What Are the 'Right' Incentives for Reform?
A Panel Analysis of the Quality of Banking Sector Reform in the Post-communist Region

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Abstract

This paper uses pooled cross-sectional time series analysis to examine the factors that push governments in the post-communist region to pursue good quality banking sector reform. I probe the impact of two important characteristics of the domestic political system: partisan politics and domestic alliances. I also test the effect of conditionality programs promoted by the IMF. The paper considers two alternative explanations of banking sector reform that are based on economic development and intrinsic cultural differences.

Paper prepared for the tenth biennial conference of the European Union Studies Association (EUSA) in Montreal, Canada, 17-19 May 2007

This is an initial draft and comments are welcome!
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I thank Milada Anna Vachudova, Liesbet Hooghe, John Stephens, and Georg Vanberg for their abiding interest in my research project, invaluable feedback, and constructive suggestions. The research in this paper was generously supported by grants from the European Commission and the European Union Center of Excellence at UNC – Chapel Hill and the Graduate School at UNC – Chapel Hill.

Reforming the banking sector in the post-communist region

Following the collapse of the Soviet bloc in the early 1990s, the policy-makers in post-communist countries could no longer rely on the economic practices used in the socialist planned economies and had to adapt to the rules of the game in a market economy framework. In order to be successful in the new economic environment, the production, investment, and management strategies of the government and the emerging private actors had to be very different from those used during the past five decades. One fundamental challenge was to reduce the involvement of the state in economic affairs and, consequently, bring the existing policies in line with the new economic environment. In the early 1990s, the newly elected parliaments across the region were engaged in a process of “policy updating” in areas as diverse as human rights, culture, and enterprise management.

The banking sector is one pivotal piece of the puzzle of economic restructuring after the fall of communism, because it provides vital financial resources for the existing as well as the new economic actors. Across the region, the emerging small private businesses in sectors such as retail, food processing, and textiles, as well as the restructuring state-owned conglomerates in sectors such as the chemical industry, metallurgical industry, and electronics need access to financial resources in order to buy new equipment, renovate the infrastructure where the production processes take place, and invest in research and development. This is one important reason why a strong financial sector that can provide efficient and reliable banking services is a must in a market economy.

Introducing market logic in the operation of the banking sector can be beneficial, especially when a country transitions from a regime with a heavy state involvement in financial decision-making, as was the case in the post-communist region. A weak banking sector cannot support the growth and improvement of the industrial and service sectors, which hampers the development of a functioning market economy. The advantage of a reformed banking sector with clear rules of the game is that economic actors can engage in meaningful long-term planning and assume availability of credit products and prompt servicing of their financial accounts (Levine 2002; Barth, Caprio, and Levine 2006). Foreign investors prefer an environment where they can set up reliable operations; domestic investors prefer to have access to affordable domestic credit in order to develop their business activities (Marinov and Marinova 2003; Djarova 2004).

Therefore, political actors have certain incentives to seek good quality banking reforms in order to promote economic development and growth.

However, the banking sector also provides fertile ground for political interference and corruption, because influential political figures can provide access to loans and preferential financing. Therefore, political actors face certain incentives to implement partial banking reforms, which would give them greater discretionary power in allocating financial resources. An unreformed banking sector may distort heavily the economic incentives in a country. When the state holds majority stakes in the most influential banks, the political agenda of the government can trump the market incentives of the banks. In the post-communist region, there have been numerous cases when public financial resources were misused for the private benefits of the influential elites (Hellman 1998; Ganev 2001; Barnes 2003; Hoff and Stiglitz 2004).

There are possible remedies to prevent the misuse of the banks such as implementing laws that promote transparency in the banks' operations; laws that allow the Central Bank to operate independently of short-term political pressures to bail out the government in times of excessive budget deficit; and institutional mechanisms to monitor the compliance of banks with the legal rules. The puzzle inspiring my research is: What factors push governments to pursue good quality banking sector reform?

Dependent variable: Quality of banking sector reform

It is indeed hard to define the components of 'good' banking sector reform in absolute terms. One analytical strategy is to consider the starting point of Eastern European transitions and the goals of transition. Then we can identify benchmark reforms necessary to achieve those goals. In Eastern Europe, the transitioning regimes started out with a communist political system and a planned economy, and the goals of transition were to establish a liberal democracy and a market economy. In the banking sphere, 'good' reforms would provide clear market entry and exit conditions (Kroszner 1998; Fries 2005); ensure the ability of banks to function according to market principles, without state intervention in their decision-making (Berglof and Bolton 2001; Fries 2005); guarantee central bank independence (Cukierman 1992; Eijffinger and De Haan 1996; Maxfield 1998; Maliszewski 2000); and establish independent banking oversight (Nord 2000; Holthausen and Ronde 2003). Those are key policy standards, according to which I will judge the quality of a country's banking sector framework at any given time point. My analysis relies on a quantitative measure of banking reform developed by the European Bank for Reconstruction and Development (EBRD) that takes into account the policy standards described above.

