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What determines the quality of economic institutions? Cross-country evidence

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Summary

This paper looks at the determinants of the quality of economic institutions such as rule of law and control of corruption in a large sample of countries. The analysis pays particular attention to the quality of democratic institutions as a potential determinant. Both types of institutions – economic and democratic – are closely linked but the relationship appears to be U-shaped rather than linear. Economic institutions tend to be better in countries that are more open to trade, investment and financial flows and do not have significant natural resource endowments. Finally, history and geography play an important role in shaping a country's economic institutions. Overall, the findings suggest that economic openness and commodity wealth may help non-democratic countries achieve improvements in some economic institutions. At the same time, the impact of commodity wealth on deeper economic institutions such as control of corruption remains negative.

Keywords: economic institutions, democratisation, economic openness

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1. Introduction

Economic and political institutions – understood as the rules of the game in a society (North, 1990) – play a key role in defining a country's long-term growth potential. Countries with stronger economic institutions – effective rule of law, a good business climate, more secure property rights and market-friendly social norms – are better positioned to attract investment, participate in trade and utilise physical and human capital more efficiently, resulting in better growth performance over the long run (see, for instance, Robinson et al., 2005).

While the importance of economic institutions is broadly acknowledged, the determinants of the quality of institutions are difficult to pin down. A particularly relevant question from a policy perspective is how certain countries with weak economic and political institutions manage to push economic reforms and improve their economic institutions notwithstanding limited political freedom.

To try to answer this question, the paper examines a broad cross-section of countries and pays particular attention to the determinants of the quality of economic institutions that may differ depending on a country's level of democratic institutions. In particular, in addition to the level of democratisation itself, the explanatory variables include interaction terms between the indicator for autocratic regimes and country characteristics, such as the level of economic openness, abundance of natural resources or the degree of ethnic fractionalisation. This analysis is motivated by the empirical observation that the relationship between democratic and economic institutions, while strong, appears to be U-shaped rather than linear, suggesting that different factors may determine the quality of economic institutions among democracies and among autocracies.

The paper also contrasts the impact of various factors on deeper economic institutions such as control of corruption and narrower measures of business environment based largely on laws on the books.

The analysis suggests that economic institutions tend to be better in countries that are more open to trade, investment and financial flows and do not have significant natural resource endowments. While natural resources may enable countries to improve government effectiveness, regulatory quality and other measures of institutional capacity that tend to improve as income grows, deeper institutions such as rule of law and control of corruption tend to be weaker in resource-rich countries. Countries' history and geography also play an important role in shaping their economic institutions.

Section 2 discusses key determinants of economic institutions in the context of the vast literature on the subject. Section 3 describes the data. Section 4 discusses the results. Section 5 concludes.

2. Determinants of economic institutions

Economic institutions – the “rules of the game” in a society, such as law and order, control of corruption, property rights, or the way in which public services are delivered – vary vastly across countries. Numerous explanations for these differences have been put forward. In particular, economic institutions can be affected by the maturity of political institutions, for instance, effectiveness of checks and balances on those in power; a country’s geography and factor endowments; a country’s history and structure of its society. Economic institutions can also be shaped by interactions between different countries and cultures – in particular, the extent to which a country is open to trade, investment and financial flows. These factors and evidence of their importance are briefly reviewed below.

2.1. Democratic institutions

The quality of political institutions is widely held to be one of the most important determinants of the quality of economic institutions (see, for instance, Adsera, Boix and Payne, 2003). Political competition and the checks and balances imposed in a well-functioning democracy restrict the ability of governments to engage in rent seeking while the accountability of government to taxpayers leads to more business-friendly rules and regulations (see, for instance, Olson (2000), North (1990) and North and Weingast, 1989). Democratic regimes are also more likely to have an independent judiciary and strong and independent regulatory bodies.

The link between the quality of economic and political institutions is further reinforced as better economic institutions tend to support economic development, and economic development over time may lead to demand for better political institutions. In fact, disentangling the direction of causality (from democratisation to better economic institutions and vice versa) is a difficult task, not least because common factors such as history and geography may affect both.

