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Abstract

This article explains the peculiarities of institutional effects on growth rates in post-communist countries. By proposing a certain dependence of the institution-growth nexus on the mode of institutional grafting, the distinction between drift-phase and path-breaking institutional change is introduced. Theoretical juxtapositions show that transition countries' institutions built through path-breaking institutional reforms differ from those that emerge evolutionarily in the drift phase in a twofold manner in their relationship to growth. Growth rates of their economies are less likely to depend on the quality of legal institutions and are more likely to be a function of the maturity of political institutions. In addition, legal institutional change in the post-communist world is a product of the quality of the political environment to a greater extent than their drift-phase alternatives. These propositions are tested empirically based on a sample of 87 countries derived from the POLITY IV Project's website.

**Keywords:** institutional economics, formal institutions, institutional change, post-communist transition

The Impact of Variations in Institutional Grafting Modes on Economic Growth:  
A Three-Dimensional Approach

**Introduction**

Growth theory asserts that good formal institutions are conducive to rapid economic development. Empirical studies from economically developed and/or developing countries (Eicher & Leukert, 2009) largely support this claim (see Acemoglu and Robinson (2012) for an overview) but exclude the post-communist world as a unique group from the analysis (Bosworth & Collins, 2003). Research has been conducted independently on these countries and either substantiates conventional findings (see Aslund (2007) for a detailed overview). Or, it recognizes peculiarities concerning the effect that formal institutional frameworks have on economic growth, with the sign and strength of this impact varying depending on the phase of transition or the maturity of formal institutions (Fidrmuc & Tichit, 2009; De Melo, Denizer, Gelb, & Tenev, 1997; Falcetti, Raiser, & Sanfey, 2000).

Studies stemming from former Soviet Union republics go even further and entirely negate the claim that free-market formal institutions *per se* may lead to economic prosperity in the course of transition (Mau, 2008; Polischuk, 2008; Polterovich, 2008). Capitalist formal institutions lack compatibility with post-communist informal norms due to the countries' insignificant historical experience with democracy and free markets (Yasin, 2003) or due to unique features of their economic systems (the military sector's prevalence in their production capacities, dominant large companies, and a deep recession that started at the outset of transition) (Polterovich & Popov, 2006). In addition, the lack of strong political contexts, which assumes an independent political sector from the economic sector, is believed to hinder these countries from improving formal institutions. Their political elite often become economic elite (Aslund, 2007), as a result of which institutional reforms simply

promote the redistribution of economic or political power without generating substantial economic growth (Dementiev & Vishnevskiy, 2011). As a consequence, many transition economies appear to be locked in an institutional trap, with any institutional improvement being associated with considerable economic and social losses (Polterovich, 2008).

Irrespective of the sign found in the relationship between formal institutions and economic growth, studies on transition economies possess one common feature: The impact of their formal institutions on growth is rarely tested in conjunction with developed and/or developing countries. An indirect comparison of results is hardly possible, since analyses do not use a standard set of conditioning variables and standard periods that would enable comparing findings. One should note that, in general, growth theory recognizes the existence of heterogeneity in the effects of formal institutions. It is well-established that the direction and strength of institutional impacts on growth vary depending on the maturity level of formal institutions (Barro, 1997; Fidrmuc & Tichit, 2009; Przeworski & Limongi, 1993) or a country's level of economic prosperity (Eicher & Leukert, 2009; Lee & Kim, 2009). However, we doubt that these two explanations are exhaustive for all post-communist countries. Transition economies started their institutional reforms from a relatively similar platform in terms of their level of economic development and the type and degree of institutional maturity but ended up at very different success levels. We argue that the cross-country variation of institutional effects on economic growth can also be attributed to the way in which such institutions were formed. The peculiar relationship of economic institutions to growth rates in transition economies can also be explained by the top-down nature of their institution building and socio-economic forces resulting from this process.

The latter proposition requires that a theoretical model be constructed to juxtapose the post-communist pattern of institution building with the pattern prevalent in other countries to identify implications that this mode of institutional grafting may have for a country's growth

dynamics. This study adopts the conventional definition of formal institutions as the basic formal rules, such as laws and regulations, that govern interactions among economic agents. We further narrow the concept of formal institutions to legal institutions, such as property rights and contract enforcement legislation, since they are viewed as the key to economic growth (North, 1990) and have been the least successfully reformed in post-communist countries (Aslund, 2007).

### **Analytical Model**

Institutional economics distinguishes between two modes of institutional grafting: drift/evolution and critical junctures. The first describes institutional change that evolves in small cumulative stages within an established institutional path. The second considers radical changes that result from a country's exposure to shocks sufficient to break society out of the outmoded, suboptimal path and shift into a new one (Acemoglu & Robinson, 2012). Drawn upon this distinction, we alternatively use the adjective "drift-phase" to describe the evolutionary type of institutional change and the term "path-breaking" when referring to institutional change at critical junctures.

Each mode of institutional change is characterized by a distinct logic of the institution formation process, affecting economic development in a certain way. To demonstrate this, we introduce a new conceptual framework to juxtapose the two types of institutional grafting processes. Since we primarily focus on the post-communist world, our point of departure is derived from the logic of a free-market economy defined as an economic system based on the exchange of goods and services between economic agents at market prices (Aslund, 2007). Given this definition, we suggest that the formation of legal rules regulating the exchange process can be understood by accounting for: (1) economic agents' values and attitudes concerning production and exchange processes; (2) the economic system's structural elements

in which production and exchange occur; and (3) the behavior of actors who devise legal rules that regulate interactions concerning production and exchange. Based on this reasoning, we present institutional grafting as shaped by three forces that correspond to three dimensions of the institutional space: (1) cultural, (2) structural, and (3) political.

The first dimension is a cultural one (Boettke, Coyne, & Leeson, 2008; Portes, 2006) which is similar to North's concept of informal institutions (North, 1990). It includes prevalent values/norms that dictate right and wrong, as well as behaviors describing how likely it is that an individual's conduct deviates from their good morals. The second dimension is structural and encompasses economic forces that reflect a country's economic infrastructure and the nature of economic arrangements. It predefines the extent to which a country's economic system is in tune with the logic of free-market economic processes and includes financial and banking systems, taxation, trade union, labor market institutions, industrial relations, etc. The third dimension is called political and includes two aspects: (1) political elites that deal with the formalization of new institutions, and (2) political institutions that comprise the rules that formalize the prevailing political interests into a legal framework.

It is believed that the three dimensions are related to each other in some way. However, that issue is beyond the scope of our analysis. Instead, we argue that legal institutions should be commensurate with the logic of each of the three dimensions in order to function effectively and promote economic development. Consequently, economic growth should be viewed as a function of the level of congruence between legal institutions and these three dimensions. We further argue that the level of this congruence may vary across the phases of institutional change (drift/evolution or path-breaking/critical junctures) and can be *a priori* identified from the logic of institution building in each of these phases.

From this perspective, the logic of the (evolutionary) institutional change that occurs during a drift along the established institutional path can be described as follows. As economic agents operate, they accumulate knowledge and experiences, which leads to technological advancements and further promotes the division of labor (Davis, 2010). This changes the organization of production processes in a country and shifts the structural dimension by establishing new industries, competition terms, pricing mechanisms, and conditions of resource allocation across various economic sectors. Profound change in the economic domain leads to transformations in how economic agents think and the values they hold. As a result, existing formal institutions are no longer adequate and commensurate with the existing economic structures and values among economic agents, thereby raising market transaction costs (North, 1990). Contractual arrangements begin to create demand for institutional change that can lower transaction costs to exploit new opportunities (Pejovich, 1999). In trying to overcome the existing inconsistencies, economic agents introduce informal changes (Eggertsson, 1997) among formal “rules of the game” in order to make the institutional framework more flexible. If efficient and compatible with the interests of political elites (Portes, 2006), these changes are captured by the political system, which formalizes and legalizes them. As a result, they acquire the status of formal institutions. Private international commercial law provides an example of the drift-phase institutional grafting (Boettke et al., 2008): The development of cross-culture exchange in 11th- and 12th-century Europe led to the spontaneous formation of the *lex mercatoria*, an informal system of customary law rooted in international commercial norms (Boettke et al., 2008). These informal institutions appeared to be effective and were later formalized into international commercial law.

The drift-phase institutional change is hence likely to produce legal institutions that are congruent with our model's three dimensions: First, institutional change is initiated by



economic agents through the bottom-up approach, as a result of which the new institutions are congruent with the values economic agents hold. Second, formal institutions are also congruent with the existing economic structure, since changes in the old institutions primarily occur as a reaction to shifts in the economic system or technologies. Third, the role of political elites in institution creation is relatively insignificant and restricted to formalizing institutions that previously emerged at the micro-level. The flexibility of political bodies, however, determines how rapidly new legal institutions that meet such demand are adopted (Davis, 2010).

The logic of path-breaking institutional reforms that occur at critical junctures differs substantially from the drift-phase logic. The distinct feature of this mode of institutional change is that shifts in a country's political system, often triggered by a political regime change, precede changes in its economic system (Fidrmuc, 2003). Such reforms rarely require the population's broad support, since the economic crisis caused by the previous regime's shortcomings serves to justify introducing essential alterations in both political and economic systems (Olson, 1982). Alternatively, the population's dissatisfaction with the current regime can encourage citizens to demand changes in both political and economic domains even if the incumbent elites resist such reforms. Radical political change can occur either through revolutions (Acemoglu & Robinson, 2012), as recent events in Arabic countries demonstrate, or in a peaceful manner without wars and coups (Olson, 1982), as in the majority of post-communist countries during the collapse of socialism (Aslund, 2007).