How much has the neo-liberal “Washington consensus” policy package influenced the course of banking reform in the region? Since transitioning in the early 1990s, many post-communist countries have found themselves in economic turmoil. Balance of payments and financial crises have been frequent. When post-communist governments approached the International Monetary Fund (IMF) for emergency financing and policy advice, or the World Bank for strategic loans to upgrade the public infrastructure, they had to take on the obligation to comply with the policy prescriptions of the so-called “Washington consensus,” which contained some provisions regarding banking sector laws. With respect to banking sector reform in the post-communist region, the IMF has been adamant about opening the sector to foreign banks and introducing more competition, streamlining bankruptcy procedures, strengthening the Central Bank and bank supervision (Nord 2000; Stone 2002; Pop 2006). Compared to other policy dimensions of the “Washington consensus” such as across-the-board deregulation and reduction of public spending, banking reform comes across as less ideologically-driven and more of a collection of “good practices” used in the advanced industrialized economies.

Explanatory variables: Government coloration, domestic alliances, and conditionality

Domestic and international factors interact to shape the quality of banking sector reform in transitional countries. I probe two characteristics of the domestic political system that according to previous research should have a strong impact on the quality of banking reform: partisan politics and domestic alliances. My analysis draws on the partisan politics literature with respect to the role of government coloration. I use the literature on hybrid democracies and the comparative political economy literature on foreign direct investment and trade to understand the role of domestic alliances. I also test the effect of conditionality programs promoted by the IMF. The two alternative explanations of banking sector legal reform that I consider are based on economic development and intrinsic cultural differences.

Government coloration

A widely recognized finding in the comparative politics literature with respect to partisan politics in the post-communist area after 1989 is that center-right and reformed communist governments in power do better in the initiation and implementation of market-liberalizing economic reforms, compared to their unreformed communist counterparts (Haggard and Webb 1994; Ekiert 1996; Bunce 2000; Grzymala-Busse 2002; Vachudova 2005). Steven Fish (1997) has demonstrated statistically that countries, where the opposition to communism won the first elections have performed best in undertaking and sustaining economic reforms after 1989.

Hypothesis 1: We expect a good quality of banking sector reform if the domestic political process is characterized by right-wing governments or reformed communists in power.

The literature on party politics in advanced industrialized countries assumes low levels of electoral volatility, relatively high party cohesion, and crystallization of programmatic party agendas. However, the assumptions about high party cohesion and crystallization of programmatic parties become questionable once when we move beyond the borders of the Central European front-runners of transition. As Herbert Kitschelt has pointed out, “the presumption that political conflict between parties is based on programmatic appeals is generally problematic for students of non-West-European politics” (1995: 448). Petr Kopecky has demonstrated in his case study of the Czech Republic that even in political systems where programmatic parties are prevalent, political parties are rather removed from their grass-root citizen supporters (1995: 517). Therefore, we need to investigate the input of other organized interests such as business associations and labor unions into parties’ policy positions. As a starting point, I consider the findings of the political science and sociology literature that has underscored the role of economic policy networks in economic restructuring (Stark and Bruszt 1998); the impact of sociopolitical networks on institution building in post-communist countries (McDermott 2002); and the effect of foreign investors on the evolution of inter-enterprise networks (Stark and Vedres 2006).

Domestic alliances

An important domestic determinant of the quality of legal reform that has received less attention in the literature is the relationship between governing elites and mobilized domestic stakeholders. By domestic stakeholders I mean organized groups with a salient political or economic policy position such as business associations, labor unions, non-governmental organizations, and policy think-tanks. The domestic political process is characterized by the formation of strategic alliances in order to adopt and implement policy change. The nature and actual operation of these alliances vary across issue areas.

Joel Hellman (1998) has investigated the economic dynamics of hybrid regimes. He argues that the most significant threat to consolidating democracy and market economy does not come from the groups of structural reform 'losers' such as pensioners and heavy industry workers, but from the small group of partial reform 'winners' such as corrupt government officials and managers of state-owned enterprises (Hellman 1998). Branislav Slanchev (2006) has confirmed statistically this finding. Hellman's analysis runs contrary to earlier studies of economic reform in the region. At the outset of the transition process, Przeworski (1991) and Haggard and Kaufman (1995) argued that the biggest threat to economic reform would come from reform losers, because the costs of reform are concentrated and the benefits are dispersed.

