

When Does Legal Origin Matter?

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December 2008

Abstract: This paper takes another look at the extent of business regulation in civil law versus common law countries. In contrast to existing studies that find a heavier role of government in the civil law countries, we show that this holds only for a subset of civil and common law countries that have well developed political institutions but not otherwise. In short, it is the interaction between legal origin and the quality of political institutions and not legal origin alone that can explain differences in the level of regulation across countries. For example, focusing on entry regulations, our results show that the number of procedures required to start a business are lower in common law compared with civil law countries by 2.5 procedures or 24.3% of the sample mean. However, this difference varies sharply across the sample of countries with high and low levels of political accountability. It equals a large 3.4 procedures (37% of the sample mean) for the former and a mere 1.1 procedures (9.7% of the sample mean) for the latter. We provide plausible explanations for these findings based on recent contributions to the literature on political and legal institutions.

Keywords: Legal Origin, Regulation, Political Institutions
JEL H11, K2, P48, P51

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1. Introduction

A large literature has developed showing systematic differences across legal traditions in the extent to which governments regulate businesses and more broadly, the quality of economic institutions. This paper argues that legal tradition alone is insufficient in explaining differences in the level of regulation across countries. In particular, it is the interaction between legal tradition and the quality of political institutions which determines the extent of regulation. For example, looking at entry regulation in a sample of 92 civil and common law countries, we find no evidence that civil law countries regulate new entry of businesses more than common law countries when political institutions are poorly developed. In short, legal origin matters for the level of entry regulation only in roughly one half of the sample of countries that have well developed political institutions. We provide some plausible explanations as to the likely reason for this finding.

Our focus on the differential effect of legal origin across countries with poor and well developed political institutions is in sharp contrast to existing studies that typically assume that legal origin affects all countries in the same way. Broadly, these studies find that compared with civil law, common law countries have fewer restrictions on the entry of new businesses (Djankov et al. 2002), more flexible labor markets (Botero et al. 2004), less corruption (Treisman 2000) and more developed financial institutions (La Porta et al. 1997). La Porta et al. (2008) provide an excellent survey of these and related studies.

The heavier role of government in the civil law countries reported in these studies is attributed to historical differences between the two legal traditions. The English common law developed the way it did to protect private property and private freedom

against the crown. Independent judiciary and a system of decentralized law-making where judges had broad powers to interpret and change laws were put in place as effective checks on the government. In contrast, the French civil law developed the way it did to promote state control. Legislators drafted laws without gaps that would otherwise afford judges the opportunity to re-interpret or change them. The marginalization of the judiciary as a check on the government helped extend state control of the economy.

We test our hypothesis using data on entry regulations, a measure of how business friendly economic institutions are and the focus of recent studies (Djankov et al. 2002). As mentioned above, our contention is that moving from civil to common law may do little to lower the level of entry regulation unless the country has developed political institutions that hold politicians accountable for what they do and don't do. Entry regulations may be lower in countries with better legal institutions that prevent the use of such regulations by politicians to generate rents.¹ However, this effect is likely to be much stronger when (weak) political institutions do not allow for an easy escape route to the rent-seeking politicians. To fix ideas, we provide a glimpse of what the data say. For brevity, we focus here on a single indicator of the quality of entry regulation, number of procedures required to start a business (Doing Business, World Bank), and a single measure of political accountability, number of constraints on the executive (Polity IV). Djankov et al. (2002) discuss the stated measure of entry regulation in detail and show that it is much higher (more heavy regulation) in civil law compared with common law countries.

¹ There are two contrasting theories, the public interest theory and the public choice theory, on why governments regulate the entry of new businesses. The public interest theory contends that entry regulations are a response to market failures (Pigou 1938) while the public choice theory views such regulations as a source of rents to politicians (Tullock 1967, Stigler 1971, Peltzman 1976). Djankov et al. (2002) look at both these explanations and find evidence in favor of the public choice theory.

Figure 1 shows the difference in the number of procedures required to start a business between common and civil law countries and how this difference varies between the set of countries that have above median (high political accountability) and below median (low political accountability) values of the number of constraints on the executive. Briefly, for the full sample, the number of procedures averages 10.3: 11.2 for the civil law countries and 8.7 for the common law countries. That is, the difference between common and civil law countries equals 2.5 procedures or 24.3% of the sample mean. However, for the sample of countries with low political accountability, the difference equals 1.1 procedures (11.7 for civil law and 10.6 for common law) or 9.7% of the sample mean (11.3 procedures). For countries with high political accountability, the difference is a large 3.4 procedures (10.7 for civil law and 7.3 for common law) or 37% of the sample mean (9.2 procedures). We note that the pattern of regulation in the figure is preserved when we use alternative measures of business regulation and/or political accountability. Examples include cost of starting a business as a percentage of per capita income (Doing Business project), number of days it takes to start a business (Doing Business project), Business Freedom index (Heritage Foundation), and the number of veto players (Database of Political Institutions, World Bank). Findings using these variables are discussed in detail in the sections that follow.²

² One concern with the legal and political variables discussed above may be that they capture the same phenomenon. That is, higher political accountability could be a direct outcome of the greater emphasis on private freedom vis-à-vis state control in the common law compared with civil law countries. If this were true, it would complicate the identification of the effect of legal origin by the level of political accountability on the level of regulation. However, the data do not validate this concern. For example, the correlation between the common law dummy and the number of constraints on the executive is a mere 0.165. We note the low correlation between legal origin and the quality of political institutions is consistent with other studies in the related literature (see, for example, Djankov et al. 2002, La Porta et al. 2008). The full set of correlations is provided in Table 3 and discussed below.

Recent contributions to the political economy literature provide some theoretical insights on the empirical approach of this paper. Acemoglu and Robinson (2006) argue that there are different ways in which social groups and politicians come to acquire power. For example, power may be allocated by formal institutions (*de jure* political power) or acquired as a result of an individual's wealth, weapons, ability to solve collective action problems and capture political parties (*de facto* political power). Interestingly, the authors argue that political reforms that alter the distribution of *de jure* power may have little effect on economic outcomes due to offsetting changes in *de facto* political power. More generally, checks and balances on politician's behavior work better in conjunction with one another than individually. In other words, this broad principle suggests that legal and political institutions are more likely to be successful in creating better economic institutions when used simultaneously. In the context of the present paper, a move from civil law to common law is likely to be more effective in creating a less burdensome (to firms) web of entry regulations when political accountability is higher.

Our empirical results clearly support this line of thinking. We look at three different measures of entry regulation and two different measures of political accountability in a cross-section of 92 countries. Our results show that common law countries regulate entry of new businesses less than civil law countries but this difference between civil and common law countries is significant and economically large only when political accountability is high. When political accountability is low or roughly below its median value, difference in the level of entry regulation between civil and common law countries is statistically insignificant and small in magnitude. For example, evaluated at

the 25th and 75th percentile values of the number of constraints on the executive, a move from civil to common law lowers the (log of) number of procedures required to start a business by 0.014 and 0.438 (against the sample mean number of procedures of 2.26), respectively. These findings are highly robust to a number of controls including per capita income, human capital, country-size, etc.

We pay due attention to the potential endogeneity problems with our empirical results. In addition to using sufficiently lagged values of the political accountability measures (to address reverse causality) and a number of controls (to address omitted variable bias), we also instrument for political constraints using a measure of newspaper readership. The instrument is motivated by a strand of the political economy literature that suggests a strong role of media in supporting higher levels of political accountability. When private agents are dispersed, media diffusion can help monitor the activities of incumbent politicians raising the level of political accountability in the country (Stromberg 2004, Besley and Prat 2007, Djankov et al. 2003c). Perotti and Volpin (2007) look at the diffusion of newspaper readership as a measure of access to information and note that it is a strong proxy for the degree of private scrutiny on political decisions even after controlling for differences in income levels across countries. Following this body of work, we use (lagged values of) newspaper readership as an instrument for the level of political accountability. Our results show a strong relationship between newspaper readership and political accountability that is robust to various controls.

