Trade and Harmonization:
If Your Institutions are Good, Does it Matter if they are Different? [1]

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Abstract

Good institutional quality (function) and similar institutional design (form) can promote international trade by reducing transaction costs. We evaluate the relative importance of function versus form in a gravity model, using an indicator of different legal systems as a proxy for differences in form, together with indicators of overall institutional quality. We take into account the endogeneity of institutional quality. We find that good institutions promote trade much more than similar legal systems and have much more explanatory power. This effect is economically large: up to 10 times the effect of different legal systems.

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1. Introduction

Institutions that lower transactions costs can support market exchange (North 1991, 1994), e.g., by lowering risk of expropriation and by providing recourse if expropriation does occur. If so doing, we consider them to be "good institutions". In recent years we have witnessed an effort to change specific institutions so that they become standardized across countries (institutional harmonization). In particular, policymakers, governments and multilateral agencies have promoted harmonization of institutions as a way to increase global trade flows. For example, the World Trade Organization (WTO) has adopted the Trade Related Intellectual Property Rights (TRIPS) agreement which aims to standardize how intellectual property is protected in countries.[2] Moreover, the focus on institutional *form* has taken precedence over institutional quality, or *function* (World Bank, 2001).

But institutions that perform similar tasks (such as contract enforcement) may be designed differently in different countries.[3] Given limited resources, this presents a tradeoff between investing in institutional harmonization versus improvements in function within a particular form. In light of the efforts towards harmonization, a key policy question for developing countries is whether it is more important to standardize institutions with some notion of international "best practice form" or to focus on improving existing institutions' performance in each country, despite their formal differences. This question has hitherto not been addressed in the empirical trade literature.

[2] The TRIPS agreement was originally signed in 1994 and then amended in 2003 and 2005. Other examples include regulatory standards, like the debate on pasteurization of traded milk products; and competition law and enforcement, which were on the negotiation table in the earlier Doha rounds of trade talks. Market forces, that is, consumer tastes and producer innovations may also increase pressures for voluntary, rather than policy induced standardization and changed trading patterns.

[3] See also World Bank (2001), Rodrik (2004a) and Rodrik (2004b) for further discussion of this point.

We evaluate empirically the relative benefits of institutional harmonization versus overall institutional quality for international trade, while stressing their separate impacts along separate dimensions: form versus function. Our analysis leads us to conclude that quality matters much more than harmonization for trade.

We use differences in legal origins as a proxy for differences in institutional form, and three different measures of institutional quality: regulatory quality, control of corruption and protection of property rights. We employ two methods in order to evaluate the relative importance of institutional quality versus differences in legal systems. The first is to estimate how much more trade would be induced by a reasonable change in institutional quality versus how much is deterred by differences in legal systems for the average trade pair. This method serves as an evaluation of possible policy outcomes.[4] The second method estimates the impacts of quality versus differences in legal systems for the average country *vis a vis* the rest of the world. This method helps determining the relative importance of institutional quality versus differences in legal systems in existing international trade flows.

As expected, institutional quality has a positive effect on bilateral trade, while differences in legal origin have a negative effect on trade. But we estimate that the effect of institutional quality is much higher than the effect of differences in legal origin on trade – up to ten times higher in some estimates. By this we mean that for the average trading pair, a reasonable improvement in institutional quality can increase bilateral trade much more than harmonization of their legal systems (in the typical case legal systems are different). We also find that institutional quality explains 5-15 times more of the variation in bilateral trade flows, relative to differences in legal origins.

[4] We admit to the well known caveat of inferring treatment effects of policy from regression coefficients.

These results inform policy: the first order of business should be getting institutions to work better within their existing form, rather than invest in harmonization, inasmuch as we wish to promote international trade. In addition, differences in initial conditions across countries may make improving existing institutions function within existing form more feasible, less costly and more effective. Pistor (2002) argues that instead of improving domestic legal systems, harmonization may undermine their efficacy in developing countries.[5] Indeed, Samuels (2006) documents a tendency in aid and development packages to implement rule of law reforms which have an emphasis on form rather than function; he argues that this emphasis has rendered many reforms unsuccessful.[6] The conclusions of Pistor (2002) and Samuels (2006) reinforce ours.[7]

The closest work to this paper is de Groot et al. (2004), who estimate that better institutional quality increases trade and, in addition, that differences in institutional quality between trading pairs is detrimental to trade. Our approach differs fundamentally from theirs: we stress that differences in institutional quality in a particular dimension are not the same as differences in form, since institutions with different form may be of similar quality (in terms of how they function). de Groot et al. (2004) do not attempt to evaluate the relative importance of quality versus differences in quality. In addition, given the fact that quality indices are bounded, higher difference in quality must imply that one of the partners has lower quality. This makes

[5] Pistor (2002) stresses that legal harmonization (in trade and finance-related legislation) can yield more harm than good because it disrupts the "natural" process of legal change, a process of innovation and adaptation to the environment. In particular, legal harmonization can undermine the efficiency of existing legal system if it does not take into account the lack of complementary institutions within the system and the inability (let alone resistance) of users of the law to embrace and comprehend new law.

[6] Hodgson (2006) highlights, *inter alia*, the interrelation between individuals' intentions and institutions (socially embedded systems of rules), arguing convincingly that they are intertwined, interrelated and self-enforcing. Moreover, these relationships are dynamic. This implies that a social equilibrium can be thought of as an evolving fixed point (equilibrium) of institutions and individuals' intentions (for more on this point see Hodgson 2006 and references therein). Therefore, simply imposing formal change exogenously may have unintended and even undesired outcomes.

[7] We are not able to identify the costs of harmonization versus the costs of quality improvements. Therefore, we cannot perform a true cost-benefit analysis. But the analyses of Pistor (2002) and Samuels (2006) suggest (although do not prove) that the costs of harmonization are likely to be at least as large for quality improvements, if not larger.

interpretation of their results difficult: it is not possible to separate the effect of an increase in quality versus changing the difference in quality between partners.

Also related to our paper is Souva et al. (2008), who find that market protecting institutions (property rights) are more important for international trade than good political institutions. Anderson and Marcouillier (2002) compare the effect of institutional indicators (corruption, or transparency of government policies, and poor contract enforcement, i.e. enforceability of legal contracts) to the effect of tariffs; they find that they are on the same order of magnitude.[8] Neither of these papers addresses the effects of function versus form.

The next three papers find that institutional quality matters for comparative advantage in producing goods that are more sensitive to contract enforcement and property rights. Although our empirical strategy involves overall trade in goods and services, these studies shep light on the potential mechanism through which institutional quality affects trade. Berkowitz et al. (2006) find that the quality of exporter institutions is most important for enhancing trade in complex products whose characteristics are difficult to fully specify in a contract. Levchenko (2004) models institutional differences as a source of comparative advantage and shows that poor contracting institutions may lead to *losses* from trade and that factor prices might diverge as a result of trade when institutional quality varies among trading partners. Levchenko (2004) also estimates that better institutions in a source country increase the share of U.S. imports from that country in complex, "institutionally-dependent" industries.[9] Finally, Nunn (2007) also finds that

[8] They also argue that gravity models that omit the impact of institutional quality on trade produce biased estimates and their empirical estimation confirms this. However, Anderson and Marcuillier (2002) do not use bilateral tariff rates. They use average tariffs per country multiplied by an indicator for whether a trade-pair does not have a free trade agreement; pairs that do have a free trade agreement have an implied effective tariff rate of zero. Our analysis below uses bilateral tariffs.

[9] More specifically, he estimates that the interaction of the overall institutional quality of a country with the Herfindahl of input shares across industries exerts a positive effect on import shares into the U.S.

good contract enforcement leads to specialization in production of goods for which relationship-specific investments in intermediate inputs are most important.

The next section discusses theoretical aspects of institutional harmonization in light of four strands of literature: institutional economics, international trade, international legal economics and fiscal decentralization. Section 3 describes the empirical framework. Section 4 describes the data. In section 5 we present the estimation results. Section 6 concludes.

2. Discussion and Theoretical Background

International trade conducted across great distances and intertemporal lags suffers from potentially large transactions costs related to verification and enforcement of contracts. Countries have developed various institutional forms to deal with these problems. The design of institutions aimed to achieve broadly similar objectives is affected by differences in endowments, preferences and history, so that institutions of similar quality can take different forms and vice versa – similar form and different qualities. Differences in formal institutional design stem partly from differences in norms or informal institutions (and vice versa).

But how important is it for international trade that institutions are similar in form? If one country's laws and courts are different from another's, then each will incur some cost in getting to know the other's institutions and in writing contracts compatible with each others' systems. For efficiency reasons, each would prefer the other partner to have the same institutions. In the real world, this is generally not possible for all the institutions that affect trade. Having similar institutions may increase trade, but going this route is hardly a simple matter for at least four reasons: (a) there is no best design for all institutions; (b) there is a pecuniary cost to changing

laws/regulations, that might prove to be quite large; (c) changing institutions would mean changing the distribution of benefits (which would create resistance by losers). Since global rules determine inter-country claims on resources or assets, it is difficult to say which rule is the most desirable. And finally, (d) given a particular political system and social norms, changing institutional form may lead to undesirable results.[10] Moreover, in some situations, which we discuss below, formal harmonization may not increase trade but instead may alter the pattern of trade or even reduce it by blocking entry into markets. In short, a blanket preference for harmonization at the policy level may be misplaced.[11]

Although the governments and multilateral organizations who support standardization of institutions claim to do so in order to promote trade, they may be doing so with a view to restricting trade, or raising overall trading profits for their constituencies. For example, an international regime for intellectual property rights may be promoted in order to protect the rents of pharmaceutical companies in industrial countries (e.g., the aforementioned TRIPS agreement). We cannot distinguish between harmonization of institutions that is motivated by attempts to limit market entry of competing producers, policy changes intended to promote trade, and harmonization induced by changing consumer preferences. We focus on the case of policy-induced harmonization.

We draw on four strands of literature – institutional economics, international trade, international legal economics and fiscal decentralization – to provide a theoretical background for the work.

[10] Even if a rule were found that truly maximized global gains, ceteris paribus, the resulting distribution of gains may not be desirable from either a "global" or individual country point of view.
[11] Institutional harmonization may occur because of private forces – that is because firms will push for changes to raise their profits or it may occur as a result of policy decisions.

Institutional economics

As North (1991, 1994) argues, ever more complex institutional structures are necessary to capture the potential gains from trade when individuals and groups become increasingly interdependent through specialization. The importance of institutional solutions for governing long-distance trade cannot be stressed enough. This is illustrated by the current debate on changes to these institutions.

The historical-institutional economics literature provides several illuminating examples of how different institutional solutions gave rise to efficient levels of trade. Greif (1989, 1993) shows how a collation among Jewish Maghribi traders solved agency problems in the 11th century. Greif (1992) argues that Genoese traders in the 12th century and 13th used a political coalition to overcome similar problems and that this system was subsequently replaced by a patron system. Milgrom, North and Weingast (1990) show how merchant courts at the Champagne fairs enforced honesty among traders; while Greif, Milgrom and Weingast (1994) show that merchant guilds were organized in order to deter rulers of local trade centers from expropriating alien traders.[12]

These papers illustrate a point close to the heart of this paper: the same trade-related challenges were met by different institutional-organizational solutions in different settings, i.e. the *same function* was served by *different forms*. Greif shows that agency problems of long-distance trade during Medieval times were solved differently by the Maghribi traders and Italian traders – the former by developing a coalition, the latter by a political institution and later by long-term, agent-specific relationships. These different solutions corresponded to specific local conditions. Greif, Milgrom and Weingast (1994) point out the difference between the

[12] Note that *merchant* guilds are not *craft* guilds. The former is an institutional response to threat of expropriation; it aims to expand trade by creating a commitment device against such expropriation to the benefit of both rulers and merchants. The latter aims to restrict quantities (and therefore, trade) after market institutions are already in place.

organization of German traders and Italian traders to avoid expropriation in the middle-to-late Medieval period – the former by creating an umbrella organization called the Hansa, the latter by using the coercive power of the city-state. In their own words:

> Although the merchant guilds exhibited a range of administrative *forms* – from subdivision of a city administration (such as the Italian city-states) to the intercity organization (of the [German] Hansa) – their *functions* were the same: to ensure the coordination of and internal enforcement required to surmount the commitment problem by permitting effective collective action. [Greif, Milgrom and Weingast (1994), page 762; italics ours]

The difference between these institutions stems from the differences in the social and political processes that dominated these regions.

International trade

World Bank (2001) examines the effect of institutions on international trade and vice versa, as do Wei (2000) and Islam and Montenegro (2001).[13] Together, these papers show that trading opportunities and competition have led to the emergence of institutions to enhance trade volumes; and describe how the development of effective institutions supports trade. Thus, trade and institutions are endogenous, a fact that we take into account in our empirical analysis.

Baldwin (1970) argues that given differences in initial conditions, world trade will be divided between rich countries linked together by mutual recognition agreements and less developed countries that cannot meet the requirements of rich countries and thus are limited in their trading ability. He concludes that harmonization is a practical goal only for countries that are not "too" different. This theme is echoed in game theoretic papers, which focus on standard-

[13] There is a large literature treating the impact of institutions on economic exchange in various areas (such as the financial sector, agriculture) and on income and growth. It is vast, and is not summarized here. Acemoglu et al. (2004) have a good summary of the literature linking institutions to growth. We mention only some important papers that relate institutions to international trade and link directly with our paper.

setting (standards being rules and therefore a form of institution) as a means of limiting entry and competition in markets. For example, Eisenmann and Verdier (2002) study regulatory protectionism in a political economy setup and the resulting types of rule-setting regimes. They argue that when countries are different, then reciprocal and bilateral regulatory bargaining do not yield higher welfare compared to unilateral regimes; and that mutual recognition agreements, in which countries are free to set their own policies while keeping common objectives, will shift policy towards tariffs in countries that have low institutional capacity.[14] This last point underscores the importance of controlling for tariffs in our empirical investigation.