The radical political alterations require adjusting the institutional framework to the new political logic and promote an immediate introduction of an entirely new set of legal institutions, commensurate with the logic of the new political regime. Many pitfalls exist at various stages of carrying out institutional reform during this process. First, a shift in the political power and the initial immaturity of new political institutions may create a temporary

vacuum of power and opportunities for political or economic elites to seek rents through the new legal institutional framework (Aslund, 2007). Second, even if this is not the case and the population's interests dominate in the process of building a new legal institutional framework, the quality of the new legal institutions ultimately depends on whether political elite incumbent to handle the institutional grafting are sufficiently familiar with the new economic system and relevant legal rules. Third, since such knowledge and skills are often missing, it is likely that building a new institutional framework involves borrowing legal rules from countries with political and economic orders close to those desired. As a result, the new legal institutions become imposed from without (Pejovich, 1999), which in turn leads to two kinds of problems.

On the one hand, implanting foreign institutions into another local context may disturb their congruence with characteristics of the structural dimension already in force. The introduction of Western industrial legislation in CIS countries is a good example of this. The new rules proved inefficient for post-communist economic systems, since Western legislation was designed for postindustrial societies with a prevalence of medium and small businesses, while many CIS economies were characterized by the overrepresentation of large (state) enterprises (Polterovich & Popov, 2006). On the other hand, a similar incongruence may also emerge between the new legal institutions and the local cultural dimension (Boettke et al., 2008; Kyriazis & Zouboulakis, 2005; Portes, 2006). Because culture is unique, economic agents may perceive and interpret the newly imported legal rules through the prism of their specific values, as a result of which the meanings assigned by economic agents to the new laws might appear completely different from their initial context (Portes, 2006). This may further lead to a mutation of the new legal institutions (Vernikov, 2009) or low levels of their enforcement (Portes, 2006).

The learning experience is expected to minimize or eliminate both kinds of incongruence (Nelson & Sampat, 2001). If policymakers design and introduce adjustment policies for the system's orderly operation at each stage during the transition period, the incompatibility between the new legal institutions and economic structures is believed to be gradually narrowed. Similarly, if economic actors learn that adapting to the new legal institutions can expand their opportunity set, they may change their cultural values and behaviors. For instance, post-communist countries in which new democratic governments successfully introduced economic reforms experienced a rise in pro-democratic attitudes among citizens (Aslund, 2007). Successful reformers have also nurtured strong support for a free-market economy (Aslund, 2007). These learning processes imply, however, that there are lags between fundamental institutional change being initiated and the time when the relevant actors get the structures right (Eggertsson, 1997), producing a positive impact for the local economy only in later periods (De Melo et al., 1997; Falcetti et al., 2000).

Japan's post-war reconstruction, which included changes in the political regime, major economic rules, and legislation, is a good example of the path-breaking approach to institutional grafting (Boettke et al., 2008). Overall, the path-breaking process of institution formation is unlikely to produce legal institutions that are congruent with our model's three dimensions: First, institutional change is profound and may include the top-down introduction of radical institutional reforms by implanting foreign institutions into the local systems. It is possible that these legal institutions will be incongruent with existing cultures, at least at the initial reform stage. Second, similar incongruence may also exist between the new legal institutions and the current economic structure for the same reason as above. Third, the role of political elites is superior and cannot be confined to legalizing new institutions but extends to their selection, design, introduction, and subsequent adjustments to the cultural and structural dimensions in place. The quality of new legal institutions might hence depend

on the quality of the country's political change and the professionalism of political elites incumbent to handle institutional grafting under the new conditions.

The above discussion suggests that the odds of ensuring congruence between the new legal institutions and the three dimensions differ substantially for the two modes of institutional change. This allows us to argue that economies might be endowed with different opportunity sets for growth, depending on the mode of institutional grafting through which the new legal institutions emerge:

*Proposition 1:* Because legal institutions formed in the drift phase are more likely to be congruent with the three dimensions, they will more effectively enhance economic development than legal institutions introduced at critical junctures. The rationale behind our reasoning is that when this congruence exists, fewer frictions emerge in the interactions between economic agents, making more transactions possible and leading to higher rates of economic growth.

*Proposition 2:* Since institutional change at critical junctures is usually profound and may require a learning process for both political elites and economic agents at least in the short run, the positive impact of the new legal institutions on economic growth will be lagged. The learning processes might also be non-linear, and as institutional elements approach an optimal design, they must induce a better learning process.

*Proposition 3:* The role of the political dimension is superior at critical junctures; we hence expect that its quality is of particular importance to the country's growth rates when the institutional framework is subjected to path-breaking institutional reforms. We identify two major mechanisms through which the political dimension's role manifests itself at critical junctures: (a) mitigating the negative impact of incongruence between the new legal institutions and the cultural or structural dimensions on economic growth (see Proposition 4)

and (b) designing and introducing new legal institutions that not only of good qualities but also congruent with the existing cultural and structural dimensions (see Proposition 5).

*Proposition 4:* Since path-breaking institutional change at critical junctures are more likely to produce legal institutions that are incongruent with the cultural and structural dimensions, a country's growth rates become a function of the ability of political elites to adjust economic structures and/or cultures to the new legal institutions' logic. By contrast, the drift-phase institutional reforms produce legal institutions congruent with our model's dimensions and hence seldom require such adaptation measures or coordinating actions on the part of the government.

*Proposition 5:* Since path-breaking institutional change at critical junctures presupposes a radical transformation of the entire institutional framework through a top-down approach, the quality of the new legal institutions becomes a function of the experience and skillfulness of political elites who handle the institutional grafting process. Their ability to choose the appropriate set of institutions predetermines the extent to which institution building processes are successful and newly imported legal institutions are of good qualities and congruent with local cultures and existing economic structures.

Based on these propositions, we postulate the following hypotheses:

*Hypothesis 1:* A positive impact of legal institutions on economic growth is greater when these institutions emerge in the drift phase rather than at critical junctures.

*Hypothesis 2:* Because of the learning process, improvements in legal institutions at critical junctures are expected to lead to (a) lagged and (b) non-linear improvements in rates of economic growth.

*Hypothesis 3:* The political dimension's positive impact on economic growth is greater at critical junctures than in the drift phase of institutional grafting.

*Hypothesis 4:* At critical junctures, the negative impact of incongruence that emerge between new legal institutions and the cultural/structural dimensions is smaller for growth rates of those countries where the political dimension is of better qualities.

*Hypothesis 5:* The political dimension's positive impact on the quality of legal institutional change is greater at critical junctures rather than in the drift phase.

### **Data and Method Description**

To test these hypotheses, we use Eicher's and Leukert's (2009) approach of splitting the sample into subsamples and conducting an empirical analysis for each of them. In forming our subsamples, we use the idea that institutional change at critical junctures presupposes a simultaneous transformation of the entire framework of formal institutions. Since such a radical transformation usually occurs because of a shift in the nature of economic relations and the logic of economic processes, we assume that only a political regime change can initiate path-breaking legal institutional reforms. This means that in choosing countries for our sample, the type of political regime and form of autocracy or democracy which the selected countries have was irrelevant. Instead, what matters is whether there was any sudden transition from one political regime to another. This idea is also in line with the hierarchy of institutions hypothesis, which assumes that formal legal institutions are a function of political institutions within which a certain political regime is embedded (Eicher & Leukert, 2009).

To identify whether a country has experienced recent changes in its political regime, we use the POLITY IV Project's website (<http://www.systemicpeace.org/polity/polity4.htm>), which provides information about political regime characteristics and transitions between 1800 and 2012 with a polity score for a wide range of countries (see appendix 1 for a country choice description). The values of a country's annual polity score range from -10 to 10, with

values 6 and above denoting full democracy and -6 and below denoting full autocracy. In our analysis, a country qualifies as being at critical junctures if: (1) there was a political regime change in which values shifted from at least -6 or below to at least 6 and above; (2) this change is rapid and occurred within a few years; (3) this change occurred after 1970. Any earlier transition is expected to produce institutions that would adhere to the local structural and cultural characteristics through the learning process and eliminate any incongruence. In this case, the new formal institutions would follow an evolutionary or drift-phase path in their maturation process; (4) the change is stable with no signs of reverting to the previous regime in the following years; (5) there have not been persistent fluctuations in the regime trend of more than 3 points since 1970. Regime trend fluctuations denote political instability, which is a separate issue with respect to growth analysis and has both positive and negative effects on economic development (Jong-A-Pin, 2009).

Since we are primarily interested in transition economies, our base path-breaking subsample only includes 21 post-communist countries that correspond to the above criteria. One should note that these countries are relatively heterogeneous in their historical trends (Soviet Union membership, experience with private property during communism, etc.) and present characteristics (EU membership, democracy types, etc.). We justify unifying them in one sample, because they all had a one-party political regime during communism with a centrally planned economic system. And they all underwent a profound institutional transformation with the same target: Transition to a free market economy and the introduction of democracy, which involved a radical change in the rules governing both political and economic processes. The fact that they slightly differ in their starting points does not contradict the purpose of our analysis, since the quantitative impact of initial conditions on the set of reforms and economic growth is small and tends to rapidly decline over time (Berg, Borensztein, Sahay, & Zettelmeyer, 1999; Falcetti et al., 2000). To ensure that the

empirical results are not unique to post-communist countries, we expand the path-breaking subsample by including non-post-communist countries that meet the above criteria, thereby increasing this subsample to 42 countries.