It might be possible to extend the logic of the story above to other economic institutions and we find some evidence of this using a broader measure of business regulations, the Heritage Foundation's Business Freedom Index. However, some caution

is necessary in interpreting the findings of this paper too broadly. For example, laws on enforcement of contracts between private agents do not necessarily lend themselves to generation of rents by politicians, and therefore, may not be affected by the degree of political accountability. The same can be said of laws that protect small investors and labor. A case by case analysis of these economic institutions along the lines of the present paper is required to see if they follow a pattern similar to what we find below. We leave this broader task for future research.

To sum up the key contribution of our paper, while the existing literature (e.g. Djankov et al. 2002, La Porta et al. 2008) shows that legal origin matters even after controlling for political variables, these studies implicitly assume that legal origin has the same effect on their dependent variables irrespective of the levels of the political variables. In contrast, the present paper shows that the impact of legal origin differs depending on the level of political constraint. That is, the effects of legal origin and political variables are inter-dependent making it imperative to analyze their interaction. In particular, legal origin is irrelevant for explaining the regulation of entry at low levels of political constraint³.

The remainder of this paper is as follows. In section 2 we introduce the main variables and provide summary statistics. Section 3 contains the main empirical findings while robustness checks are discussed in section 4. A summary of the main findings of the paper along with a discussion on the potential caveats to our results and scope for future work is provided in the concluding section.

³ See a paper by Keefer and Stasvage (2000) that has a similar flavor. It shows that independence of central banks is effective (in achieving intended targets such as lower inflation) only when political accountability is high (so that politicians do not reverse central bank decisions).

2. Data and main variables

A definition of all the variables used in the regressions is provided in Table 1. Summary statistics of the main variables are contained in Table 2. The data are a cross-section of 92 countries that follow the English common law or the French civil law.⁴ These data are collected from various sources such as the World Bank (Doing Business project, World Development Indicators, Database of Political Institutions), La Porta et. al. (1999), Polity IV and Heritage Foundation.

2.1 *Dependent variable*

Our main dependent variable is a measure of entry regulation across countries taken from the World Bank's Doing Business project. It equals the (log of) number of procedures required to start a business, averaged over the all years (2003-2007) for which data are available (*Procedures*). The mean value of *Procedures* equals 2.26 and the standard deviation equals 0.42.

For robustness, we look at another measure of entry regulation, the cost of starting a business as measured by the Doing Business project. As for *Procedures*, we use the (log of) average value of the cost of starting a business (as a percentage of country's per capita income) over all years for which data are available (*Cost*). We also experimented with two other measures which include the time it takes to complete all registration requirements in order to start a business (Doing Business project) and the Business Freedom Index (*BFI*) from Heritage Foundation.⁵ *BFI* is based on expert's opinion on

⁴ We leave out countries with Socialist, German and Scandinavian legal origins, a common practice in the literature. See, for example, La Porta et al. (2008). List of countries in the sample is provided in Table 1.

⁵ Annual values of *BFI* are available from 1997-2007. Since 2006, the index is based purely on the Doing Business indicators of starting a business, obtaining (construction) permits and closing a business. We use

how difficult it is due to business regulations for entrepreneurs to obtain licenses and their business. Hence, it is a broader measure of the regulatory environment than the Doing Business indicators mentioned above and helps shed some light on the generality of our results. *BFI* varies between 0 and 100 with higher values implying less regulation of businesses or greater business freedom. The mean value of the index equals 62.7 and the standard deviation is 10.8.

2.2 Explanatory variables

The main explanatory variables include legal origin of a country, a measure of political accountability and the interaction of legal origin and the political accountability measure (henceforth, main interaction term). The remaining explanatory variables are in the nature of standard controls motivated by existing work on regulation, legal origin and political institutions. Among others, these variables include the main religion of the country, per capita income, human capital and total population (country-size).

2.2.1 Legal Origin

For legal origin, we use a dummy variable, *English*, that equals 1 for a country whose legal structure is based on the English common law and 0 otherwise (French civil law country). In the full sample, there are 33 common law and 59 civil law countries. Data source for *English* is La Porta et al. (1999).

2.2.2 Political accountability

three year average values of the index prior to 2006 (2003-2005) to ensure that we are not merely replicating the results for *Procedures* and *Cost* discussed above.

There are a number of variables that capture various aspects of the quality of political institutions. The most commonly used one among these is the number of constraints on the executive (from Polity IV database) which is also our main measure of the level of political accountability across countries. In order to minimize problems due to reverse causality, we use lagged values of the number of constraints on the executive averaged over the period 1980-1989 (*Constraints*). *Constraints* varies between 1 and 7 with higher values implying greater political accountability. In our sample, the mean value of the variable equals 3.51 and the standard deviation is 2.19.

One potential shortcoming of the index on executive constraints is that it is a subjective measure based on experts' opinion. To alleviate this concern, we use an alternative index of political accountability, *Checks*, developed by Beck et al. (1999) and averaged over the period 1980-1989. This index is a count of the number of veto players, based on whether the executive and legislative chamber(s) are controlled by different parties in presidential systems, and on the number of parties in government for parliamentary systems. The index is further modified to take account of the fact that certain electoral rules will affect the cohesiveness of governing coalitions. *Checks* varies between 0 and 7.1 in our sample with higher values of the variable implying greater political accountability. The mean value of *Checks* equals 2.04 and the standard deviation is 1.36.

2.3 Other controls

Since legal origin is predetermined and we use lagged values of the political accountability measures, reverse causality from the level of regulation to our main

explanatory variables is unlikely. However, a relatively more serious concern with our findings could arise from a failure to control for other relevant variables (omitted variable bias) such as income and education (discussed in detail below). To this end, we show that our main results are robust to a number of controls such as income, education, regional fixed effects, country-size and the main religion of the country. For income, we use (log of) GDP per capita (PPP adjusted, constant 2000 USD) averaged over the period 1990-1999 (*Income*) and taken from the World Development Indicators, World Bank. For education, we follow Glaeser et al. (2004) and use (log of) primary enrollment rate, average values over the 1990-1999 period (*Education*). Data source for the variable is World Development Indicators, World Bank. The remaining controls are described in detail in the next two sections.

3. Main results

3.1 Estimation without controls

Our main regression results are provided in Tables 4-6. These are based on *Procedures* as the dependent variable and *Constraints* as the political accountability measure. Estimation method used is the ordinary least squares with Huber-White robust standard errors.

Columns 1 and 2 of Table 4 show that without any other controls, common law and higher political accountability are associated with lower number of procedures to start a business. For example, a move from civil to common law lowers the value of *Procedures* by 0.322 (column 1, Table 4) or 14.2% of the mean value of the dependent variable. The effect is significant at 1% level. Similarly, a move from the lowest to the

highest value of *Constraints* lowers *Procedures* by 0.462 or 20.4% of the mean of the latter (column 2, Table 4). The change is significant at 1% level. Both these variables continue to show significant effects (at 1% level) on the dependent variable when we include them simultaneously in the specification (column 3, Table 4). In column 4 of Table 4 we include our main interaction term. Regression results in the column show that the interaction term is economically large and statistically significant (at 1% level). The effect of common law on *Procedures* varies between 0.045 (p-value of 0.678) at the lowest value of *Constraints* and a large -0.661 (p-value of 0.001) at the highest value of *Constraints*. Figure 2 provides a full picture of the variation in the effect of English common law on the dependent variable depending on the level of political accountability along with the 95% confidence interval.

3.2 Estimation with Regional Dummies

The estimates presented so far could suffer from potential omitted variable bias. That is, some omitted variable could be driving both low political accountability and high regulation in common law countries. For example, Panel A of Table 3 reveals a high correlation between political accountability and the level of income and education. As well, Djankov et al. (2002) find a significant negative relationship between income level and entry regulation. They note that controlling for GDP per capita is a “critical” test for the robustness of the relationship between legal origin, political institutions and the level of regulation⁶.