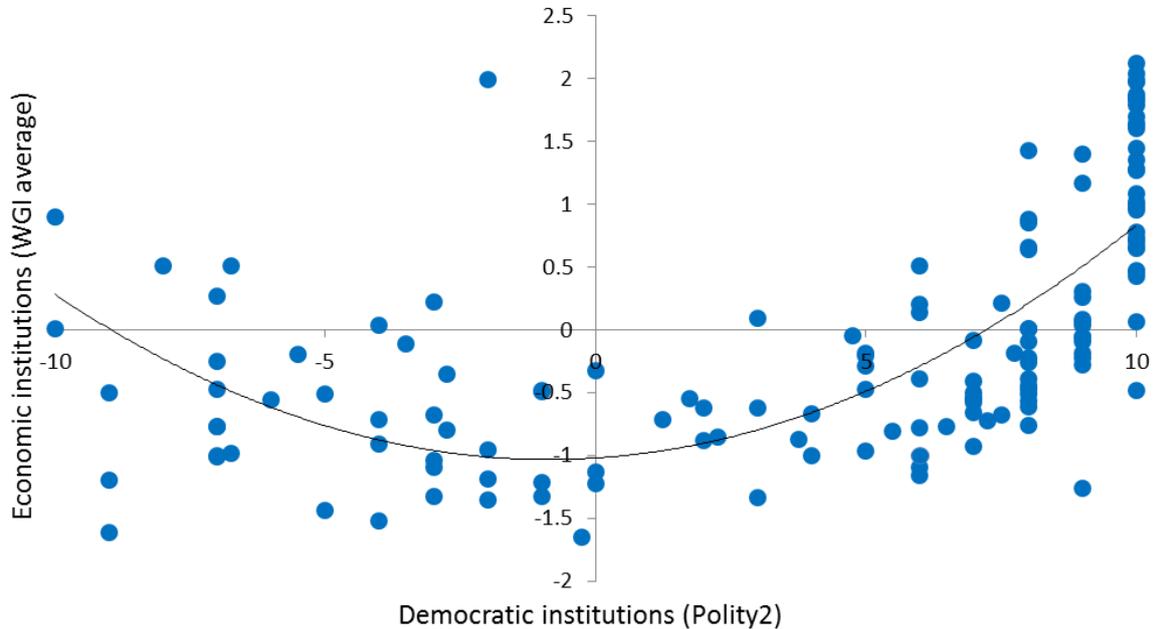
While the quality of economic institutions and that of democratic institutions are very strongly positively correlated, the relationship does not appear to be linear, or even monotonic. This is illustrated in a simple chart below (Chart 1), which uses two standard measures of economic and political institutions.

Democratic institutions are measured by a Polity IV index, compiled annually by the Center for Systemic Peace. The index ranges from -10 (corresponding to a completely autocratic regime, such as hereditary monarchy) to 10 (corresponding to a well-functioning democracy), with countries with Polity scores below -5 labelled as “autocracies”. It is plotted on the horizontal axis.

To measure broad economic institutions, we use four World Bank Worldwide Governance Indicators (WGIs): for government effectiveness, regulatory quality, the rule of law and control of corruption (the remaining two indicators – voice and accountability and political stability and absence of violence – reflect primarily the strength of political institutions). The WGI indicators are based on data sources that include expert judgement and surveys of households and businesses. Thus they reflect the quality of institutions as perceived by expert professionals and economic agents more generally, rather than take a narrow view of the laws on the books. The WGIs are available annually from 1996 to 2011 for a large number of

countries. They range from -2.5 to +2.5, with higher values corresponding to better institutions.¹ A simple average of the four WGI indicators is plotted on the vertical axis of Chart 1.

Chart 1: Democratic institutions and economic institutions



Sources: World Bank Governance Indicators, Polity IV and authors’ calculations.
 Note: Based on year 2011.

The positive relationship between the quality of economic and political institutions is strong. In particular, with a single exception of Singapore, no country with weak political institutions enjoys high-quality economic institutions (with a quality one standard deviation above the average or higher). This points to a certain “glass ceiling” in terms of improvements in economic institutions that can be achieved in non-democratic environments.

At the same time, a number of countries with very low Polity scores (to the left of -5) have relatively strong (above-average) economic institutions (for instance, Qatar or the United Arab Emirates). In fact, the relationship appears to be better approximated by a U-curve than by a straight line.

As there is no good reason to assume that further increasing the degree of autocracy in countries with a low level of political institutions by itself improves economic institutions, it is likely that some third factors may account for higher average quality of economic institutions in the “tail” of more autocratic regimes.

This gives rise to the question whether the same factors influence evolution of economic institutions in autocracies and democracies or these factors may differ depending on the democracy context. This question is further explored below by allowing the effects of various

¹ See Kaufmann et al. (2009) for discussion of the methodology and sources.

determinants of economic institutions (discussed below) to differ in a group of countries with low Polity scores.

2.2. Geography

Economic institutions evolve slowly, exhibiting strong path dependence and hence they are likely to depend on a country's geography, history or various characteristics of a society, none of which can be easily influenced by policy-makers.

A country's geography can have a profound impact on a country's economic development. Landlocked countries with difficult climates and terrains may experience lower growth and development outcomes due to high transportation costs, diseases, low productivity in agriculture and other factors. Some studies see these direct channels as the driving force shaping economic outcomes (see, for instance, Gallup, Sachs and Mellinger, 1999) while others argue that geography affects development primarily through its impact on economic and political institutions (Robinson, Acemoglu and Johnson, 2005).

For instance, it has often been argued that countries located further away from the equator may have stronger economic institutions as temperate climates encouraged economic specialisation and development of trade over the centuries, contributing to stronger industrial growth (see, for instance, Hall and Jones, 1999). Acemoglu, Johnson and Robinson (2001) further argue that colonial institutions were weaker in countries where mortality among colonial settlers was higher. This was because colonisers had little incentive to build "inclusive" economic and political institutions such as property rights and democratic government that support long-term investment and every incentive to extract (appropriate) rents available in the short term.