Bagwell and Staiger (2001) argue that if governments were granted more sovereignty (rather than less) over their policy choices, while maintaining a given level of market access, then existing GATT principles would deliver globally efficient outcomes.[15] Their conclusion runs in contrast to the rationale for harmonization, because more sovereignty implies heterogeneous policies that manifest themselves in a higher degree of institutional heterogeneity. Bhagwati and Hudec (1996) discuss what determines good versus bad types of harmonization. See also Krugman (1997) for a summary of some of their arguments, which amounts to rejecting the economic case for harmonization.

Legal studies

Legal scholars, such as Sykes (2000) and Sauve and Zampetti (2000) find that neither complete harmonization nor diversity (what Sykes calls competition) between trading partners is always desirable and that the relative merits of each depend on the degree diversity of local conditions,

[14] Differences can be in market size, cost of adoption of regulations (technical or administrative), preferences and the extent of market failures.

[15] Bagwell and Staiger (2001) relate to their work to the debate in the late 1990s, on whether to enforce labor and environmental standards within a "social clause" in the GATT\WTO, where the existing GATT rules were only designed to ensure market access.

such as tastes, income etc'. Sauve and Zampetti (2000) advocate the principle of subsidiarity, by which a global authority should act only where it is obvious that a local authority cannot deliver efficient results, e.g., in the presence of global externalities.[16] Pistor (2002) argues that forced legal standardization (i.e., greater specificity of written law) of trade-related and financial legislation ignores how legal institutions develop, is ineffective and may very well cause more harm than good.

Fiscal federalism

The fiscal federalism literature is also relevant to this paper, because setting international agreements and institutions mirror issues that are faced in fiscal federalism. The main difference is that there is no sovereign authority that has the power to impose discipline or redistribution in the international arena. Some of the themes from the aforementioned legal studies are echoed in these papers.

Casella and Feinstein (1990) develop a model in which trade involves a transaction cost, and political clubs eliminate this cost only for members. An expansion of trade is accompanied by a desire for greater integration of political units (i.e., institutional harmonization) in order to reduce the occurrence of transaction costs. But as profitability of trade in ever larger markets reduces the importance of transactions costs, the desire for political integration decreases and may overcome the desire for lower transaction costs. This is accompanied by less harmonization. Therefore, the desired outcome depends on the relative returns to diversity (which are increased with heterogeneous preferences, endowments and income) versus harmonization (lower

[16] Subsidiarity is the principle that allocates decision power to the smallest (or, the lowest level) competent authority. This entails freedom to choose the means to achieve globally-agreed upon objectives. The global objectives merit multilateral negotiation, agreement and, therefore, action (i.e., making rules that apply across borders) when they address externalities and market failures that are global in character.

transactions costs). Moreover, the optimal level of integration may differ over time and for different groups of countries.

Alesina, Angeloni and Schunecht (2002) summarize European Union (EU) legislation among member countries and discuss the types of policy areas that could benefit from centralization or standardization, which also depend on the balance between externalities and asymmetries between union members. They analyze survey responses from EU members and show that it is difficult to find areas where all countries favor either policy harmonization or diversity.[17]

To sum up, the literature concludes that good quality institutions promote trade, but also indicates that *a priori*, it is difficult to say whether global rule setting resulting in forced institutional and regulatory standardization will be accompanied by more trade or not. The relative gains to individual countries from standardization versus better quality are a matter for empirical investigation. We turn to this next.

3. Empirical Framework

We estimate the effect of institutional diversity on international trade relative to that of institutional quality. We would like to know which effect is bigger in an economic sense and to evaluate their relative explanatory power. Our analysis is based on a gravity equation, which estimates an empirical relationship between bilateral trade flows and market size and distance between country-pairs. The theoretical foundations of this relationship are discussed in Anderson

[17] Interestingly, *average* preferences over policy responsibilities among EU members are broadly in line with the normative theoretical analysis – although there are deviations on specific issues. For example, they find that the EU citizens think that it is not involved enough on the environment and international relations, whereas it is over-involved in agriculture and civil and social protection policies.

(1979) and Anderson and van Wincoop (2003). We include other variables that potentially capture direct costs to trade and have become "standard procedure" in the practice of gravity equation estimation, as well as variables that potentially capture indirect costs to trade.

We use three different measures of institutional quality: "Bureaucratic Quality" and "Control of Corruption" from the ICRG dataset and "Protection of Property Rights" from the Heritage Foundation dataset. These three seemed to us to be most important for trade *a priori*. For example, Bureaucratic Quality and Control of Corruption capture the efficiency of customs control, licensing and other regulatory bodies, and whether extra payments are required in order to "smooth" or expedite customs clearing and other legal procedures. The indicator "Protection of Property Rights" captures elements such as the business environment and risk of hold-ups and expropriation of shipments.

Our baseline specification is

$$ln(T_{ijt}) = \delta \cdot dlegor_{ij} + \pi \cdot Inst_{ijt} + \beta_1 ln(distance_{ij}) + \beta_2 ln(GDP_{it} \cdot GDP_{jt}) + \beta_3 ln(area_{it} \cdot area_{jt}) + \beta_4 landlocked_{ij} + \beta_5 islands_{ij} + \beta_6 border_{ij} + \beta_7 common\_language_{ij} + \beta_8 currency\_union_{ijt} + v_{ijt}, \quad (1)$$

where T is the trade flow between a country-pair; *dlegor* is an indicator for different legal origins of countries i and j (it does not vary over time); and *Inst* is the sum of institutional quality (one of the three indices) for countries i and j. *Distance* denotes the great-circle distance between a country-pair, *GDP* is gross domestic product, *area* denotes land area, *landlocked* is the number of landlocked countries in the bilateral relationship (0, 1 or 2), *island* is the number of island countries in the bilateral relationship (0, 1 or 2), *border* is an indicator for a common border (=1 if trading pair shares common border, zero otherwise), *common_language* indicates a common official language and *currency_union* indicates a common currency, and v is an i.i.d. error

term.[18] In more advanced specifications we use a set of additional controls, which includes colonial ties, trade agreements and tariffs.[19]

Since a country-pair may appear several times in our dataset, standard error estimation always takes into account the clustering by country-pairs. The coefficients are estimated by OLS or IV, where the latter estimator takes into account the potential endogeneity of institutional quality to trade and measurement error of institutional indicators. The potential endogeneity is highlighted in World Bank (2001), Wei (2000) and Islam and Montenegro (2001). In the IV estimations, we instrument our measures of institutional quality by absolute latitude.[20]

Anderson and van Wincoop (2003) stress that consistent estimation of gravity equations requires adding country dummies which capture price levels in each country.[21] However, our institutional quality indices are collinear with a full set of country dummies. There is very little time variation in these indices. Therefore, if we wish to control for country effects we must choose which dummies to include. We choose to estimate all our specifications without any country dummies for lack of a systematic way of choosing dummies. By omitting country dummies we risk omitted variable bias. If our institutional variables capture fundamental differences between countries, then the bias will not be too large.

Discussion of institutional variables: form versus function

[18] We also experimented with estimating gravity equations that include GDP per capita. If preferences are non-homothetic, then this can be an important determinant of preference for non-local, traded goods. We do not report estimates that include this variable but they are not materially different and are available upon request.
[19] Including colonial ties and trade agreements is particularly important for our analysis, because they potentially pick up institutional similarities over and above legal origins. We elaborate on this when we describe our results.
[20] Latitude is used also by Hall and Jones (1999), Beck, Demirguc-Kunt and Levine (2003), Easterly and Levine (2003). Additional IV estimates using ethnic fractionalization as an instrument are available upon request. The results are not materially different from the ones presented here.
[21] A more efficient structural estimation procedure would be 3SLS. However, this approach relies on a specific price index formula. See Anderson and van Wincoop (2003) for details.

In general, it is difficult to find an empirical measure of institutional diversity, that is, a measure that reflects how institutions performing similar functions may vary. The design of formal institutions in any country reflects differences in legal traditions (which may produce variation in processes, or more fundamentally, variation in the distribution of rights to property). Legal systems themselves are changed by social and political processes and informal traditions. Thus, using differences in legal tradition as an indicator of institutional differences among countries gives us a first approximation of the notion of diversity.[22] There is some debate in the economics literature (yet not in the law literature) that legal origin may be linked to overall institutional quality, not just form. That is, some legal traditions provide a better environment than others despite the evidence provided by the OECD countries which shows that countries with differing legal origins can do equally well in trade and development.

The legal literature and some of the economics literature discuss design differences among different legal systems, for example, procedural differences.[23] La Porta et al. (1997, 1998, and 1999), Beck, Demirguc-Kunt and Levine (2003) and Levine (2005), among others, have linked differences in legal origin to overall institutional quality. In particular, focusing mainly on the financial system, these studies contend that countries that have French legal origins tend to have poorer quality institutions and therefore poorer outcomes, such as lower financial development.

Acemoglu et al. (2001) argue that good institutions developed when colonizers introduced institutions of private property rather than pursuing an extractive strategy. Thus, institutional quality in developing countries is not determined by the legal origin of the country, but by the incentives of the colonizer to set up good institutions regardless of legal origin. In

[22] Of course, looking at legal traditions alone gives no hint of what type of diversity there exists within the group of countries that have similar legal origin.
[23] See, for example, World Bank (2001), Islam (2003) and references therein.

another paper, Acemoglu et al. (2005) relate the development of economic institutions to inequalities in the distribution of resources and political institutions rather than legal origin. Acemoglu and Johnson (2005) contend that while legal origin may be related to the quality of certain types of institutions (they focus on some aspects of the judiciary, or what they call contracting institutions), it is not a good instrument for institutions that regulate interactions between the state and citizens (for example, measures of corruption, bureaucratic efficiency or protection of property rights). Moreover, they show that contracting institutions have an effect only on the *type* of financial intermediation that occurs, but not on economic activity overall.[24]

Legal scholars contend that different legal origins and formal legal systems do not signal differences in overall quality, but merely reflect differences in designs and procedures that reflect historical circumstances but that are independent of the overall quality of legal systems. For example, Pistor et al. (2003) find that common law and civil law systems in origin countries have experienced substantial change and adaptation over time (especially in corporate finance provisions). By contrast, legal transplants from both legal families (e.g., to colonies) have often retained the transplanted law for decades. Pistor et al. (2001, 2003a and 2003b), and Berkowitz et al. (2003a , 2003b) contend that it is the method of transplantation rather than inherent deficiencies of certain French institutions (e.g., French legal system) that makes certain institutions perform worse in poor countries. The negative association between French legal origin and institutional performance would be picking up the worse performance of French colonized countries with respect to other countries that is due to some other omitted factor. These authors attempt to distinguish between the influence of legal family versus the impact of other aspects of the legal transplantation relationship (such as readiness of the country for new laws

[24] Growth, investment and financial development.

and familiarity with the new laws) and find the latter to be a more important determinant of legal development. The relationship between legal family and legal system development is not robust.

In sum, there is sufficient evidence to support the view that the focus on legal families as a determinant of institutional quality is misplaced and that legal family is not a fundamental determinant of economic outcomes. Moreover, even if our institutional quality measures are related to specific legal origins – in the sense that countries that have a Common Law system have better institutions than countries that have Civil Law systems – it does not imply that institutional quality would be higher or lower in country-pairs that have different or similar legal origins. We illustrate this point as follows: France and the U.K. have different legal systems, and both exhibit good institutional quality, whereas Togo and Ghana also have different legal systems, but both do not exhibit good institutional quality. Of course, examples do not say much about the average. In the data, the simple correlation between difference in legal origins and institutional quality is in fact positive, but not very large (see Table 3).

de Groot at al. (2004) use the absolute value of the difference between institutional qualities of a bilateral trading pair to capture differences in institutional quality which they equate to differences in institutional form. They assume that if you have similar quality you must have similar form. As discussed above, this notion is contrary to what most of the empirical evidence and theory suggest. In our sample of countries we can detect a very weak, albeit positive correlation between differences in legal origin and the disparity between institutional qualities of a bilateral trading pair, using our measures of institutional quality. Appendix Table A1 reports the numbers. These numbers are very similar to those obtained by replacing the disparity by an indicator for a difference larger than two standard deviations of the institutional

quality index (this variable is used by de Groot et al. 2004).[25] Thus, our indicator for differences in form, *dlegor*, captures something other than disparity in institutional quality. Our discussion above demonstrates that this is a more appropriate indicator for form.

4. The Data

Our data set builds on that of Rose (2004).[26] Unless otherwise stated, the data is from that source; see our Table 1 for a concise description. Most of the variables from that source are standard and do not merit an elaborate description here (see Rose 2004 for complete details), except for the regressand in all our estimations: the log of *average* bilateral trade flows. The direct source for this variable is the International Monetary Fund's Direction of Trade dataset. Unlike most bilateral trade datasets used in recent work, these flows include goods and services. This variable is the average of all four potentially available trade flows between a country-pair (exports from *i* to *j* reported by *i*, imports into *j* from *i* reported by *j*, etc.). Although this increases the reliability of the trade data, it imposes symmetry on the effects of the determinants of trade. This means that we are estimating the effect of a change in the regressors both on exports and imports.[27] This seems to be a plausible assumption for some regressors (e.g., distance), but not for all (e.g., tariffs vis-à-vis a trading partner). We address this issue below.