⁶ Similarly, Glaeser et al. (2004) find that effect of political institutions on growth becomes much weaker (and statistically insignificant) when one controls for the level of human capital.

The high correlation between political accountability and the level of income and education mentioned above suggests a broader problem. That is, aspects of overall development not fully captured by income and education levels may also be correlated with political accountability and regulation. This source of omitted variable bias cannot be eliminated by merely controlling for income and education levels. Below we argue that the inclusion of regional dummies alleviates much of this concern.

A closer inspection of the correlation between political variables and income, education reveals an interesting pattern across and within three major regions: Africa, Western Europe and North America, and the rest of the world. That is, a relatively larger chunk of the variation in the political variables occurs within than across these three regions. However, it is the variation across the regions, and especially across Europe and North America (11 countries) and the rest, that drives the high overall correlation between education, income and the political variables. To see this, we first provide correlations between the various variables dropping the 11 Western European and North American countries from the sample (Panel B, Table 3). Note that the correlation between income, education and the political variables is much smaller in this restricted sample (Panel B, Table 3) than in the full sample (Panel A, Table 3). Next, starting with the full sample, we regress each variable on the regional dummies and take the residuals. Correlation between these residuals is reported in Panel C of Table 3 while the correlation between the original values of the variables and their respective residuals is reported in Panel D of Table 3. In Panel C we find that the correlation between the political variables and income and education are only moderate in magnitude suggesting that differences in these variables are correlated across rather than within the three

regions. Further, all correlations in Panel D are high implying that much of the variation in our main variables occurs within than across the three regions.

The findings discussed above allow us to use a parsimonious specification for our main regression results without causing much serious concern about the omitted variable bias problem. That is, we control for regional fixed effects: *Africa* and *Europe & North America*. The rest of the world is the omitted category.

Regression results reported in column 5 of Table 4 show that the regional fixed effects do not change our main results much from above. In fact, the estimated coefficient of the interaction term becomes stronger, increasing (in absolute value) from -0.118 (column 4, Table 4) to -0.135 (column 5, Table 4). As above, the effect of *English* on *Procedures* is statistically insignificant and positive at the lowest value of *Constraints* but negative and statistically significant at 1% level for the highest value of *Constraints*.

To get a sense of how widespread the effect of legal origin on entry regulation is, Panel B of Table 4 shows the critical value of *Constraints* above which common law has a statistically significant (at 5% level) negative effect on the dependent variable. Without the regional fixed effects the critical value equals 2.61 (42nd percentile value), while with regional effects it is 2.43 (41st percentile value). In other words, common law is associated with a significantly lower number of procedures to start a business for the highest 58-59% of the values of *Constraints*.

We also experimented with dropping the Western European and North American countries from the sample but this had very little effect on our main results. For example, the estimated coefficient of the interaction term increased in absolute value from -0.118 for the full sample (column 4, Table 4) to -0.134 (p-value of 0.009, not shown) for the

restricted sample. Similarly, for the specification in column 5 of Table 4, the corresponding change was from -0.135 (column 5, Table 4) to -0.148 (p value of 0.006, not shown). Given that differences in income levels and overall development are particularly sharp between Western European and North American countries relative to the rest of the world, the results reported above suggest that it is extremely unlikely that our main interaction term is spuriously picking up income, education or overall development related effects on regulation.

3.3 Estimation with other controls

Results of estimation with other controls are provided in Table 5. We begin by showing that our results are robust to controls for income and education. In column 1 of Table 5 we control for both these variables. The estimated coefficient of our main interaction term changes only marginally from -0.135 (column 5, Table 4) to -0.130 (column 1, Table 5) and remains significant at 1% level. Similarly, there is very little change in the estimated coefficients of *English* and *Constraints*. For example, for the former, the coefficient value changes from 0.190 (column 5, Table 4) to 0.170 (column 1, Table 5) and for the latter, there is no change. This is in sharp contrast to Glaeser et al. (2004) who show that controlling for education destroys the otherwise large effect of the quality of political institutions on economic growth. One reason for this could be that while education may affect growth through increased R&D and higher worker productivity, there is no obvious link between education and entry regulation. If this is indeed true then the issue of political institutions spuriously picking up the effect of human capital on regulation is less credible. We note that the estimated coefficient of education is

statistically insignificant and economically small in column 1 of Table 5 and also elsewhere in the paper.

One concern with the findings so far could be that the differential effect of legal origin across countries with low and high levels of political accountability that we found above is spuriously the differential effect of legal origin across countries with low and high levels of income and/or education. This source of omitted variable bias for our main interaction term is not ruled out by simply controlling for the level of income and education as we did above. Hence, we extend our specification by controlling for the interaction term between *English* and *Income* as well as *Education*. Regression results controlling for these additional interaction terms are reported in column 2 of Table 5. These results clearly show that there is no significant difference in the effect of legal origin on *Procedures* across rich and poor countries and across countries with low and high levels of education. More importantly, the estimated coefficient of our main interaction term still remains significant although it shows a moderate decline (in absolute value) from -0.130 (column 1, Table 5) to -0.097 (p-value of 0.030, column 2, Table 5).

As documented in the broader literature on legal origins, income and education levels do not vary much with the legal origin of countries. For our sample of countries, the correlation between *English* and *Income* equals -0.001 and 0.159 between *English* and *Education*. These correlations are relatively small and suggest that it is unlikely that our main interaction term is picking up the differential effect of political accountability across rich and poor countries or across countries with high and low levels of education. We confirm this view by controlling for the interaction term between *Constraints* and *Income*

and between *Constraints* and *Education*. Regression results reported in column 3 of Table 5 show that these additional controls do not change our main result much. The estimated coefficient of our main interaction term still remains negative and significant at less than 5% increasing marginally in magnitude from -0.097 (column 2, Table 5) to -0.099 (column 3, Table 5).

La Porta et al. (2008) argue that omitted religious factors constitute the most serious threat to the findings in the literature on legal origin. We follow their remedy by controlling for (the fixed effects of) the main religion of the country. The main religions include Catholicism, Islam, Protestantism and the residual category of all other religions. Regression results in column 4 of Table 5 show that controlling for the main religion fixed effects hardly changes the estimated coefficient of our main interaction term. It changes from -0.099 (column 3, Table 5) to -0.100 (column 4, Table 5) and remains significant at close to 1% level (p-value of 0.012). Also, there is no significant change in the regression results for the remaining variables in the specification from above.

In our last robustness check we control for the size of the country measured by the (log of) total population of the country, averaged over the 1990-1991 period (*Population*). Mulligan and Shleifer (2004) argue that running regulatory institutions takes a fixed cost, and therefore jurisdictions with larger populations affected by a given regulation are more likely to have them. They find that in a sample of over 70 countries, population is significantly positively correlated with a number of regulatory measures including the ones used in the present study.

Our main results easily survive controls for population as well as its interaction with the legal origin dummy and the political accountability variable. Adding *Population*

to the list of controls above, the estimated coefficient of the main interaction term changed only slightly from -0.100 (column 4, Table 5) to -0.104 (not shown) and remained significant at 5% level (p-value of 0.013). As predicted by Mulligan and Shleifer, *Population* showed a positive correlation with the dependent variable but this was not statistically significant (at the 10% level), perhaps due to the large number of controls in place. Next, we allow the effect of population to vary with the legal origin of countries and the level of political accountability. Regression results reported in column 5 of Table 5 show that these additional controls do not affect our main result much. The estimated coefficient of our main interaction term remains negative and statistically significant (at 1% level). In fact, it is slightly bigger in magnitude with the population related controls than without them. For population, we find no significant variation in its effect across civil and common law countries or across high and low political accountability countries.

3.4 Instrumental variables (IV) regressions

To address any remaining concerns regarding the reverse causality from business regulation to political accountability, we instrument political accountability using newspaper readership following the work of Perotti and Volpin (2007). Specifically, we use (log of) number of newspapers sold per capita in 1980 (*Media*) as the instrument.

