is positive and significant in only one of four specifications. Comparing R-squareds, the models explain 3% to 18% of the variation in contract enforcement costs.

Other economic factors can influence contract enforcement costs. We introduce economic controls in Table 3. Landlocked (an additional exogenous proxy for institutions) accounts for external exposures to reform inefficient economic institutions and policies (Olson, 1982). In column (1), individualism is robust to this inclusion; landlocked is positive and significant.

We proxy for the quality of the legal system by including a measure of rule of law (Freedom House, 2014). Rule of law captures the presence of an independent judiciary, prevalence of rule of law in criminal and civil matters, protection from unjust imprisonment, equal treatment for all segments of the population, and overall access to an equitable legal system. This measure ranges from zero to 16, with a higher score indicating better rule of law. Column (2) shows that individualism remains significant. Intuitively, rule of law is also positive and significant, indicating that a just legal system correlates with effective contract enforcement.

If individualism is correlated with the social structure of a country, the coefficient on individualism could be biased. For example, the strength of collectivist social ties may be heightened among individuals belonging to similar minority groups, such as ethnicity, language, or religion. Previous studies find that ethnic and religious composition influences economic policy and the quality of governance (Easterly and Levine, 1997; Alesina et al., 2003).

We therefore control for the influence of social composition using two approaches. First, we include measures of ethnic, linguistic, and religious fractionalization. Alesina et al. (2003) find that these are linked to poor economic policies, lower provision of public goods, and re-distributional policies favoring segments of the population. Each indicator measures the probability that two randomly selected individuals from a country's population will belong to the same ethnic, language, or religious group, respectively. Second, we include the percent of the country's population with native ancestry (Ashraf and Galor, 2013). The level of genetic diversity in a country is shown to have a hump-shaped effect on development outcomes, reflecting a trade-off between harmful and beneficial diversity.

Homogenous populations may find it easier to develop efficient contracting rules compared to more diverse groups. If so, fractionalized societies will have worse contracting rules. By the same logic, a higher percent of native population should positively correlate with efficient contracting. Results reported in columns (3) reveal that individualism remains positive and significant when controlling for fractionalization. Of the three measures, ethnic fractionalization is the only one that is significant. As reported in column (4), we do not find a significant correlation between contract enforcement and native population; however, individualism remains significant.

A history of communism plausibly affects policies to enforce a commercial contract (Alesina and Fuchs-Schundeln, 2007). In column (5), we include a variable reflecting a country's history with communism, measured as the proportion of the time between 1915 and 2000 that a country had a communist government (McCleary and Barro, 2006). Individualism is robust to the inclusion of communism, which positively and significantly relates to contract enforcement.

Although the positive coefficient on communism is counterintuitive, we interpret this as suggesting that former communist countries did not rent-seek by creating additional judicial steps and procedures to enforce a commercial contract, perhaps because there were virtually no property rights and limited commercial activity under communistic regimes (Djankov et al., 2003). This may have inadvertently led to a post-communist structure with a lower cost system to enforce contracts. Nonetheless, this result is not robust to the inclusion of additional variables or controlling for endogeneity as found in the IV estimation below.

Table 3

Individualism and contract enforcement with institutional and economic controls.

OLS regressions of individualism on the contract enforcement index with economic and institutional controls. Contract enforcement index is the first principal component of three contract enforcement variables: cost, time, and procedures to enforce a contract. Individualism is the degree to which individuals are integrated into groups, measured by the extent to which a society sees people primarily as individuals looking after themselves (high individualism) or as members of tightly knit communities (low individualism). Common law indicates English legal origin. Landlocked indicates a landlocked country. Rule of law measures access to an established and equitable legal system. Ethnic, Linguistic, and Religious frac measure the probability two randomly selected individuals from a country will belong to the same ethnic group, speak the same language, and belong to the same religious group, respectively. Native is the percent of a country's population with native ancestry in 1500, and Communism is the proportion of the period from 1915 to 2000 that a country had a communist government. Natural resources are the sum of rents from a country's natural resources, measured as a percentage of GDP. Unemployment is the share of the labor force without work but available and seeking employment. FDI represents foreign direct investment measured as net inflows, as a percentage of GDP. Trade is the sum of exports and imports measured as a percentage of GDP. Detailed variable descriptions are provided in Appendix A. Robust standard errors are reported in parenthesis. ***, **, and * denote significance at 1%, 5%, and 10%, respectively.

Dep. Var: Contract enforcement index											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Individualism	0.005***	0.004**	0.004**	0.006***	0.006***	0.005***	0.006***	0.005***	0.006***	0.004**	0.005**
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
Common law	−0.009	0.001	0.012	−0.025	−0.013	0.009	−0.016	−0.008	−0.033	−0.022	−0.036
	(0.072)	(0.069)	(0.086)	(0.071)	(0.071)	(0.068)	(0.068)	(0.064)	(0.059)	(0.095)	(0.086)
Landlocked	0.178**									0.077	0.039
	(0.054)									(0.061)	(0.066)
Rule of law		0.017**								0.012	0.014
		(0.007)								(0.013)	(0.012)
Ethnic frac			−0.361*							0.089	0.194
			(0.188)							(0.208)	(0.189)
Linguistic frac			0.111							−0.057	−0.114
			(0.165)							(0.192)	(0.178)
Religious frac			0.106							0.170	0.153
			(0.146)							(0.185)	(0.159)
Native				−0.024						0.034	0.066
				(0.099)						(0.093)	(0.086)
Communism					0.257***					0.215	0.243*
					(0.043)					(0.159)	(0.141)
Natural resources						−0.007**				−0.000	0.001
						(0.002)				(0.004)	(0.004)
Unemployment							−0.015**			−0.010	−0.009
							(0.007)			(0.007)	(0.006)
FDI								0.011**		0.006	
								(0.005)		(0.004)	
Trade									0.002***		0.002**
									(0.000)		(0.000)
Constant	0.369***	0.239**	0.454***	0.382***	0.348***	0.445***	0.474***	0.320***	0.208**	0.245	0.062
	(0.059)	(0.071)	(0.108)	(0.100)	(0.060)	(0.066)	(0.088)	(0.059)	(0.064)	(0.198)	(0.179)
Observations	72	76	77	76	72	77	77	77	77	68	68
Adj. R²	21%	26%	21%	19%	20%	24%	22%	26%	32%	28%	36%

We next introduce four economic variables shown to influence the quality of the court system. Natural resources can deteriorate the quality of formal institutions (Djankov et al., 2008). Unemployment is included as a proxy for macroeconomic instability. Ahlquist and Prakash (2010) show that FDI contributes to contract enforcement. We also include a measure of trade since more international exchange facilitates the need for contract enforceability (Ranjan and Lee, 2007).

As reported in columns (6)–(9), all four economic controls are significant and load with the expected sign. An increase in either natural resources or unemployment reduces the efficiency of contract enforcement, while an increase in either FDI or trade increases the efficiency of contract enforcement. More importantly, individualism is robust to these inclusions, remaining positive and highly significant in each specification.