Countries that have not experienced political regime change or have experienced profound but gradual change (each stage of change not being greater than a 3-point fluctuation in the polity score) are considered to be in the drift phase. The base drift subsample is limited to 22 old and stable democracies or autocracies to avoid a disproportionate subsample size. Since most of these countries are relatively advanced in their economic development, we expand this subsample by adding other developed and developing countries and augmenting this subsample to 45 countries. These countries are also heterogeneous in their characteristics. Common for all of them is that there has not been any rapid change in their political regime. Appendix 2 lists the countries included in each of the subsamples. One should note that some of these countries lack data on institutional or political indexes, which results in a smaller number of cases actually used in each type of analysis.

We are primarily interested in comparing how formal legal and political institutions impact economic growth for the two country groups: evolutionary/drift versus path-breaking/critical junctures. The quality of legal institutions is approximated through a contract enforcement and property rights protection index sourced from the 2007 annual report of the Economic Freedom of the World (see Gwartney, Lawson, Sobel, & Leeson (2007) for the detailed description of the index composition). The values vary from 1 (bad legal institutions) to 10 (good legal institutions). Formal institutions are considered to be good when they are clearly defined and well-enforced, which means that the institutional scores are closer to 10.



The political dimension's quality is measured through the control of corruption in government, government effectiveness, the quality of regulation, and voice and accountability. All political indexes are sourced from the World Bank Group database and vary from -2.5 (bad political situation) to 2.5 (ideal political situation). The four indexes are highly correlated, with the voice and accountability index showing the greatest uniqueness in its variance (see table 1). We use this index to describe the quality of democratic settings in a country and hence the quality of political institutions. The three remaining indexes are combined by using the STATA *predict* option for factor analysis to construct a single measure of the policymaking quality which is expected to approximate the quality of political elites. Table 2 presents descriptive statistics for the key variables (see table 2).

[insert Table 1 and Table 2 here]

We follow Tabellini (2008) in measuring the cultural dimension through the four aspects (control, respect, trust, and obedience) and source the relevant measures from the World Values Survey. Obedience represents the percentage of people in the sample who mentioned obedience as an important factor in society. Trust and respect are positive responses to questions about trusting most of the people and whether most people show tolerance and respect towards others. Control is operationalized through the question about how much freedom of choice and control people have over their own lives. The aggregate variable is constructed by adding up the values of control, respect, and trust, and subtracting the value of obedience. Since many countries included in the subsamples participated in one wave of the WVS, the cultural variable is available only on a cross-sectional basis.

We follow Eicher and Schreiber (2010) in operationalizing the structural dimension and utilize the EBRD measures to construct a structural policy index, consisting of price

liberalization, foreign exchange/trade liberalization, small/large scale privatization, enterprise reform, competition policy reform, banking sector reform, and non-banking financial institutional reform. We use the STATA *predict* option for factor analysis to create a single construct. We limit the analysis of the structural dimension to the base path-breaking subsample, since the relevant data are only available for this set of countries.

To test our hypotheses empirically, we use the dynamic GMM method proposed by Arellano and Bond (Arellano & Bover, 1995; Blundell & Bond, 1998). The procedure for applying this technique is well-documented by Pääkkönen (2010), Lee and Kim (2009), and Eicher and Schreiber (2010). It requires that the equation is first-differenced to eliminate the heterogeneity in production functions and then an instrumental variable method is applied on the differenced model, with lagged values of the endogenous variables used as instruments for the variables themselves. To avoid an overfitting bias, we often restrict instruments to only few lags of the respective variables. We further use the STATA *collapse* sub-option to create one instrument for each variable and lag distance rather than one for each time period, variable, and lag distance. We also add the sub-options *small* to request small-sample corrections to the covariance matrix estimate. We calculate a two step estimator instead of a one step. Additionally, we use the sub-option *noleveleq* that invokes difference instead of system GMM. To demonstrate the correctness of the model, we report the number of instruments generated by the model, the results from a *Hansen overidentification test*, and the *Arellano-Bond test for AR(2)* serial correlation in the residuals. STATA command *xtabond2* is used for calculating the model parameters.

In line with Pääkkönen's study (2010), we utilize yearly data for the period from 1996 to 2008. We exclude the initial transition years from the analysis, since the outset of transition entailed profound systemic changes (Fidrmuc, 2003). We apply the same model to both subsamples while ensuring that a standard set of conditioning variables and standard

periods are used. Our base growth model includes two variables: investment and inflation. Investment is included, since it is the key predictor in the majority of growth models (Solow, 1956). Macroeconomic stability is, in turn, considered a precondition for economic recovery during transition in the post-communist world (Fischer, Sahay, & Vegh, 1996) and an important growth factor for emerging markets in general (Dattels & Miyajima, 2009; Emara, 2012). For these two variables, we do not discuss differences in the coefficient estimates between the drift and path-breaking subsamples, as this is beyond the scope of our research. We primarily focus on juxtaposing the impact of formal legal institutions and political indexes on growth rates. Hence, the base model is:

$$\ln Y_{it} = \alpha \ln Y_{it-1} + \beta_1 \ln K_{it} + \beta_2 \ln MS_{it} + \varepsilon_{it} \quad (1)$$

Where  $Y_{it}$  is a measure of economic development limited to economic growth and operationalized through an annual real GDP growth rate,  $Y_{it-1}$  is one-period-lagged economic growth.  $K$  stands for the investment in physical capital measured through gross capital formation as a percentage of GDP.  $MS$  represents macroeconomic stability captured by annual consumer price inflation. The main source for the above variables is the World Bank electronic database.

We begin the analysis with testing the key premise of our theoretical model that incongruence between the new legal institutions and our model's three dimensions is detrimental to economic growth:

$$\ln Y_{it} = \alpha \ln Y_{it-1} + \beta_1 \ln K_{it} + \beta_2 \ln MS_{it} + \beta_3 D\_Culture_{it} + \beta_4 D\_Structure_{it} + \beta_5 D\_Politics_{it} + \varepsilon_{it} \quad (2)$$

Where  $D_{-}$  is a measure of incongruence expressed through the distance between the quality of a country's legal institutions and one of the three dimensions and calculated as follows:  $Distance = [(Legal\ institutional\ index - Dimensions'\ value) / Dimensions'\ value]$ . Since cultural measures are available on a cross-sectional basis, we calculate annual distances between legal institutions and the cultural dimension as differences between legal scores for every year and the constant cultural scores. Our main assumption here is that culture remains relatively stable over the period analyzed.

We further include formal legal institutions ( $LI$ ) into the base model:

$$\ln Y_{it} = \alpha \ln Y_{it-1} + \beta_1 \ln K_{it} + \beta_2 \ln MS_{it} + \beta_3 LI_{it} + \varepsilon_{it} \quad (3)$$

Similarly, we include political dimension indexes ( $PI$ ) into the base model as:

$$\ln Y_{it} = \alpha \ln Y_{it-1} + \beta_1 \ln K_{it} + \beta_2 \ln MS_{it} + \beta_3 PI_{it} + \varepsilon_{it} \quad (4)$$

At this stage of the analysis, we are able to compare the coefficient estimates of the legal institutional variable,  $LI$ , and the political dimension variable,  $PI$ , between the drift and path-breaking subsamples. To explore the mechanisms through which the importance of the political dimension manifests itself at critical junctures, we first analyze the role of the democratic settings and decision-making quality in mitigating the detrimental impact of incongruence on economic growth by allowing interactions between the distance variables and the political dimension's measures:

$$\ln Y_{it} = \alpha \ln Y_{it-1} + \beta_1 \ln K_{it} + \beta_2 \ln MS_{it} + \beta_3 PI_{it} + \beta_4 D\_Culture_{it} + \beta_5 D\_Structure_{it} + \beta_6 PI * D\_Culture_{it} + \beta_7 PI * D\_Structure_{it} + \varepsilon_{it} \quad (5)$$

Where  $PI*D\_Culture$  and  $PI*D\_Structure$  are interaction terms between the political indexes and distances that legal institutions develop to culture or economic structure respectively.

We further proceed to exploring the impact of political indexes on the quality of legal institutional change:

$$LI\_change_{it} = \alpha LI_{it-1} + \rho_1 Life\_expect_{it} + \rho_2 PI_{it} + \mu_{it} \quad (6)$$

Where  $LI\_change$  stands for an annual change in the legal institutional index during the period analyzed and is calculated as [(Legal Institutional Index in year t - Legal Institutional Index in year (t-1)] / Legal Institutional Index in year (t-1).  $LI_{it-1}$  is a lagged value of the legal institutional index,  $PI$  is political institution indexes (democratic settings and policymaking quality indexes), and  $Life\_expect$  stands for life expectancy. Life expectancy is included in the equation, since it is considered a standard predictor of formal institutions, along with the latitude variable (see Acemoglu, Johnson, and Robinson (2001), Islam (2004) for the examples of institutional equations). Life expectancy captures a country's disease environment, which is believed to have predetermined the kind of formal institutions that initially emerged in a country and persisted over time (Acemoglu et al., 2001). Unlike a more conventional measure of the disease environment, such as settler mortality rates, this variable is available on an yearly basis and for all of the selected countries, including transition economies. Since formal institutions may influence the quality of life and impact life expectancy, we consider this variable endogenous and insert it into the *gmmstyle* option to instrument it with the lagged values of the variable itself. In contrast, the latitude variable is considered strictly exogenous and is included in the *ivstyle* option.