Characteristics of the terrain may also matter, both for economic outcomes directly and for the quality of institutions. In particular, costs of trade and investment are likely to be higher in landlocked countries and countries with more difficult, rugged terrain. Being landlocked or having more difficult terrain increases the cost of trade and investment. At the same time, difficult conditions may encourage the development of economic institutions that aim to compensate for higher transaction costs (see Nunn and Puga, 2012, who use an index of ruggedness of a country's terrain to capture the role of geography).

2.3. History

Economic institutions may also be deeply influenced by a country's history. Several recent studies confirm an exceptionally strong degree of path dependence of economic institutions. In some cases it may stretch back centuries as colonial powers and empires have a long-lasting impact on societies that come under their rule (see, for instance, Becker et al., 2011, Grosjean, 2011a, 2011b, Grosfeld and Zhuravskaya, 2013, for evidence on the legacy of different empires in Europe).

As institutions take a long time to mature, the length of time that a country has been an independent state may also play an important role. Countries with a longer history of self-governance as a state are likely to have more developed economic institutions (see Chanda and Putterman, 2007). The history of self-governance can be summarised in an index that measures the effective length of independent statehood of each country.

2.4. Ethnic fractionalisation

Another country characteristic that can affect the success of reforms and institution building is the extent to which a society is divided along ethnic or linguistic lines (Alesina et al., 1999). In divided societies it may be more difficult for different ethnic groups or political parties to agree on the direction of reforms that are needed to strengthen a country's economic institutions.

In fact, different fractions of society may have little trust in each other or in government institutions more generally (Putnam et al., 1994). One commonly used indicator of such divisions is the index of ethnic fractionalisation (Wacziarg et al., 2003). The index shows the probability of two randomly chosen individuals in a country belonging to different ethnic groups. Countries with higher fractionalisation indices are expected to have weaker economic institutions, other things being equal.

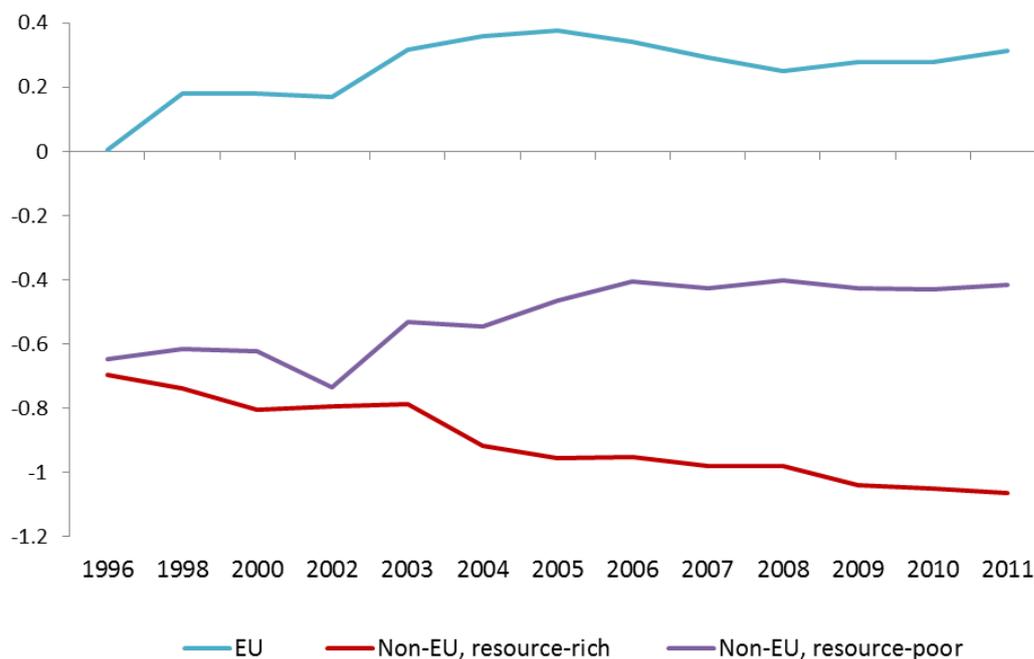
2.5. Natural resource endowments

Another semi-exogenous factor that affects institutional development is the abundance of natural resources relative to the size of the economy (measured, for instance, as a share of natural resource rents (revenues net of extraction costs) as a share of GDP, or as a share of commodities in total exports).

Natural resource abundance can lead to a weakening of democratic institutions as well as economic ones (see, for instance, Boix, 2003, and Guriev et al., 2009, for an overview of the institutional "resource curse"). In resource-rich countries the ruling elites are likely to be particularly opposed to democratisation and a strengthening of economic institutions as stronger institutions, such as rule of law or control of corruption, impose checks and balances that make it more difficult for the ruling elites to appropriate natural resource rents (Karl, 1997). Natural resource abundance may in fact have both a direct negative effect on economic institutions and an indirect one, via a weakening of political institutions that further undermines the development of economic ones.

Strikingly, countries in emerging Europe and Central Asia that came out of decades of central planning had similar average scores for control of corruption in the mid-1990s, regardless of whether they were resource-rich or resource-poor (excluding the future EU members, which enjoyed a somewhat higher quality of economic institutions). However, since then the averages of quality of economic institutions in resource-rich and resource-poor countries have been steadily diverging. The divergence became particularly rapid during the period of high commodity prices from 2003 (Chart 2). Although this evidence is only suggestive and cannot necessarily be interpreted as causal, it is consistent with the existence of an institutional "resource curse".