In columns (10) and (11) we control for all variables simultaneously, alternating FDI and trade due to their high correlation. Individualism remains positive and significant. For example, according to column (11), a one standard deviation increase in individualism leads to a 0.11 improvement in the contract enforcement index, or a 0.40 standard deviation increase. According to these specifications, we are explaining up to 36% of the variation in contract enforcement.

Overall, these results are consistent with the first hypothesis, suggesting a significant empirical association between individualism and contract enforcement costs. The finding is robust to the inclusion of exogenous determinants of institutions, proxies for institutional quality, and economic controls.

Next, we address potential concerns regarding our measure of individualism. We first include Hofstede's (2001) other culture dimensions: power distance, masculinity, and uncertainty avoidance.[9] The results, reported in column (1) of Table 4, indicate that

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[9] Power distance measures the degree to which individuals accept that power is distributed unequally among various member of society. Masculinity reflects a lack of emphasis on caring for others, solidarity, and quality of life. Uncertainty avoidance measures the degree to which members of society are comfortable in unstructured situations.

Table 4

Individualism and contract enforcement with alternative cultural variables.

Reported are OLS regressions of individualism with additional cultural controls. Contract enforcement index is the first principal component of three contract enforcement variables: cost, time, and procedures to enforce a contract. Individualism is the degree to which individuals are integrated into groups. Common law indicates English legal origin. Power distance measures the degree to which less powerful members of society accept and expect power to be distributed unequally. Masculinity reflects the emphasis in society on caring for others, solidarity, and quality of life (Femininity), as opposed to achievement and success (Masculinity). Uncertainty avoidance is the degree to which members of society are comfortable in unstructured situations. Autonomy measures the degree to which individuals find value in pursuing their own goals, experiences, ideas, and beliefs. Hierarchy reflects the emphasis on obeying role obligations within an unequally distribution of power, and Harmony reflects the emphasis on accepting the social and physical world as it exists. East Asia Pacific, Eastern and Central Europe, Middle East and N. Africa, South Asia, Sub-Saharan Africa, North America, and Western Europe are regional indicator variables. Detailed variable descriptions are provided in Appendix A. Robust standard errors are reported in parenthesis. ***, **, and * denote significance at 1%, 5%, and 10%, respectively.

Dep. Var: Contract enforcement index							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Individualism	0.004**	0.006***	0.003*				
	(0.002)	(0.001)	(0.002)				
Common law	−0.082	0.053		0.128	0.113	0.116	0.116
	(0.071)	(0.079)		(0.088)	(0.092)	(0.180)	(0.183)
Power distance	−0.002						
	(0.002)						
Masculinity	0.000						
	(0.002)						
Uncertainty avoidance	−0.003*						
	(0.001)						
Embeddedness				−0.287**		−0.245**	
				(0.087)		(0.120)	
Autonomy					0.229**		0.179*
					(0.072)		(0.101)
Hierarchy						−0.074	−0.091
						(0.182)	(0.183)
Harmony						−0.037	−0.015
						(0.286)	(0.289)
East Asia Pacific		0.148	0.259**				
		(0.089)	(0.103)				
Eastern and Central Europe		0.091	0.226**				
		(0.070)	(0.089)				
Middle East and N. Africa		−0.200**	−0.076				
		(0.079)	(0.096)				
South Asia		−0.529***	−0.404***				
		(0.117)	(0.078)				
Sub-Saharan Africa		0.023	0.149*				
		(0.088)	(0.080)				
North America		−0.167*	0.122				
		(0.085)	(0.126)				
Western Europe			0.273**				
			(0.113)				
Constant	0.746***	0.362***	0.368***	1.733***	−0.224	1.902	0.236
	(0.197)	(0.068)	(0.068)	(0.315)	(0.299)	(1.570)	(1.678)
Observations	78	72	72	43	43	43	43
Adj. R-squared	20%	41%	46%	12%	9%	9%	7%

the association between individualism and contract enforcement is robust to the inclusion of the additional cultural factors. None of the other dimensions are significant at the 5% level. Thus, the relation between individualism and contract enforcement does not appear to be driven by omitted dimensions of culture.

Cultural values often cluster by regional location. Thus, we include World Bank regional dummy variables in column (2). These include East Asia Pacific, Eastern and Central Europe, Middle East and North Africa, South Asia, Sub-Saharan Africa, and North America. In column (3), we drop common law and include a regional dummy for Western Europe in addition to the set of regional dummies in column (2). Individualism remains positive and significant in both regressions; however, the coefficient is smaller and significant at the 10% level in column (3).

As with other measures of culture, there is no single, definitive measure of individualism. This raises the possibility that the results are sensitive to the specific measure of individualism developed by Hofstede. Thus, we re-estimate our results using two alternative measures of individualism from Schwartz (2006), embeddedness and autonomy.

Schwartz's data are based on surveys of K-12 school teachers and college students administered in over fifty countries. In Schwartz's cultural system, the relationship between the individual and the collective is captured by three variables: embeddedness, affective autonomy, and intellectual autonomy. Cultures emphasizing embeddedness focus on social relationships and shared goals. In contrast, autonomy stresses individuality in preferences, action, and thought. Autonomy is measured by averaging affective and intellectual autonomy (Licht et al., 2007). Embeddedness and autonomy are highly correlated, so we include them in separate specifications.

As shown in columns (4) and (5), the results for Schwartz's alternative measures of individualism largely confirm our earlier findings. Embeddedness is negative and significant, while autonomy is positive and significant. To reduce further concern about omitted cultural values, we follow Licht et al.'s (2007) specification and include Schwartz's other cultural dimensions, hierarchy and harmony. Hierarchy captures obeying role obligations within an unequal distribution of power, and harmony refers to an emphasis on accepting the world as it is. As shown in columns (6) and (7), the results are robust to these inclusions.

The results using the Schwartz's data are theoretically and empirically consistent with Hofstede's individualism, but the number of observations and R-squareds are significantly reduced. Therefore, the remainder of the analysis is conducted using Hofstede's individualism.

Overall, the results presented in Table 4 suggest that the association between individualism and contract enforcement is robust to alternative measures of individualism, regional controls, and other dimensions of culture. We turn next to issues raised by the endogeneity of culture.

4.2. IV estimation

As discussed in the hypotheses section, individualism is associated with economic development. However, it is also possible that economic development influences the level of individualism (Hofstede, 2001). Another concern is that wealthier countries may enforce contracts more efficiently. To address these endogeneity concerns, we include log GDP per capita in IV estimations. An additional concern is reverse causality. When costs of enforcement are sufficiently high, individuals may avoid the court system and rely on informal means of contract enforcement, thus creating a greater dependence upon collectivist ties (Djankov et al., 2002). This further highlights the necessity of including IV analysis.