The sample covers 1984-1999, which is dictated by the availability of data on institutional quality and tariffs. Our measure of dissimilarity of institutional form is a dummy for different legal origins. This dummy is equal to 1 when a country-pair does not share the same

[25] We also experimented with this using only one standard deviation; this yielded virtually identical results. We experimented with alternative institutional quality variables from the World Bank's Governance Matters dataset (Kaufmann et al. 2006). The results are not materially different.
[26] Available at Rose's web site, http://faculty.haas.berkeley.edu/arose/.
[27] Anderson and van Wincoop (2003) solve their model under this restriction. See Helpman, Melitz and Rubinstein (2005) for a framework that does not impose this restriction.

legal origin and zero otherwise. Legal origins are from Djankov et al. (2003) and augmented by the CIA Factbook.[28] Two of our measures of institutional quality are Bureaucratic Quality and Control of Corruption; they are taken from the International Country Risk Guide (ICRG) dataset, are available from 1984 and cover 135 countries for which we have trade data, although coverage is not complete in all years. Our third measure of institutional quality is Protection of Property Rights; it is taken from the Heritage Foundation dataset, is available from 1995 and onwards, and covers 154 countries for which we have trade data.[29] Here coverage is almost complete for all years. Using two independent sources which employ different methodologies contributes to testing the validity of our results.[30] A full list of countries can be found in the appendix. We use the sum of the index for a country-pair as a regressor; that is, $Inst_{ijt} = Inst_{it} + Inst_{jt}$. This reflects the aforementioned symmetry built into our data. Here we elaborate on our institutional quality indices:

1. *Bureaucratic Quality*. This index captures the institutional strength and quality of the bureaucracy. High values are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services where the bureaucracy tends to be autonomous from political pressure and to have an established mechanism for recruitment and training.
2. *Control of Corruption*. This is an assessment of how well corruption is curbed. The most common form of corruption met directly by business is financial corruption in the form of demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans. Although this measure takes

[28] The five legal origins are Common Law (British), Civil Law (French), German, Scandinavian and Socialist.
[29] We linearly transformed the original variable such that a higher index means better protection of property rights.
[30] We chose not to present regression results using the World Bank's "Governance Matters" indicators because its country and especially year coverage is less complete than our institutional indicators.

such corruption into account, it is more concerned with actual or potential corruption in the form of excessive patronage, nepotism, "favor for-favors", and suspiciously close ties between politics and business.

3. *Protection of Property Rights*. This indicator captures the degree to which the exchange of goods and services is protected by the rule of law – enforced by an independent, fair, and efficient judicial system – by protecting private property and providing an environment in which business transactions take place with a high degree of certainty.

We obtain bilateral tariff data from the World Bank TRAINS dataset for 1988-99. Use of this data eliminates observations from 1984-87. Although this is the most elaborate bilateral tariff dataset of which we are aware of, the coverage of the bilateral tariffs of all trade pairs in this sample is rather patchy (in the later years the coverage is significantly better than in the early years) and considerably reduces the sample size in regressions in which it is used. As a regressor, we use (trade-weighted average across goods) bilateral tariffs, averaged for each country-pair. As with institutional quality, the averaging reflects the symmetry assumption. We chose to average rather than to sum in order to make results easy to interpret. For many country pairs the tariff data was available for only one country. In these cases, we treat the tariff of that country as the "average" of both. This procedure is used in order not to lose too many data points in the estimation of specifications with tariffs. Even so, the tariff data cover only 43% of the entire sample for which trade and institutional data are available. This restriction somewhat biases the sample toward industrialized countries, especially in the earlier years of the panel. Therefore we fit regressions with and without controlling for tariffs.

We use the sum of the absolute value of latitude for a country-pair as an instrument for institutional quality variables. Country latitudes are taken from the CIA Factbook.

In Table 2 we report summary statistics for all our regressors. Sixty five percent of the country-pairs (in all years) in our sample do not share the same legal origin. Our institutional quality variables exhibit significant variation. It is noteworthy that the average tariff variable has some extreme outliers, usually due to countries that trade very few products and impose a high tariff *vis a vis* each other.

In Table 3 we report correlations that were of interest to us *a priori*.[31] Notably among these correlations is the small positive correlation between trade flows and different legal origins. The institutional quality variables are highly correlated among themselves. Not surprisingly, tariffs are negatively correlated with trade. They are also negatively correlated with institutional quality.

5. Results

Our baseline results are summarized in Tables 4-6. Each table presents results for a different measure of institutional quality – Bureaucratic Quality, Control of Corruption and Protection of Property Rights. We estimate separate equations for each indicator due to their high correlation. Since the tariff data cover only 43% of the sample, we estimate all specifications first without tariffs and then add them as a regressor. We address the potential endogeneity of institutional quality to trade by instrumenting for the sum of institutional quality with the sum of absolute latitude for each country-pair.

Baseline results

[31] All correlations are statistically significant at the 1% level except for correl(regional,comcol), which is not statistically significant at conventional levels.

Our estimates imply that different legal origins do have a detrimental effect on trade, amounting to between 10% and 25%, depending on the specification.[32] This is a large effect.[33] Our estimate for the detrimental effect of tariffs yields an elasticity of 1 to 2, thus every percentage point increase in tariffs decreases trade by 1%-2% on average.

We also find large positive effects of institutional quality on trade – in some cases very large. In order to assess this effect, the last line in Tables 4-6 report the effect of a change of one standard deviation in institutional quality on trade.[34] For instance, the estimates in Table 4 imply that one standard deviation improvement in Bureaucratic Quality increases trade by 50%-120%. This is a much larger impact than that of differences in legal origins. A similar picture emerges for our other two institutional quality indicators in Tables 5-6 in terms of magnitudes.

In order to further illustrate the magnitudes that our estimates imply, we provide some examples of an increase of one unit (not standard deviation) in the institutional quality index near the mean value. *Ceteris paribus*, had Colombia had the Bureaucratic Quality of Costa Rica (one unit more in the index), it would have traded 60 percent more with its trading partners on average. Had Brazil curbed corruption to the extent that Chile does, it would have traded 32 percent more with its trading partners on average. And had the Dominican Republic protected property rights as well as Ecuador does, it would have traded 43 percent more with its trading partners on average.

These magnitudes should not be taken at face value, since all institutional quality indices are highly correlated and an increase in one index in practice probably implies an increase in the rest. Rather, the estimates should be understood as capturing the general institutional

[32] The largest point estimate is in Table 6, column 4. The effect is exp{-0.29}-1 = -0.25.
[33] Using a similar variable, Helpman, Melitz and Rubinstein (2005) find a slightly larger impact in their regressions; this could be because they do not control for institutional quality. Moreover, their data consists of trade in goods only (without trade in services).
[34] This is calculated as follows: exp{coef*sd}-1.

environment, where an increase in one dimension involves all the rest. In sum, we find that the effect of better institutional quality vastly outweighs the detrimental effects of different legal origins.

Relative explanatory power

One way to try to evaluate the relative importance of differences in legal systems versus institutional quality is using beta coefficients.[35] A beta coefficient tells us how many standard deviations the regressand would change in response to a change of one standard deviation of the regressor. Taking this approach to evaluate relative importance is not without problems. The coefficients are interpreted in terms of standard deviations, but the standard deviations of the variables are not equivalent, perhaps not even comparable. Yet, this method brings us closer to evaluating the relative explanatory power of each variable in the data. A larger beta coefficient (in absolute value) implies that a regressor explains a larger amount of variation in the regressand. We now turn to describe the estimation results.

Panel A of Table 7a reports OLS estimates of specifications that have the same gravity and ancillary variables as in tables 4-6, but with different combinations of institutional quality indicators. Panel A is given for completeness. We focus on Panel B, which reports the beta coefficients of those specifications. The main point to take from Panel B is that the institutional variables have much more explanatory power for trade than differences in legal origins. Thus, not only the effect of a potential marginal change is larger, as described above, but the data varies more with institutional quality, relative to legal harmonization.

[35] Beta coefficients are computed by fitting a regression to standardized variables (subtracting the average and dividing by the standard deviation). Beta coefficients are also known as "standardized regression coefficients".

In column (1) we see that the beta coefficients of Bureaucratic Quality, Control of Corruption and Protection of Property Rights are roughly 3.6, 1.6 and 4.6 larger than the one estimated for differences in legal origins, respectively. In column (1) we also see that among our three institutional quality variables, Control of Corruption, with a beta of 0.032, has less than half the explanatory power of Bureaucratic Quality and roughly a third the explanatory power of Protection of Property Rights for trade. Of the latter two, property rights seem to have slightly more explanatory power for trade. We do not want to make too much of the differences between the institutional variables but rather wish to point out that the main conclusions are valid no matter which institutional quality is used.

The specification in column (1) can be estimated only in the years 1995-1999 due to the availability of our property rights indicator. Therefore we estimate a similar specification in column (2) without property rights, in 1984-1999. A similar pattern emerges. The beta coefficients to Control of Corruption and Bureaucratic Quality are roughly 4.6 and 7 times larger than the one estimated for differences in legal origins, respectively. In columns (3)-(5) we report the beta coefficients for each institutional quality indicator separately. Notice that these are exactly the same specifications as the first columns in Tables 4-6. The results keep the pattern described above, with the explanatory power of Control of Corruption and Bureaucratic Quality estimated an entire order of magnitude larger than differences in legal origins.

One problem with the previous exercise is the interpretation of the beta coefficient of differences in legal origins. Since this is a binary variable, it is not clear how a country would change it by one standard deviation. We address this problem by estimating the same specifications as in Table 5 where each country's *only* trade partner is the *hypothetical* average

of its trading partners.[36] More specifically, we replace all the variables in equation (1) that are indexed by *j*, i.e. partners of country *i*, by their average for country *i*. For example, GDP_j is replaced by

$$\overline{GDP}_{J(i)} = \frac{1}{J(i)} \sum_{j=1}^{J(i)} GDP_j \ ,$$

which is the average GDP of country *i*'s trading partners, where *J(i)* denotes the number of such partners. *J(i)* is a function only of *i* and is kept the same for all variables for a given year, so that the partner sample is consistent across all variables. Other variables that are denoted both *i* and *j* are simply averaged. Thus, equation (1) becomes

$$\ln\left(\overline{T}_{J(i)t}\right) = \delta \cdot \overline{dlegor}_{J(i)} + \pi\left(Inst_{it} + \overline{Inst}_{J(i)t}\right) + \beta_1 \ln\left(\overline{\text{distance}}_{J(i)}\right) + \beta_2 \ln\left(GDP_{it} \cdot \overline{\text{GDP}}_{J(i)t}\right) + \beta_3 \ln\left(area_i \cdot \overline{\text{area}}_{J(i)}\right)$$
$$+ \beta_4 \overline{landlocked}_{J(i)} + \beta_5 \overline{islands}_{J(i)} + \beta_6 \overline{border}_{J(i)} + \beta_7 \overline{common\_language}_{J(i)} + \beta_8 \overline{currency\_union}_{J(i)t} + v_{J(i)t} \quad (2)$$

The averaging procedure serves as a way to smooth the legal differences variable and thus making the beta coefficients easier to interpret. However, the averaging procedure changes the interpretation of the coefficient to *dlegor*. Notice that $\overline{dlegor}_{J(i)}$ denotes the average "different-ness" of country *i* from all its trading partners. A change from one to zero implies now that a country has moved from a situation in which it was different from *all* its partners to a situation it is fully legally harmonized with them. The full size of the coefficient should be interpreted as the implied increase in trade for such a scenario.

This is different from the previous specifications, in which the coefficient to *dlegor* was to be interpreted as the change in trade *vis a vis* a particular partner. For instance, a country may

[36] We thank Bill Easterly for suggesting this exercise.

match its legal system to that of one trading partner but not to another, since there are five legal systems in our data. This aspect of the data is lost in the averaging procedure. Therefore, the magnitude of the coefficient should not be compared with our previous estimates. Due to the linearity in their construction, $\left(Inst_{it} + \overline{Inst}_{J(i)t}\right)$, the institutional quality variables keep their previous interpretation, where one can contemplate a one-unit change in country *i*'s institutional quality index in the same way we have done above.

We report the results of estimating equation (2) in Table 7b, where we replicate the same combinations of institutional variables as in Table 7a. The pattern in Table 7b is similar to that is Table 7a. In column (1) we evaluate the relative importance of all institutional variables and the degree of "Different-ness" in Legal Origins.

As before, we focus on Panel B, but we note two things about the estimates in Panel A. First, in columns (1) and (5) we see that the estimates of the coefficient to Different-ness in Legal Origins are much larger than our previous estimates. One should remember here that the coefficients are not comparable, as they pertain to different scenarios. Second, in column (1) we see that the coefficient on Control of Corruption is very small, negative and not statistically significant; in column (2) it is positive but smaller still. This is due to colinearity with our other institutional variables, as is evident from column (4), in which the coefficient on Control of Corruption is large, positive and statistically significant.

The results in Panel B of Table 7b convey a similar message as in Table 7a. The beta coefficients to Bureaucratic Quality and Protection of Property Rights are 2.4 and 1.6 times larger that the beta coefficient to Different-ness in Legal Origins. The beta coefficient to Control of Corruption is much smaller now. Here, it is Bureaucratic Quality that has the highest beta coefficient. In columns (2) and (3) we see that the beta coefficient to Bureaucratic Quality is

more than 5 times larger than the beta coefficient to Different-ness in Legal Origins. In column (4) the beta coefficient to Control of Corruption is also more than 5 times larger than the beta coefficient to Different-ness in Legal Origins. In column (5) the beta coefficient to Different-ness in Legal Origins is quite large; the beta coefficient to Protection of Property Rights is but 1.2 times larger. However, in light of the results in column (1), we can safely conclude that institutional quality has much more explanatory power than Different-ness in Legal Origins.

Robustness: cross-sections

Since our instrument in the IV estimation is not time-varying, while our instrumented variable is time-varying, we re-estimate the specification in columns 1-2 in Tables 4-6 on cross sections of 5-year averages. Our sample is 16 years long, so we take averages over three periods: 1985-90, 1991-94 and 1995-99. Our averaging procedure takes into account the fact that some year observations for a country-pair might be missing; in order to avoid dropping too many observations we average over the years for which data are available, within each period. We choose not to estimate specifications with tariffs in order to avoid too much imputation out of the tariff data, thus asking too much from already scant tariff data: some of the average tariff data points already exist for only one country as it is (see description in the data subsection); moreover, many year observations for tariffs are missing.

The results are reported in Tables 8-10 and are in line with the estimates from the annual frequency sample. Interestingly, the estimates for the effect of different legal origins in Tables 8-9 – when Bureaucratic Quality or Control of Corruption are controlled for – are much smaller than in the previous ones, sometimes small enough not to render statistical significance. The largest estimate is found in Table 8 in column 2: 18% less trade due to different legal origins.