Chart 2: Average indicator of control of corruption in emerging Europe and Central Asia



Sources: World Governance Indicators, authors' calculations.

Some indirect effects of natural resource abundance on institutions may also be positive, notably via the income effect. Natural resource wealth can be used to strengthen the implementation capacity of governments, pursue basic business environment reforms and reduce petty corruption by raising the pay of officials, regulators and inspectors. Some Gulf Cooperation Council (GCC) countries, for instance, score relatively well on certain measures of economic institutions, which in part accounts for the U-shaped relationship between political and economic institutions discussed above.

2.6. Economic openness

Openness of the economy to international trade and investment is also likely to affect evolution of a country's economic institutions. Foreign investors may create stronger demand for better institutions. The presence of multinational companies can facilitate the transfer of skills and the adoption of international business practices – which may, over time, lead to improvements in some economic institutions (see, for instance, Foley, 2002). Dual listing of company shares contributes to improved corporate governance (see Coffee, 2002).

Education and training abroad may play a key role in strengthening the technical capacity of the government, civil service and state-owned companies, if they employ many of the returning scholars. This may help to design and implement technocratic economic reforms.

International integration often leads to the adoption of external benchmarks that may be used to anchor reforms. A popular external benchmark is the World Bank *Doing Business* ranking, a well-defined and independently verifiable (even if somewhat narrow) measure of the

quality of a country's business environment. A number of countries (for instance, Belarus, Georgia and Russia) adopted formal *Doing Business* ranking targets; Russia recently developed roadmaps for improving each of the 11 dimensions of business environment featured in *Doing Business*, such as access to electricity or trading across borders.

Importantly, international rankings such as the *Doing Business* report incorporate elements of yardstick competition – a comparison of economic policies and achievements in a given country with those of its neighbours or of countries with similar histories or endowments. Such yardstick competition is known to play a role in shaping economic policies (see, for instance, Besley and Case, 1995, for evidence from the United States). External benchmarks go beyond international league tables. They may take the form of membership of international organisations – the World Trade Organization or the Organisation for Economic Cooperation and Development (OECD), for example. Accession often requires countries to make important adjustments to various laws and regulations, for instance in intellectual property rights protection or service sector liberalisation, and this may significantly affect a country's economic institutions and firm productivity (see Shepotylo and Vakhitov, 2012, for evidence on the impact of Ukraine's WTO accession).

Accession to regional economic blocs with strong economic institutions may provide the strongest external anchor for improving institutions. For example, the prospects of EU accession played a crucial role in supporting improvement in institutions in countries in central and south-eastern Europe (see, for instance, Schweinker et al., 2011).

More broadly, there is evidence that the quality of economic institutions tends to converge within regional economic blocs with deeper integration, whereby countries with weaker economic institutions catch up with countries with stronger institutions, in particular in areas such as regulatory quality, albeit slowly (see EBRD, 2012 b).

The next sections examine the measurement of various factors discussed above and present empirical results for the determinants of economic institutions.