Table 5
Individualism and contract enforcement with IV estimation.

In this table we instrument for individualism using Latitude and Pronoun drop. Panel A reports the first stage OLS regressions with Individualism as the dependent variable. Panel B presents the second stage results with the Contract enforcement index as the explanatory variable. Latitude is the absolute value of latitude of a country. Pronoun Drop indicates a country where grammatical rules allow pronoun drop. All variables are as described in Table 1 and Appendix A. Robust standard errors are reported in parenthesis. ***, **, and * denote significance at 1%, 5%, and 10%, respectively. In Panel B, Hansen's J statistics are reported.

Panel A: First stage				
Dep. Var: Individualism				
	(1)	(2)	(3)	(4)
Latitude	76.741***	66.462***	65.769***	67.342***
	(9.943)	(14.690)	(14.781)	(11.952)
Pronoun drop	−14.146**	−7.898*	−8.158*	−13.206**
	(4.620)	(4.378)	(4.422)	(4.407)
Common law	7.021*	7.047*	7.494*	7.252*
	(3.893)	(4.195)	(4.252)	(3.894)
Landlocked		4.530	5.226	
		(7.688)	(7.738)	
Rule of law		0.588	0.445	
		(0.894)	(0.934)	
Ethnic frac		−27.236**	−29.110**	
		(13.027)	(12.806)	
Linguistic frac		15.030	15.775	
		(10.292)	(10.015)	
Religious frac		12.281	11.878	
		(9.894)	(9.688)	
Native		−7.572	−7.896	
		(6.718)	(6.665)	
Communism		−9.288	−10.741	
		(11.472)	(12.245)	
Natural resources		−0.163	−0.186	
		(0.214)	(0.222)	
Unemployment		0.458	0.429	
		(0.349)	(0.366)	
FDI		−0.488		
		(0.590)		
Trade			−0.044	
			(0.030)	
Log GDP pc				3.458
				(2.270)
Constant	23.205***	22.000*	26.455**	−7.533
	(6.492)	(11.176)	(12.524)	(20.646)
Observations	73	64	64	72
Adj. R²	65%	70%	71%	66%
F-stat	54.80	19.98	21.50	42.25
SW F-stat	82.15***	12.53***	12.10***	37.49***

Table 5 *(continued)*

Panel B: Second stage

Dep. Var: Contract enforcement index

	(1)	(2)	(3)	(4)
Individualism	0.008***	0.007**	0.007**	0.006**
	(0.001)	(0.003)	(0.003)	(0.002)
Common law	0.013	−0.002	−0.026	0.028
	(0.070)	(0.085)	(0.085)	(0.071)
Landlocked		0.070	0.041	
		(0.077)	(0.081)	
Rule of law		0.001	0.007	
		(0.013)	(0.013)	
Ethnic frac		0.181	0.266	
		(0.227)	(0.232)	
Linguistic frac		−0.122	−0.158	
		(0.182)	(0.175)	
Religious frac		0.033	0.044	
		(0.156)	(0.147)	
Native		0.061	0.079	
		(0.078)	(0.082)	
Communism		0.184	0.254*	
		(0.135)	(0.138)	
Natural resources		−0.000	0.001	
		(0.003)	(0.003)	
Unemployment		−0.013*	−0.012*	
		(0.007)	(0.007)	
FDI		0.022**		
		(0.009)		
Trade			0.002***	
			(0.000)	
Log GDP pc				0.043
				(0.057)
Constant	0.260***	0.229	0.045	−0.101
	(0.069)	(0.161)	(0.173)	(0.464)
Observations	73	64	64	72
Adj. R^2	12%	25%	32%	17%
Hansen J-stat	0.34	0.66	0.42	0.28
p-Value	0.56	0.42	0.52	0.60

As with any IV model, the major challenge is to find appropriate instruments. Fortunately, the literature provides several valid instruments for individualism. These include latitude (a geography variable) and pronoun drop (a language variable).

Some scholars empirically document that geography has a direct effect on economic development by influencing climate, the disease environment, and natural endowments (Diamond, 1997; Gallup et al., 1999; Sachs, 2001, 2003). However, others present evidence that geography indirectly affects economic outcomes by influencing culture and institutions (Easterly and Levine, 2003; Rodrik et al., 2004). Engerman and Sokoloff (1997) illustrate that historical differences in factor endowments impact current cultural and institutional development.

Latitude, measured as distance from the equator, is linked to culture through its effect on colonization and institutional transfer (Hall and Jones, 1999; Williamson and Kerekes, 2011). Sowell (1998) provides further support by illustrating that cultural values are determined by the ability to interact and learn from others. Geography influences culture by facilitating or impeding such interactions. Groups living in isolation due to geographic impediments do not culturally progress compared to societies in which the cost of interacting with others is lower. Geography thus determines cross-cultural exchange, which influences the values and beliefs held in societies.

As such, we argue that geography directly shapes culture, including individualism. Thus, we use latitude as an instrument for individualism. We recognize potential biases concerning excludability. One benefit of using latitude as an instrument is that it is exogenously determined. However, geography may influence contract enforcement costs via other channels besides culture. Our inclusion of income per capita helps to minimize this concern. In addition, the first stage results indicate that the exclusion restrictions are satisfied. We also drop latitude as an instrument and find similar results.[10]

The second individualism instrument is a language variable from Licht et al. (2007). Tang and Koveos (2008) show that language is an important determinant of cultural clusters, since language serves as a cultural transmission mechanism across generations. Kashima and Kashima (1998) present evidence that pronoun usage in language represents psychological differences between the speaker and the social context. Specifically, the use of 'I' or 'you' signals that the individual is the center of the context. On the contrary, a grammatical rule licensing pronoun drop suggests a reduction between the individual and the group. Consequently, pronoun usage should be more prevalent in individualistic societies, and pronoun drop allowed in cultures where

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[10] These results are not tabulated to save space but are available upon request.

Table 6

Individualism, democracy, and contract enforcement.

OLS regressions with contract enforcement index as the dependent and individualism and measures of democracy as the primary independent variables. Contract enforcement index is the first principal component of three contract enforcement variables: cost, time, and procedures to enforce a contract. Individualism is the degree to which individuals are integrated into groups, measured by the extent to which a society sees people primarily as individuals looking after themselves (high individualism) or as members of tightly knit communities (low individualism). Democracy-Polity2 captures democracy versus autocracy and ranges from −10 to 10, with 10 representing a strong democracy. Democracy-Voice proxies for the degree to which the citizens of a country are able to participate in selecting their government. Common law indicates English legal origin. Landlocked indicates a landlocked country. Rule of law measures access to an established and equitable legal system. Ethnic, Linguistic, and Religious frac measure the probability two randomly selected individuals from a country will belong to the same ethnic group, speak the same language, and belong to the same religious group, respectively. Native is the percent of a country's population with native ancestry in 1500, and Communism is the proportion of the period from 1915 to 2000 that a country had a communist government. Natural resources are the sum of rents from a country's natural resources, measured as a percentage of GDP. Unemployment is the share of the labor force without work but available and seeking employment. FDI represents foreign direct investment measured as net inflows, as a percentage of GDP. Trade is the sum of exports and imports measured as a percentage of GDP. Detailed variable descriptions are provided in Appendix A. Robust standard errors are reported in parenthesis. ***, **, and * denote significance at 1%, 5%, and 10%, respectively.