However, the estimates in Table 10 – when Protection of Property Rights is controlled for – are larger than before: 26% (OLS) and 32% (IV) less trade due to different legal origins.

Our estimates for the effects of institutional quality on trade are on the same order of magnitude as before and more. The IV estimates for Bureaucratic Quality imply an increase of 318%, 154% and 88% in trade per one standard deviation of the index in the three sub-samples. The IV estimates for Control of Corruption imply an increase of 182%, 92% and 54% in trade per one standard deviation of the index in the three sub-samples. Interestingly, the point estimates are smaller in the later years. The IV estimate of the effect on trade of an increase of one standard deviation of the property rights protection index – is 139%, which is twice as large as the estimate in Table 6. Some of these estimates are very large, but they are consistent with the large explanatory power of our institutional quality variables.

Robustness: additional controls

We introduce additional controls for colonial ties and trade agreements as a robustness check, adding them one by one and then together. The results are reported in Tables 11-13 as follows: columns 1 and 2 replicate columns 1 and 2 from Tables 4-6 to ease comparisons; in columns 3-8 we add our controls; and in columns 9-10 we also control for tariffs. In all of the estimation results the effects of the additional controls are in the expected direction and meaningful magnitudes. For each specification, the first column reports OLS estimates and the second reports IV estimates, where we instrument for institutional quality using the absolute value of latitude.

In all of these robustness checks colonial ties decrease the effect of different legal origins, and sometimes even to the point that the coefficient to *dlegor* is not statistically significant. This

is not very surprising, since many countries inherited their legal systems from their colonizer. Indeed, colonial ties are negatively correlated with different legal origins (see Table 3). Interestingly, the colony-colonizer indicator is large and statistically significant only when we control for protection of property rights, but not for the other two quality indices. The effects of institutional quality measures do not change with the introduction of colonial ties.

Controlling for trade agreements increases somewhat the effect of different legal origins in Tables 11 and 12, but not in Table 13. This is surprising; trade agreements are generally written so as to be acceptable regardless of the legal system and presumably would reduce the impact of differences in legal systems on trade. We would expect that differences in institutional design would be less important for countries that have regional or other trade agreements, since these agreements are a source of harmonization[37]. The coefficient on membership in the WTO is estimated to be large, negative and statistically significant in most cases, in particular when controlling for Bureaucratic Quality and Protection of Property Rights. This is also surprising. Rose (2004) finds smaller negative effects which are statistically insignificant, using the same data in a longer sample (1945-99), but without differences in legal origin or indicators for institutional quality.[38] Thus, once institutional quality is controlled for, WTO membership seems to be detrimental to trade, or at least does not promote it. This might be due to a selection effect, in which it is those who do not trade much wish to join the WTO. The effects of our institutional quality measures on trade decrease slightly when trade agreements are controlled for, which is what one might expect since trade agreements provide remedies for many of the problems that

[37] Differences in legal origin are not significantly negatively correlated with membership in regional agreements, that is, trade agreements are not more likely to be made between countries with similar legal systems.
[38] However, the number of reporting countries in the sample is much smaller in the earlier part of the sample.

good institutions address.[39] However, when tariffs are added in columns 9-10 we have that the negative estimate to WTO membership becomes statistically insignificant. To the extent that WTO\GATT agreements achieve lower tariffs, this might indicate that over and above tariff rates membership does not entail extra benefits. However, remember the caveat mentioned above, that including tariffs biases the sample towards richer countries.

When we control for both colonial ties and trade agreements we estimate a smaller effect for both legal origins and institutional quality. The effect on trade of an increase of one standard deviation in the Bureaucratic Quality index falls from 120% to 70%; for Control of Corruption it falls from 74% to 45%; and for Protection of Property Rights it falls from 70% to 44%. However, the effect on trade of different legal origins also diminishes much more, and in Tables 11-12 it becomes small enough not to render statistical insignificance. Therefore, our main result – that institutional quality matters more than differences in legal origins – holds.

When, in addition, we control for tariffs we find a larger effect of different legal origins. However, given the special nature of the sub-sample for which tariff data are available, we should treat this result with caution; the results are driven mostly by industrial countries, for which tariff data exist. Nevertheless, they are in line with our other estimates and, more importantly, the effects of institutional quality remain much larger.

Robustness: subsamples of rich and poor countries

In order to assess the relative importance of institutional quality versus differences in legal origins for two subsamples. The "Rich Partner" subsample includes all observations in which at least one country in the pair has PPP GDP per capita greater than 10,000 U.S. dollars in 2000.

[39] To the extent that trade agreements are binding legal documents, they are, in fact, part of the institutional framework that is relevant for international trade.

This effectively excludes all pairs in which both countries have less than that income. The "Poor Partner" subsample includes all observations in which at least one country in the pair has PPP GDP per capita less than 10,000 U.S. dollars in 2000. This effectively excludes all pairs in which both countries have more than that income.[40] A list of 31 countries that define the Rich Partner subsample is reported in the appendix.

We estimate the same baseline specifications of Tables 4-6 on the two subsamples of country-pairs. The results are reported in Tables 14-16. In all three tables the first two columns replicate the first two columns of Tables 4-6 for convenience. The next two columns report results for the same specification for the Rich Partner subsample, while the last two columns report the results for the Poor Partner subsample. We keep here the practice of using IV estimators for all subsamples to correct for potential endogeneity and measurement error.

The estimates in Tables 14-15 for Bureaucratic Quality and Control of Corruption exhibit a similar pattern. First, differences in legal origin are more important when at least one trading partner is rich than when at least one trading partner is relatively poor. Second, the opposite is true for institutional quality; it is more important when at least one trading partner is relatively poor. Moreover, the *relative* importance of institutional quality versus different legal systems is much larger when a trading partner is relatively poor than when one trading partner is relatively rich.

For example, in the Poor Partner subsample one standard deviation of either Bureaucratic Quality or Control of Corruption is associated with an increase in trade that is more than 6 times larger than the decrease in trade due to different legal origins. The actual magnitude is economically large: an 84-130% increase in trade due to one standard deviation of Bureaucratic

[40] The GDP data were taken from the World Bank's World Development Indicators. The results reported below hold for a broad range of cutoff incomes. These results are available upon request.

Quality and 71-74% increase in trade due to one standard deviation of Control of Corruption. In the Rich Partner subsample the OLS estimates assign a more modestly larger effect to the institutional quality variables, but the IV estimates reverse this and let the difference in legal origins have a larger effect. In calculating the impact on trade we take the standard deviation in the relevant subsample. Summary statistics in each subsample are reported in Table 17.

What can explain this pattern? If institutional quality is higher in rich countries, then it may cease to be a binding constraint for trade and legal differences become more important. Since our data do not allow disentangling the effect on imports and exports, we can only conjecture that this is true. In Table 17 we see that all institutional quality variables have higher means and lower variances in the Rich Partner subsample than in the Poor Partner subsample. The statistical properties of the indicator for different legal origins are not significantly different in the subsamples.

The picture for Protection of Property Rights in table 16 is slightly different, although it conveys a similar message. The OLS estimator yields a similar coefficient to differences in legal origin in all subsamples, which is higher than in Tables 14-15. The coefficient to Protection of Property Rights is also similar in all subsamples. However, the IV estimator assigns a small negative coefficient to Property Rights in the Rich Partner subsample, which is statistically not significant. This might be due to the reason we mentioned above, that when institutional quality is high enough it ceases to be a binding constraint and increasing it may not increases trade. The coefficient to different legal origins is also smaller than in other subsamples in this table.

In the Poor partner subsample the picture is similar to the previous tables; Protection of Property Rights has a much larger effect on trade than differences in legal origin – between 2 and

3 times larger. The economic magnitude is similar to increasing Control of corruption: 57-79% increase in trade due to an increase of one standard deviation of Protection of Property Rights.

In sum, it appears that for relatively poor countries it is more important to increase institutional quality than to harmonize legal systems. This is not a trivial finding. Although poorer countries tend to have worse institutions and thus have larger scope to improve institutional quality, it is not straightforward that the relative importance of institutional quality versus differences in legal systems is higher in poorer countries. In other words, the marginal effect on trade of an increase in institutional quality seems to be higher in poorer countries, but also relatively higher with respect to differences in legal origins.

6. Conclusion

In this paper we estimate how much do differences in institutional form or design matter for trade, once we control for differences in overall institutional quality. We find that institutional quality matters more than differences in form. This is relevant for policy, since many policy makers and important multilateral organizations argue that harmonization can promote trade, while sometimes mistakenly viewing harmonization as the only way to improve institutional quality. But good institutional quality can be achieved by distinct institutional forms. The empirical analysis indicates that the impact of bad institutions – inefficient bureaucracy, corruption and poor property rights protection – is a much larger deterrent to trade than the impact of differences in form as proxied by differences in legal systems. This is particularly true in poor countries.

We also find that the impacts of differences in legal origin and even in institutional effectiveness on trade are reduced when we include a whole set of controls in our model.

Therefore, we argue that policies favoring harmonization may be much less important in promoting trade than policies promoting institutional effectiveness, especially since the latter are more likely to succeed and may be less costly to achieve.

Our indicator of institutional diversity is broad and picks up the effect of historical factors on trade, while it does not pick up how institutions may vary within sets of countries that share legal origins. Our indicator is not perfectly correlated with institutional quality yet does provide some measure of design differences between countries. We argue that legal origin is a good indicator of legal system diversity, especially since we control for overall institutional quality.

The results inform policy: the first order of business should be getting institutions to work better within their existing form, rather than invest in institutional standardization in order to promote international trade.

References

Acemoglu, Daron, Simon Johnson and James A. Robinson (2001), “The Colonial Origins of Comparative Development: An Empirical Investigation”, *American Economic Review* 91(5), pp. 1369-1401.

Acemoglu, Daron, Simon Johnson and James A. Robinson (2005), “Institutions as the Fundamental Cause of Long-Run Growth”, in Aghion, Philippe and Stephen Durlauf (2005), *Handbook of Economic Growth*, Elsevier, North Holland, 2005.

Acemoglu, Daron and Simon Johnson (2005), “Unbundling Institutions”, *Journal of Political Economy* 113, pp. 949-995.

Alesina, Alberto, Ignazio Angeloni and Ludger Schuknecht (2001), “What does the European Union Do?”, NBER working paper, No. 8647.

Anderson, James E. (1979), “A Theoretical Foundation for the Gravity Equation”, *American Economic Review* 69(1), pp. 106-16.

Anderson, James E. and Douglas Marcouillier (2002), “Insecurity and the Pattern of Trade: an Empirical Investigation”, *Review of Economics and Statistics* 84(2), pp. 342–352.

Anderson, James E. and Eric van Wincoop (2003), “Gravity with Gravitas: A Solution to the Border Puzzle”, *American Economic Review* 93(1), pp. 170-192.

Bagwell, Kyle and Robert W. Staiger (2001), "Domestic Policies, National Sovereignty, and International Economic Institutions," *Quarterly Journal of Economics* 116(2), pp. 519-562.

Bhagwati, Jagdish N. and Robert E. Hudec (Eds.) (1996), *Fair Trade and Harmonization, Vol. 1: Economic Analysis*. MIT Press.

Baldwin, R.E. (1970), *Nontariff Distortions of International Trade*, The Brookings Institution, Washington, DC.

Beck, Torsen, Asli Demirguc-Kunt, and Ross Levine (2003), “Law, Endowments, and Finance”, *Journal of Financial Economics* 70, pp. 137-181.

Berkowitz, Daniel, Katharina Pistor and Jean-Francois Richard (2003a), "The Transplant Effect", *American Journal of Comparative Law* 51(1) pp. 163-204.

Berkowitz, Daniel, Katharina Pistor and Jean-Francois Richard (2003b), “Economic development, Legality and the Transplant Effect”, *European Economic Review* 47(1), pp. 165-195.

Berkowitz, Daniel, Johannes Moenius, and Katharina Pistor (2006), “Trade, Law and Product Complexity”, *Review of Economics and Statistics* 88, pp. 363-373.

Casella, Alessandra and Jonathan Feinstein (1990), “Public Goods in Trade: On the Formation of Markets and Political Jurisdictions”, NBER working paper 3554.

de Groot, Henri L. F., Gert-Jan Linders, Piet Rietveld and Uma Subramanian (2004), “The Institutional Determinants of Bilateral Trade Patterns”, *KYKLOS* 57(1), pp. 103-124.

Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer (2003), "Courts", *The Quarterly Journal of Economics*, pp. 453-517.

Easterly, William and Ross Levine (2003), “Tropics, Germs and Crops: How Endowments Influence Economic Development”, *Journal of Monetary Economics* 50(1), pp. 3-39.

Eisenmann, A. S. and Thierry Verdier (2002), “Reciprocity and the Political Economy of Harmonization and Mutual Recognition of Regulatory Measures”, CEPR discussion paper DP3147.

Greif, Avner (1989), “Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders”, *Journal of Economic History* 49(4), pp. 857-882.

Greif, Avner (1992), “Institutions and International Trade: Lessons from the Commercial Revolution”, *American Economic Review* 82(2), pp. 128-133.

Greif, Avner (1993), “Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders’ Coalition”, *American Economic Review* 83(3), pp. 525-548.

Greif, Avner, Paul Milgrom, and Barry Weingast (1994), “Coordination, Commitment and Enforcement: The Case of the Merchant Guild”, *Journal of Political Economy* 102(4), pp. 745-776.

Hall, Robert E. and Charles I. Jones (1999), “Why do Some Countries Produce so Much More Output per Worker than Others?” *The Quarterly Journal of Economics* 114(1), pp. 83-116

Helpman, E., M. Melitz and Y. Rubinstein (2006), “Trading Partners and Trading Volumes”, Department of Economics Working Paper, Harvard University.

Hodgson, Geoffrey (2006), “What Are Institutions?”, *Journal of Economic Issues* 40(1), pp. 1-25.

Islam, Roumeen (2003) “Institutional Reform of the Judiciary: Which Way Forward?”, World Bank Policy Research Working Paper WPS3134.