3. Data

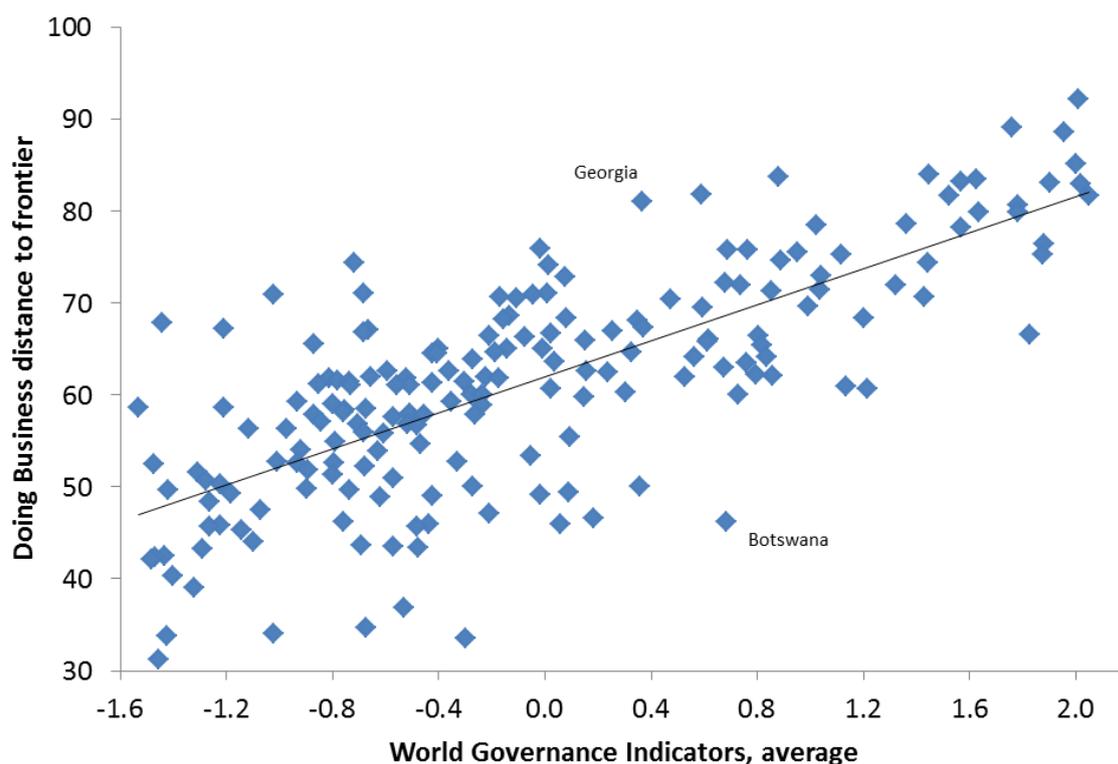
3.1. Measuring economic institutions

The World Governance Indicators that measure economic institutions are complemented by the data from the World Bank *Doing Business* surveys. Compared with the WGI, *Doing Business* measures give a greater weight to various rules and regulations that shape the business environment in which a representative firm operates. It incorporates narrow but more easily quantifiable measures of obstacles to doing business, such as the number of days needed to obtain approval for a start-up or the cost of opening a bank account.

The survey assesses each economy along 11 dimensions such as starting a business or getting access to electricity. An economy's performance is summed up by the *Doing Business* "distance to the frontier". This indicator, available annually starting from 2006, is computed based on the differences between the awarded scores and those of the best performer in each category. For example, the Hong Kong Special Administrative Region represents the frontier for dealing with construction permits while New Zealand represents the frontier when it comes to starting a business. For each country, the distances to the best performers in each category are aggregated to form a composite measure of the distance to best practices. This measure is rescaled from 0 to 100, with higher scores corresponding to a better business environment (see World Bank, 2013, for details).

Chart 3 plots the *Doing Business* distance to frontier against the average of the four WGIs. While the two measures of economic institutions are strongly positively correlated across countries, there are substantial differences between the two measures in a number of countries. For instance, Georgia is placed in the top 10 countries according to the *Doing Business* ranking but its average World Governance Indicator is middle-of-the-range. In contrast, Botswana has a higher average World Governance Indicator, reflecting strong perceived underlying economic institutions, yet it scores poorly in terms of ease of doing business for a representative firm.

Chart 3: World Governance Indicators and distance to the *Doing Business* frontier



Sources: World Governance Indicators, *Doing Business* reports and authors' calculations.

These differences reflect the fact that the distance to the frontier can, to some extent, be reduced by rolling back and simplifying business regulations, although this may not improve other aspects of economic institutions (such as the rule of law). Conversely, certain countries with generally developed economic institutions may have a long tradition of complex bureaucratic procedures. Empirical analysis below may shed some further light on drivers of these differences.

3.2. Other variables

Resource dependence is measured by the share of commodity rents in total value added (estimated by the World Bank) or by the share of commodities in total merchandise exports.

Economic openness is measured both in terms of openness to trade and financial openness. Openness to trade is captured by the trade intensity index, which compares a country's share of world trade with its share of world output. More precisely, the index is a residual in a regression of the volume of trade on a country's GDP and a number of other characteristics that are commonly used to explain trade flows (see Pritchett, 1996). Higher values of the index correspond to a higher degree of trade openness.

Financial openness is proxied by the Chinn-Ito index of capital account openness that takes into account various forms of capital controls and currency convertibility restrictions (see Chinn and Ito, 2006). Higher values of the index correspond to greater financial openness.

The history of self-governance is summarised by a state antiquity index constructed by discounting the presence of a governing body representing independent statehood over the past 2,000 years by 50 per cent every half-century (Chanda and Putterman, 2007). Higher values of the index are ascribed to states that have existed longer.

Regressions also include regional dummy variables (where the EBRD region refers to emerging Europe, Central Asia as well as Jordan, Egypt, Tunisia and Morocco).

The dataset covers more than 130 countries (listed in Annex 1). Coverage is dictated by the availability of measures of institutions and other variables. Table 1 presents descriptive statistics for selected variables. Cross-country regressions are estimated by OLS using the 2011 cross-section of data, to focus on cross-country variation in variables such as economic or political institutions, characteristics of geography, history or society. These variables are either constant over time or have limited meaningful time variation, hence the focus on cross-sectional dimension.

This inevitably limits the interpretation of the results due to potential issues related to omitted variables and reverse causality.

Table 1: Descriptive statistics

<i>Variable</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>
Distance to frontier	61.4	12.6	60.6	35.1	91.7
World governance indicator av.	0.03	0.95	-0.17	-1.58	2.11
Polity score	4.3	6.1	7.0	-10.0	10.0
Income per capita, log	8.9	1.3	9.0	6.2	11.7
Ethnic fractionalisation	0.44	0.25	0.46	0.00	0.93
Distance from the equator	26.8	17.2	25.1	0.2	64.2
Landlocked	0.22	0.42	0.00	0.00	1.00
Terrain ruggedness index	1.3	1.2	0.0	6.7	0.9
Share of commodities in exports	31.4	30.2	18.5	0.0	98.9
Natural resource rents,% GDP	10.2	15.6	3.4	0.0	78.5
Trade intensity index	0.04	0.59	0.02	-1.17	3.30
State antiquity index	403.8	216.1	402.3	25.0	860.9
Financial openness index	0.43	1.62	0.06	-1.86	2.43

Source: Authors' calculations.