To serve as a valid instrument for *Constraints*, *Media* should be highly correlated with constraints, and it should affect *Procedures* only through *Constraints*. Panel A of Table 6 shows the relationship between *Media* and *Constraints*. This relationship is economically large, statistically significant and positive and easily survives controls for

income, education, legal origin, etc. For example, regressing *Constraints* on *Media* without any other controls, we find that the R-squared equals a high of 0.442 and a unit standard deviation increase in the value of *Media* is associated with an increase in the value of *Constraints* by 1.48 (or 42% of the mean value of *Constraints*), significant at 1% level (column 1, Table 6).

Panel B of Table 6 reports the second stage instrumental variables (IV) regression results. In these regressions, values of *Constraints* are replaced by their predicted values ($Constraints^{IV}$) taken from the regression of *Constraints* on *Media* along with the various controls discussed above (listed in Panel A, Table 6) which we treat as included instruments.⁷ The IV regressions confirm our main result discussed above. That is, the estimated coefficient of the main interaction term is negative and statistically significant (at 5% level) with or without the various controls. As an additional check, we also added the interaction terms between *Media* and income, education and population to the final specification in column 5, Panel B, Table 6. However, this did not change our main results much. The estimated coefficient of the main interaction term ($English*Constraints^{IV}$) changed only slightly from -0.271 (column 5, Panel B, Table 6) to -0.261 (not shown) and remained significant at 5% level (p-value of 0.036).

4. Robustness to alternative measures of political and economic institutions

4.1 Alternative measures of entry regulation and political accountability

Regression results for the cost of starting a business as the dependent variable are provided in Table 7. These results show that the estimated coefficient of our main

⁷ Our main results do not change much if we first interact *English* and *Media* and use the predicted values of the interaction term ($English*Media$). The predicted values are obtained by regression $English*Constraints$ on $English*Media$, with and without the various controls discussed above.

interaction term is negative and statistically significant at 5% level with and without the various controls. As above, controlling for the regional fixed effects causes the estimated coefficient of the interaction term to rise (in absolute value) from -0.290 (column 1, Table 7) to -0.408 (column 2, Table 7). The latter estimate implies that the value of *Cost* is lower in common law countries by 2.02 (against the sample mean of 3.65) at the highest value of *Constraints* and higher by 0.430 at the lowest value of *Constraints*. The former effect is significant at 1% level while the latter is insignificant at the 10% level or less. Adding the remaining controls discussed above does not change these results much (columns 3-7, Table 7).⁸

Regression results using *Checks* as a measure of political accountability are reported in Table 8 and are qualitatively similar to the ones discussed above. The estimated coefficient of our main interaction term is negative and significant at the 5% level or less for both measures of entry regulation, with or without the various controls.⁹ As above, controlling for the regional fixed effects causes the estimated coefficient of the interaction term to rise (in absolute value) although only moderately.

Lastly, we used (log of) number of days required to start a business as measured by the World Bank's Doing Business project as the dependent variable. Results using this variable are roughly similar to the ones discussed above. For example, in our main specification (controlling for regional fixed effects), the estimated coefficient of our main interaction term was negative and statistically significant at the 5% level. It ranged

⁸ The instrumental variables regression results using *Cost* as the dependent variable are almost similar to the ones discussed above for *Procedures* as the dependent variable (Table 6). The estimated coefficient of our main interaction term is negative and significant at close to the 1% level for all the specifications in Table 6. These results are not reported but available on request from the authors.

⁹ The only exception is when *Cost* is regressed on the common law dummy, *Checks* and their interaction without any other controls. The estimated coefficient of the interaction term is significant between 5-10% level with a p-value of 0.070, although it is still large in magnitude (column 5, Table 8).

between -0.256 and -0.303 using *Constraints* for the various specifications shown in Table 8 and between -0.256 and -0.373 with *Checks* as the political accountability measure. Roughly, common law countries show lower number of days to start a business than the civil law countries and the difference is significant at 5% level for the largest 40% of the values of the political accountability variables but insignificant otherwise.

4.2 Business Freedom Index as dependent variable

As a final robustness check, we used *BFI* as an alternative measure of business regulation. Regression results using *BFI* are provided in Table 9 and are similar to the ones we found above.¹⁰ That is, the estimated coefficient of the main interaction term is positive, economically large and statistically significant at 5% level. The positive coefficient implies that business freedom in common law relative to civil law countries increases as the level of political accountability rises. Briefly, without any other controls, *BFI* shows a statistically significant (at 5% level) and positive relationship with the two political accountability measures (not reported) and the same holds for *English* (coefficient value of 5.38 with a p-value of 0.049). In columns 1 and 4 of Table 9, we include both these controls simultaneously along with our main interaction term using *Constraints* and *Checks*, respectively. In both these columns, the interaction term is positive and large. For example, using *Constraints* (column 1, Table 9), *BFI* rises by 11.1 (p-value of 0.003) or 17.7% of the mean value of the dependent variable when we move from civil to common law at the highest value of *Constraints*. The corresponding change

¹⁰ All regressions in Table 9 exclude El Salvador which shows erratic changes in the dependent variable around our sample period. It is also a gross outlier in most of the specifications in the Table. With El Salvador included in the sample, the estimated coefficient of our main interaction term is lower by 25-30% (in absolute value) in some of the specifications. However, it is still significant at close to 1% level in all the specifications in Table 9 except for column 3 where it is significant between 10-20% level (coefficient value of 1.23, p-value of 0.163).

at the lowest value of *Constraints* equals a decrease of 2.58, statistically insignificant at 10% level (p-value of 0.473). Adding the various controls to the specification or using the *Checks* variable does not cause these results to change in a qualitative sense (columns 2-6, Table 9). These findings suggest that the differential effect of legal origin on regulation across countries with high and low levels of political accountability may hold for regulations other than entry barriers. As mentioned in the introduction, a case by case analysis of these other regulations is required to ascertain (or reject) the validity of our claim.

5. Discussion and Conclusion

Before ending this paper some discussion of our key results and potential caveats to them is in order. To begin with, some caution is necessary in interpreting our results regarding political accountability too narrowly. For example, the Polity IV project measures the overall quality of democracy in a country through four sub-components. These sub-components include *Constraints*, competitiveness of executive recruitment, openness of executive recruitment and the competitiveness of participation which captures the extent to which alternative preferences to policies and leadership can be pursued in the political arena. These sub-components are all highly correlated. For example, the correlation between *Constraints* and the competitiveness of executive recruitment index (average value over 1980-89) equals 0.818. While this high correlation is not specific to the present study, it does suggest caution in attributing our results for *Constraints* and *Checks*

too narrowly to political accountability rather than the quality of the broader political environment.¹¹

Next, some studies suggest that whether candidates are elected based on the proportion of votes received by the party (proportional representation) or not is a good predictor of the quality of political institutions. La Porta et. al. (2008) look at the effect of legal origin on a number of variables (including entry regulation) and use a proportional representation dummy as their main control for the quality of political institutions. However, we find only a weak correlation between the proportional representation dummy and our measures of political accountability. For example, the proportional representation dummy explains only 7.04% of the variation in *Constraints* and 3.6% in *Checks*. What this suggests is that the proportional representation system captures dimensions of the political environment other than political accountability. Perhaps for this reason, and similar to La Porta et al. (2008), we do not find any significant effect of proportional representation on the level of regulation. Further, the effect of common law on regulation shows no significant difference between countries that follow the proportional representation system and those that don't.