Dep. Var: Contract enforcement index						
	(1)	(2)	(3)	(4)	(5)	(6)
Individualism	0.005***	0.004**	0.005**	0.003*	0.004**	0.005**
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Democracy-Polity2	0.007	−0.008	−0.002			
	(0.006)	(0.014)	(0.012)			
Democracy-Voice				0.095**	−0.009	−0.056
				(0.038)	(0.124)	(0.123)
Common law	−0.026	−0.021	−0.035	0.011	−0.022	−0.038
	(0.069)	(0.097)	(0.086)	(0.069)	(0.097)	(0.089)
Landlocked		0.074	0.021		0.077	0.038
		(0.060)	(0.068)		(0.061)	(0.067)
Rule of law		0.018	0.017		0.013	0.022
		(0.015)	(0.014)		(0.019)	(0.020)
Ethnic frac		0.077	0.180		0.088	0.191
		(0.202)	(0.189)		(0.213)	(0.192)
Linguistic frac		−0.071	−0.121		−0.058	−0.121
		(0.191)	(0.177)		(0.194)	(0.176)
Religious frac		0.163	0.130		0.172	0.161
		(0.190)	(0.161)		(0.190)	(0.160)
Native		0.026	0.074		0.032	0.058
		(0.095)	(0.087)		(0.097)	(0.087)
Communism		0.145	0.228		0.209	0.202
		(0.217)	(0.177)		(0.200)	(0.174)
Natural resources		−0.001	0.001		−0.000	0.000
		(0.005)	(0.005)		(0.005)	(0.004)
Unemployment		−0.009	−0.009		−0.010	−0.009
		(0.007)	(0.007)		(0.007)	(0.007)
FDI		0.006			0.006	
		(0.004)			(0.004)	
Trade			0.002***			0.002**
			(0.000)			(0.000)
Constant	0.327***	0.265	0.048	0.417***	0.236	−0.003
	(0.061)	(0.199)	(0.180)	(0.063)	(0.215)	(0.223)
Observations	76	67	67	78	68	68
Adj. R²	22%	29%	38%	23%	27%	35%

collectivism is emphasized. Thus, the dummy for pronoun drop (one for a grammatical rule allowing pronoun drop, zero otherwise) is expected to have a negative association with individualism. To expand the number of observations, we utilize an updated version of the pronoun drop variable provided by Davis and Abdurazokzoda (2016).

First stage results are provided in Panel A of Table 5. Both instruments are significantly correlated with individualism. This implies that greater distance from the equator increases individualism, and the use of pronoun drop is associated with lower levels of individualism. The first stage results, including the F-statistics, adjusted R-squareds, Sanderson-Windmeijer (SW) F-statistic of excluded instruments, and Hansen J-statistics (reported in Panel B), suggest that these instruments are indeed valid and appropriate to exclude.

Panel B of Table 5 presents the second stage IV results. In column (1), we report the specification controlling only for common law. Individualism is positive and significant at the 1% level. Marginal effects suggest that a one standard deviation increase in individualism increases the contract enforcement index by about 0.18, or a 0.67 standard deviation increase. The next two specifications include our full vector of controls with either FDI or trade. Consistent with the OLS results, individualism remains significant at the 5% level. FDI and trade are also positive and significant at the 5% level.

As discussed above, individualism is linked to income per capita, so its inclusion in the OLS specification is subject to endogeneity. We now include log GDP per capita in the IV model reported in column (4). Individualism is positive and significant at the 5% level. GDP per capita is positive but insignificant.

Based on these specifications, we are explaining between 12% and 32% of the variation in the contract enforcement index. These results suggest that the exogenous component of individualism has a strong positive effect on the efficiency of contract enforcement. After controlling for endogeneity and reverse causality, the results of our IV estimation support our earlier findings regarding the significance of individualism for efficient contract enforcement. Next, we ask *how* individualism shapes contract enforcement.

4.3. Institutional layers hypothesis

In this section we consider the *Institutional Layers Hypothesis*, which argues that individualism may indirectly influence contract enforcement through its impact on democratic institutions. If individualism only affects contract enforcement indirectly, we expect the coefficient on individualism to be insignificant once we include democracy.

Columns (1)–(3) of Table 6 report the findings using polity2. In all three specifications individualism is positive and significant at the 5% level or better. Polity2 is insignificant in all three regressions. Columns (4)–(6) control for democracy using voice. Individualism remains significant in all three models. Voice is significant only in the first regression. Both sets of regressions

Table 7

Individualism, democracy, and contract enforcement with iv estimation.

In this table we instrument for individualism using Latitude and Pronoun drop. Panel A reports the first stage OLS regressions with Individualism as the dependent variable. Panel B presents the second stage results with the Contract enforcement index as the explanatory variable. Latitude is the absolute value of latitude of a country. Pronoun Drop indicates a country where grammatical rules allow pronoun drop. Individualism is the degree to which individuals are integrated into groups, measured by the extent to which a society sees people primarily as individuals looking after themselves (high individualism) or as members of tightly knit communities (low individualism). Democracy-Polity2 captures democracy versus autocracy and ranges from −10 to 10, with 10 representing a strong democracy. Democracy-Voice proxies for the degree to which the citizens of a country are able to participate in selecting their government. All variables are as described in Table 1 and Appendix A. Robust standard errors are reported in parenthesis. ***, **, and * denote significance at 1%, 5%, and 10%, respectively. In Panel B, Hansen's J statistics are reported.