### **Empirical results**

Table 3 confirms the idea that path-breaking institutional reforms are more likely to produce institutions that are incongruent with our model's three dimensions: The absolute values of the distance variables are greater for the path-breaking subsamples than for the drift subsamples. The only exception is the distance to the democratic settings quality that proves greater in the drift phase than at critical junctures. Given the increased role of political institutions in the design of institutional grafting processes at critical junctures, this finding does not contradict the logic of our discussion.

We also receive support for our key assumption that increasing the distance between legal institutions and the three dimensions may worsen a transition country's economic performance (see table 4). A similar relationship is found for the extended drift subsample, but only partially confirmed for the extended path-breaking subsample (see table 5). The lack of complete evidence for the extended path-breaking subsample can be attributed to a great number of missing values for the cultural variable. Concerning the policy decision-making index, this may also mean that at critical junctures, what matters is not the distance that legal institutions develop to the political dimension, but the actual quality of this political dimension.

[insert Table 4 and Table 5 here]

Our empirical results also confirm the idea of heterogeneity in the impact of legal and political indexes on the economic growth between the drift and path-breaking subsamples. The legal institutional index strongly affects growth rates of economies operating within the institutions formed via evolutionary institutional change for both the base and extended drift

subsamples (see tables 6 and 7). We also establish a positive relationship between institutional indexes and growth rates when the analysis shifts to the path-breaking subsamples, but this impact is substantially smaller compared to the drift subsamples. These results stand up to the alternative model specification choice and to the exclusion of resource-rich countries from the analysis.

[insert Table 6 and Table 7 here]

A closer analysis of institutional effects on economic performance at critical junctures suggests that in the long run, legal institutions of countries in both the base and extended path-breaking subsamples developed some relationship with rates of economic growth. If relating lagged values of institutional indexes to growth rates (see tables 8 and 9), one finds a positive association between the two variables, which is commensurate with hypothesis 2(a). Additionally, we establish that the short-term impact is often non-linear, which is consistent with hypothesis 2(b). The negative coefficient on the main effect of the legal institutional variable suggests that when the new legal institutions are of poor qualities (the values of the legal score are low), such legal institutions constitute a negative growth factor. In turn, a positive quadratic term means that, as the quality of institutions improves, the negative effect is offset and legal institutions become a positive determinant of economic growth. A similar non-linear relationship was also found by Fidrmuc and Tichit (2009) in the relationship between economic reforms and economic growth in the post-communist region and by De Melo et al. (1997) concerning the impact of structural reforms on economic growth. The initially negative impact of transition reforms on economic growth is often explained by high adjustment costs (De Melo et al., 1997), which turns into a positive impact in subsequent years (Falcetti et al., 2000). Alternatively, this may imply that when the quality of formal

institutions is poor, they are either of an extractive nature or allow wide rent-seeking in the economy, hindering economic development. The example of privatization in the Ukraine and Russia demonstrates how establishing the institution of private property, which was necessary for wide-scale privatization, could harm local economies by causing a considerable output drop (Aslund, 2007).

[insert Table 8 and Table 9 here]

This non-linear relationship between legal institutions and rates of economic growth suggests that economies from the path-breaking subsamples may grow fast even if formal legal institutions are poorly developed. Accounting for the level of institutional enforcement may contribute to clarifying these unusual results. We use a corruption perceptions index constructed by Transparency International to measure the level of institutional enforcement with values varying between 1 (complete corruption) and 10 (no corruption). By allowing the legal institutional variable and the corruption perceptions index to interact, we obtained evidence for the smoothing effects of poor enforcement of confusing formal institutions on the dynamics of economic growth. Accordingly, improvements in enforcement levels of legal institutions without improving such institutions may impair economic development in transition countries (see column 4 in table 8). If the enforcement mechanism is coupled with improving the quality of property rights and contract enforcement legislation, the main negative effect is offset and reducing corruption fosters economic development. We found a similar relationship for the extended path-breaking subsample, but the results remain statistically insignificant, suggesting that post-communist economies may represent a particular group (see table 9).



Tables 10 to 13 juxtapose the impact of the political dimension on economic growth between the drift and critical juncture subsamples. The results are largely consistent with the expectations formulated in hypothesis 3 and suggest that economies operating within a path-breaking institutional framework formed at critical junctures are more sensitive to the quality of their political sector, especially concerning political decision-making. The policymaking quality index develops a closer relationship with growth rates of countries from the path-breaking subsamples. In the case of the drift subsamples, it is more important that strong democratic settings exist to allow these economies to grow faster. The results also remain robust to alternative model specification choices or to the exclusion of resource rich countries from the extended subsamples.

[insert Table 10, Table 11, Table 12 and Table 13 here]

To further understand the role of the political dimension at critical junctures, we introduce interactions between political indexes and the distance between legal institutions and our model's dimensions. The negative coefficient estimates on the distance variables (see table 14) suggest that increasing the distance to the cultural or structural dimensions may slow down economic growth. The positive coefficient estimates on the interaction terms in turn indicate that the mature political environment may cushion the negative impact of this distance, supporting hypothesis 4. The interaction effect is especially strong for the extended path-breaking subsample.

[insert Table 14 here]

Our results further suggest that during the path-breaking institutional reforms, the quality of the political environment is instrumental in building legal institutions (see table 15). The path-breaking institutional change proves particularly sensitive to the quality of political decision-making. By contrast, a drift-phase institutional change is relatively independent from the quality of policymaking but influenced by the democratic settings quality. These results hold true for both base and extended subsamples. Additionally, table 16 indicates that the distance variables' negative impact on the legal institutional change can be mitigated if the quality of the political environment (democratic settings and political decision-making scores) improves. The above findings are consistent with hypothesis 5.

[insert Table 15 and Table 16 here]

Overall, the empirical analysis supports the original hypotheses. Moreover, the results can be considered robust given the selected robustness check strategies: (1) the drift subsample included economically developing countries to avoid the difference in coefficients being caused by variances in the level of economic or institutional maturity between the two country groups; (2) we included non-post-communist countries in the path-breaking subsample to verify whether the specificities found for post-communist countries are universal or unique to the post-communist world; (3) we eliminated resource rich countries and small economies from both subsamples. The list of such countries was retrieved from Mankiw, Romer, and Weil (1992). One should note that the results for transition economies (the base path-breaking subsample) show slight peculiarities as compared to other countries from the extended path-breaking subsample. We believe that this difference is due to specificities of the socialist regime. While Communism represented a dictatorship, it was

characterized by relatively high industrialization levels, albeit militarized to a great extent, a highly educated labor force, high levels of urbanization, and extended social programs.

### **Conclusion and Discussion**

This study introduces the idea that institutional grafting is shaped by three forces: cultural, structural, and political. The success of institutional reforms is viewed as dependent not only on the actual quality of newly introduced legal institutions but also on the level of incongruence that these institutions develop to the three dimensions. The potential size of this incongruence is considered a function of the phase in which such institutions emerge. Drift-phase institutional change produces legal institutions that are congruent with the logic of the three dimensions and that promote economic development. Path-breaking institutional change in contrast leads to the emergence of institutions that develop distances to the defined dimensions and that, thereby, have only a limited impact on growth rates. In this case, the actual quality of the political dimension will predetermine both a local economy's growth dynamics and the success of institutional change.

Future research is needed to eliminate three major limitations of our study. First, a more careful grouping of countries for both subsamples is necessary to eliminate stark heterogeneities in their political, economic, social, and historical characteristics. Second, one should consider integrating countries with unstable regime trends into the analysis. Finally, alternative economic development measures should be used to demonstrate the robustness of our findings on the impact that the mode of institution building has on patterns of economic progress in the world.

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Table 1

*Factor Loading and Unique Variances for Political Scores*

VARIABLE	Factor	Uniqueness
Voice and accountability	0.894	0.162
Government effectiveness	0.972	0.038
Regulatory quality	0.953	0.073
Corruption control in government	0.948	0.065



Table 2

*Descriptive Statistics for Key Variables of the Extended Subsamples*

VARIABLES	No. of observations	Mean	SD	Min.	Max.
<b>The extended drift subsample</b>					
GDP per capita growth	528	2.839	3.521	-5.930	31.800
Legal institutions	426	0.720	0.193	0.125	1.000
The political dimension					
Democratic settings quality	440	0.658	0.274	0.118	1.000
Policymaking quality	449	0.631	0.241	0.098	1.000
The cultural dimension	300	0.418	0.258	0.070	1.000
The structural dimension					
<i>Not available</i>					
Distance to the political dimension					
Distance to democratic settings quality	384	0.276	0.745	-0.437	4.214
Distance to policymaking quality	383	0.175	0.312	-0.562	1.873
Distance to the cultural dimension	236	1.501	1.666	-0.483	7.613
Distance to the structural dimension					
<i>Not available</i>					
Corruption perception index	462	6.236	2.436	1.400	10.000
Gross capital formation	534	23.277	8.185	8.000	114.000
Inflation	526	4.129	4.740	-13.800	34.700
Life expectancy	540	73.156	9.054	35.000	85.000
Legal institutional change	383	0.017	0.179	-0.767	1.422
Latitude	540	0.373	0.202	0.014	0.711
<b>The extended path-breaking subsample</b>					
GDP per capita growth	492	3.648	4.319	-17.690	26.000
Legal institutions	369	0.532	0.126	0.198	0.906
The political dimension					
Democratic settings quality	420	0.587	0.147	0.212	0.851
Policymaking quality	418	0.414	0.128	0.194	0.713
The cultural dimension	384	0.279	0.163	0.095	0.825
The structural dimension	252	0.683	0.186	0.000	1.000
Distance to the political dimension					
Distance to democratic settings quality	337	-0.087	0.272	-0.622	1.681
Distance to policymaking quality	336	0.312	0.343	-0.344	1.403
Distance to the cultural dimension	284	1.605	1.472	-0.596	5.485
Distance to the structural dimension	174	-0.187	0.169	-0.585	0.711
Corruption perception index	397	3.395	1.164	0.400	6.900
Gross capital formation	502	23.476	7.110	6.000	75.000
Inflation	502	9.894	13.061	-9.600	121.600
Life expectancy	504	67.486	8.681	41.000	80.000
Legal institutional change	327	0.030	0.185	-0.432	1.595
Latitude	492	0.368	0.185	0.056	0.667

*Note.* The legal institutional scores and the three dimensions' variables are rescaled to vary between 0 and 1. The minimum and maximum values of the respective variables from the pooled sample are used as benchmarks for rescaling.