Lastly, La Porta et. al. (2008) show that the level of regulation (as measured by *Procedures*) is lower in common law compared with civil law countries even for the sample of countries that have autocratic governments as identified by Przeworski et. al. (2000). However, our findings above seem to suggest otherwise. Political accountability is likely to be at the lower end in countries with autocratic governments so that the distinction between civil and common law (for the level of regulation) should be

¹¹ We share this problem with the broader literature on how political institutions affect economic outcomes. See, for example, Stasavage (2002).

irrelevant for such countries. Closer inspection provides some light on why our results differ from those of La Porta et. al. That is, there is substantial overlap in the level of political accountability across autocratic and non-autocratic countries and only 16.3% of the variation in *Constraints* and 14.1% in *Checks* can be explained by autocracy vs. non-autocracy.¹² Hence, it seems that the autocratic and non-autocratic distinction does not properly capture the variation across countries in the level of political accountability as defined in the present paper. As a further check, we controlled for the dummy indicating if a country is autocratic or not and also its interaction with the legal origin dummy. However, this did not change our main results much from above and we did not find any significant difference in the effect of legal origin across autocratic and non-autocratic countries.¹³

To conclude, the theory of legal origin suggests that common law countries are more inclined towards private freedom, protection of private property and less involvement of the state in the functioning of the economy than the civil law countries. The present paper attempts to look at entry regulation in a cross-section of 92 civil and common law countries. We find that while common law countries regulate entry of new businesses less than the civil law countries, the difference between them is significant only when political accountability is high. In countries with low political accountability, the distinction between civil and common law traditions does not matter for the extent of entry regulation. Consistent with the broader literature on political economy, the finding

¹² The relatively weak relationship between autocracy and political accountability is not too surprising because Przeworski et. al. classify many countries as autocratic even when these countries had only a brief spell of autocratic governments. For example, Cameroon is classified as an autocratic country but it had only one year of autocratic government (1971-1972) during the 1960-1990 period covered by the study.

¹³ For example, using *Procedures*, *Constraints* and the main controls discussed above (specification in column 5, Table 4), the estimated coefficient of our main interaction term changed from -0.135 (column 5, Table 4) to -0.125 (p-value of 0.005) when we controlled for a dummy indicating if a country is autocratic or not.

suggests that while the ideology of greater private freedom and judicial independence in the common law versus civil law countries is important for explaining business regulation, these are likely to have desirable effects only when political institutions provide the necessary enforcement guarantee.

We believe that the present work offers a number of exciting opportunities for future work. For example, the legal tradition of a country is known to be highly correlated with the level of financial development of countries. It will be useful to check if this relationship is uniform or varies with the level of political accountability. A similar case can be made for other covariates of legal origin such as the quality of contract enforcement, regulation of the labor market and corruption. We hope that the present paper stimulates more research along these lines.

References

- [1] Acemoglu, Daron and James A. Robinson (2006), "Persistence of Power, Elites and Institutions," mimeograph.
- [2] Beck, Thorsten, G. Clarke, A. Groff, P. Keefer and P. Walsh (1999), "New Tools and New Tests in Comparative Political Economy: The Database of Political Institutions," mimeograph, International Finance Corporation, Washington, DC.
- [3] Beck, Thorsten, Asli Demirguc-Kunt and Ross Levine (2003), "Law and Finance: Why Does Legal Origin Matter?" *Journal of Comparative Economics*, 31; pp. 653-675.
- [4] Beck, Thorsten, Asli Demirguc-Kunt and Vojislav Maksimovic (2005), "Financial and Legal Constraints to Growth: Does Firm Size Matter?" *Journal of Finance*, 60(1), pp. 137-177.
- [5] Besley, Timothy and Andrea Prat (2007), "Handcuffs for the Grabbing Hand? Media Capture and Government Accountability," *American Economic Review*, *Forthcoming*.
- [6] Botero, Juan, Simeon Djankov, Rafael La Porta, Florencio Lopez-de Silanes and Andrei Shleifer (2004), "The Regulation of Labor," *Quarterly Journal of Economics*, 119(4): 1339-82.
- [7] Clarke, George R. G., Robert Cull and Maria S.M. Peria (2006), "Foreign Bank Participation and Access to Credit Across Firms in Developing Countries," *Journal of Comparative Economics*, 34(4), pp. 774-795.
- [8] Dabla-Norris, Era, Mark Gradstein and Gabriela Inchauste (2008), "What Causes Firms to Hide Output? The Determinants of Informality," *Journal of Development Economics*, 85 (1-2), pp. 1-27.
- [9] Djankov, Simeon, Rafael La Porta, Florencio Lopez-de Silanes and Andrei Shleifer (2002), "The Regulation of Entry," *Quarterly Journal of Economics*, 117(1): 1-37.
- [10] Djankov, Simeon, Rafael La Porta, Florencio Lopez-de Silanes and Andrei Shleifer (2003a), "Courts," *Quarterly Journal of Economics*, 118(2): 453-517.
- [11] Djankov, Simeon, Edward Glaeser, Rafael La Porta, Florencio Lopez-de Silanes and Andrei Shleifer (2003b), "The New Comparative Economics," *Journal of Comparative Economics*, 31(1): 595-619.
- [12] Djankov, Simeon, Caralee McLiesh, Tatiana Nenova and Andrei Shleifer (2003c), "Who Owns the Media?" *Journal of Law and Economics*, 46, pp. 341-381.

- [13] Djankov, Simeon, Rafael La Porta, Florencio Lopez-de Silanes and Andrei Shleifer (2008), "The Law and Economics of Self Dealing," Forthcoming, *Journal of Financial Economics*.
- [14] Gennaioli, Nicola and Andrei Shleifer (2007), "The Evolution of Common Law," *Journal of Political Economy*, 117(1), pp. 43-68.
- [15] Glaeser, Edward L., Rafael La Porta, Florencio Lopez-De-Silanes and Andrei Shleifer (2004), "Do Institutions Cause Growth?" *Journal of Economic Growth*, 9, pp. 271-303.
- [16] La Porta, Rafael, Florencio Lopez-de Silanes, Andrei Shleifer and Robert Vishny (1997), "Legal Determinants of External Finance," *Journal of Finance*, 52(3): 1131-50.
- [17] La Porta, Rafael, Florencio Lopez-de Silanes, Andrei Shleifer and Robert Vishny (1999), "The Quality of Government," *Journal of Law, Economics and Organization*, 15(1): 222-79.
- [18] La Porta, Rafael, Florencio Lopez-de Silanes and Andrei Shleifer (2008), "The Economic Consequences of Legal Origins," *Journal of Economic Literature*, 46(2), pp. 285-332.
- [19] Mulligan, B. Casey and Andrei Shleifer (2004), "Population and Regulation," NBER Working Paper No. 10234.
- [20] Peltzman, Sam (1976), "Towards a More General Theory of Regulation," *Journal of Law and Economics*, XIX, pp. 211-240.
- [21] Perotti, Enrico and Paolo Volpin (2007), "Politics, Investor Protection and Competition," unpublished manuscript.
- [22] Pigou, Arthur C. (1938), **The Economics of Welfare**, 4th edition, Macmillan and Co., London.
- [23] Przeworski, Adam, Michael E. Alvarez, Jose Antonio Cheibub and Fernando Limongo (2000), **Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990**, Cambridge University Press, Cambridge and New York.
- [24] Stasavage, David (2002), "Private Investment and Political Institutions," *Economics and Politics*, 14(1), pp. 41-63.
- [25] Stigler, George J. (1971), "The Theory of Economic Regulation," *Bell Journal of Economics and Management Science*, II, pp. 3-21.
- [26] Stromberg, David (2004), "Radio's Impact on Public Spending," *Quarterly Journal of Economics*, 66, pp. 3-27.

[27] Treisman, Daniel (2000), "The Causes of Corruption: A Cross-National Study," *Journal of Public Economics*, 76(3), pp. 399-457.

[28] Tullock, Gordon (1967), "The Welfare Cost of Tariffs, Monopoly, and Theft," *Western Economic Journal*, V, pp. 224-232.