Notes: Descriptive statistics refer to the year 2011.

4. Results

4.1. Base specifications

Results of baseline cross-country regressions for World Governance Indicators on a number of variables that are expected to influence the quality of economic institutions are presented in Table 2. Income per capita is included in some specifications but is excluded from others. On the one hand, income per capita may be influenced by the quality of economic institutions (countries with better institutions tend to be more productive and hence richer). On the other hand, inclusion of income per capita somewhat alleviates the problem of reverse causality from economic institutions to political institutions, as the main channel through which such reverse causality would work is the wealth channel (as economies become richer, demand for democracy increases, see, for instance, Lipset, 1959).²

² Income per capita and democratic institutions can be instrumented with their lagged variables. Such instruments are weak due to high correlation between contemporaneous and lagged values. The results remain broadly unchanged and are available upon request.

Table 2: Determinants of the average of World Bank Governance Indicators

<i>Dependent variable</i>	<i>Average World Bank Governance Indicator</i>				
	(1)	(2)	(3)	(4)	(5)
<i>Polity score</i>	0.062*** (0.008)	0.033*** (0.010)	0.029*** (0.008)	0.031** (0.014)	0.020 (0.013)
<i>Share of commodities in exports</i>		-0.002 (0.002)	-0.004** (0.002)	-0.002 (0.002)	-0.004** (0.002)
<i>Share of commodities *</i>				0.001 (0.004)	-0.004 (0.004)
<i>Low polity</i>					
<i>Trade intensity</i>		0.19 (0.12)	0.20*** (0.07)	0.20 (0.13)	0.20*** (0.08)
<i>Trade intensity *</i>				-0.75 (0.48)	-0.29 (0.30)
<i>Low polity</i>					
<i>Financial openness</i>		0.20*** (0.04)	0.12*** (0.03)	0.20*** (0.04)	0.11*** (0.03)
<i>Financial openness *</i>				0.31 (0.28)	0.52** (0.24)
<i>Low polity</i>					
<i>Ethnic fractionalisation</i>	-0.66** (0.30)	-0.35 (0.26)	-0.10 (0.20)	-0.36 (0.27)	-0.14 (0.21)
<i>Ethnic fractionalisation *</i>				0.44 (0.87)	1.16 (0.74)
<i>Low polity</i>					
<i>Distance to equator</i>	0.014 (0.008)	0.017*** (0.006)	0.009 (0.006)	0.018*** (0.007)	0.012* (0.006)
<i>Landlocked</i>	-0.14 (0.11)	-0.22** (0.10)	-0.09 (0.10)	-0.25** (0.11)	-0.08 (0.12)
<i>Ruggedness</i>	-0.04 (0.05)	-0.01 (0.04)	0.01 (0.04)	-0.01 (0.04)	0.01 (0.04)
<i>State antiquity index (absolute, 50%)</i>	0.003* (0.002)	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)	0.004* (0.002)
<i>Income per capita, log</i>			0.37*** (0.06)		0.38*** (0.07)
<i>EBRD countries of operation</i>	-0.74** (0.34)	-0.59* (0.30)	-0.35 (0.26)	-0.63** (0.31)	-0.43 (0.26)
<i>Western Europe</i>	0.13 (0.37)	-0.03 (0.32)	-0.02 (0.27)	-0.07 (0.33)	-0.08 (0.28)
<i>Sub-Saharan Africa</i>	-0.44 (0.31)	-0.04 (0.28)	0.42 (0.26)	-0.02 (0.29)	0.40 (0.25)
<i>Asia</i>	-0.37 (0.35)	-0.17 (0.33)	-0.02 (0.27)	-0.14 (0.34)	-0.03 (0.27)
<i>Pacific</i>	0.59 (0.43)	0.74* (0.41)	0.75** (0.35)	0.73* (0.41)	0.66* (0.38)
<i>Middle East/North Africa</i>	-0.34 (0.42)	-0.02 (0.28)	0.09 (0.24)	0.02 (0.27)	0.21 (0.39)
<i>Latin America</i>	-0.74** (0.33)	-0.57* (0.30)	-0.38 (0.27)	-0.57* (0.30)	-0.38 (0.27)
<i>Constant</i>	-0.24 (0.48)	-0.60 (0.41)	-3.91*** (0.58)	-0.64 (0.42)	-3.96*** (0.59)
<i>Number of observations</i>	131	121	121	121	121
<i>R-squared</i>	0.70	0.77	0.83	0.77	0.84

Source: Authors' calculations.

Note: Robust standard errors in parentheses. Values significant at the 10 per cent level are marked with *; at the 5 per cent level, with **; at the 1 per cent level, with ***.