Table 3

*Mean Values for the Distance Variables, by Mode of Institutional Grafting*

VARIABLES	The drift subsample		The path-breaking subsample	
	Base	Extended	Base	Extended
Distance to the political dimension				
Distance to democratic settings quality	0.087	0.276	-0.017	-0.087
Distance to policymaking quality	0.084	0.175	0.305	0.312
Distance to the cultural dimension	1.037	1.501	1.682	1.605
Distance to the structural dimension	<i>Not available</i>	<i>Not available</i>	-0.187	<i>Not available</i>

Table 4

*The Impact of the Distance Variables on Economic Growth for the Base Subsamples*

VARIABLES	The base path-breaking subsample			
	(1)	(2)	(3)	(4)
Ln(Growth rate) <sub>t-1</sub>	0.098*** (0.025)	0.028 (0.049)	-0.060 (0.044)	0.056*** (0.015)
Ln(Capital)	0.563*** (0.049)	0.211 (0.151)	0.506*** (0.153)	0.247** (0.118)
Ln(Inflation)	-0.133*** (0.019)	-0.108*** (0.028)	-0.079*** (0.022)	-0.115*** (0.013)
Distance to the Cultural dimension	-0.141*** (0.042)			
Distance to the Political dimension				
Distance to Democratic settings quality		-0.183* (0.089)		
Distance to Policymaking quality			-0.317*** (0.082)	
Distance to the Structural dimension				-0.598** (0.223)
<i>Number of instruments</i>	21	19	19	21
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.424	0.322	0.269	0.410
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.322	0.453	0.458	0.252
<i>Number of observations</i>	130	105	105	130
<i>Number of countries</i>	21	21	21	21

*Note.* Standard errors in parentheses. Results are only reported for the base path-breaking subsample. We do not run a similar analysis for the base drift subsample due to a great number of missing values for the cultural variable and the lack of data for the structural variable. All the variables specified in the model are included in the gmmstyle option. Instruments are restricted to the first, second and third lags of the respective variables; time dummies appear in the ivstyle option.

\*p < .10. \*\* p < .05. \*\*\* p < .01.

Table 5

*The Impact of the Distance Variables on Economic Growth for the Extended Subsamples*

VARIABLES	The extended drift subsample			The extended path-breaking subsample		
	(1)	(2)	(3)	(4)	(5)	(6)
Ln(Growth rate) <sub>t-1</sub>	-0.145*** (0.041)	-0.216*** (0.004)	0.098*** (0.034)	0.021 (0.051)	0.245*** (0.043)	0.254*** (0.046)
Ln(Capital)	2.771*** (0.658)	3.498*** (0.274)	2.084*** (0.581)	0.068 (0.174)	0.978*** (0.332)	0.614* (0.304)
Ln(Inflation)	-0.396*** (0.103)	-0.307*** (0.030)	-0.336*** (0.064)	-0.158*** (0.032)	-0.039 (0.053)	-0.113*** (0.036)
Distance to the Cultural dimension	-0.610*** (0.086)			0.448*** (0.088)		
Distance to the Political dimension						
Distance to Democratic settings quality		-0.222*** (0.033)			-0.702** (0.282)	
Distance to Policy-making quality			-1.082*** (0.373)			0.378* (0.197)
<i>Number of instruments</i>	21	35	27	29	27	27
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.383	0.278	0.404	0.451	0.192	0.136
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.547	0.223	0.390	0.105	0.566	0.354
<i>Number of observations</i>						
<i>Number of countries</i>	140	186	186	192	190	190
<i>Number of instruments</i>	24	42	42	32	40	40

*Note.* Standard errors in parentheses. All the variables specified in the model are included in the gmmstyle option; time dummies appear in the ivstyle option. Column (1): Instruments are restricted to the first, second and third lags of the respective variables; Column (2): Instruments are increased to the seventh lags of the respective variables; Column (3): Instruments used are from the second to the sixth lags of the respective variables; Columns (4, 5 and 6): Instruments used are from the fifth to the ninth lags of the respective variables.

\*p < .10. \*\* p < .05. \*\*\* p < .01.

Table 6

*The Impact of Legal Institutions on Economic Growth for the Base Subsamples*

VARIABLES	The base drift subsample				The base path-breaking subsample			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Ln(Growth rate) <sub>t-1</sub>	0.113 (0.133)	-0.095*** (0.019)	0.216** (0.083)	0.121 (0.141)	0.069 (0.061)	0.166*** (0.036)	0.077 (0.070)	0.214 (0.137)
Ln(Capital)	3.790*** (1.303)	4.154*** (0.537)	3.340*** (1.106)	4.813** (2.018)	-0.500 (0.517)	-0.475 (0.295)	0.508* (0.282)	-0.492 (0.544)
Ln(Inflation)	-0.343 (0.214)	-0.490*** (0.084)	-0.514*** (0.148)	-0.744** (0.316)	-0.059 (0.044)	-0.083** (0.034)	-0.255*** (0.051)	-0.120** (0.053)
Legal institutions	10.440*** (2.867)	2.098** (1.008)	9.473*** (2.400)	6.705* (3.574)	-0.630 (0.871)	0.759*** (0.208)	0.421 (0.571)	1.146** (0.475)
<i>Number of instruments</i>	13	21	17	13	13	21	17	13
<i>Hansen test of overid. restrictions</i> (Prob > chi2)	0.252	0.507	0.239	0.123	0.196	0.333	0.178	0.140
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.462	0.104	0.567	0.287	0.289	0.304	0.221	0.347
<i>Number of observations</i>	128	128	128	128	130	130	130	130
<i>Number of countries</i>	22	22	22	22	21	21	21	21

*Note.* Standard errors in parentheses. Column (1): All the variables specified in the model are included in the gmmstyle option. Instruments are restricted to the third, fourth and fifth lags of the respective variables; Column (2): In addition to the above specification choice, time dummies appear in the ivstyle option; Column (3): An alternative model specification choice is used such as restricting instruments to the ninth and tenth lags of the respective variables; Column (4): An alternative model specification choice is used such as restricting instruments to the fifth lags of the respective variables and omitting the collapse sub-option.

\*p < .10. \*\* p < .05. \*\*\* p < .01.

Table 7

*The Impact of Legal Institutions on Economic Growth for the Extended Subsamples*

VARIABLES	The extended drift subsample				The extended path-breaking subsample			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Ln(Growth rate) <sub>t-1</sub>	-0.098 (0.064)	-0.227*** (0.011)	0.071* (0.037)	-0.205*** (0.011)	0.011 (0.074)	0.060*** (0.020)	-0.012 (0.076)	0.033* (0.019)
Ln(Capital)	3.294*** (0.801)	3.021*** (0.384)	3.063*** (0.848)	2.451*** (0.611)	0.628 (0.441)	0.701** (0.289)	0.933** (0.425)	-0.002 (0.092)
Ln(Inflation)	-0.485*** (0.120)	-0.491*** (0.099)	-0.433*** (0.130)	-0.357*** (0.042)	-0.085 (0.060)	-0.081** (0.031)	-0.084* (0.044)	-0.143*** (0.024)
Legal institutions	1.883* (0.933)	3.717*** (0.550)	4.623*** (0.799)	2.361*** (0.311)	1.876** (0.693)	1.656*** (0.414)	1.497** (0.594)	1.915*** (0.331)
<i>Number of instruments</i>	26	35	26	33	26	35	26	33
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.292	0.348	0.209	0.567	0.125	0.338	0.123	0.214
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.319	0.195	0.815	0.209	0.092	0.103	0.153	0.106
<i>Number of observations</i>	236	236	190	190	227	227	213	213
<i>Number of countries</i>	42	42	33	33	40	40	37	37

*Note.* Standard errors in parentheses. Column (1): All the variables specified in the model are included in the gmmstyle option. Instruments are restricted to the ninth and tenth lags of the respective variables. The collapse sub-option is not included. Time dummies appear in the ivstyle option; Column (2): An alternative model specification choice is used such as restricting instruments to the sixth lags of the respective variables and including the collapse sub-option; Column (3): Resource rich countries are excluded from the analysis; specification choice of Model 1 is applied; Column (4): Resource rich countries are excluded from the analysis; the specification choice from Model 2 is applied with the collapse suboption added in order to keep the number of instruments less than the number of countries.

\* p < .10. \*\* p < .05. \*\*\* p < .01.