According to Hellman, the post-communist experience shows that reforms have been stalled by "enterprise insiders who have become new owners only to strip their firms' assets; commercial bankers who have opposed macroeconomic stabilization to preserve their enormously profitable arbitrage opportunities in distorted financial markets; local officials who have prevented market entry into their regions to protect their share of local monopoly rents; and so-called mafiosi who have undermined the creation of a stable legal foundation for the market economy" (1998: 204). Hellman points out that these actors can hardly be classified as short-term net losers of economic reform. On the contrary, they were the earliest and biggest winners.

Hypothesis 2: We expect a poor quality of banking reform if the domestic political process is characterized by an alliance between corrupt elites in power and rent-seeking domestic stakeholders.

Scholars of political economy have established that foreign direct investment (FDI) has affected positively the economic performance of transitional economies in the post-communist region (Dunning and Narula 1996; Schröder 2001; Marinov and Marinova 2003). From a macro-economic perspective, FDI helps to cover current account and fiscal deficits. Moreover, FDI supplements the low domestic resources to finance both ownership change and capital formation. Compared with other financing options, FDI also facilitates the transfer of technology, know-how and skills, and helps local enterprises to reach foreign markets (Krkoska 2001).

What is the mechanism through which foreign direct investors influence banking sector legal reform? Foreign direct investment differs from other types of international capital flows with respect to the purpose and duration of the commitment that it involves. The purpose of FDI is to establish lasting commercial relations and to exert a noticeable managerial influence in the foreign country (Barrell and Holland 2000: 478). Therefore, it is long-term oriented, compared to shorter-term opportunities such as portfolio investment. Lipschitz, Lane, Mourmouras note that FDI is the type of foreign investment that is least likely to be withdrawn in response to short-term market volatility (Lipschitz et al. 2002: 4). The long-term commitment of FDI investors motivates them to take an active part in the enterprise decision-making process and press the country's government for a more transparent and efficient business environment.

A weaker relationship between foreign capital and domestic economic developments concerns the role of trade. Trade patterns are influenced by considerations about economic efficiency, comparative advantage, and production costs, so they are not necessarily related to the country's legal framework. Scholars of political economy have analyzed the impact of trade on domestic politics. Axel Haldenius (1992) has argued that exposure to international trade brings higher rates of economic growth, which in turn fosters political liberalization and a more democratic and accountable domestic political system. Beck et al. (2001) argue that trade openness generates pressures for more transparency and efficiency in the domestic financial sector.

Hypothesis 3: We expect a good quality of banking reform if foreign direct investors have a strong presence in the country.

Hypothesis 4: We expect a good quality of banking reform if a country has strong trade relations with advanced industrialized economies.

Conditionality

The use of conditionality by international actors has received significant attention by scholars and policy-makers (Mayhew 1998; Schmitter 2001; Schimmelfennig and Sedelmeier 2004; Vachudova 2005). In general, conditionality entails a package of rewards and punishments, attached to demands for specific policy changes. With regards to banking sector reform in the post-communist region, the IMF has demanded provisions that guarantee the independence of the Central Bank from political pressure; opening the banking sector to foreign investors and competition; strengthening banking supervision; and improving the bankruptcy legal framework (Bonin and Wachtel 1999; Berglof and Bolton 2001). The EU has also demanded the adoption of the banking standards observed in the Union as part of the obligatory pre-accession transposition of the *acquis communautaire.*

IMF conditionality was introduced in the 1950s as a way of ensuring that governments do not squander the financial support provided by the Fund. The IMF offers financial assistance only on the condition that the respective government agrees to pursue a range of economic stabilization and adjustment policies that are spelt out in a "letter of intent" document signed by the government and the Fund (Williamson 1983; Dreher and Vaubel 2003; Bird and Willet 2003). The IMF claims that its conditionality policies have a positive effect on attracting private capital flows and improving the stability of the target country's financial system. The Fund promotes conditionality as a signaling or commitment device that increases the markets' confidence in the country and encourages private market actors to become involved, whereas without conditionality they would have been reluctant to do so (IMF 2001; Bird and Willet 2003; Edwards 2003).

Hypothesis 5: We expect a good quality of banking reform if a country has been involved consistently in IMF conditionality programs.