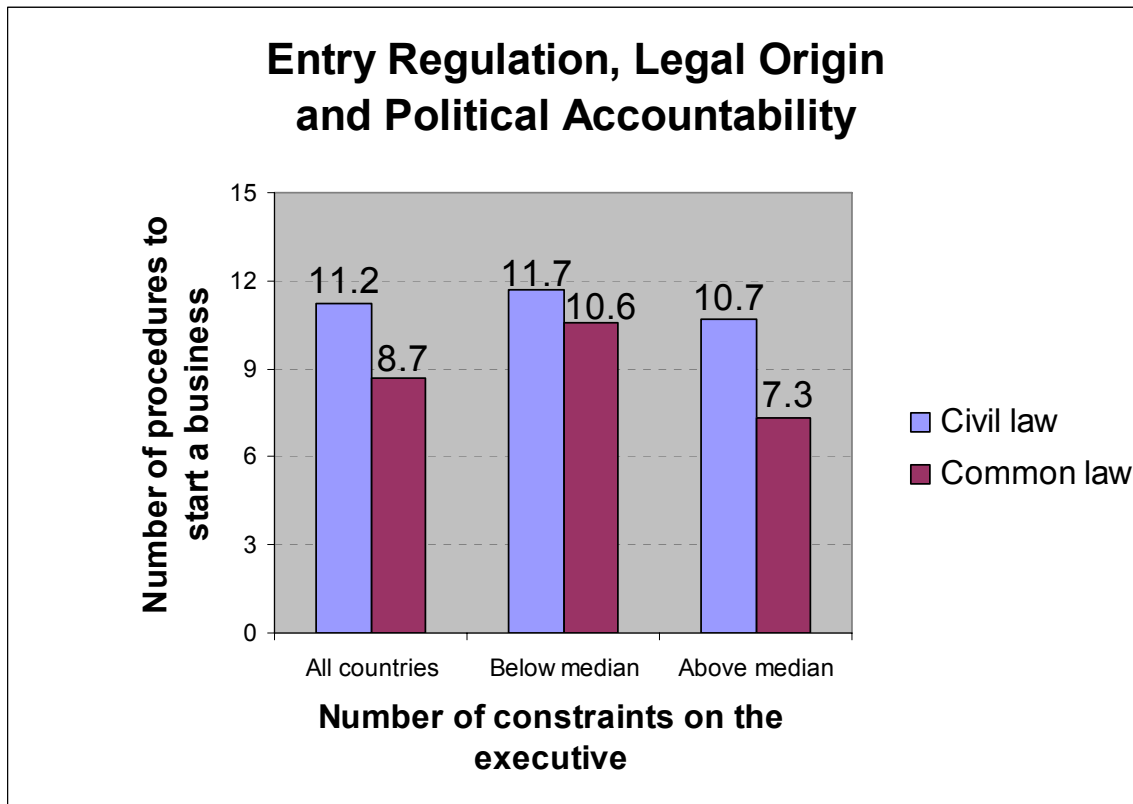


Figure 1

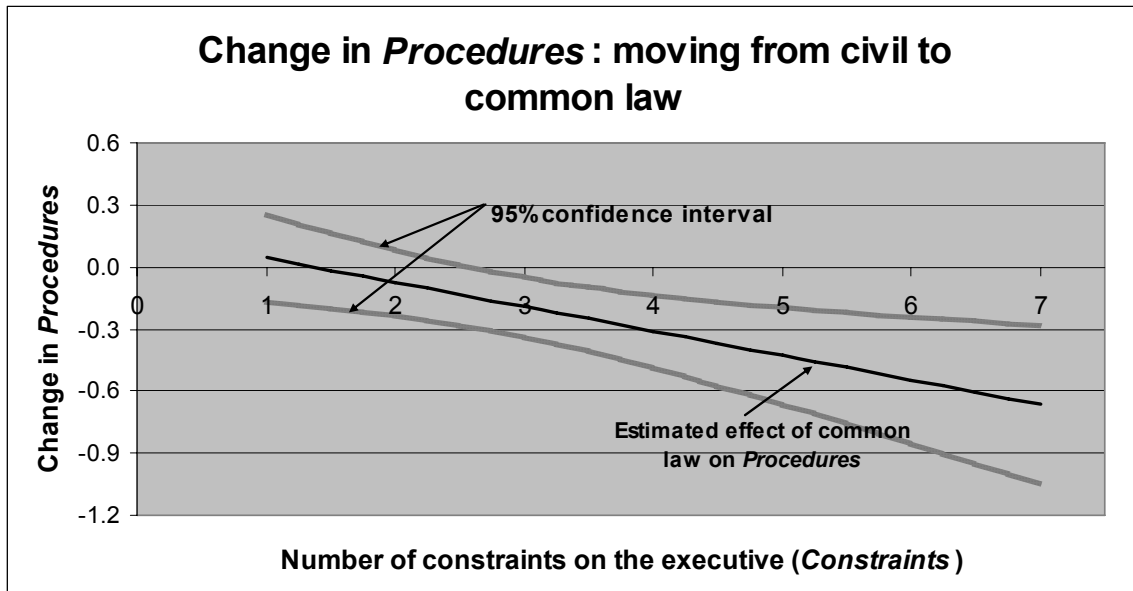


Figure 2

1. X axis in the figure measures *Constraints*
2. Y axis measures the change in *Procedures* when we move from civil to common law (from column 4, Table 4) for various values of *Constraints* along with the 95% confidence interval.
3. The solid line in the figure (marked as “Estimated effect”) is the estimated value of $English+English*Constraints$ for various values of *Constraints*. The remaining two lines show the 95% confidence interval for the estimated values.

Table 1: Description of Main Variables and Sample

Variable	Description
<i>Procedures</i>	Log of average value of the number of procedures required to start a new business. The average is taken over all years (2003-08) for which data are available. Source: Doing Business project, World Bank. www.doingbusiness.org .
<i>Cost</i>	Log of average cost incurred to meet all regulatory requirements to start a business. The cost is expressed as a percentage of per capita income of the country. The average is taken over all years (2003-08) for which data are available. Source: Doing Business project, World Bank. www.doingbusiness.org .
Business Freedom index	Values between 0-100 with higher values implying less regulation of businesses. We use three year averages (2003-2005) of the index. Source: Heritage Foundation.
<i>English</i>	A dummy variable equal to 1 for a country that follows the English common law and 0 otherwise (French civil law country). Source: La Porta et al. (1999)
<i>Constraints</i>	Number of constraints on the executive. We use average values of the index over the period 1980-89. Source: Polity IV database.
<i>Checks</i>	An index of political accountability developed by Beck et al. (1999). The index is a count of the number of veto players in the government. We use average value of the index taken over the period 1980-89. Source: Beck et al. (1999)
<i>Income</i>	Log of average value of GDP per capita (PPP adjusted and in constant 2000 USD). The average is taken over annual values over the period 1990-99. Source: World Development Indicators, World Bank.
<i>Education</i>	Log of average value of the gross primary enrollment rate. The average is taken over annual values over the period 1990-99. Source: World Development Indicators, World Bank
<i>Region fixed effects:</i>	
<i>Africa</i>	A dummy variable equal to 1 if a country is located in the African continent and 0 otherwise.
<i>Europe & North America</i>	A dummy variable equal to 1 if a country located in Western Europe or North America (Canada and U.S.A.) and 0 otherwise.
<i>Religion fixed effects</i>	Dummy variables that indicate the main religion of the country. The main religions are Catholic,

<i>Population</i>	Protestant, Muslim and the (omitted) residual category of the rest. Source: La Porta et al. (1999) Log of average value of total population of the country where the average is taken over the period 1990-1999.
<i>Media</i>	Source; World Development Indicators, World Bank. Log of number of newspapers sold per capita in 1980. Source: Statistical Abstract of the World, 3rd edition; (The main primary data source is UNESCO)

List of countries in the sample

Algeria, Angola, Argentina, Australia, Bangladesh, Belgium, Benin, Bolivia, Botswana, Brazil, Burkina Faso, Burundi, Cameroon, Canada, Central African Republic, Chad, Chile, Colombia, Comoros, Congo, Congo (DR), Costa Rica, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, France, Gambia, Ghana, Greece, Guatemala, Guinea, Guinea-Bissau, Guyana, Honduras, India, Indonesia, Iran, Ireland, Israel, Italy, Ivory Coast, Jamaica, Jordan, Kenya, Kuwait, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mexico, Morocco, Mozambique, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Portugal, Rwanda, Saudi Arabia, Senegal, Sierra Leone, South Africa, Spain, Sri Lanka, Sudan, Swaziland, Syria, Tanzania, Thailand, Turkey, United Kingdom, United States of America, Uganda, United Arab Emirates, Uruguay, Venezuela, Zambia.