The results confirm that democracy is associated with better economic institutions, and that the effect is generally statistically and economically significant, even when controlling for per capita income. A one standard deviation improvement on the Polity scale is associated with around a 1.8 standard deviation improvement in the average World Governance Indicator, controlling for other factors such as per capita income.

When the distance to the frontier is used as the dependent variable in similar specifications (reported in Table 3), democratic institutions loses its statistical significance, perhaps reflecting the fact that the frontier index captures a narrower aspect of economic institutions, which is less closely related to democracy than broad WGI measures such as government effectiveness or the rule of law. While less democratic regimes may be successful in streamlining rules and regulations governing firms' operations they appear to be much less successful in controlling corruption and ensuring rule of law.

Table 3: Determinants of the distance to the *Doing Business* frontier

<i>Dependent variable</i>	<i>Distance to the Doing Business Frontier</i>				
	(1)	(2)	(3)	(4)	(5)
<i>Polity score</i>	0.46*** (0.14)	0.03 (0.17)	0.03 (0.12)	0.24 (0.20)	0.15 (0.16)
<i>Share of commodities in exports</i>		-0.03 (0.02)	-0.06*** (0.002)	-0.06** (0.02)	-0.08*** (0.02)
<i>Share of commodities *</i>				0.20*** (0.07)	0.16*** (0.06)
<i>Low polity</i>					
<i>Trade intensity</i>		2.1 (1.5)	2.4** (1.1)	2.3 (1.7)	2.3** (1.1)
<i>Trade intensity *</i>				-10.7 (6.6)	-1.3 (4.7)
<i>Low polity</i>					
<i>Financial openness</i>		3.0*** (0.6)	1.6*** (0.6)	2.8*** (0.7)	1.6** (0.6)
<i>Financial openness *</i>				0.3 (1.2)	-0.1 (1.2)
<i>Low polity</i>					
<i>Ethnic fractionalisation</i>	-6.2 (4.0)	0.0 (3.7)	1.1 (3.2)	-0.3 (3.9)	1.4 (3.3)
<i>Ethnic fractionalisation *</i>				-11.4 (11.8)	-11.5 (8.9)
<i>Low polity</i>					
<i>Distance to equator</i>	0.18* (0.11)	0.22** (0.09)	0.09 (0.08)	0.20** (0.10)	0.09 (0.09)
<i>Landlocked</i>	-2.9* (1.7)	-3.5** (1.7)	-1.7 (1.6)	-4.7*** (1.7)	-2.5 (1.8)
<i>Ruggedness</i>	-0.35 (0.70)	0.11 (0.60)	0.38 (0.57)	0.39 (0.62)	0.51 (0.58)
<i>Income per capita, log</i>			5.6*** (1.0)		5.2*** (1.1)
<i>EBRD countries of operation</i>	-9.2** (4.3)	-6.8* (3.9)	-3.4 (3.5)	-7.2* (3.8)	-4.0 (3.5)
<i>Western Europe</i>	-3.3 (4.5)	-4.5 (3.9)	-4.8 (3.6)	-4.7 (3.9)	-5.0 (3.6)
<i>Sub-Saharan Africa</i>	-14.6*** (4.3)	-7.6* (4.0)	-0.9 (3.7)	-6.7* (3.9)	-0.7 (3.7)
<i>Asia</i>	-5.9 (4.8)	-1.9 (4.3)	-0.3 (3.6)	-1.7 (4.6)	-0.5 (3.8)
<i>Pacific</i>	5.4 (5.1)	7.7* (4.2)	7.4** (3.7)	8.2** (3.9)	7.7** (3.5)
<i>Middle East/North Africa</i>	-5.7 (5.6)	-7.2 (4.8)	-7.2* (3.9)	-13.3*** (4.7)	-10.3*** (3.6)
<i>Latin America</i>	-13.5*** (4.4)	-10.1** (3.9)	-8.1** (3.8)	-10.2** (3.9)	-8.2** (3.8)
<i>Constant</i>	67.5*** (6.0)	62.3*** (5.4)	14.3 (9.2)	62.1*** (5.4)	17.3* (9.8)
<i>Number of observations</i>	146	131	131	131	131
<i>R-squared</i>	0.55	0.63	0.72	0.66	0.73

Source: Authors' calculations.

Note: Robust standard errors in parentheses. Values significant at the 10 per cent level are marked with *; at the 5 per cent level, with **; at the 1 per cent level, with ***.

Both trade openness and financial openness are associated with higher quality of economic institutions. A one standard deviation increase in the index of trade openness is associated with an improvement of around one-eighth of a standard deviation in the average of the four governance indicators. The effect of financial openness is larger: a one standard deviation change in the Chinn-Ito index is associated with an improvement equivalent to 30 per cent of a standard deviation in the quality of economic institutions.

In terms of history dependence, the state antiquity index appears to have a significant impact on the World Governance Indicators average. Landlocked countries and countries closer to the equator tend to have weaker economic institutions (the indicator of the ruggedness of terrain is not significant). The coefficient on ethno-linguistic fractionalisation is negative, as expected, but relatively small and not statistically significant in most specifications.