Alternative explanations

What are some plausible alternative explanations of why banking sector legal reform occurs, or fails to take place, in the post-communist region? In my analysis of banking legal reform, the policy outcomes result from the interplay of domestic and international actors. This is an agent-driven account, assuming that foremost strategic considerations motivate the actors involved in the process of policy change. The most compelling alternative conceptualizations are structural ones. According to structural accounts, the policy outcomes are driven by the initial conditions in which countries find themselves such as their level of economic development, or fundamental cultural characteristics. According to my argument, even in cases with adverse initial conditions, good quality banking reform is possible if there is sufficient political will and mobilized actors ready to carry out the necessary reforms. By contrast, structural accounts would predict little or no change if the underlying characteristics of the economic and social system stay the same.

Economic development

Adam Przeworski et al.'s (2000) project examines systematically the relationship between regime type (democratic or authoritarian) and economic performance. As part of their analysis, the authors draw conclusions about the relationship between the nature of political and institutional arrangements and the level of economic development of different countries. Although Przeworski et al.'s analysis is more sophisticated and nuanced than modernization theory accounts, in essence, it contends that "poor countries cannot afford a strong state" (2000: 163). According to the authors' analysis of data since the 1950s, countries with an annual per capita income below $1,000 have very grim prospects of ever developing economically, and consequently, institutionally (2000: 162). The scholars detect a more heterogeneous pattern of economic and institutional development for states with annual per capita incomes between $1,000 - $2,000 and upper per capita income categories. In these income groups, some countries such as Singapore, Portugal, and Greece grew economically over time, whereas other countries remained in the same income category, or descended below the $1,000 boundary (2000: 162). Even if we accept the argument that very poor states cannot sustain complex political institutions, the question remains of what factors other than the level of economic development have shaped the path of institutional change in countries from the heterogeneous income categories. If we follow the logic of the economic development argument, we should expect predominantly wealthy countries to have an advanced banking sector framework.

Alternative hypothesis 1: We expect a good quality of banking reform if a country has a high level of economic development.

Culture

Although the concept of culture is not easy to capture in quantifiable terms, some scholars have attempted to study systematically the impact of culture on institutions and governance. For example, Amir Licht et al. (2006) analyze the rule of law, curbing corruption, and democratic accountability as part of a general bundle of social norms. The authors identify seven broad types of world culture and examine the systematic influence of culture type on the bundle of social norms. The authors find statistical evidence that "national cultural profiles predict governance outcomes some thirty years later" (2006: 29) and therefore propose that the direction of causality flows from culture to social norms.

The volume "Culture Matters" edited by Lawrence Harrison and Samuel Huntington (2000) shares a similar vision of the role of culture in society. As Stace Lindsey emphasizes in his contribution to the Harrison and Huntington project, "individuals will often accept intellectual arguments, understand the need to change, and express commitment to changing, *but then resort to what is familiar*" (2000: 283). In other words, cultural values matter because they form the principles around which economic activity is organized. Hence, if we follow the logic of this project, altering the institutional environment in a country presupposes a change in the underlying attitudes, beliefs, and assumptions.

Alternative hypothesis 2: We expect a good quality of banking reform if there is an existing culture that supports the development of market institutions.

Model estimation

This paper uses pooled cross-sectional time series analysis, which allows me to get leverage on important factors contributing to a good quality of banking reform that vary both cross-sectionally and over time. Time series analysis also allows me to test the effect of a broader range of factors on the dependent variable, as the number of observations in my model is higher than in a single-year ordinary least squares (OLS) regression and this generates more degrees of freedom in the estimation process (Plümper, Troeger, and Manow 2005).

The units of analysis in my model are twenty-five states in the post-communist region: the East Central European states, the Baltic states, the South-East European states, and all post-

Soviet states over a period of eleven years: 1995-2005. From the states of ex-Yugoslavia, I have excluded Bosnia-Herzegovina and Serbia-Montenegro from my analysis due to the frequently missing data. In total, my model has 275 observations. The panel that I use is balanced: it contains twenty-five countries and observations on each variable for eleven years.

The literature has shown that using OLS estimation techniques on pooled cross-sectional data violates several regression assumptions, which lowers the size of the standard errors and artificially increases the significance of the estimated coefficients (Beck and Katz 1995). The most serious problems are the following: errors in time series data tend to be serially correlated; errors are likely to show cross-sectional heteroskedasticity such that variances differ across units; errors may be cross-sectionally correlated as well; errors may reflect causal heterogeneity across space, time, or both (Ostrom 1978; Sayrs 1989; Hicks 1994; De Boef 2004). Beck and Katz (1995) recommend using OLS estimation with a lagged dependent variable to correct for the serial correlation, as well as panel-corrected standard errors.