Islam, Roumeen and Claudio Montenegro (2002). “What Determines the Quality of Institutions?”, World Bank Policy Research Working Paper WPS2764.

Kaufmann, Daniel, Aart Kraay and Massimo Mastruzzi (2006), "Governance Matters V: Governance Indicators for 1996-2005", World Bank Policy Research Working Paper WPS4012.

Krugman, Paul (1997), “What Should Trade Negotiators Negotiate About?”, *Journal of Economic Literature* 35, pp. 113-120.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert W. Vishny (1997), “Legal Determinants of External Finance”, *Journal of Finance* 52(3), pp. 113-1155.

_____ (1998), “Law and Finance”, *Journal of Political Economy* 106(6), pp. 1113-1155.

_____ (1999), “ The Quality of Government”, *Journal of Law Economics and Organization* 15, pp. 222-279.

Levchenko, Andrei A. (2004), “Institutional Quality and International Trade”, IMF Working Paper WP/04/231

Levine, Ross (2005), “Law, Endowments and Property Rights”, NBER working paper No. 11502.

Milgrom, Paul, Douglass North and Barry Weingast (1990), “The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges and the Champagne Fairs”, *Economics and Politics* 2(1), pp.1-23.

North, Douglass C. (1991), “Institutions”, *Journal of Economic Perspectives* 5(1), pp. 97-112.

North, Douglass C. (1994), “Institutions Matter”, *Economic History* 9411004, Economics Working Paper Archive EconWPA.

Nunn, Nathan (2007), "Relationship-Specificity, Incomplete Contracts and the Pattern of Trade," *The Quarterly Journal of Economics* 122(2), pp. 569-600.

Pistor, Katharina (2002), “The Standardization of Law and Its Effect on Developing Economies”, *The American Journal of Comparative Law* 50(1), pp. 97-130.

Pistor, Katharina, Yoram Keinan, Jan Kleinheisterkamp and Mark West (2001), "The Evolution of Corporate Law", background paper for World Bank (2001), *Building Institutions for Markets*, World Development Report 2002.

_____ (2003a), "The Evolution of Corporate Law: A Cross Country Comparison", *Journal of* International Economic Law 23(4), pp. 791-871.

_____ (2003b), "Innovation in Corporate Law", *Journal of Comparative Economics* 31, pp. 676-694.

Rodrik, Dani (2004a), "Growth Strategies", in Aghion, Philippe and Stephen Durlauf (2005), *Handbook of Economic Growth*, Elsevier, North Holland, 2005.

_____ (2004b), "Getting Institutions Right", working paper.

Rose, Andrew K. (2004), "Do we Really Know that the WTO Increases Trade?" *American Economic Review* 94(1), pp. 98-114.

Samuels, Kristi (2006), "Rule of Law Reform in Post-Conflict Countries: Operational Initiatives and Lessons Learnt", World Bank Social Development Paper No. 37.

Sauve, Pierre, and Americo Zampetti (2000), "Subsidiarity Perspectives on the New Trade Agenda", *Journal of International Economic Law* 3(1), pp. 83-114.

Souva, Mark, Dale L. Smith and Shawn Rowan (2008), "Promoting Trade: The Importance of Market Protecting Institutions", *Journal of Politics* 70, pp. 383-392.

Sykes, Alan (2000), "Regulatory Competition or Regulatory Harmonization? A Silly Question?" *Journal of International Economic Law* 3(2), pp. 257-264.

Wei, Shang-Jin (2000), "Natural Openness and Good Government", NBER working paper No. 7765.

World Bank (2001), *Building Institutions for Markets*, World Development Report 2002.

Table 1: List of Variables and Sources

Variable	Availability	Description	Source
Log of average trade flow	1984-99	Average of real imports and exports between trade partners	Rose (2004)
Different Legal Origin	-	Indicator for different legal origins	Djankov et al. (2003) and CIA Factbook
Bureaucratic Quality	1984-99	Sum of bureaucratic quality indicators per country pair	International Country Risk Guide (ICRG)
Control of Corruption	1984-99	Sum of control of corruption indicators per country pair	International Country Risk Guide (ICRG)
Protection of Property Rights	1995-99	Sum of property rights protection indicators per country pair	The Heritage Foundation
log distance	-	Great circle distance between trade pair	Rose (2004)
log product of GDP	1984-99	log of product of trade pair real GDPs	Rose (2004)
log product of land area	-	log product of trade pair land area	Rose (2004)
no. of landlocked	-	Number of landlocked countries in trade pair (0, 1, 2)	Rose (2004)
no. of islands	-	Number of island countries in trade pair (0, 1, 2)	Rose (2004)
common border	-	Indicator for a common border for trade pair	Rose (2004)
common language	-	Indicator for a common official language for trade pair	Rose (2004)
currency union	1984-99	Indicator for both countries in trade pair members in a currency union	Rose (2004)
common colonizer	-	Indicator for common colonizer of both countries in trade pair	Rose (2004)

colony-colonizer	-	Indicator for colony-colonizer relationship in trade pair	Rose (2004)
both in GATT/WTO	1984-99	Indicator for both countries in trade pair members in GATT/WTO	Rose (2004)
only one in GATT/WTO	1984-99	Indicator for only one country in trade pair a member in GATT/WTO	Rose (2004)
generalized system of preferences (GSP)	1984-99	Indicator for one country extending GSP privileges to the other	Rose (2004)
regional trade agreement	1984-99	Indicator for both countries in trade pair members in a regional trade agreement	Rose (2004)
log of product of telephone lines per 1,000 people	1984-99	log of product of telephone lines per 1,000 people in trade pair	WDI, The World Bank
log of product of road length per 1,000 people	1984-99	log of product of road length per 1,000 people in trade pair	WDI, The World Bank
average weighted tariff	1988-99	Average of bilateral weighted tariff for trade pair. When only one value exists, that is the one that is taken	TRAINS, The World Bank
sum of absolute latitude	-	Sum of absolute latitudes of countries in trade pair	CIA Factbook
ethnic fractionalization	-	Sum of probabilities of two people randomly meeting someone not from their own ethnic group	Alesina et al. (2003)

Sources in detail:

Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat and Romain Waicziarg (2003), "Fractionalization, *Journal of Economic Growth* 8

Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer (2003), "Courts", *The Quarterly Journal of Economics*,

Rose, Andrew (2004), "Do we really know that the WTO increases trade?", *American Economic Review* 94(1)

CIA Factbook,http://www.cia.gov/cia/publications/factbook/

ICRG, http://www.icrgonline.com/

The Heritage Foundation, http://www.heritage.org/

Table 2: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
log of average trade flow	83757	10.41	3.47	-16.09	20.81
Different legal origin	83757	0.66	0.48	0	1
Sum of bureaucratic quality	77594	4.67	1.67	0	8
Sum of control of corruption	77594	7.02	1.97	0	12
Sum of property rights protection	29772	4.96	1.47	0	8
log distance	83757	8.19	0.79	4.02	9.42
log product of GDP	83757	48.87	2.48	39.00	59.09
log product of land area	83757	24.69	2.83	11.82	32.77
no. of landlocked	83757	0.27	0.48	0	2
no. of islands	83757	0.26	0.47	0	2
common border	83757	0.03	0.17	0	1
common language	83757	0.19	0.39	0	1
currency union	83757	0.01	0.08	0	1
common colonizer	83757	0.09	0.28	0	1
colony-colonizer	83757	0.02	0.13	0	1
both in GATT/WTO	83757	0.64	0.48	0	1
one in GATT/WTO	83757	0.32	0.47	0	1
generalized system of preferences (GSP)	83757	0.31	0.46	0	1
regional trade agreement	83757	0.02	0.13	0	1
log of product of telephone lines per 1,000 people	80731	8.42	2.70	-0.30	14.37
log of product of road length per 1,000 people	51286	3.03	1.55	-10.87	7.74
average weighted tariff	36107	9.32	10.61	0	326.96

Table 3: Key Correlations

	trade	dlegor	burqua	corrup	pr	comcol	colony	bothin	gsp	regional	lines	lroadpop
Different legal origin	0.05											
Sum of bureaucratic quality	0.48	0.20										
Sum of control of corruption	0.36	0.20	0.68									
Sum of property rights protection	0.41	0.15	0.70	0.47								
common colonizer	-0.11	-0.26	-0.12	-0.16	-0.09							
colony-colinizer	0.14	-0.15	0.07	0.06	0.06	-0.04						
both in GATT/WTO	0.11	0.02	0.25	0.20	0.27	0.03	0.04					
generalized system of preferences (GSP)	0.29	0.16	0.33	0.37	0.33	-0.21	0.09	0.12				
regional trade agreement	0.18	-0.05	0.11	0.11	0.13	0.00	0.03	0.06	-0.05			
log of product of telephone lines per 1,000 people	0.45	0.18	0.66	0.57	0.62	-0.22	0.05	0.09	0.26	0.13		
log of product of road length per 1,000 people	0.14	0.12	0.48	0.49	0.34	-0.19	0.03	0.07	0.24	0.08	0.50	
average weighted tariff	-0.14	-0.05	-0.22	-0.25	-0.20	0.18	-0.05	0.02	-0.21	0.02	-0.28	-0.24

Notes: All correlations are taken for all existing observations. All correlations are statistically significant at the 1% level except for correl(regional,comcol), which is not statistically significant at conventional levels.

Table 4: Trade, Legal Origins and Bureaucratic Quality, Baseline Results

Dep. Var.: log of average trade flow

	(1) OLS	(2) IV	(3) OLS	(4) IV
Different Legal Origin	-0.10	-0.14	-0.24	-0.21
	(-2.19)	(-2.89)	(-5.42)	(-4.44)
Bureaucratic Quality	0.38	0.47	0.32	0.25
	(26.2)	(12.64)	(21.81)	(6.8)
average weighted tariff			-0.02	-0.02
			(-12.91)	(-12.7)
log distance	-1.09	-1.07	-0.97	-0.98
	(-36.97)	(-35.44)	(-33.55)	(-32.82)
log product of GDP	1.07	1.03	1.01	1.03
	(95.8)	(63.24)	(96.78)	(68.34)
log product of land area	-0.20	-0.18	-0.17	-0.17
	(-21.75)	(-18.06)	(-19.12)	(-17.91)
no. of landlocked	-0.33	-0.35	-0.41	-0.40
	(-7.39)	(-7.81)	(-9.59)	(-9.44)
common border	0.98	1.02	0.97	0.94
	(6.77)	(6.93)	(6.49)	(6.26)
common border	0.98	1.02	0.97	0.94
	(6.77)	(6.93)	(6.49)	(6.26)
common language	0.51	0.49	0.54	0.55
	(9.07)	(8.62)	(9.97)	(10.06)
currency union	1.90	1.86	1.18	1.19
	(7.85)	(7.66)	(4.9)	(4.98)
Observations	77594	77594	32752	32752
R^2	0.67	0.67	0.74	0.74
First stage R^2		0.43		0.44
% increase in trade due to 1s.d. institution	88%	119%	70%	53%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. IV estimators use the sum of absolute latitude as an instrument for the sum of bureaucratic quality for both countries in a trading pair. The sum of bureaucratic quality ranges from 0 to 8 with mean 4.672 and standard deviation 1.667. The percent increase in trade due to 1s.d. institution (bureaucratic quality) is calculated as follows: exp(coef*sd)-1.

Table 5: Trade, Legal Origins and Control of Corruption, Baseline Results

Dep. Var.: log of average trade flow

	(1) OLS	(2) IV	(3) OLS	(4) IV
Different Legal Origin	-0.08	-0.09	-0.19	-0.18
	(-1.70)	(-1.78)	(-4.13)	(-3.83)
Control of Corruption	0.27	0.28	0.17	0.15
	(25.11)	(12.64)	(15.80)	(6.71)
average weighted tariff			-0.02	-0.02
			(-13.12)	(-12.60)
log distance	-1.08	-1.08	-0.97	-0.98
	(-37.03)	(-36.23)	(-32.82)	(-31.90)
log product of GDP	1.13	1.12	1.08	1.09
	(108.66)	(96.35)	(112.99)	(106.44)
log product of land area	-0.21	-0.21	-0.19	-0.19
	(-23.48)	(-22.33)	(-22.14)	(-21.69)
no. of landlocked	-0.35	-0.35	-0.40	-0.40
	(-7.84)	(-7.84)	(-9.32)	(-9.25)
no. of islands	-0.03	-0.03	-0.04	-0.03
	(-0.55)	(-0.64)	(-0.83)	(-0.72)
common border	0.91	0.91	0.92	0.92
	(6.33)	(6.33)	(6.21)	(6.10)
common language	0.62	0.62	0.63	0.63
	(11.05)	(11.06)	(11.64)	(11.64)
currency union	2.15	2.15	1.37	1.36
	(8.59)	(8.60)	(5.66)	(5.58)
Observations	77594	77594	32752	32752
R^2	0.67	0.67	0.73	0.73
First stage R^2		0.40		0.43
% increase in trade due to 1s.d. institution	70%	74%	40%	36%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. IV estimators use the sum of absolute latitude as an instrument for the sum of control of corruption for both countries in a trading pair. The sum of control of corruption ranges from 0 to 12 with mean 7.012 and standard deviation 1.972. The percent increase in trade due to 1s.d. institution (control of corruption) is calculated as follows: exp(coef*sd)-1.