Panel A: First stage								
Dep. Var: Individualism								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Latitude	75.159***	65.623***	64.570***	65.736***	65.776***	66.294***	65.522***	61.620***
	(10.160)	(14.312)	(14.382)	(12.275)	(10.872)	(14.658)	(14.729)	(11.936)
Pronoun drop	− 12.774**	− 8.806*	− 9.285**	− 11.748**	− 10.084**	− 6.751	− 6.810	− 10.139**
	(4.902)	(4.420)	(4.468)	(4.702)	(4.796)	(5.103)	(5.076)	(4.802)
Common law	7.776*	6.516	7.035*	8.293**	7.293*	7.282*	7.804*	7.424**
	(4.073)	(4.003)	(4.038)	(4.046)	(3.664)	(4.264)	(4.300)	(3.698)
Landlocked		5.234	6.283			4.281	4.977	
		(8.112)	(8.252)			(7.368)	(7.372)	
Rule of law		1.125	1.011			0.069	− 0.183	
		(0.939)	(0.956)			(1.339)	(1.357)	
Ethnic frac		− 25.501*	− 27.805**			− 26.318**	− 28.145**	
		(13.474)	(12.991)			(13.057)	(12.814)	
Linguistic frac		12.580	13.286			15.277	16.122	
		(10.428)	(10.030)			(10.294)	(9.957)	
Religious frac		12.977	12.573			12.073	11.605	
		(9.362)	(9.066)			(10.007)	(9.753)	
Native		− 8.917	− 9.571			− 6.935	− 7.160	
		(7.024)	(6.928)			(6.870)	(6.742)	
Communism		− 17.291	− 20.246*			− 6.437	− 7.443	
		(10.992)	(11.495)			(12.756)	(13.449)	
Natural resources		− 0.291	− 0.338*			− 0.120	− 0.136	
		(0.192)	(0.191)			(0.237)	(0.247)	
Unemployment		0.522	0.490			0.433	0.398	
		(0.327)	(0.345)			(0.344)	(0.361)	
FDI		− 0.603				− 0.515		
		(0.660)				(0.580)		
Trade			− 0.058*				− 0.047	
			(0.033)				(0.029)	
Log GDP pc				3.813*				2.050
				(2.268)				(2.058)
Democracy-Polity2	0.288	− 0.945**	− 1.074**	0.199				
	(0.290)	(0.465)	(0.423)	(0.268)				
Democracy-Voice					5.508**	3.650	4.348	4.761*
					(2.614)	(7.286)	(7.196)	(2.483)
Constant	21.099**	25.426**	31.939**	− 12.591	22.392***	24.089**	29.251**	4.295
	(6.917)	(10.757)	(11.323)	(21.167)	(6.174)	(11.899)	(13.295)	(18.829)
Observations	72	64	64	71	73	64	64	72
Adj. R²	65%	71%	72%	66%	67%	70%	70%	67%
F-stat	44.51	19.00	20.58	35.11	56.60	18.09	19.41	44.76
SW F-stat excludable	58.35***	14.96***	14.58***	26.56***	26.41***	10.94***	10.51***	19.94***

Table 7 (continued)

Panel B: Second stage

Dep. Var: Contract enforcement index

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Individualism	0.008***	0.007**	0.007**	0.007**	0.007**	0.008**	0.008**	0.006*
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Democracy-Polity2	0.002	−0.003	0.001	0.002				
	(0.007)	(0.012)	(0.011)	(0.007)				
Democracy-Voice					0.029	−0.107	−0.144	0.022
					(0.055)	(0.118)	(0.113)	(0.055)
Common law	−0.008	−0.004	−0.026	0.001	0.017	−0.007	−0.035	0.029
	(0.070)	(0.087)	(0.086)	(0.075)	(0.070)	(0.088)	(0.090)	(0.072)
Landlocked		0.071	0.040			0.068	0.036	
		(0.078)	(0.082)			(0.078)	(0.081)	
Rule of law		0.002	0.006			0.016	0.028	
		(0.015)	(0.015)			(0.017)	(0.018)	
Ethnic frac		0.192	0.267			0.179	0.272	
		(0.224)	(0.232)			(0.224)	(0.229)	
Linguistic frac		−0.131	−0.157			−0.138	−0.183	
		(0.185)	(0.176)			(0.185)	(0.175)	
Religious frac		0.035	0.043			0.042	0.057	
		(0.160)	(0.150)			(0.158)	(0.149)	
Native		0.055	0.080			0.043	0.056	
		(0.078)	(0.081)			(0.077)	(0.079)	
Communism		0.157	0.261			0.103	0.150	
		(0.181)	(0.170)			(0.183)	(0.177)	
Natural resources		−0.001	0.001			−0.002	−0.001	
		(0.004)	(0.004)			(0.004)	(0.004)	
Unemployment		−0.013*	−0.012*			−0.013*	−0.012	
		(0.007)	(0.007)			(0.007)	(0.007)	
FDI		0.022**				0.023**		
		(0.009)				(0.009)		
Trade			0.002***				0.002***	
			(0.000)				(0.000)	
Log GDP pc				0.022				0.038
				(0.062)				(0.056)
Constant	0.252***	0.235	0.041	0.065	0.287**	0.112	−0.129	−0.035
	(0.070)	(0.164)	(0.176)	(0.494)	(0.097)	(0.198)	(0.224)	(0.463)
Observations	72	64	64	71	73	64	64	72
Adj. R^2	14%	24%	30%	15%	14%	23%	30%	17%
Hansen J-stat	0.16	0.72	0.40	0.14	0.46	1.39	1.42	0.37
p-Value	0.69	0.39	0.53	0.71	0.50	0.24	0.23	0.54

support the argument that individualism has a direct influence on contract enforcement more so than an indirect impact through democracy.[11]

The differences between the findings using polity2 and voice stem largely from the differences in the correlations between individualism and polity2 (0.40) and voice (0.65). Given this additional source of endogeneity, we replicate these tests with IV estimations. In Table 7, Panel A, we present the first stage results. Consistent with the results in Table 5, latitude and pronoun drop strongly predict individualism.

In Panel B, we replicate the specifications from Table 5 using both polity2 and voice as measures of democracy. In all specifications, individualism is positive and significant and democracy is insignificant. This indicates that individualism is not impacting contract enforcement indirectly via democracy. According to regression (8), the model with the weakest coefficient, a one standard deviation increase in individualism increases the contract enforcement index by almost 0.50 of a standard deviation. The adjusted R-squareds range from 14% to 30%.[12]

Overall, the results in Tables 6 and 7 do not support the *Institutions Layers Hypothesis*. Once we control for democracy, individualism appears to directly influence contract enforcement costs. Perhaps individualism's impact depends on a country's level of democracy, as suggested by the *Interactive Hypothesis*. We turn now to investigate this question.

4.4. Interactive hypothesis

If democracy provides a mechanism through which individuals can express their cultural preferences, it is plausible that democracy magnifies individualism's impact on contract enforcement. Under this scenario, interactions between democracy and individualism

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[11] When additional controls are included in the specifications, standard errors for the democracy variables increase, possibly indicating multicollinearity. However, our VIF scores minimize this concern, ranging from 1.13 to 3.88.

[12] VIF scores range from 1.22 to 4.26, minimizing multicollinearity concerns.

Table 8

Individualism interactions and contract enforcement.

OLS regressions of individualism interactions on the contract enforcement index. Contract enforcement index is the first principal component of three contract enforcement variables: cost, time, and procedures to enforce a contract. Individualism is the degree to which individuals are integrated into groups, measured by the extent to which a society sees people primarily as individuals looking after themselves (high individualism) or as members of tightly knit communities (low individualism). All variables are as described in Table 1 and Appendix A. Robust standard errors are reported in parenthesis. ***, **, and * denote significance at 1%, 5%, and 10%, respectively. In Panel B, marginal effects are reported using maximum democracy scores.