Table 2: Summary statistics for the main variables

Variable	Sample Size	Mean	Standard deviation	Range (Minimum, Maximum)
<i>Procedures</i>	92	2.26	0.42	(0.69, 2.94)
<i>Cost</i>	92	3.65	1.65	(-1.61, 7.03)
<i>English</i>	92	0.36	0.48	(0, 1)
<i>Constraints</i>	92	3.51	2.19	(1, 7)
<i>Checks</i>	92	2.04	1.36	(1, 7.1)
<i>Income</i>	92	8.12	1.31	(5.63, 10.55)
<i>Education</i>	89	4.42	0.35	(3.33, 4.80)
<i>Population</i>	92	16.31	1.45	(13.09, 20.64)
Business Freedom Index (<i>BFI</i>)	85	62.71	10.82	(40, 85)
<i>Media</i>	84	-3.79	1.94	(-9.76, -0.88)

Table 3: Correlations

Panel A: Full sample							
	<i>English</i>	<i>Constraints</i>	<i>Checks</i>	<i>Income</i>	<i>Education</i>	<i>Procedures</i>	<i>Cost</i>
<i>English</i>	1						
<i>Constraints</i>	0.165	1					
<i>Checks</i>	0.175	0.782	1				
<i>Income</i>	-0.001	0.629	0.611	1			
<i>Education</i>	0.159	0.469	0.422	0.588	1		
<i>Procedures</i>	-0.368	-0.401	-0.464	-0.382	-0.200	1	
<i>Cost</i>	-0.216	-0.572	-0.597	-0.778	-0.519	0.590	1
Panel B: Excluding Western Europe and North America							
	<i>English</i>	<i>Constraints</i>	<i>Checks</i>	<i>Income</i>	<i>Education</i>	<i>Procedures</i>	<i>Cost</i>
<i>English</i>	1						
<i>Constraints</i>	0.194	1					
<i>Checks</i>	0.266	0.755	1				
<i>Income</i>	-0.012	0.470	0.407	1			
<i>Education</i>	0.173	0.414	0.397	0.564	1		
<i>Procedures</i>	-0.356	-0.274	-0.282	-0.242	-0.139	1	
<i>Cost</i>	-0.183	-0.450	-0.44	-0.73	-0.50	0.49	1
Panel C: Residuals							
	<i>English</i>	<i>Constraints</i>	<i>Checks</i>	<i>Income</i>	<i>Education</i>	<i>Procedures</i>	<i>Cost</i>
<i>English</i>	1						
<i>Constraints</i>	0.226	1					
<i>Checks</i>	0.268	0.589	1				
<i>Income</i>	0.009	0.244	0.132	1			
<i>Education</i>	0.218	0.194	0.128	0.272	1		
<i>Procedures</i>	-0.402	-0.209	-0.273	-0.165	-0.040	1	
<i>Cost</i>	-0.289	-0.258	-0.270	-0.578	-0.268	0.499	1
Panel D: Residuals and the original values of the variables							
	<i>English</i>	<i>Constraints</i>	<i>Checks</i>	<i>Income</i>	<i>Education</i>	<i>Procedures</i>	<i>Cost</i>
<i>English</i>	0.999						
<i>Constraints</i>		0.746					
<i>Checks</i>			0.663				
<i>Income</i>				0.618			
<i>Education</i>					0.791		
<i>Procedures</i>						0.917	
<i>Cost</i>							0.766

“Residuals” are obtained by regressing each variable on two dummies: *Africa* and *Europe & North America*. These dummy variables are defined in Table 1 along with the rest of the variables.

Table 4: Main Results

Dependent variable: <i>Procedures</i>					
	(1)	(2)	(3)	(4)	(5)
Panel A					
<i>English*Constraints</i>				-0.118*** (0.008)	-0.135*** (0.001)
<i>English</i>	-0.322*** (0.002)		-0.271*** (0.002)	0.162 (0.256)	0.19 (0.171)
<i>Constraints</i>		-0.077*** (0.002)	-0.067*** (0.002)	-0.018 (0.380)	0.038* (0.088)
<i>Africa</i>					0.135* (0.055)
<i>Europe & North America</i>					-0.377** (0.024)
R-squared	0.135	0.161	0.254	0.343	0.421
Observations	92	92	92	92	92
p-values in brackets. All standard errors are Huber-White robust; significance levels are denoted by *** 1% level, ** 5% level and * 10% level.					
Panel B					
Critical values of <i>Constraints</i> (percentile values in brackets) above which <i>English</i> has a statistically significant (at the 5% level) negative effect on the dependent variable:					
				2.61 (42)	2.43 (41)

Table 5: Main specification with controls

Dependent variable: <i>Procedures</i>					
	(1)	(2)	(3)	(4)	(5)
<i>English*Constraints</i>	-0.130*** (0.002)	-0.097** (0.030)	-0.099*** (0.006)	-0.100** (0.012)	-0.111*** (0.008)
<i>English</i>	0.17 (0.264)	1.754* (0.089)	1.485 (0.181)	1.912 (0.115)	1.686 (0.228)
<i>Constraints</i>	0.038 (0.104)	0.022 (0.352)	-0.2 (0.573)	-0.199 (0.594)	-0.326 (0.460)
Region Fixed effects	Yes	Yes	Yes	Yes	Yes
<i>Income</i>	-0.044 (0.426)	-0.011 (0.841)	0.218*** (0.002)	0.220*** (0.007)	0.204** (0.021)
<i>Education</i>	0.04 (0.712)	0.061 (0.555)	-0.387** (0.022)	-0.385** (0.038)	-0.333* (0.090)
<i>English*Income</i>		-0.06 (0.473)	0.039 (0.577)	0.046 (0.532)	0.055 (0.457)
<i>English*Education</i>		-0.271 (0.313)	-0.385 (0.139)	-0.503* (0.068)	-0.525* (0.069)
<i>Constraints*Income</i>			-0.094*** 0.000	-0.095*** (0.001)	-0.088*** (0.003)
<i>Constraints*Education</i>			0.226** (0.012)	0.226** (0.014)	0.205** (0.033)
Religion fixed effects				Yes	Yes
<i>Population</i>					-0.033 (0.458)
<i>English*Population</i>					0.018 (0.700)
<i>Constraints*Population</i>					0.01 (0.297)
R-squared	0.429	0.443	0.554	0.562	0.57
Observations	89	89	89	89	89

p-values in brackets. All standard errors are Huber-White robust; significance levels are denoted by *** 1% level, ** 5% level and * 10% level.