Table 6: Trade, Legal Origins and Protection of Property Rights, Baseline Results

Dep. Var.: log of average trade flow

	(1) OLS	(2) IV	(3) OLS	(4) IV
Different Legal Origin	-0.25	-0.26	-0.29	-0.25
	(-5.96)	(-5.76)	(-6.76)	(-5.38)
Protection of Property Rights	0.31	0.36	0.30	0.18
	(21.43)	(6.34)	(19.71)	(3.40)
average weighted tariff			-0.02	-0.02
			(-8.64)	(-8.52)
log distance	-1.20	-1.20	-1.15	-1.14
	(-48.76)	(-48.47)	(-45.06)	(-44.00)
log product of GDP	0.98	0.97	0.99	1.02
	(105.61)	(49.36)	(102.26)	(59.68)
log product of land area	-0.10	-0.09	-0.10	-0.13
	(-12.20)	(-6.45)	(-12.08)	(-9.76)
no. of landlocked	-0.54	-0.55	-0.55	-0.53
	(-15.70)	(-15.35)	(-15.17)	(-14.15)
no. of islands	-0.18	-0.20	-0.18	-0.12
	(-4.15)	(-3.98)	(-4.15)	(-2.42)
common border	1.04	1.05	0.96	0.95
	(8.38)	(8.36)	(7.59)	(7.46)
common language	0.41	0.38	0.52	0.59
	(7.72)	(6.26)	(9.94)	(9.78)
currency union	1.31	1.32	1.06	1.09
	(5.46)	(5.47)	(2.93)	(3.15)
Observations	29772	29772	19536	19536
R^2	0.72	0.72	0.75	0.75
First stage R^2		0.42		0.42
% increase in trade due to 1s.d. institution	57%	69%	55%	30%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. IV estimators use the sum of absolute latitude as an instrument for the sum of protection of property rights for both countries in a trading pair. The sum of protection of property rights ranges from 0 to 8 with mean 4.962 and standard deviation 1.47. The percent increase in trade due to 1s.d. institution (property rights) is calculated as follows: exp(coef*sd)-1.

Table 7a: Trade, Legal Origins and Institutional Quality, Relative Explanatory Power

Dep. Var.: log of average trade flow

A.	(1) 1995-99	(2) 1984-99	(3) 1984-99	(4) 1984-99	(5) 1995-99
Different Legal Origin	-0.14	-0.13	-0.1	-0.08	-0.25
	[3.02]	[2.76]	[2.19]	[1.70]	[5.96]
Bureaucratic Quality	0.16	0.26	0.38		
	[7.76]	[14.90]	[26.20]		
Control of Corruption	0.06	0.14		0.27	
	[4.81]	[11.22]		[25.11]	
Protection of Property Rights	0.2				0.31
	[11.07]				[21.43]
Observations	23609	77594	77594	77594	29772
R^2	0.74	0.67	0.67	0.67	0.72
B.	Beta Coefficients				
Different Legal Origin	-0.020	-0.018	-0.014	-0.011	-0.035
Bureaucratic Quality	0.071	0.126	0.182		
Control of Corruption	0.032	0.082		0.154	
Protection of Property Rights	0.091				0.137

Notes: Panel A reports OLS estimates. t-values in brackets. Standard errors are calculated taking into account country-pair clusters. The following variables are included in the estimation but their coefficients are not reported: log distance, log product of GDP, log product of land area, no. of landlocked, common border, common border, common language, currency union. A constant and year dummies are not reported as well. Panel B reports beta coefficients estimated for the same specification as panel A.

Table 7b: Trade, Legal Origins and Institutional Quality, Relative Explanatory Power, Average Trade Partner

Dep. Var.: log of average trade flow ***with average trade partner***

A.	(1) 1995-99	(2) 1984-99	(3) 1984-99	(4) 1984-99	(5) 1995-99
Different-ness in Legal Origin	-0.64	-0.36	-0.36	-0.2	-1.23
	[3.43]	[3.28]	[3.26]	[1.78]	[7.12]
Bureaucratic Quality	0.33	0.33	0.34		
	[5.61]	[12.21]	[16.02]		
Control of Corruption	-0.05	0.01		0.17	
	[1.25]	[0.39]		[9.95]	
Protection of Property Rights	0.22				0.36
	[3.97]				[8.28]
Observations	539	1790	1790	1790	638
R^2	0.82	0.79	0.79	0.77	0.8

B.	Beta Coefficients				
Different Legal Origin	-0.079	-0.042	-0.041	-0.023	-0.166
Bureaucratic Quality	0.185	0.223	0.228		
Control of Corruption	-0.032	0.006		0.133	
Protection of Property Rights	0.124				0.197

Notes: All variables are averages per reporting country vis-à-vis its trading partners. Panel A reports OLS estimates. t-values in brackets. The following variables are included in the estimation but their coefficients are not reported: log distance, log product of GDP, log product of land area, no. of landlocked, common border, common border, common language, currency union. A constant and year dummies are not reported as well. Panel B reports beta coefficients estimated for the same specification as panel A.

Table 8: Trade, Legal Origins and Bureaucratic Quality, 5-year averages

Dep. Var.: log of average trade flow

	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV
Years in Average	1985-1989		1990-1994		1995-1999	
Different Legal Origin	-0.04	-0.20	-0.11	-0.19	-0.15	-0.19
	(-0.50)	(-2.33)	(-1.72)	(-2.78)	(-3.10)	(-3.51)
Bureaucratic Quality	0.45	0.81	0.43	0.58	0.32	0.44
	(20.65)	(13.55)	(20.30)	(11.78)	(14.82)	(7.49)
log distance	-1.25	-1.20	-1.12	-1.09	-1.12	-1.10
	(-27.42)	(-24.82)	(-29.94)	(-27.33)	(-38.88)	(-37.26)
log product of GDP	1.16	1.02	1.16	1.11	1.05	1.00
	(62.27)	(37.21)	(73.58)	(50.92)	(78.48)	(42.41)
log product of land area	-0.27	-0.22	-0.24	-0.23	-0.13	-0.11
	(-20.06)	(-15.27)	(-20.89)	(-17.43)	(-13.36)	(-7.30)
no. of landlocked	-0.08	-0.16	-0.29	-0.31	-0.41	-0.43
	(-1.01)	(-1.97)	(-4.97)	(-5.31)	(-9.22)	(-9.70)
no. of islands	-0.05	-0.36	-0.14	-0.22	-0.21	-0.28
	(-0.76)	(-4.32)	(-2.32)	(-3.40)	(-4.28)	(-4.96)
common border	0.91	1.08	1.12	1.21	1.22	1.26
	(4.76)	(5.21)	(6.52)	(6.83)	(7.70)	(7.75)
common language	0.46	0.35	0.52	0.48	0.53	0.51
	(5.34)	(3.91)	(7.18)	(6.59)	(8.73)	(8.12)
currency union	1.96	1.54	2.23	2.18	1.69	1.72
	(6.83)	(4.98)	(8.25)	(7.98)	(6.03)	(6.11)
Observations	5353	5353	5627	5627	7014	7014
R^2	0.62	0.61	0.71	0.71	0.74	0.74
First stage R^2		0.38		0.44		0.52
% increase in trade due to 1s.d. institution	121%	318%	99%	154%	58%	88%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant is not reported. Each column reports a regression performed on one cross-section of 5-year averages. The averages are taken over all *available* years in the 5-year sub-sample, and the procedure takes into account missing year observations. IV estimators use the sum of absolute latitude as an instrument for the sum of bureaucratic quality for both countries in a trading pair. The sum of bureaucratic quality ranges from 0 to 8 with means 4.21, 4.58, 4.85, with standard deviations 1.77, 1.62, 1.42, in years 1985-89, 1990-94, 1995-99, respectively. The percent increase in trade due to 1s.d. institution (property rights) is calculated as follows: exp(coef*sd)-1.

Table 9: Trade, Legal Origins and Control of corruption, 5-year averages

Dep. Var.: log of average trade flow

	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV
Years in Average	1985-1989		1990-1994		1995-1999	
Different Legal Origin	-0.01	-0.09	-0.08	-0.08	-0.11	-0.15
	(-0.12)	(-1.13)	(-1.25)	(-1.29)	(-2.17)	(-2.83)
Control of Corruption	0.33	0.50	0.35	0.35	0.15	0.26
	(19.47)	(13.97)	(19.59)	(11.93)	(11.25)	(7.43)
log distance	-1.25	-1.22	-1.13	-1.13	-1.12	-1.10
	(-27.43)	(-25.78)	(-30.32)	(-29.47)	(-38.63)	(-36.39)
log product of GDP	1.21	1.14	1.20	1.20	1.13	1.11
	(66.47)	(53.91)	(82.16)	(73.21)	(104.23)	(88.84)
log product of land area	-0.27	-0.25	-0.25	-0.25	-0.18	-0.16
	(-20.37)	(-18.02)	(-21.07)	(-20.20)	(-18.97)	(-15.47)
no. of landlocked	-0.14	-0.22	-0.42	-0.42	-0.36	-0.38
	(-1.79)	(-2.72)	(-7.20)	(-7.16)	(-8.24)	(-8.73)
no. of islands	0.22	0.17	-0.06	-0.06	-0.15	-0.22
	(3.26)	(2.50)	(-0.99)	(-1.02)	(-2.94)	(-4.09)
common border	0.81	0.86	1.02	1.03	1.16	1.21
	(4.29)	(4.45)	(6.01)	(5.99)	(7.41)	(7.56)
common language	0.63	0.65	0.65	0.65	0.61	0.62
	(7.29)	(7.41)	(9.11)	(9.10)	(9.94)	(10.11)
currency union	2.42	2.39	2.47	2.47	1.73	1.83
	(8.11)	(7.84)	(8.56)	(8.56)	(6.05)	(6.27)
Observations	5353	5353	5627	5627	7014	7014
R^2	0.62	0.61	0.71	0.71	0.74	0.73
First stage R^2		0.37		0.47		0.34
% increase in trade due to 1s.d. institution	101%	182%	89%	92%	29%	54%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant is not reported. Each column reports a regression performed on one cross-section of 5-year averages. The averages are taken over all *available* years in the 5-year sub-sample, and the procedure takes into account missing year observations. IV estimators use the sum of absolute latitude as an instrument for the sum of control of corruption for both countries in a trading pair. The sum of control of corruption ranges from 0 to 12 with means 6.65, 7.19, 6.79, with standard deviations 2.09, 1.84, 1.66, in years 1985-89, 1990-94, 1995-99, respectively. The percent increase in trade due to 1s.d. institution (property rights) is calculated as follows: exp(coef*sd)-1.

Table 10: Trade, Legal Origins and Property Rights, 5-year averages

Dep. Var.: log of average trade flow

	(1) OLS	(2) IV
Years in Average	1995-1999	
Different Legal Origin	-0.30	-0.39
	(-6.42)	(-7.27)
Protection of Property Rights	0.29	0.58
	(16.20)	(8.29)
log distance	-1.27	-1.30
	(-45.90)	(-44.91)
log product of GDP	1.04	0.94
	(92.83)	(37.87)
log product of land area	-0.11	-0.05
	(-12.24)	(-2.84)
no. of landlocked	-0.43	-0.49
	(-10.72)	(-11.70)
no. of islands	-0.22	-0.38
	(-4.67)	(-6.40)
common border	1.14	1.18
	(7.81)	(7.79)
common language	0.34	0.18
	(5.86)	(2.54)
currency union	1.32	1.42
	(5.38)	(5.50)
Observations	8632	8632
R^2	0.72	0.71
First stage R^2		0.43
% increase in trade due to 1s.d. institution	54%	139%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant is not reported. Each column reports a regression performed on one cross-section of 5-year averages. The averages are taken over all *available* years in the 5-year sub-sample, and the procedure takes into account missing year observations. IV estimators use the sum of absolute latitude as an instrument for the sum of property rights for both countries in a trading pair. The sum of property rights ranges from 0 to 12 with mean 4.8 and standard deviation 1.5, in 1995-99. The percent increase in trade due to 1s.d. institution (property rights) is calculated as follows: exp(coef*sd)-1.

Table 11: Trade, Legal Origins and Bureaucratic Quality, Robustness

Dep. Var.: log of average trade flow	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV	(7) OLS	(8) IV	(9) OLS	(10) IV
Different Legal Origin	-0.1	-0.14	-0.07	-0.1	-0.14	-0.14	-0.1	-0.1	-0.19	-0.15
	(2.19)	(2.89)	(1.45)	(2.05)	(3.13)	(2.86)	(2.18)	(1.96)	(4.41)	(3.23)
Bureaucratic Quality	0.38	0.47	0.37	0.45	0.33	0.32	0.33	0.32	0.3	0.2
	(26.20)	(12.64)	(25.95)	(12.04)	(22.45)	(7.62)	(22.39)	(7.55)	(20.87)	(5.22)
log distance	-1.09	-1.07	-1.09	-1.07	-1.09	-1.09	-1.08	-1.09	-0.95	-0.97
	(36.97)	(35.44)	(37.00)	(35.45)	(36.57)	(35.39)	(36.45)	(35.25)	(33.78)	(32.99)
log product of GDP	1.07	1.03	1.06	1.03	1.05	1.05	1.04	1.05	1	1.03
	(95.80)	(63.25)	(94.34)	(63.41)	(93.16)	(65.95)	(92.29)	(66.15)	(96.69)	(70.78)
log product of land area	-0.2	-0.18	-0.2	-0.18	-0.2	-0.2	-0.19	-0.19	-0.16	-0.18
	(21.75)	(18.07)	(21.30)	(17.79)	(21.20)	(19.21)	(20.68)	(18.77)	(18.78)	(18.38)
no. of landlocked	-0.33	-0.35	-0.33	-0.35	-0.34	-0.34	-0.35	-0.34	-0.39	-0.38
	(7.39)	(7.82)	(7.43)	(7.82)	(7.92)	(7.83)	(8.01)	(7.93)	(9.60)	(9.38)
no. of islands	-0.16	-0.21	-0.14	-0.2	-0.13	-0.12	-0.12	-0.11	-0.1	-0.06
	(3.43)	(4.27)	(3.17)	(3.88)	(2.77)	(2.34)	(2.73)	(2.26)	(2.28)	(1.30)
common border	0.98	1.02	0.97	1.01	1.05	1.04	1.03	1.03	0.82	0.78
	(6.77)	(6.93)	(6.58)	(6.71)	(7.40)	(7.30)	(7.22)	(7.10)	(5.81)	(5.56)
common language	0.51	0.49	0.46	0.44	0.53	0.53	0.46	0.46	0.43	0.46
	(9.07)	(8.62)	(7.94)	(7.53)	(9.49)	(9.50)	(8.01)	(8.03)	(8.18)	(8.54)
currency union	1.9	1.86	1.96	1.91	1.92	1.92	1.89	1.89	1.32	1.34
	(7.85)	(7.66)	(7.83)	(7.60)	(7.91)	(7.93)	(7.51)	(7.53)	(5.07)	(5.17)
common colonizer			0.96	0.92			0.83	0.84	0.82	0.83
			(6.90)	(6.70)			(6.12)	(6.12)	(6.71)	(6.66)
colony-colinizer			-0.01	0.01			0.14	0.13	0.05	0.02
			(0.14)	(0.11)			(1.38)	(1.35)	(0.38)	(0.17)
both in GATT/WTO					-0.25	-0.24	-0.27	-0.26	-0.2	-0.09
					(2.32)	(2.10)	(2.50)	(2.27)	(1.19)	(0.56)
only one in GATT/WTO					-0.16	-0.15	-0.18	-0.17	-0.1	-0.04
					(1.49)	(1.41)	(1.67)	(1.58)	(0.63)	(0.22)
generalized system of preferences (GSP)					0.64	0.65	0.63	0.64	0.25	0.29
					(16.25)	(14.11)	(15.93)	(13.99)	(6.53)	(7.11)
regional trade agreement					0.53	0.54	0.54	0.55	1.87	1.85
					(3.60)	(3.58)	(3.69)	(3.69)	(10.72)	(10.72)
average weighted tariff									-0.02	-0.02
									(11.99)	(12.15)
Observations	77594	77594	77594	77594	77594	77594	77594	77594	32752	32752
R^2	0.67	0.67	0.67	0.67	0.68	0.68	0.68	0.68	0.75	0.75
First stage R^2		0.43		0.43		0.46		0.46		0.46
% increase in trade due to 1s.d. institution	88%	119%	85%	112%	73%	70%	73%	70%	65%	40%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. The sum of bureaucratic quality ranges from 0 to 8 with mean 4.672 and standard deviation 1.667. The percent increase in trade due to 1s.d. institution (bureaucratic quality) is calculated as follows: exp(coef*sd)-1.