Panel A: Interaction results

Dep. Var: Contract enforcement index

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Indiv. * Democracy-Polity2	0.001**	0.001**	0.001**	0.001**				
	(0.000)	(0.000)	(0.000)	(0.001)				
Indiv. * Democracy-Voice					0.004*	0.003	0.004**	0.004*
					(0.002)	(0.002)	(0.002)	(0.002)
Individualism	−0.006	−0.005	−0.004	0.010*	−0.000	0.000	0.000	−0.002
	(0.004)	(0.004)	(0.004)	(0.005)	(0.003)	(0.003)	(0.002)	(0.003)
Democracy-Polity2	−0.038**	−0.034**	−0.030*	−0.047**				
	(0.017)	(0.016)	(0.016)	(0.017)				
Democracy-Voice					−0.051	−0.051	−0.091	−0.102
					(0.097)	(0.094)	(0.090)	(0.099)
Common law	−0.072	−0.062	−0.075	−0.033	−0.014	−0.017	−0.047	0.013
	(0.066)	(0.066)	(0.061)	(0.065)	(0.070)	(0.065)	(0.059)	(0.068)
FDI		0.008**				0.009**		
		(0.004)				(0.004)		
Trade			0.002***				0.002***	
			(0.000)				(0.000)	
Log GDP pc				0.100**				0.092*
				(0.043)				(0.047)
Constant	0.685***	0.626***	0.491***	−0.121	0.502***	0.457***	0.358***	−0.296
	(0.143)	(0.136)	(0.141)	(0.365)	(0.086)	(0.087)	(0.089)	(0.415)
Observations	76	75	75	74	78	77	77	76
Adj. R²	28%	31%	38%	33%	25%	30%	37%	30%

Panel B: Marginal effects, highly democratic countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	0.007***	0.007***	0.007***	0.005***	0.006***	0.006***	0.007***	0.005**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)

will be positive and significant.[13] Alternatively, democracies may select policies inconsistent with cultural preferences, and instead, choose policies in line with political self-interest. If so, the interaction terms will be insignificant and individualism in isolation should remain significant. To test these claims, we create two interaction terms with individualism and each measure of democracy.

Table 8, Panel A presents the results introducing both individualism/democracy interaction terms. Columns (1)–(4) use polity2 as the democracy measure and columns (5)–(8) use voice. As shown, seven of the eight specifications report positive and significant coefficients on the individualism/democracy interaction terms. This is robust to the inclusion of the previously significant control variables: FDI, trade, and log GDP per capita.

The estimates imply that individualism's impact is magnified in democracies; however, the marginal effects are only significant in highly democratic countries. We report the marginal effects in Panel B using values for the maximum level of democracy. A one standard deviation increase in individualism in a highly democratic country, such as Portugal, increases the contract enforcement index between 0.41 and 0.55 standard deviations, depending on the specification. This suggests that democracies channel cultural preferences into regulation outcomes, thus amplifying individualism's influence on contract enforcement costs. However, even in highly democratic regimes the size of this amplification is less than individualism's direct effect.

5. Conclusion

In this study we investigate whether culture influences the efficiency of contract enforcement, and, if so, the mechanism through which culture impacts the costs of enforcement. Specifically, we examine the role of individualism in determining the variation in the costs of commercial contract enforcement. Our results suggest that individualism significantly decreases enforcement costs. We interpret these results to support the hypothesis that individualism is significantly associated with efficient contract enforcement.

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[13] Alesina and Giuliano (2015) believe that exploring interactions between culture and institutions is a promising avenue for research since it stresses a two way effect and does not rely on identifying causality.

We further examine how individualism relates to contract enforcement by hypothesizing that individualism can indirectly influence the cost of enforcement through its impact on democracy. Controlling for democracy, we find that individualism's effect on contract enforcement is independent of democracy, suggesting a direct association between individualism and contract enforcement. However, an examination of the interaction effects indicates that democracy magnifies individualism's impact on the efficiency of contract enforcement. Collectively, these results suggest that while democracy is not necessary for individualism to influence contract enforcement costs, its influence is enhanced in highly democratic countries.

Overall, our research illuminates how culture alters choices, expectations, and preferences, leading to vastly different economic and financial outcomes across countries. We provide a link between culture and financial development by illustrating that individualism directly affects contract enforcement costs and political institutions magnify this effect.

Identifying the influence of culture on economic outcomes should be seen as a means to better understand the world and ways in which we may be limited in changing it. Like other works on the economics of culture, pinpointing specific policy implications are difficult. This work shows that culture can constrain policymakers. Specifically, policymakers may be limited in their ability to find solutions to macroeconomic concerns, as culture is slow-moving and difficult to change.

In addition, our results suggest that when formal rules are introduced or changed to facilitate financial development, the effect will depend on the cultural values in that country. The search for optimal financial policy may be a misguided exercise, since what constitutes best practice for a given society will depend on its culture. Thus, policymakers should proceed with caution when designing or encouraging formal institutional transfer, as policies and formal rules may function very differently in diverse cultural environments. As a result, changes to top-down formal rules may be met with limited success if local norms are not taken into consideration.

Broadly speaking, the findings may have implications for development projects and U.S. foreign policy. Providing individuals with democratic rights may counter the cultural values in regions emphasizing collectivism, such as many Asian and African countries. This suggests that development projects championing democracy may not produce the desired outcome.

Appendix A. Data description

Variable	Description	Source
Primary variables		
Contract enforcement index	First principal component of three contract enforcement variables: a measure of the number of procedures, number of days, and the cost to enforce a contract. Scaled between 0 and 1, with 1 being most efficient.	Doing Business (World Bank, 2015b)
Cost to enforce	Cost recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita or $5000, whichever is greater. Three types of costs are recorded: court costs, enforcement costs, and average attorney fees. No bribes are recorded. Averaged 2004–2014.	Doing Business (World Bank, 2015b)
Time to enforce	Calendar days, counted from the moment the plaintiff decides to file the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between. Three different stages are recorded: time to file and serve, time for trial and judgment, time to enforce. Averaged 2004–2014.	Doing Business (World Bank, 2015b)
Procedures to enforce	Number of procedural steps to enforce a commercial contract through the relevant court. A procedure is defined as any interaction, required by law or commonly used in practice, between the parties or between the parties and the judge or court officer. Other procedural steps, internal to the court or between the parties and their counsel, may be counted as well. Procedural steps include the steps to file and serve the case, steps to assign the case to a judge, steps for trial and judgment, and steps necessary to enforce the judgment. Averaged from 2004 to 2014.	Doing Business (World Bank, 2015b)
Individualism	The degree to which individuals are integrated into groups; assumes weak ties among group members. Denotes the extent to which society sees people primarily as individuals looking after themselves (high individualism) or primarily as members of tightly knit communities (low individualism).	Hofstede, 2001
Other culture measures		
Power distance	Measures the degree to which less powerful members of society accept and expect power to be distributed unequally, capturing how society handles inequalities among people. In low power distance cultures, people strive to equalize the distribution of power and demand justification for inequalities of power.	Hofstede, 2001
Masculinity	Reflects the emphasis in society on caring for others, solidarity, and quality of life (Femininity), as opposed to achievement and success (Masculinity).	Hofstede, 2001
Uncertainty avoidance	The degree to which members of society are comfortable in unstructured situations. Highly uncertainty avoidant cultures are characterized by a strong need for predictability and control over the environment.	Hofstede, 2001
Embeddedness	Embeddedness captures the emphasis on the individual as part of a group and commitment to maintaining group solidarity and traditional order. Higher score implies greater collectivism.	Schwartz, 2006
Autonomy	Average score of affective autonomy and intellectual autonomy of a country. Autonomy measures the degree to which individuals find value in pursuing their own goals, experiences,	Schwartz, 2006