Table 6					
	(1)	(2)	(3)	(4)	(5)
Panel A: First stage IV regressions					
Dependent variable: <i>Constraints</i>					
<i>Media</i>	0.765*** (0.000)	0.763*** (0.000)	0.374** (0.015)	0.317** (0.032)	0.334** (0.023)
<i>English</i>		0.071 (0.858)	0.469 (0.265)	0.628 (0.129)	-2.572 (0.791)
<i>Regional fixed effects</i>			Yes	Yes	Yes
<i>Income</i>			0.059 (0.869)	0.456 (0.188)	0.373 (0.340)
<i>Education</i>			0.086 (0.897)	-0.856 (0.128)	-0.569 (0.337)
<i>Population</i>				0.286* (0.066)	0.12 (0.487)
<i>Religion fixed effects</i>				Yes	Yes
<i>English*Income</i>					0.176 (0.601)
<i>English*Education</i>					-0.741 (0.730)
<i>English*Population</i>					0.306 (0.265)
F-test (joint significance of all the variables)	103.41*** (0.000)	50.94*** (0.000)	81.9*** (0.000)	40.12*** (0.000)	25.12*** (0.000)
R-squared	0.451	0.452	0.557	0.628	0.638
Observations	84	84	81	81	81

Panel B: Second stage IV regressions					
Dependent variable: <i>Procedures</i>					
<i>English*Constraints^{IV}</i>		-0.297*** (0.000)	-0.193*** (0.006)	-0.192*** (0.003)	-0.271** (0.029)
<i>English</i>		0.856*** (0.003)	0.488* (0.079)	0.448 (0.122)	-1.824 (0.455)
<i>Constraints^{IV}</i>		-0.017 (0.569)	-0.049 (0.659)	-0.067 (0.597)	-0.046 (0.733)
Observations		84	81	81	81

1) Regression results in Panel B include all the controls listed in the corresponding column in Panel A. For each column, *Constraints^{IV}* are the predicted values of *Constraints* from the corresponding column in Panel A.

2) p-values in brackets. All standard errors are Huber-White robust; significance levels are denoted by *** 1% level, ** 5% level and * 10% level.

Table 7: Results using Cost of Starting a Business

Dependent variable: <i>Cost</i>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>English*Constraints</i>	-0.290**	-0.408***	-0.338***	-0.362***	-0.380***	-0.376***	-0.333**
	(0.023)	(0.001)	(0.001)	(0.007)	(0.003)	(0.004)	(0.010)
<i>English</i>	0.638	0.838*	0.638	7.627*	5.176	5.239	7.218
	(0.216)	(0.088)	(0.196)	(0.066)	(0.268)	(0.336)	(0.167)
<i>Constraints</i>	-0.30***	0.045	0.108	0.109	1.149	0.725	-0.453
	0.000	(0.594)	(0.118)	(0.139)	(0.263)	(0.517)	(0.714)
Region Fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
<i>Income</i>			-0.791***	-0.926***	-0.679***	-0.739***	-0.84***
			0.000	0.000	(0.005)	(0.006)	(0.004)
<i>Education</i>			-0.552	-0.156	-0.145	-0.156	-0.089
			(0.229)	(0.741)	(0.806)	(0.786)	(0.883)
<i>English*Income</i>				0.345	0.477*	0.450*	0.444*
				(0.155)	(0.052)	(0.056)	(0.074)
<i>English*Education</i>				-2.173**	-1.852*	-1.784	-2.252*
				(0.026)	(0.070)	(0.152)	(0.060)
<i>Constraints*Income</i>					-0.105	-0.081	-0.082
					(0.132)	(0.228)	(0.221)
<i>Constraints*Education</i>					-0.03	0.018	0.147
					(0.894)	(0.942)	(0.541)
Religion fixed effects						Yes	Yes
<i>Population</i>							-0.358**
							(0.011)
<i>English*Population</i>							(0.000)
							(0.999)
<i>Constraints*Population</i>							0.038
							(0.237)
R-squared	0.377	0.551	0.697	0.715	0.727	0.734	0.766
Observations	92	92	89	89	89	89	89

p-values in brackets. All standard errors are Huber-White robust; significance levels are denoted by *** 1% level, ** 5% level and * 10% level.

Table 8: Results using Checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Procedures</i>				<i>Cost</i>			
<i>English*Checks</i>	-0.134** (0.049)	-0.148** (0.028)	-0.137** (0.039)	-0.149** (0.029)	-0.345* (0.070)	-0.427** (0.032)	-0.408** (0.029)	-0.598*** (0.005)
<i>English</i>	0.032 (0.803)	0.031 (0.803)	-0.009 (0.946)	1.757 (0.172)	0.352 (0.467)	0.299 (0.539)	0.311 (0.536)	3.89 (0.453)
<i>Checks</i>	-0.075** (0.029)	-0.008 (0.880)	-0.01 (0.856)	0.302 (0.754)	-0.57*** 0.000	-0.095 (0.590)	-0.021 (0.902)	3.769 (0.126)
<i>Region fixed effects</i>		Yes	Yes	Yes		Yes	Yes	Yes
<i>Income</i>			-0.065 (0.280)	0.188*** (0.004)			-0.835*** 0.000	-0.776*** (0.002)
<i>Education</i>			0.085 (0.423)	-0.045 (0.869)			-0.448 (0.338)	0.703 (0.374)
<i>English*Income</i>				0.032 (0.634)				0.507** (0.042)
<i>English*Education</i>				-0.448* (0.067)				-1.857 (0.118)
<i>Checks*Income</i>				-0.149*** 0.000				-0.204** (0.015)
<i>Checks*Education</i>				0.102 (0.650)				-0.5 (0.319)
<i>Religion fixed effects</i>				Yes				Yes
<i>Population</i>				-0.051 (0.272)				-0.285** (0.029)
<i>English*Population</i>				-0.003 (0.955)				0.069 (0.596)
<i>Checks*Population</i>				0.034 (0.101)				0.028 (0.614)
R-squared	0.343	0.371	0.39	0.571	0.388	0.513	0.689	0.774
Observations	92	92	89	89	92	92	89	89

p-values in brackets. All standard errors are Huber-White robust; significance levels are denoted by *** 1% level, ** 5% level and * 10% level. The dependent variable in columns (1) to (4) is *Procedures* and *Cost* in columns (5) to (8).

Table 9: Business Freedom Index

Dependent variable: Business Freedom index							
	(1)	(2)	(3)		(4)	(5)	(6)
	Using Constraints				Using Checks		
<i>English*Constraints</i>	2.281**	2.816***	1.656**	<i>English*Checks</i>	3.528***	4.038***	3.600***
	(0.017)	(0.001)	(0.035)		(0.009)	(0.000)	(0.004)
<i>English</i>	-4.87	-5.744	-36.583	<i>English</i>	-4.09	-4.115	-32.155
	(0.268)	(0.177)	(0.305)		(0.292)	(0.273)	(0.402)
<i>Constraints</i>	1.230***	-0.421	-6.491	<i>Checks</i>	2.320***	-0.194	-16.629
	(0.010)	(0.524)	(0.519)		(0.000)	(0.848)	(0.344)
<i>Region fixed effects</i>		Yes	Yes	<i>Region fixed effects</i>		Yes	Yes
<i>Income</i>			7.739***	<i>Income</i>			6.991***
			(0.000)				(0.000)
<i>Education</i>			-10.506	<i>Education</i>			-9.643
			(0.102)				(0.149)
<i>English*Income</i>			0.571	<i>English*Income</i>			-0.487
			(0.696)				(0.756)
<i>English*Education</i>			6.206	<i>English*Education</i>			8.249
			(0.423)				(0.319)
<i>Constraints*Income</i>			-0.354	<i>Checks*Income</i>			0.045
			(0.474)				(0.943)
<i>Constraints*Education</i>			3.770*	<i>Checks*Education</i>			5.496
			(0.087)				(0.185)
<i>Religion fixed effects</i>			Yes	<i>Religion fixed effects</i>			Yes
<i>Population</i>			2.174*	<i>Population</i>			1.613
			(0.059)				(0.178)
<i>English*Population</i>			0.215	<i>English*Population</i>			-0.248
			(0.846)				(0.822)
<i>Constraints*Population</i>			-0.540**	<i>Checks*Population</i>			-0.619*
			(0.015)				(0.061)
R-squared	0.304	0.409	0.695	R-squared	0.329	0.393	0.697
Observations	85	85	83	Observations	85	85	83

p-values in brackets. All standard errors are Huber-White robust; significance levels are denoted by *** 1% level, ** 5% level and * 10% level.