Table 8

*Extended Analysis of Legal Institutional Effects on Growth Rates for the Base Path-Breaking Subsample*

VARIABLES	The base path-breaking subsample			
	(1)	(2)	(3)	(4)
Ln(Growth rate) <sub>t-1</sub>	0.295*** (0.098)	0.336*** (0.065)	0.138*** (0.028)	0.166*** (0.049)
Ln(Capital)	0.033 (0.323)	0.073 (0.345)	-0.382*** (0.126)	-0.689** (0.273)
Ln(Inflation)	-0.314*** (0.066)	-0.172*** (0.055)	-0.146*** (0.039)	-0.145*** (0.048)
Legal institutions <sub>t-1</sub>	1.448*** (0.468)			
Legal institutions		-19.823*** (3.459)	-0.295 (0.393)	-4.390* (2.141)
Legal institutions <sub>_2</sub>		20.479*** (3.560)		
Cpi			0.423*** (0.130)	-0.424 (0.439)
Cpi * Legal institutions				1.375* (0.662)
<i>Number of instruments</i>	16	19	19	19
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.159	0.365	0.494	0.410
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.713	0.724	0.413	0.428
<i>Number of observations</i>	113	130	126	126
<i>Number of countries</i>	21	21	21	21

*Note.* Standard errors in parentheses. All the variables specified in the model are included in the gmmstyle option. Instruments are restricted only to the second or third lags of the respective variables. The collapse sub-option is included. Time dummies appear in the ivstyle option.

\* p < .10. \*\* p < .05. \*\*\* p < .01.

Table 9

*Extended Analysis of Legal Institutional Effects on Growth Rates for the Extended Path-Breaking Subsample*

VARIABLES	The extended path-breaking subsample			
	(1)	(2)	(3)	(4)
Ln(Growth rate) <sub>t-1</sub>	0.281*** (0.053)	0.395*** (0.091)	0.292*** (0.066)	0.308*** (0.082)
Ln(Capital)	-0.279 (0.291)	-0.369 (0.386)	-0.465 (0.319)	-0.425 (0.307)
Ln(Inflation)	-0.242*** (0.050)	-0.165* (0.087)	-0.037 (0.062)	-0.053 (0.078)
Legal institutions <sub>t-1</sub>	3.019*** (0.385)			
Legal institutions		-17.38* (10.290)	1.170 (1.064)	0.357 (3.554)
Legal institutions <sub>-2</sub>		19.010* (10.660)		
Cpi			0.120 (0.224)	-0.116 (0.842)
Cpi * Legal institutions				0.320 (1.237)
<i>Number of instruments</i>	28	17	19	19
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.196	0.171	0.104	0.092
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.984	0.797	0.249	0.346
<i>Number of observations</i>	203	227	214	214
<i>Number of countries</i>	40	40	40	40

*Note.* Standard errors in parentheses. All the variables specified in the model are included in the gmmstyle option. Instruments are restricted to the second, third, fourth, fifth and sixth lags of the respective variables for Column 1 and to the second and third lags of the respective variables for Columns 2, 3, and 4. The collapse sub-option is included. Time dummies appear in the ivstyle option.

\* p < .10. \*\* p < .05. \*\*\* p < .01.



Table 10

*The Impact of Democratic Settings Quality on Economic Growth for the Base Subsamples*

VARIABLES	The base drift subsample			The base path-breaking subsample		
	(1)	(2)	(3)	(1)	(2)	(3)
Ln(Growth rate) <sub>t-1</sub>	-0.087*** (0.029)	-0.144*** (0.011)	-0.599*** (0.116)	-0.167 (0.099)	-0.021* (0.011)	0.464** (0.195)
Ln(Capital)	-0.436 (1.168)	1.279** (0.609)	7.508*** (0.930)	-0.205 (0.360)	0.429*** (0.062)	1.374*** (0.441)
Ln(Inflation)	-0.118 (0.101)	-0.349*** (0.066)	-0.421*** (0.137)	-0.039 (0.034)	-0.113*** (0.026)	-0.455*** (0.117)
Democratic settings quality	11.280*** (2.194)	3.188* (1.733)	4.542** (1.826)	4.608 (5.167)	1.068 (1.547)	2.125** (0.770)
<i>Number of instruments</i>	13	19	15	13	19	15
<i>Hansen test of overid. restrictions</i> (Prob > chi2)	0.123	0.359	0.329	0.066	0.243	0.124
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.110	0.079	0.107	0.122	0.338	0.636
<i>Number of observations</i>	100	100	100	116	116	116
<i>Number of countries</i>	22	22	22	21	21	21

*Note.* Standard errors in parentheses. Column (1): All the variables specified in the model are included in the gmmstyle option. Instruments are restricted to the first, second and third lags of the respective variables; (2) Additionally, time dummies appear in the ivstyle option; (3) An alternative model specification choice is used such as restricting instruments only to the tenth lags of the respective variables and omitting the collapse sub-option.

\* p < .10. \*\* p < .05. \*\*\* p < .01.

Table 11

*The Impact of Democratic Settings Quality on Economic Growth for the Extended Subsamples*

VARIABLES	The extended drift subsample				The extended path-breaking subsample			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Ln(Growth rate) <sub>t-1</sub>	-0.200*** (0.007)	-0.191*** (0.005)	-0.214*** (0.021)	-0.219*** (0.003)	-0.057* (0.029)	-0.062*** (0.018)	-0.043 (0.038)	0.037 (0.034)
Ln(Capital)	2.119*** (0.626)	2.736*** (0.219)	2.875*** (0.767)	4.198*** (0.204)	0.150 (0.137)	0.036 (0.023)	0.204 (0.185)	0.085 (0.112)
Ln(Inflation)	-0.224*** (0.052)	-0.253*** (0.035)	-0.297*** (0.072)	-0.254*** (0.022)	-0.032 (0.021)	-0.037*** (0.012)	-0.083*** (0.030)	-0.076*** (0.020)
Democratic settings quality	3.236*** (0.546)	3.320*** (0.389)	4.403*** (1.269)	3.140*** (0.533)	7.139*** (1.469)	8.230*** (0.747)	7.847*** (2.029)	4.341*** (0.743)
<i>Number of instruments</i>	33	39	23	31	33	39	23	31
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.417	0.268	0.321	0.371	0.238	0.433	0.142	0.154
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.153	0.183	0.202	0.370	0.482	0.467	0.566	0.273
<i>Number of observations</i>	191	191	191	148	205	205	205	190
<i>Number of countries</i>	43	43	43	33	40	40	40	37

*Note.* Standard errors in parentheses. Column (1): All the variables specified in the model are included in the gmmstyle option. Instruments used are from the first to the eighth lags of the respective variables; Column (2): Additionally, time dummies appear in the ivstyle option; Column (3) An alternative model specification choice is used such as reducing the instruments to the fourth lags of the respective variables; Column (4): Resource rich countries are omitted from the analysis, the specification choice from Model 2 is applied with instruments reduced to the sixth lags of the respective variables.

\* p < .10. \*\* p < .05. \*\*\* p < .01.

Table 12

*The Impact of Policymaking Quality on Economic Growth for the Base Subsamples*

VARIABLES	The base drift subsample			The base path-breaking subsample		
	(1)	(2)	(3)	(1)	(2)	(3)
Ln(Growth rate) <sub>t-1</sub>	-0.069 (0.147)	0.052 (0.054)	0.189*** (0.009)	0.205 (0.199)	0.313*** (0.091)	0.284*** (0.053)
Ln(Capital)	4.021 (2.362)	2.357** (1.028)	2.336*** (0.669)	-1.518* (0.780)	0.022 (0.194)	0.124 (0.157)
Ln(Inflation)	-1.146** (0.527)	-0.679*** (0.207)	-0.798*** (0.055)	-0.088 (0.139)	-0.227** (0.091)	-0.296*** (0.057)
Policymaking quality	-27.220* (15.560)	-1.470 (3.543)	-0.422 (2.225)	9.058** (3.893)	3.765** (1.529)	5.715*** (0.991)
<i>Number of instruments</i>	9	15	19	9	15	19
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.375	0.371	0.354	0.160	0.161	0.248
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.348	0.141	0.210	0.616	0.736	0.532
<i>Number of observations</i>	100	100	100	116	116	116
<i>Number of countries</i>	22	22	22	21	21	21

*Note.* Standard errors in parentheses. Column (1): All the variables specified in the model are included in the gmmstyle option. Instruments are restricted to the second and third lags of the respective variables; Column (2): Additionally, time dummies appear in the ivstyle option; Column (3): An alternative model specification choice is used such as increasing instruments to the fourth lags of the respective variables.

\* p < .10. \*\* p < .05. \*\*\* p < .01.