Appendix A (*continued*)

Variable	Description	Source
	ideas, and beliefs. A higher score implies greater individualism.	
Hierarchy	Refers to an emphasis on obeying role obligations within a legitimately unequal distribution of power, roles, and resources.	Schwartz, 2006
Harmony	Refers to an emphasis on accepting the social and physical world as it is, trying to comprehend and fit in rather than to change or exploit it.	Schwartz, 2006
Regions	Dummy variables reflecting a country's location in the following regions: East Asia Pacific, Eastern and Central Europe, Middle East and North Africa, South Asia, Sub-Saharan Africa, North America, and Western Europe.	WDI (World Bank, 2015a)
Controls		
Common law	Dummy variable coded 0 or 1: 1 indicates that a country was colonized by Britain and English legal code was transferred.	La Porta et al., 2008
Landlocked	Dummy variable for whether a country is landlocked.	CIA (World Fact Book, 2015
Rule of law	Measures access to an established and equitable system of rule of law. Ranges from 0 to 16, with a higher score indicating better rule of law. Measured in 2014.	Freedom House, 2014
Ethnic fractionalization	Measures the probability that two randomly selected individuals from a country's population will belong to the same ethnic group. Ranges from 0 to 1.	Alesina et al., 2003
Linguistic fractionalization	Measures the probability that two randomly selected individuals from a country's population will belong to the same language. Ranges from 0 to 1.	Alesina et al., 2003
Religious fractionalization	Measures the probability that two randomly selected individuals from a country's population will belong to the same religion. Ranges from 0 to 1.	Alesina et al., 2003
Communism	Share of the period from 1915 to 2000 that a country had a communist government. This variable was computed using dummy variables from McCleary and Barro (2006) capturing whether a country was communist in six periods, measured in 15 year intervals starting in 1925.	McCleary and Barro, 2006
Native	The percentage of a country's population with native ancestry in 1500 CE.	Ashraf and Galor, 2013
Natural resources	Natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents. Measured as a percentage of GDP. Averaged 1990–2014.	WDI (World Bank, 2015a)
Unemployment	Unemployment refers to the share of the labor force that is without work but available for and seeking employment. As a percent of total labor force. Averaged 1990–2014.	WDI (World Bank, 2015a)
FDI	Foreign direct investment (FDI) are the net inflows of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. As a percentage of GDP. Averaged from 1990 to 2014.	WDI (World Bank, 2015a)
Trade	Trade is the sum of exports and imports of goods and services measured as a share of GDP. Averaged from 1990 to 2014.	WDI (World Bank, 2015a)
Democracy-Polity2	Polity2 represents competitiveness of political participation, openness and competitiveness of selecting political leaders, and constraints on executive power and ranges from −10 to 10 with 10, representing strong democracy. Averaged 1990–2014.	Jaggers and Marshall, 2000
Democracy-Voice	Captures perceptions to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. The index is scaled from −2.5 to 2.5. Averaged 1996–2013.	Kaufmann et al., 2015
Log GDP pc	Log of gross domestic product, per capita, PPP, 2011 international $; averaged from 1990 to 2014.	WDI (World Bank, 2015a)
Instruments		
Latitude	Measured as the absolute value of the latitude of the country, scaled to values between 0 and 1 (0 is the equator).	La Porta et al., 1999
Pronoun drop	Dummy variable coded 0 or 1: 1 indicates grammatical rules allow for pronoun drop.	Davis and Abdurazokzoda, 2016

Appendix B. Country list

Country code	Country	Contract enforcement index	Cost to enforce (% of claim)	Time to enforce (days)	Procedures to enforce (number)	Individualism	Common law	Democracy-Polity2	Democracy-Voice	GDP pc
ARG	Argentina	0.66	17.33	590.00	36.00	46.00	0.00	7.64	0.29	
AUS	Australia	0.94	21.07	395.00	28.25	90.00	1.00	10.00	1.45	35,970
AUT	Austria	0.98	15.79	397.00	25.67	55.00	0.00	10.00	1.40	38,508
BGD	Bangladesh	0.01	66.80	1442.00	41.00	20.00	1.00	4.16	−0.42	1901
BEL	Belgium	0.93	17.70	505.00	26.83	75.00	0.00	9.36	1.39	37,013
BRA	Brazil	0.32	16.50	731.00	43.60	38.00	0.00	8.00	0.39	12,404
BGR	Bulgaria	0.55	23.80	564.00	38.42	30.00	0.00	8.56	0.48	11,499
CAN	Canada	0.65	22.30	570.00	36.00	80.00	1.00	10.00	1.50	36,945
CHL	Chile	0.68	28.60	480.00	36.00	23.00	0.00	8.96	0.99	15,742
CHN	China	0.73	16.20	452.80	37.00	20.00	0.00	−7.00	−1.54	5595
COL	Colombia	0.16	47.90	1350.00	33.25	13.00	0.00	7.36	−0.29	9462
CRI	Costa Rica	0.30	24.30	864.50	40.00	15.00	0.00	10.00	1.01	10,283
CZE	Czech Republic	0.83	33.08	633.67	27.17	58.00	0.00	9.59	0.95	23,347
DNK	Denmark	0.81	23.52	392.50	34.92	74.00	0.00	10.00	1.62	40,295
ECU	Ecuador	0.49	27.20	588.00	39.00	8.00	0.00	6.88	−0.26	8538
EGY	Egypt	0.17	26.20	1010.00	42.00	38.00	0.00	−4.84	−1.01	8294
SLV	El Salvador	0.61	19.20	786.00	33.00	19.00	0.00	7.20	0.02	6356
EST	Estonia	0.81	19.53	425.00	34.50	60.00	0.00	7.92	1.05	19,642
ETH	Ethiopia	0.56	15.20	610.00	38.50	27.00	0.00	−1.00	−1.19	800
FIN	Finland	0.90	13.30	308.50	33.00	63.00	0.00	10.00	1.58	34,307
FRA	France	0.94	17.40	390.83	29.00	71.00	0.00	9.00	1.24	34,185
DEU	Germany	0.91	14.40	395.50	31.00	67.00	0.00	10.00	1.37	37,351
GHA	Ghana	0.64	23.00	545.83	36.67	20.00	1.00	4.04	0.22	2596
GRC	Greece	0.29	14.40	1008.75	38.92	35.00	0.00	10.00	0.93	25,603
GTM	Guatemala	0.22	26.50	1449.50	31.00	6.00	0.00	6.80	−0.33	6330
HKG	Hong Kong	0.99	21.20	272.17	26.83	25.00	1.00		0.40	38,819
HUN	Hungary	0.86	15.00	365.00	34.00	80.00	0.00	10.00	1.00	19,235
IND	India	0.01	39.60	1420.00	46.00	48.00	1.00	8.80	0.39	3161
IDN	Indonesia	0.16	115.70	471.00	40.00	14.00	0.00	2.32	−0.26	6928
IRN	Iran	0.57	17.00	513.75	40.00	41.00	0.00	−3.72	−1.33	13,275
IRQ	Iraq	0.18	30.03	520.00	51.00	38.00	0.00	−5.67	−1.45	10,071
IRL	Ireland	0.97	26.90	560.00	21.42	70.00	1.00	10.00	1.38	38,102
ISR	Israel	0.43	25.30	890.00	35.00	54.00	1.00	9.64	0.63	24,905
ITA	Italy	0.13	28.77	1248.75	39.00	76.00	0.00	10.00	1.02	34,513
JAM	Jamaica	0.53	45.60	617.50	34.58	39.00	1.00	9.12	0.53	8378
JPN	Japan	0.84	32.20	360.00	32.00	46.00	0.00	10.00	1.00	32,839