Table 12: Trade, Legal Origins and Control of Corruption, Robustness

Dep. Var.: log of average trade flow	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV	(7) OLS	(8) IV	(9) OLS	(10) IV
Different Legal Origin	-0.08	-0.09	-0.04	-0.05	-0.12	-0.1	-0.07	-0.06	-0.14	-0.13
	(1.70)	(1.78)	(0.88)	(0.92)	(2.49)	(2.14)	(1.52)	(1.21)	(3.14)	(2.75)
Control of Corruption	0.27	0.28	0.27	0.27	0.23	0.19	0.22	0.19	0.16	0.12
	(25.11)	(12.65)	(24.73)	(12.06)	(20.24)	(7.56)	(20.19)	(7.50)	(14.36)	(5.12)
log distance	-1.08	-1.08	-1.08	-1.08	-1.09	-1.1	-1.09	-1.09	-0.96	-0.97
	(37.03)	(36.24)	(37.10)	(36.24)	(36.56)	(35.88)	(36.47)	(35.74)	(33.07)	(32.09)
log product of GDP	1.13	1.12	1.12	1.12	1.1	1.11	1.1	1.11	1.07	1.07
	(108.66)	(96.37)	(106.79)	(95.86)	(102.99)	(96.69)	(101.89)	(96.22)	(111.02)	(107.30)
log product of land area	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.2	-0.21	-0.19	-0.19
	(23.48)	(22.34)	(22.90)	(21.75)	(22.78)	(22.32)	(22.13)	(21.67)	(21.40)	(21.34)
no. of landlocked	-0.35	-0.35	-0.35	-0.35	-0.36	-0.35	-0.36	-0.35	-0.39	-0.38
	(7.84)	(7.84)	(7.90)	(7.87)	(8.19)	(7.85)	(8.31)	(7.97)	(9.34)	(9.24)
no. of islands	-0.03	-0.03	-0.02	-0.02	-0.01	0	-0.01	0	-0.04	-0.02
	(0.55)	(0.64)	(0.42)	(0.47)	(0.18)	(0.08)	(0.21)	(0.07)	(0.79)	(0.54)
common border	0.91	0.91	0.9	0.9	0.98	0.97	0.97	0.96	0.77	0.76
	(6.33)	(6.33)	(6.17)	(6.16)	(6.91)	(6.84)	(6.76)	(6.68)	(5.54)	(5.44)
common language	0.62	0.62	0.56	0.56	0.62	0.62	0.54	0.54	0.51	0.51
	(11.05)	(11.06)	(9.62)	(9.63)	(11.16)	(11.04)	(9.46)	(9.39)	(9.71)	(9.69)
currency union	2.15	2.15	2.16	2.16	2.12	2.1	2.06	2.05	1.47	1.45
	(8.59)	(8.60)	(8.36)	(8.36)	(8.44)	(8.35)	(7.92)	(7.89)	(5.58)	(5.49)
common colonizer			0.92	0.92			0.81	0.82	0.81	0.82
			(6.51)	(6.45)			(5.90)	(5.94)	(6.42)	(6.44)
colony-colinizer			0.06	0.07			0.19	0.17	0.09	0.06
			(0.64)	(0.69)			(1.90)	(1.73)	(0.70)	(0.50)
both in GATT/WTO					-0.17	-0.14	-0.19	-0.16	-0.08	-0.04
					(1.51)	(1.22)	(1.72)	(1.42)	(0.50)	(0.26)
only one in GATT/WTO					-0.11	-0.09	-0.13	-0.11	-0.02	0
					(0.97)	(0.82)	(1.18)	(1.02)	(0.13)	(0.02)
generalized system of preferences (GSP)					0.61	0.65	0.61	0.65	0.28	0.3
					(15.27)	(13.99)	(15.11)	(13.93)	(7.01)	(7.12)
regional trade agreement					0.47	0.52	0.49	0.53	1.87	1.86
					(3.23)	(3.48)	(3.37)	(3.63)	(10.62)	(10.61)
average weighted tariff									-0.02	-0.02
									(12.33)	(12.08)
Observations	77594	77594	77594	77594	77594	77594	77594	77594	32752	32752
R^2	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.74	0.74
First stage R^2		0.40		0.40		0.44		0.44		0.46
% increase in trade due to 1s.d. institution	70%	74%	70%	70%	57%	45%	54%	45%	37%	27%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. The sum of control of corruption ranges from 0 to 12 with mean 7.02 and standard deviation 1.972. The percent increase in trade due to 1s.d. institution (control of corruption) is calculated as follows: exp(coef*sd)-1.

Table 13: Trade, Legal Origins and Protection of Property Rights, Robustness

Dep. Var.: log of average trade flow	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV	(7) OLS	(8) IV	(9) OLS	(10) IV
Different Legal Origin	-0.25	-0.26	-0.17	-0.18	-0.25	-0.23	-0.17	-0.16	-0.21	-0.18
	(5.96)	(5.76)	(4.03)	(4.05)	(6.00)	(5.42)	(4.07)	(3.69)	(5.01)	(4.11)
Protection of Property Rights	0.31	0.36	0.31	0.36	0.28	0.24	0.28	0.25	0.28	0.19
	(21.43)	(6.35)	(21.73)	(6.41)	(18.89)	(4.92)	(19.09)	(5.25)	(18.77)	(4.17)
log distance	-1.2	-1.2	-1.19	-1.2	-1.16	-1.16	-1.16	-1.16	-1.12	-1.12
	(48.76)	(48.48)	(48.58)	(48.45)	(46.33)	(46.26)	(46.10)	(46.08)	(44.55)	(44.38)
log product of GDP	0.98	0.97	0.98	0.96	0.97	0.98	0.96	0.97	0.98	1.01
	(105.61)	(49.37)	(105.17)	(49.62)	(102.82)	(63.14)	(102.89)	(63.53)	(104.15)	(71.81)
log product of land area	-0.1	-0.09	-0.09	-0.08	-0.11	-0.11	-0.1	-0.1	-0.1	-0.12
	(12.20)	(6.45)	(11.47)	(5.95)	(12.80)	(9.45)	(12.07)	(8.83)	(12.27)	(10.90)
no. of landlocked	-0.54	-0.55	-0.55	-0.56	-0.54	-0.53	-0.54	-0.53	-0.54	-0.52
	(15.70)	(15.35)	(16.00)	(15.64)	(15.73)	(14.83)	(15.99)	(15.20)	(15.08)	(14.29)
no. of islands	-0.18	-0.2	-0.19	-0.21	-0.19	-0.17	-0.21	-0.19	-0.22	-0.18
	(4.15)	(3.98)	(4.45)	(4.23)	(4.63)	(3.73)	(5.01)	(4.18)	(5.56)	(3.98)
common border	1.04	1.05	1.01	1.01	1.02	1.02	0.98	0.98	0.74	0.73
	(8.38)	(8.37)	(8.04)	(8.02)	(8.31)	(8.25)	(7.97)	(7.93)	(5.73)	(5.67)
common language	0.41	0.38	0.27	0.24	0.41	0.43	0.27	0.29	0.37	0.41
	(7.72)	(6.26)	(4.97)	(3.79)	(7.91)	(7.75)	(5.13)	(5.06)	(7.09)	(7.43)
currency union	1.31	1.32	1.12	1.12	1.39	1.37	1.16	1.15	1.11	1.12
	(5.46)	(5.48)	(4.53)	(4.53)	(5.77)	(5.70)	(4.72)	(4.67)	(3.18)	(3.36)
common colonizer			1.1	1.1			1	1	0.94	0.93
			(8.53)	(8.51)			(7.94)	(7.92)	(8.21)	(8.10)
colony-colinizer			0.46	0.47			0.49	0.49	0.31	0.31
			(5.07)	(5.13)			(5.48)	(5.45)	(2.72)	(2.68)
both in GATT/WTO					-0.62	-0.58	-0.55	-0.52	-0.55	-0.44
					(5.05)	(4.36)	(4.64)	(4.07)	(3.41)	(2.59)
only one in GATT/WTO					-0.63	-0.6	-0.55	-0.54	-0.59	-0.52
					(5.11)	(4.72)	(4.66)	(4.36)	(3.63)	(3.12)
generalized system of preferences (GSP)					0.42	0.44	0.42	0.44	0.19	0.23
					(11.69)	(10.56)	(11.84)	(10.54)	(5.28)	(5.89)
regional trade agreement					0.66	0.69	0.68	0.7	1.79	1.81
					(5.34)	(5.36)	(5.52)	(5.47)	(9.96)	(10.21)
average weighted tariff									-0.02	-0.02
									(8.47)	(8.49)
Observations	29772	29772	29772	29772	29772	29772	29772	29772	19536	19536
R^2	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.75	0.75
First stage R^2		0.42		0.42		0.49		0.49		0.49
% increase in trade due to 1s.d. institution	58%	70%	58%	70%	51%	42%	51%	44%	51%	32%

Notes: t-values in parentheses. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. The sum of protection of property rights ranges from 0 to 8 with mean 4.96 and standard deviation 1.471. The percent increase in trade due to 1s.d. institution (protection of property rights) is calculated as follows: exp(coef*sd)-1.

Table 14: Trade, Legal Origins and Bureaucratic Quality, Rich Countries vs. Poor

Dep. Var.: log of average trade flow

	All		Rich Partner		Poor Partner	
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	IV	OLS	IV	OLS	IV
Different Legal Origin	-0.1	-0.14	-0.28	-0.2	-0.12	-0.19
	[2.19]	[2.89]	[5.27]	[3.44]	[2.43]	[3.43]
Bureaucratic Quality	0.38	0.47	0.32	0.12	0.38	0.52
	[26.20]	[12.64]	[17.90]	[2.21]	[24.12]	[11.09]
log distance	-1.09	-1.07	-0.81	-0.85	-1.14	-1.14
	[36.97]	[35.44]	[24.97]	[24.52]	[33.34]	[32.94]
log product of GDP	1.07	1.03	1.06	1.11	1.08	1.04
	[95.80]	[63.25]	[79.65]	[62.34]	[89.92]	[56.13]
log product of land area	-0.2	-0.18	-0.18	-0.18	-0.2	-0.18
	[21.75]	[18.07]	[16.62]	[16.49]	[20.43]	[15.69]
no. of landlocked	-0.33	-0.35	-0.28	-0.25	-0.3	-0.33
	[7.39]	[7.82]	[5.99]	[5.44]	[6.40]	[6.93]
common border	-0.16	-0.21	-0.29	-0.16	-0.24	-0.31
	[3.43]	[4.27]	[5.63]	[2.68]	[4.83]	[5.69]
common border	0.98	1.02	0.09	0.17	1.17	1.24
	[6.77]	[6.93]	[0.59]	[1.00]	[7.44]	[7.74]
common language	0.51	0.49	0.38	0.44	0.52	0.48
	[9.07]	[8.62]	[6.13]	[6.90]	[8.35]	[7.52]
currency union	1.9	1.86	1.11	0.98	1.81	1.74
	[7.85]	[7.66]	[6.17]	[9.69]	[7.51]	[7.15]
Observations	77594	77594	39961	39961	69014	69014
R^2	0.67	0.67	0.78	0.77	0.64	0.64
First stage R^2		0.43		0.38		0.37
% increase in trade due to 1s.d. institution	88%	119%	52%	17%	84%	130%

Notes: t-values in Brackets. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. IV estimators use the sum of absolute latitude as an instrument for Bureaucratic Quality. The Rich Partner subsample includes all country pairs where at least one is "rich". The Poor Partner subsample includes all country pairs where at least one is "poor". "Rich" countries are defined as those with PPP GDP per capita larger than 10,000 dollars in 2000 and the rest are "poor". The percent increase in trade due to 1s.d. institution is calculated as exp(coef*sd)-1 and takes into account different standard deviations in each subsample. Summary statistics for the institutional quality variable in each subsample are reported in Table 17.