Table 13

*The Impact of Policymaking Quality on Economic Growth for the Extended Subsamples*

VARIABLES	The extended drift subsample				The extended path-breaking subsample			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Ln(Growth rate) <sub>t-1</sub>	-0.263*** (0.026)	-0.065*** (0.018)	-0.079*** (0.025)	-0.007 (0.008)	-0.019 (0.041)	0.199*** (0.010)	0.025 (0.036)	0.217*** (0.032)
Ln(Capital)	1.408*** (0.393)	2.194*** (0.095)	2.111*** (0.166)	2.391*** (0.051)	0.136 (0.099)	0.685*** (0.070)	0.973*** (0.117)	0.852*** (0.044)
Ln(Inflation)	-0.346*** (0.068)	-0.356*** (0.030)	-0.409*** (0.066)	-0.416*** (0.038)	-0.111*** (0.025)	-0.146*** (0.016)	-0.250*** (0.037)	-0.208*** (0.026)
Policymaking quality	-6.330*** (2.085)	0.292 (1.076)	-0.895 (1.310)	1.157** (0.565)	4.308*** (1.063)	3.427*** (0.545)	8.369*** (1.481)	5.439*** (1.001)
<i>Number of instruments</i>	27	39	34	34	27	39	34	34
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.732	0.360	0.290	0.400	0.186	0.333	0.359	0.396
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.249	0.362	0.402	0.623	0.402	0.556	0.755	0.756
<i>Number of observations</i>	194	194	194	151	205	205	205	190
<i>Number of countries</i>	44	44	44	34	40	40	40	37

*Note.* Standard errors in parentheses. Column (1): All the variables specified in the model are included in the gmmstyle option. Instruments used are from the first to the fifth lags of the respective variables; Column (2): An alternative model specification choice is applied such as allowing instruments to vary from the third to the tenth lags of the respective variables; Column (3): An alternative model specification choice is used such as restricting instruments to the fourth lags of the respective variables and omitting the collapse suboption; Column (4): Resource rich countries are omitted from the analysis.

\* p < .10. \*\* p < .05. \*\*\* p < .01.

Table 14

*The Impact of Changes in the Distance Variables on Economic Growth for the Path-Breaking Subsample*

VARIABLES	The base path-breaking subsample				The extended path-breaking subsample	
	(1)	(2)	(3)	(4)	(5)	(6)
Ln(Growth rate) <sub>t-1</sub>	0.184* (0.094)	0.529*** (0.170)	0.784 (0.516)	-0.005 (0.104)	-0.079*** (0.028)	0.261*** (0.080)
Democratic settings quality	-0.824 (1.886)		9.319** (3.904)		-1.077 (1.912)	
Policymaking quality		0.517 (4.302)		9.612*** (2.909)		-0.641 (2.684)
D_Culture	-0.210 (0.562)	-1.807 (1.276)			-0.045 (0.360)	-1.212** (0.545)
D_Culture* Democratic settings quality	0.791 (0.973)				1.279* (0.641)	
D_Culture* Policymaking quality		4.222* (2.358)				3.511** (1.445)
D_Structure			-1.123 (7.939)	-3.986 (3.564)		
D_Structure* Democratic settings quality			3.036 (15.980)			
D_Structure* Policymaking quality				11.060 (9.324)		
<i>Number of instruments</i>	17	12	12	17	27	22
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.538	0.134	0.305	0.186	0.197	0.134
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.151	0.490	0.413	0.396	0.163	0.958
<i>Number of observations</i>	105	105	105	105	158	158
<i>Number of countries</i>	21	21	21	21	32	32

*Note.* Standard errors in parentheses. The results for the control variables (LnCapital and LnInflation) are not reported due to space limits. Column (1): Instruments are restricted to the fifth and sixth lags of the respective variables; Column (2): Instruments are restricted to the second lags of the respective variables; Column (3): Instruments are restricted to the tenth lags of the respective variables; Column (4): Instruments are restricted to the fifth and sixth lags of the respective variables; Column (5): Instruments used are from the first to the fourth lags of the respective variables; Column (6): Instruments are restricted to the eighth, ninth and tenth lags of the respective variables. \* p < .10. \*\* p < .05. \*\*\* p < .01.

Table 15

*The Impact of the Political Dimension on Legal Institutional Change, by Mode of Institutional Grafting*

VARIABLES	The drift subsample				The path-breaking subsample			
	(1)	Base (2)	Extended (3)	Extended (4)	(1)	Base (2)	Extended (3)	Extended (4)
Legal institutions <sub>t-1</sub>	-1.331*** (0.029)	-0.253** (0.099)	-0.880*** (0.028)	-0.588*** (0.092)	-1.561*** (0.061)	-1.397*** (0.116)	-1.943*** (0.039)	-1.869*** (0.109)
Life expectancy	-0.013*** (0.002)	-0.005*** (0.001)	0.016*** (0.001)	0.002 (0.004)	0.008 (0.010)	0.006 (0.010)	0.025*** (0.003)	0.001 (0.009)
Democratic settings quality	0.509*** (0.120)		0.467*** (0.031)		-0.765** (0.337)		0.271** (0.132)	
Policymaking quality		0.127 (0.131)		-0.168 (0.331)		1.792*** (0.591)		1.807*** (0.403)
<i>Number of instruments</i>	18	14	38	22	18	14	38	22
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.218	0.153	0.216	0.185	0.459	0.331	0.404	0.123
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.484	0.635	0.267	0.234	0.123	0.210	0.122	0.165
<i>Number of observations</i>	132	132	256	256	102	102	219	219
<i>Number of countries</i>	22	22	43	43	20	20	41	41

*Note.* Standard errors in parentheses. All the variables specified in the model are included in the gmmstyle option. Time dummies appear in the ivstyle option. Columns (1): Instruments are restricted to the first, second and third lags of the respective variables; Columns (2): Instruments are restricted to the second and third lags of the respective variables; Columns (3): Instruments used are from the third to the tenth lags of the respective variables; Columns (4): Instruments used are from the second to the fifth lags of the respective variables.

\* p < .10. \*\* p < .05. \*\*\* p < .01.

Table 16

*The Impact of the Distance Variables on Legal Institutional Grafting for the Path-Breaking Subsample*

VARIABLES	The base path-breaking subsample				The extended path-breaking subsample	
	(1)	(2)	(3)	(4)	(5)	(6)
Legal institutional change $t_{-1}$	-0.295*** (0.006)	-0.304*** (0.026)	-0.254*** (0.011)	-0.213*** (0.021)	-0.304*** (0.018)	-0.279*** (0.012)
Life expectancy	-0.074*** (0.013)	-0.037*** (0.013)	0.009 (0.012)	0.042** (0.014)	-0.024*** (0.005)	-0.013*** (0.003)
Democratic settings quality	-2.539*** (0.622)		-0.656 (0.726)		-2.576*** (0.321)	
Policymaking quality		-5.444*** (0.464)		-1.844*** (0.588)		-2.998*** (0.349)
D_Culture	-0.098 (0.141)	-0.557*** (0.180)			-0.055 (0.101)	-0.073 (0.065)
D_Culture*	0.618** (0.229)				0.445*** (0.151)	
Democratic settings quality		1.626*** (0.226)				0.618*** (0.128)
D_Culture*						
Policymaking quality			-1.716** (0.703)	-2.038** (0.755)		
D_Structure			4.646*** (1.348)			
D_Structure*						
Democratic settings quality						
D_Structure*				7.362*** (1.927)		
Policymaking quality						
<i>Number of instruments</i>	19	19	19	19	27	27
<i>Hansen test of overid. restrictions (Prob &gt; chi2)</i>	0.228	0.272	0.274	0.304	0.299	0.269
<i>Arellano-Bond test for AR(2)(Pr &gt; z)</i>	0.626	0.760	0.913	0.300	0.168	0.560
<i>Number of observations</i>	96	96	96	96	162	162
<i>Number of countries</i>	20	20	20	20	31	31

*Note.* Standard errors in parentheses. All the variables specified in the model are included in the gmmstyle option. Time dummies appear in the ivstyle option. We restrict instruments to the first, second and third lags of the respective variables for the base path-breaking subsample. In the case of the extended path-breaking subsample, instruments used are from the fifth to the ninth lags of the respective variables.

\*  $p < .10$ . \*\*  $p < .05$ . \*\*\*  $p < .01$ .

## Appendix 1

### *Description of Country Choice for the Drift and Path-Breaking Subsamples*

<b>Country</b>	<b>Choice</b>	<b>Notes</b>
Afghanistan	Not included	Recent history of military intervention
Albania	Included in the path-breaking sample	
Algeria	Not included	Fluctuations in regime trend greater than 3 points
Angola	Not included	Insufficient change (the benchmark of 6 not reached)
Argentina	Included in the path-breaking sample	
Armenia	Included in the path-breaking sample	History of reverse trend but included due to the insufficient number of transition countries in the base subsample
Australia	Included in the drift sample	Resource rich
Austria	Included in the drift sample	
Azerbaijan	Included in the path-breaking sample	History of reverse trend but included due to the insufficient number of transition countries in the base subsample
Bahrain	Included in the drift sample	Resource rich
Bangladesh	Included in the path-breaking sample	Fluctuations in regime trend greater than 3 points but after 2006. Starting point of change is slightly above -6
Belarus	Not included	Recursive movement to autocracy
Belgium	Included in the drift sample	
Benin	Included in the path-breaking sample	
Bhutan	Not included	Fluctuations in regime trend greater than 3 points
Bolivia	Included in the path-breaking sample	
Bosnia	Not included	No data on polity scores
Botswana	Included in the drift sample	
Brazil	Included in the path-breaking sample	Profound political change occurs but in stages. Resource rich
Bulgaria	Included in the path-breaking sample	
Burkina Faso	Not included	Fluctuations in regime trend greater than 3 points
Burundi	Not included	Mixed change, difficult to classify
Cambodia	Not included	Insufficient and unstable change
Cameroon	Included in the drift sample	
Canada	Included in the drift sample	Resource rich
Cape Verde	Not included	Insufficient starting point for change (above -6)
Cen. Afr. Rep.	Not included	Insufficient change
Chad	Not included	Insufficient change
Chile	Not included	A lot of missing values on key variables
China	Included in the drift sample	Resource rich
Colombia	Included in the drift sample	
Comoros	Not included	Fluctuations in regime trend greater than 3 points
Congo	Not included	Insufficient and unstable change
Costa Rica	Included in the drift sample	
Croatia	Included in the path-breaking sample	Starting point of change is slightly above -6
Cuba	Not included	A lot of missing values on key