The results suggest that abundance of resources has a negative effect on economic institutions over and above its effect through weaker political institutions. This effect is statistically significant for both measures of economic institutions when per capita income is controlled for.

4.2. Determinants of economic institutions in countries with low levels of democracy

To investigate whether the determinants of economic institutions differ in more democratic and less democratic countries, the regression specification was augmented with a number of interaction terms between a dummy variable for low-polity countries (those with a score below -5, often referred to as autocracies) and several variables of interest.³ The coefficient on the interaction terms shows the difference between the marginal effects of, say, natural resource abundance on economic institutions in more democratic countries and less democratic ones, while the sum of the coefficients on the interaction term and the variable itself reflects the magnitude of the marginal effect in countries with weaker democratic institutions.

The results presented in columns 4-5 of Table 2 and columns 4-5 of Table 3 suggest that in the case of governance indicators, the effect of financial openness and integration into the global financial system is particularly large in the case of countries with weaker political institutions (the difference between the marginal effects in subsamples of countries with weak political institutions and stronger ones is also large and statistically significant). In terms of magnitude, a one standard deviation increase in financial openness in a subsample of countries with weaker political institutions is associated with almost a one standard deviation increase in the quality of economic institutions.

The impact of natural resource abundance on deeper economic institutions remains negative in the subsample of less democratic countries, and if anything, the “institutional resource curse” effect is stronger in the countries, although the difference is not statistically significant. However, in low-polity countries an abundance of natural resources is positively and significantly associated with the distance to the frontier.⁴ This suggests that natural resources may enable countries to improve the quality of rules and regulations and

³ If low-polity countries are defined as those with negative Polity scores the results remain broadly unchanged.

⁴ The total effect for these countries is the sum of the coefficient for the commodity share of exports and the interaction term between the commodity share of exports and a dummy variable for countries with low Polity scores (that is to say, scores below -5).

government capacity to implement them as income grows, while deeper economic institutions such as rule of law and control of corruption tend to remain weaker in resource-rich countries.

There is some evidence that non-democratic regimes may be more successful in neutralising the negative impact of ethnic fractionalisation on economic institutions but these effects, if any, are not significant. Other factors that are hard to quantify may also help countries with weaker political institutions to advance structural reforms. For instance, in larger economies, a healthy degree of competition for investments between regions can help to advance economic reform at the regional level, regardless of the degree of democracy and voter accountability. Over time, change at the level of regions may help to improve economy-wide institutions (see EBRD, 2012a).

5. Conclusion

This paper looked at the determinants of the quality of economic institutions in a large cross-country sample, with particular reference to factors that may help countries with weak political institutions manage to push economic reforms and improve their economic institutions, notwithstanding limited political freedom. Such improvements appear to be possible as the unconditional relationship between democratic and economic institutions appears to have a U shape, with a number of countries characterised by weak political institutions and moderate-quality economic ones. To further examine this question, the paper distinguished between deeper economic institutions such as control of corruption and narrower measures of business environment based largely on laws and regulations.

The analysis suggests that economic institutions tend to be better in countries that are more open to trade and financial flows and do not have significant natural resource endowments. While natural resources may enable countries to improve government effectiveness, regulatory quality and other measures of institutional capacity that tend to improve as income grows, deeper economic institutions such as rule of law and control of corruption tend to be weaker in resource-rich countries. History and geography also play an important role in shaping a country's economic institutions.

The analysis in the paper does not necessarily establish the causal relationships, as economic and political institutions and economic development continuously reinforce (or undermine) one another. Nonetheless, the findings suggest that countries with weak economic and political institutions may be able to use external anchors and greater economic openness to leverage some improvements in economic institutions. The analysis also indicates that clear and verifiable policy benchmarks (such as rankings of the quality of business environment) may help, in particular in circumstances where governments have resources at their disposal to finance the required reforms of public administration. However, such improvements appear to be limited to "less deep" economic institutions.

Annex 1: List of countries

Afghanistan, Albania, Antigua and Barbuda, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Belize, Bermuda, Bhutan, Bolivia, Bonaire, Bosnia and Herzegovina, Botswana, Brazil, Brunei, Bulgaria, Cambodia, Canada, Cayman Islands, Chile, China, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Fiji, Finland, France, Georgia, Germany, Greece, Grenada, Guatemala, Guyana, Haiti, Honduras, Hong Kong, Hungary, Iceland, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Democratic People's Republic of Korea (North Korea), Republic of Korea (South Korea), Kuwait, Kyrgyz Republic, Latvia, Lebanon, Lithuania, Luxembourg, Macao, FYR Macedonia, Malaysia, Maldives, Malta, Mauritius, Mexico, Moldova, Monaco, Mongolia, Montenegro, Morocco, Myanmar, Nepal, Netherlands, New Zealand, Nicaragua, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Singapore, Sint Maarten, Slovak Republic, Slovenia, South Africa, Spain, Sri Lanka, Suriname, Sweden, Switzerland, Syrian Arab Republic, Tajikistan, Thailand, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Uzbekistan, Venezuela, Vietnam, Yemen, Yugoslavia.

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