Country code	Country	Contract enforcement index	Cost to enforce (% of claim)	Time to enforce (days)	Procedures to enforce (number)	Individualism	Common law	Democracy-Polity2	Democracy-Voice	GDP pc
KEN	Kenya	0.43	40.70	465.00	41.00	27.00	1.00	2.24	−0.40	2331
KOR	Korea	0.93	10.30	230.00	33.33	18.00	0.00	7.36	0.66	22,856
KWT	Kuwait	0.21	18.80	566.00	50.00	38.00	0.00	−7.08	−0.44	83,497
LBN	Lebanon	0.44	30.80	721.00	37.00	38.00	0.00	6.00	−0.42	13,080
LBY	Libya	0.31	27.00	690.00	43.00	38.00	0.00	−5.88	−1.65	24,023
LUX	Luxembourg	0.99	9.40	321.00	26.00	60.00	0.00	10.00	1.53	78,358
MYS	Malaysia	0.82	29.13	539.17	29.67	26.00	1.00	4.00	−0.38	16,786
MLT	Malta	0.46	35.90	505.00	40.00	59.00	0.00		1.19	23,851
MEX	Mexico	0.68	30.90	388.90	36.80	30.00	0.00	6.00	0.14	14,493
MAR	Morocco	0.52	25.20	510.00	40.00	46.00	0.00	−6.08	−0.63	5184
NLD	Netherlands	0.92	24.23	514.00	26.00	80.00	0.00	10.00	1.58	40,713
NZL	New Zealand	0.95	23.40	216.00	30.00	79.00	1.00	10.00	1.60	28,614
NGA	Nigeria	0.35	57.70	509.80	40.20	20.00	1.00	0.64	−0.83	3815
NOR	Norway	0.89	9.90	295.00	34.00	69.00	0.00	10.00	1.61	57,490
PAK	Pakistan	0.09	23.00	993.10	46.00	14.00	1.00	2.84	−0.96	3694
PAN	Panama	0.58	45.00	686.00	32.00	11.00	0.00	8.84	0.49	11,755
PER	Peru	0.44	35.70	467.92	41.25	16.00	0.00	6.04	−0.06	7651
PHL	Philippines	0.38	26.53	855.33	37.00	32.00	0.00	8.00	0.03	4749
POL	Poland	0.46	19.07	847.08	36.00	60.00	0.00	9.20	0.98	15,925
PRT	Portugal	0.69	13.67	562.00	35.83	27.00	0.00	10.00	1.27	24,799
ROM	Romania	0.73	24.40	522.42	34.42	30.00	0.00	7.72	0.39	13,298
RUS	Russian	0.88	14.90	267.00	35.00	39.00	0.00	4.35	−0.72	17,451
SAU	Saudi Arabia	0.34	27.50	635.00	42.25	38.00	1.00	−10.00	−1.64	40,785
SLE	Sierra Leone	0.08	131.17	515.00	39.67	20.00	1.00	1.84	−0.52	1251
SGP	Singapore	1.00	22.47	137.50	21.00	20.00	1.00	−2.00	−0.06	56,258
SVK	Slovak Republic	0.74	27.85	567.50	33.00	52.00	0.00	8.95	0.88	18,884
ZAF	South Africa	0.80	33.20	600.00	29.58	65.00	1.00	8.52	0.65	10,870
ESP	Spain	0.53	17.42	513.75	40.92	51.00	0.00	10.00	1.17	29,886
SUR	Suriname	0.00	37.10	1715.00	44.00	47.00	0.00	4.88	0.28	11,804
SWE	Sweden	0.85	31.25	412.17	31.00	71.00	0.00	10.00	1.60	37,359
CHE	Switzerland	0.86	22.83	408.00	32.00	68.00	0.00	10.00	1.56	49,502
TWN	Taiwan	0.38	17.70	510.00	45.00	17.00	0.00	8.28	0.82	
TZA	Tanzania	0.66	14.30	515.00	38.00	27.00	1.00	−1.88	−0.32	1756
THA	Thailand	0.77	15.00	469.25	36.00	20.00	1.00	6.08	−0.15	10,314
TTO	Trin. & Tobago	0.05	33.50	1340.00	42.00	16.00	1.00	9.72	0.55	21,328
TUR	Turkey	0.71	26.80	420.00	36.33	37.00	0.00	7.72	−0.21	14,206
GBR	United Kingdom	0.83	38.63	411.00	30.17	89.00	1.00	10.00	1.34	32,844
USA	United States	0.79	30.50	420.00	33.60	91.00	1.00	10.00	1.21	45,328
URY	Uruguay	0.41	19.00	721.25	40.00	36.00	0.00	10.00	0.99	13,830
VEN	Venezuela	0.78	43.70	530.83	30.00	12.00	1.00	5.16	−0.64	15,738
VNM	Vietnam	0.71	29.88	410.17	36.00	20.00	0.00	−7.00	−1.41	3173
ZMB	Zambia	0.60	38.70	552.67	35.00	27.00	1.00	4.40	−0.31	2708
Average		0.59	28.50	610.25	35.78	41.83	0.32	5.82	0.34	21,387

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