Table 15: Trade, Legal Origins and Corruption, Rich Countries vs. Poor

Dep. Var.: log of average trade flow

	All		Rich Partner		Poor Partner	
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	IV	OLS	IV	OLS	IV
Different Legal Origin	-0.08	-0.09	-0.25	-0.19	-0.1	-0.11
	[1.70]	[1.78]	[4.42]	[3.33]	[2.01]	[2.08]
Control of Corruption	0.27	0.28	0.17	0.07	0.29	0.3
	[25.11]	[12.65]	[11.89]	[2.19]	[23.52]	[11.17]
log distance	-1.08	-1.08	-0.83	-0.85	-1.14	-1.14
	[37.03]	[36.24]	[24.99]	[24.68]	[33.24]	[33.25]
log product of GDP	1.13	1.12	1.12	1.13	1.14	1.14
	[108.66]	[96.37]	[91.33]	[87.20]	[99.52]	[91.34]
log product of land area	-0.21	-0.21	-0.19	-0.19	-0.22	-0.21
	[23.48]	[22.34]	[17.79]	[17.38]	[21.76]	[20.44]
no. of landlocked	-0.35	-0.35	-0.27	-0.25	-0.32	-0.33
	[7.84]	[7.84]	[5.76]	[5.37]	[6.84]	[6.85]
common border	-0.03	-0.03	-0.13	-0.11	-0.13	-0.14
	[0.55]	[0.64]	[2.55]	[2.04]	[2.59]	[2.64]
common border	0.91	0.91	0.12	0.17	1.09	1.1
	[6.33]	[6.33]	[0.76]	[1.02]	[6.93]	[6.93]
common language	0.62	0.62	0.49	0.48	0.63	0.63
	[11.05]	[11.06]	[7.93]	[7.73]	[10.10]	[10.11]
currency union	2.15	2.15	1.2	1.03	2.09	2.1
	[8.59]	[8.60]	[11.54]	[9.00]	[8.33]	[8.33]
Observations	77594	77594	39961	39961	69014	69014
R^2	0.67	0.67	0.77	0.77	0.64	0.64
First stage R^2		0.40		0.32		0.35
% increase in trade due to 1s.d. institution	70%	74%	34%	13%	71%	74%

Notes: t-values in Brackets. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. IV estimators use the sum of absolute latitude as an instrument for Control of Corruption. The Rich Partner subsample includes all country pairs where at least one is "rich". The Poor Partner subsample includes all country pairs where at least one is "poor". "Rich" countries are defined as those with PPP GDP per capita larger than 10,000 dollars in 2000 and the rest are "poor". The percent increase in trade due to 1s.d. institution is calculated as exp(coef*sd)-1 and takes into account different standard deviations in each subsample. Summary statistics for the institutional quality variable in each subsample are reported in Table 17.

Table 16: Trade, Legal Origins and Property Rights, Rich Countries vs. Poor

Dep. Var.: log of average trade flow

	All		Rich Partner		Poor Partner	
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	IV	OLS	IV	OLS	IV
Different Legal Origin	-0.25	-0.26	-0.27	-0.16	-0.28	-0.31
	[5.96]	[5.76]	[5.55]	[2.90]	[6.34]	[6.23]
Protection of Property Rights	0.31	0.36	0.3	-0.1	0.32	0.41
	[21.43]	[6.35]	[15.83]	[1.52]	[20.33]	[6.05]
log distance	-1.2	-1.2	-0.99	-0.96	-1.25	-1.27
	[48.76]	[48.48]	[35.11]	[31.77]	[45.62]	[43.92]
log product of GDP	0.98	0.97	1.01	1.11	0.99	0.97
	[105.61]	[49.37]	[88.91]	[58.67]	[98.69]	[44.96]
log product of land area	-0.1	-0.09	-0.1	-0.15	-0.1	-0.08
	[12.20]	[6.45]	[10.83]	[11.96]	[11.34]	[5.06]
no. of landlocked	-0.54	-0.55	-0.61	-0.54	-0.53	-0.55
	[15.70]	[15.35]	[15.54]	[13.04]	[14.84]	[14.54]
common border	-0.18	-0.2	-0.2	-0.07	-0.27	-0.31
	[4.15]	[3.98]	[4.23]	[1.18]	[5.69]	[5.55]
common border	1.04	1.05	-0.03	0.19	1.22	1.23
	[8.38]	[8.37]	[0.15]	[0.96]	[9.44]	[9.46]
common language	0.41	0.38	0.41	0.62	0.4	0.35
	[7.72]	[6.26]	[6.82]	[8.48]	[7.00]	[5.12]
currency union	1.31	1.32	0.31	0.6	1.21	1.23
	[5.46]	[5.48]	[0.68]	[2.33]	[5.05]	[5.07]
Observations	29772	29772	14160	14160	26948	26948
R^2	0.72	0.72	0.81	0.79	0.69	0.69
First stage R^2		0.42		0.30		0.38
% increase in trade due to 1s.d. institution	58%	70%	42%	-11%	57%	79%

Notes: t-values in Brackets. Standard errors are calculated taking into account country-pair clusters. A constant and year dummies are not reported. IV estimators use the sum of absolute latitude as an instrument for Protection of Property Rights. The Rich Partner subsample includes all country pairs where at least one is "rich". The Poor Partner subsample includes all country pairs where at least one is "poor". "Rich" countries are defined as those with PPP GDP per capita larger than 10,000 dollars in 2000 and the rest are "poor". The percent increase in trade due to 1s.d. institution is calculated as exp(coef*sd)-1 and takes into account different standard deviations in each subsample. Summary statistics for the institutional quality variable in each subsample are reported in Table 17.

Table 17: Summary Statistics for Rich\Poor Subsamples

Variable	Obs	Mean	Std. Dev.	Min	Max
Rich Partner subsample: at least one country with PPP GDP per capita >10,000 in 2000					
Sum of bureaucratic quality	39961	5.60	1.32	1	8
Sum of control of corruption	39961	8.11	1.70	0	12
Sum of property rights protection	14160	5.82	1.16	2	8
Poor Partner subsample: at least one country with PPP GDP per capita <10,000 in 2000					
Sum of bureaucratic quality	69014	4.51	1.60	0	8
Sum of control of corruption	69014	6.87	1.85	0	12
Sum of property rights protection	26948	4.83	1.42	0	8

Appendix

ICRG countries sample (Bureaucratic Quality, Control of Corruption)

ALBANIA, ALGERIA, ANGOLA, ARGENTINA, ARMENIA, AUSTRALIA, AUSTRIA, AZERBAIJAN, BAHAMAS, BAHRAIN, BANGLADESH, BELARUS, BELGIUM, BOLIVIA, BOTSWANA, BRAZIL, BULGARIA, BURKINA FASO, BURMA(Myanmar) , CAMEROON, CANADA, CHILE, CHINA, COLOMBIA, CONGO, DEM. REP. OF (ZAIRE) , CONGO, REP. OF, COSTA RICA, COTE D'IVORIE (IVORY COAST) , CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, DOMINICAN REP. , ECUADOR, EGYPT, EL SALVADOR, ESTONIA, ETHIOPIA, FINLAND, FRANCE, GABON, GAMBIA, GERMANY, GHANA, GREECE, GUATEMALA, GUINEA, GUINEA-BISSAU, GUYANA, HAITI, HONDURAS, HONG KONG, HUNGARY, ICELAND, INDIA, INDONESIA, IRAN, IRAQ, IRELAND, ISRAEL, ITALY, JAMAICA, JAPAN, JORDAN, KAZAKHSTAN, KENYA, KOREA,SOUTH(R) , KUWAIT, LATVIA, LEBANON, LIBERIA, LIBYA, LITHUANIA, LUXEMBOURG, MADAGASCAR, MALAWI, MALAYSIA, MALI, MALTA, MEXICO, MOLDVA, MONGOLIA, MOROCCO, MOZAMBIQUE, NAMIBIA, NETHERLANDS, NEW ZEALAND, NICARAGUA, NIGER, NIGERIA, NORWAY, OMAN, PAKISTAN, PANAMA, PAPUA N.GUINEA, PARAGUAY, PERU, PHILIPPINES, POLAND, PORTUGAL, QATAR, ROMANIA, RUSSIA, SAUDI ARABIA, SENEGAL, SIERRA LEONE, SINGAPORE, SLOVAK REPUBLIC, SLOVENIA, SOMALIA, SOUTH AFRICA, SPAIN, SRI LANKA, SUDAN, SURINAME, SWEDEN, SWITZERLAND, SYRIA, TANZANIA, THAILAND, TOGO, TRINIDAD&TOBAGO, TUNISIA, TURKEY, UGANDA, UKRAINE, UNITED ARAB EMIRATES, UNITED KINGDOM, UNITED STATES, URUGUAY, VENEZUELA, VIETNAM, YEMEN, REPUBLIC OF, ZAMBIA, ZIMBABWE.

Heritage Foundation countries sample (Property Rights)

ALBANIA, ALGERIA, ANGOLA, ARGENTINA, ARMENIA, AUSTRALIA, AUSTRIA, AZERBAIJAN, BAHAMAS, BAHRAIN, BANGLADESH, BARBADOS, BELARUS, BELGIUM, BELIZE, BENIN, BOLIVIA, BOTSWANA, BRAZIL, BULGARIA, BURKINA FASO, BURMA(Myanmar) , BURUNDI, CAMBODIA, CAMEROON, CANADA, CAPE VERDE, CHAD, CHILE, CHINA, COLOMBIA, CONGO, DEM. REP. OF (ZAIRE) , CONGO, REP. OF, COSTA RICA, COTE D'IVORIE (IVORY COAST) , CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, DJIBOUTI, DOMINICAN REP. , ECUADOR, EGYPT, EL SALVADOR, EQUATORIAL GUINEA, ESTONIA, ETHIOPIA, FIJI, FINLAND, FRANCE, GABON, GAMBIA, GEORGIA, GERMANY, GHANA, GREECE, GUATEMALA, GUINEA, GUINEA-BISSAU, GUYANA, HAITI, HONDURAS, HONG KONG, HUNGARY, ICELAND, INDIA, INDONESIA, IRAN, IRELAND, ISRAEL, ITALY, JAMAICA, JAPAN, JORDAN, KAZAKHSTAN, KENYA, KOREA, SOUTH(R), KUWAIT, KYRQYZ REPUBLIC, LAO PEOPLE'S DEM. REP. , LATVIA, LEBANON, LESOTHO, LIBYA, LITHUANIA, LUXEMBOURG, MADAGASCAR, MALAWI, MALAYSIA, MALI, MALTA, MAURITANIA, MAURITIUS, MEXICO, MOLDVA, MONGOLIA, MOROCCO, MOZAMBIQUE, NAMIBIA, NEPAL, NETHERLANDS, NEW ZEALAND, NICARAGUA, NIGER, NIGERIA, NORWAY, OMAN, PAKISTAN, PANAMA, PAPUA N.GUINEA, PARAGUAY, PERU, PHILIPPINES, POLAND, PORTUGAL, ROMANIA, RUSSIA, RWANDA, SAMOA, SAUDI ARABIA, SENEGAL, SIERRA LEONE, SINGAPORE, SLOVAK REPUBLIC, SLOVENIA, SOUTH AFRICA, SPAIN, SRI LANKA, SUDAN, SURINAME, SWAZILAND, SWEDEN, SWITZERLAND, SYRIA, TAJIKISTAN, TANZANIA, THAILAND, TOGO, TRINIDAD&TOBAGO, TUNISIA, TURKEY, TURKMENISTAN, UGANDA, UKRAINE, UNITED ARAB EMIRATES, UNITED KINGDOM, UNITED STATES, URUGUAY, UZBEKISTAN, VENEZUELA, VIETNAM, YEMEN, , REPUBLIC OF, ZAMBIA, ZIMBABWE

List of 31 countries with PPP GDP per capita >10,000 in 2000

AUSTRALIA, AUSTRIA, BELGIUM, CANADA, DENMARK, FINLAND, FRANCE, GERMANY, HONG KONG, ICELAND, IRELAND, JAPAN, LUXEMBOURG, NETHERLANDS, NORWAY, SINGAPORE, SWEDEN, SWITZERLAND, UNITED ARAB EMIRATES, UNITED KINGDOM, UNITED STATES, BAHAMAS, ISRAEL, ITALY, KUWAIT, CYPRUS, GREECE, KOREA,SOUTH(R) , PORTUGAL, SPAIN, NEW ZEALAND

Table A1: correlations between differences in legal origin and institutional quality disparity

	dlegor	dburqua	dcorrup
dburqua	0.09		
dcorrup	0.09	0.28	
dpr	0.13	0.60	0.20

	dlegor	dburqua2	dcorrup2
dburqua2	0.07		
dcorrup2	0.05	0.50	
dpr2	0.09	0.46	0.41

	dlegor	dgoveff	dregqua	drulela	dconcor
dgoveff	0.10				
dregqua	0.02	0.65			
drulela	0.15	0.87	0.64		
dconcor	0.16	0.90	0.55	0.91	
dkkz	0.11	0.91	0.74	0.92	0.91

	dlegor	dgoveff2	dregqua2	drulela2	dconcor2
dgoveff2	0.08				
dregqua2	0.01	0.39			
drulela2	0.14	0.72	0.39		
dconcor2	0.15	0.74	0.29	0.75	
dkkz2	0.10	0.70	0.51	0.72	0.61

Notes: "dlegor" is an indicator for the difference in legal origins. The letter "d" before an indicator's name denotes the absolute value of the difference between qualities of bilateral trade country pairs. "Burqua" is an indicator for bureaucratic quality and "corrup" is an indicator for less corruption - both from ICRG dataset in 1999. "Pr" is an indicator for protection of property rights from the Heritage Foundation in 1999. The following indicators are from the World Bank's Government Matters dataset in 1998: "goveff" indicates government efficiency, "regqua" indicates regulatory quality, "rulela" indicates rule of law, "concor" indicates control of corruption, and "kkz" indicates a composite of all 6 Government Matters indicators. An indicator's name followed by the number two denotes that the difference has been replaced by a dummy variable that is equal to one if the original difference is greater than two standard deviations.