		variables
Cyprus	Not included	Insufficient history of regime trend
Czech Republic	Included in the path-breaking sample	
Denmark	Included in the drift sample	
Djibouti	Not included	Insufficient change
Dominican Republic	Not included	Fluctuations in regime trend greater than 3 points
Congo Kinshasa	Not included	Insufficient change
East Timor	Not included	Insufficient history of regime trend available
Ecuador	Not included	Insufficient starting point for change (above -6)
Egypt	Included in the drift sample	
El Salvador	Included in the path-breaking sample	Change is in the early 1980s and is relatively durable
Equatorial Guinea	Included in the drift sample	
Eritrea	Not included	Insufficient history of regime trend available
Estonia	Included in the path-breaking sample	
Ethiopia	Not included	Insufficient change
Fiji	Not included	Fluctuations in regime trend greater than 3 points
Finland	Included in the drift sample	
France	Included in the drift sample	
Gabon	Not included	Insufficient change
Gambia	Not included	Change is from democracy to autocracy
Georgia	Included in the path-breaking sample	
Germany	Included in the drift sample	
Ghana	Not included	Fluctuations in regime trend greater than 3 points
Greece	Included in the drift sample	
Guatemala	Included in the path-breaking sample	Full transition is reached but in two phases with few years apart
Guinea-Bissau	Not included	Unstable change
Guinea	Included in the drift sample	Resource rich
Guyana	Included in the path-breaking sample	Resource rich
Haiti	Not included	Fluctuations in regime trend greater than 3 points
Honduras	Not included	Insufficient starting point for change (above -6)
Hungary	Included in the path-breaking sample	
India	Included in the drift sample	
Indonesia	Included in the path-breaking sample	Change is relatively recent (around 2000)
Iran	Not included	Unstable change
Iraq	Not included	Recent history of military occupation
Ireland	Included in the drift sample	
Israel	Included in the drift sample	
Italy	Included in the drift sample	
Ivory Coast	Not included	Insufficient change (the benchmark of 6 not reached)
Jamaica	Included in the drift sample	
Japan	Included in the drift sample	
Jordan	Not included	Fluctuations in regime trend greater than 3 points
Kazakhstan	Not included	No transition to democracy
Kenya	Not included	Mixed change, difficult to classify

Korea North	Not included	A lot of missing values on key variables
Korea South	Included in the path-breaking sample	Starting point for change is slightly above -6
Kosovo	Not included	Insufficient history of regime trend
Kuwait	Not included	
Kyrgyzstan	Included in the path-breaking sample	Insufficient change (the benchmark of 6 not reached) but included due to the insufficient number of transition countries in the base subsample
Laos	Not included	Change is from democracy to autocracy
Latvia	Included in the path-breaking sample	
Lebanon	Not included	Recent history of military occupation
Lesotho	Included in the path-breaking sample	Change is around mid of 1990s. Recent experience with democracy prior to change. Resource rich
Liberia	Not included	A lot of missing values on key variables
Libya	Not included	A lot of missing values on key variables
Lithuania	Included in the path-breaking sample	
Luxembourg	Included in the drift sample	Marked as small economy
Macedonia	Included in the path-breaking sample	
Madagascar	Included in the path-breaking sample	Reverse trend but after 2006
Malawi	Included in the path-breaking sample	
Malaysia	Not included	Fluctuations in regime trend greater than 3 points
Mali	Included in the path-breaking sample	
Mauritania	Not included	Fluctuations in regime trend greater than 3 points
Mauritius	Included in the drift sample	
Mexico	Included in the drift sample	Resource rich
Moldova	Included in the path-breaking sample	
Mongolia	Included in the path-breaking sample	
Montenegro	Not included	Insufficient history of regime trend
Morocco	Included in the drift sample	
Mozambique	Included in the path-breaking sample	The upper benchmark of 6 is slightly not reached). Change is around mid of 1990s.
Myanmar	Not included	A lot of missing values on key variables
Namibia	Not included	Insufficient history of regime trend
Nepal	Not included	Fluctuations in regime trend greater than 3 points
Netherlands, the	Included in the drift sample	
New Zealand	Included in the drift sample	
Nicaragua	Not included	Mixed change, difficult to classify
Niger	Not included	Unstable change
Nigeria	Not included	Unstable change
Norway	Included in the drift sample	Resource rich
Oman	Included in the drift sample	Resource rich
Pakistan	Not included	Fluctuations in regime trend greater than 3 points
Panama	Included in the path-breaking sample	
Papua N. G.	Not included	Insufficient history of regime trend
Paraguay	Included in the path-breaking sample	
Peru	Not included	Fluctuations in regime trend greater

		than 3 points
Philippines	Included in the path-breaking sample	
Poland	Included in the path-breaking sample	
Portugal	Included in the drift sample	Change is shortly after 1970
Qatar	Not included	A lot of missing values on key variables
Romania	Included in the path-breaking sample	
Russia	Included in the path-breaking sample	Resource rich, Fluctuations in regime trend but the country is retained for the analysis due to the insufficient number of transition countries in the subsample
Rwanda	Included in the drift sample	
Saudi Arabia	Included in the drift sample	Resource rich
Senegal	Not included	A lot of missing values on key variables
Serbia	Included in the path-breaking sample	
Sierra Leone	Not included	Mixed change, difficult to classify
Singapore	Included in the drift sample	
Slovak Rep.	Included in the path-breaking sample	
Slovenia	Included in the path-breaking sample	
Solomon Isl.	Not included	Insufficient history of regime trend
Somalia	Not included	Mixed change, difficult to classify
South Africa	Not included	Insufficient starting point for change (above -6)
South Sudan	Not included	No data on regime trend are available
Spain	Not included	A lot of missing values on key variables
Sri Lanka	Included in the drift sample	Mild fluctuations in regime trend
Sudan	Not included	Fluctuations in regime trend greater than 3 points
Suriname	Not included	No data on regime trend are available
Swaziland	Not included	Mixed change, difficult to classify
Sweden	Included in the drift sample	
Switzerland	Included in the drift sample	
Syria	Included in the drift sample	Fluctuations in regime trend prior 1970
Taiwan	Not included	Change is in many stages
Tajikistan	Not included	Insufficient political change (the upper benchmark of 6 not reached)
Tanzania	Not included	Insufficient change
Thailand	Not included	Fluctuations in regime trend greater than 3 points
Togo	Not included	Insufficient change (the upper benchmark of 6 not reached)
Trinidad	Included in the drift sample	
Tunisia	Included in the drift sample	Gradual change
Turkey	Not included	Fluctuations in regime trend greater than 3 points
Turkmenistan	Not included	No transition to democracy
UAE	Not included	Insufficient history of regime trend
Uganda	Not included	Fluctuations in regime trend greater than 3 points
Ukraine	Included in the path-breaking sample	
United Kingdom, the	Included in the drift sample	
United States, the	Included in the drift sample	Resource rich
Uruguay	Included in the path-breaking sample	Brief history of reverse trend shortly after 1970
Uzbekistan	Not included	No transition to democracy
Venezuela	Not included	Change is from democracy to

		autocracy
Vietnam	Included in the drift sample	
Yemen	Not included	Fluctuations in regime trend greater than 3 points
Zambia	Included in the path-breaking sample	Brief history of reverse trend
Zimbabwe	Not included	Change is from democracy to autocracy

*Note.* List of countries is sourced from <http://www.systemicpeace.org/polity/polity4.htm>.

## Appendix 2

### *List of Countries Used in the Analysis*

Drift-phase subsamples		Path-breaking subsamples	
Base	Extended	Base	Extended
Australia	Australia	Albania	Albania
Austria	Austria	Armenia	Argentina
Belgium	Bahrain	Azerbaijan	Armenia
China	Belgium	Bulgaria	Azerbaijan
Colombia	Botswana	Croatia	Bangladesh
Costa Rica	Cameroon	Czech Republic	Benin
Denmark	Canada	Estonia	Bolivia
Finland	China	Georgia	Brazil
Germany	Colombia	Hungary	Bulgaria
India	Costa Rica	Kyrgyzstan	Croatia
Ireland	Denmark	Latvia	Czech Republic
Israel	Egypt	Lithuania	El Salvador
Italy	Equatorial Guinea	Macedonia	Estonia
Jamaica	Finland	Moldova	Georgia
Japan	France	Poland	Guatemala
Netherlands, the	Germany	Romania	Guyana
New Zealand	Greece	Russia	Hungary
Norway	Guinea	Serbia	Indonesia
Sweden	India	Slovakia	Korea South
Switzerland	Ireland	Slovenia	Kyrgyzstan
United Kingdom, the	Israel	Ukraine	Latvia
United States, the	Italy		Lesotho
	Jamaica		Lithuania
	Japan		Macedonia
	Luxembourg		Madagascar
	Mauritius		Malawi
	Mexico		Mali
	Morocco		Moldova
	Netherlands, the		Mongolia
	New Zealand		Mozambique
	Norway		Panama
	Oman		Paraguay
	Portugal		Philippines
	Rwanda		Poland
	Saudi Arabia		Romania
	Singapore		Russia
	Sri Lanka		Serbia
	Sweden		Slovakia
	Switzerland		Slovenia
	Syria		Ukraine
	Trinidad		Uruguay
	Tunisia		Zambia
	United Kingdom, the		
	United States, the		
	Vietnam		