However, the use of a lagged dependent variable creates problems with respect to the dialogue between the theories that we want to test and the estimation methods that we employ (Plümper, Troeger, and Manow 2005). When we include the level of the dependent variable from the previous year as a control, the analysis essentially turns into a study of annual change. Usually, the lagged dependent variable becomes the most significant explanatory factor. If we pursue this analytical strategy, we cannot say much about the role of institutional and political factors that may be of important theoretical interest. Achen (2000) has demonstrated that a lagged dependent variable "does bias the substantive coefficients toward negligible values and does artificially inflate the effect of the lagged dependent variable."

In my analysis, the year-to-year change in the evaluation of the countries' banking reform does not change drastically. Therefore, models that use a lagged dependent variable will have a unit root: the coefficient of the lagged banking sector evaluation will explain virtually all the variance in the model (Bradley 2001; Kittel and Obinger 2002). Thus, the lagged dependent variable washes out the effect of the other independent variables, while substantively it does not contribute much to the explanation (Nickell 1981; Baltagi 2001). Also, the very interpretation of the lagged dependent variable is problematic. Because the lagged dependent variable can be written out as a function of the independent variables, the coefficient of the lagged dependent variable actually measures the weighted average of the independent variables (Cochrane and

Orcutt 1949). Hence it is not justified to interpret the lagged dependent variable as a measure of path dependency or persistency (Plümper, Troeger, and Manow 2005).

In order to be able to test the substantive theoretical propositions outlined earlier in this paper, I choose not to use the lagged dependent variable approach in my analysis of the quality of banking sector reform in the post-communist region. Instead, I will correct for the serial correlation in the data by applying a Prais-Winsten transformation model (AR1) with panel-corrected standard errors. This method has been advocated by Plümper, Troeger, and Manow (2005) as an estimation procedure that allows researchers to test substantive theoretical expectations more accurately than models that employ fixed country effects or a lagged dependent variable.

The Prais-Winsten transformation model (AR1) is an example of what Judge et al. (1985) call *Estimated Generalized Least Squares* (EGLS) models. The goal of the EGLS analytical approach is to determine the nature of the autoregressive process that generates the errors, estimate its parameters (in the case of a first-order process AR1 this is a single parameter), then transform the data and apply an OLS estimation procedure to derive the coefficient estimates (Ostrom 1978). The Prais-Winsten approach uses conditional maximum likelihood estimation and incorporates all available observations.

To evaluate the robustness of the coefficient estimates that I obtained from applying a Prais-Winsten transformation model (AR1) with panel-corrected standard errors, I also re-estimated the model in two ways. First, I used a technique which provides robust cluster estimators of the standard errors. This procedure yields correct standard errors in the presence of any pattern of heteroskedasticity, which is a concern in pooled time series analysis (Bradley and Stephens, forthcoming). Second, I used an error components time series model, also called a random coefficients model. This technique estimates the parameters of the distributions of the different components of the error term to derive efficient and unbiased estimates (Sayrs 1989). The idea is to break down the error into three separate components resulting from three sources of variation: variation in the time periods, variation in the cross-sections, and “true” random error variation (De Boef 2004). The advantage of using the random effects model is that the estimates will be more efficient. However, if the error variances are correlated with the explanatory variables, the estimators will be biased. Overall, the two additional estimation techniques provided estimates that are in line with the ones obtained from the Prais-Winsten transformation model.

Before I present and discuss the coefficient estimates, I need to consider the relationships among the variables included in the model. Appendix I provides a description of the explanatory variables, the sources of the data, and the measurement scales. Appendix III shows the correlations among the analyzed variables. By looking at the correlation matrix, we detect a potential multicollinearity problem for several of the independent variables (the correlation is above 0.6). I considered incorporating in the analysis institutional capacity variables such as administrative and judicial capacity. However, because they are highly correlated with the GDP variable and with each other, I chose not to include them in the final model specification.

Although I have coded for the countries' participation in EU conditionality programs as well, I decided to estimate the model only with the measure for IMF program participation for two main reasons. First, participation in the strictest and most effective EU conditionality program – the accession process – is highly correlated with the GDP variable, the trade variable, and the corruption variable, and thus it would probably produce multicollinearity in the estimation process. Second, the kind of conditionality program that the EU is likely to offer depends on the target country's location, degree of political stability, and level of economic development. For example, it is not reasonable to expect that the EU will offer the accession conditionality package to the Ukraine, or to stretch this reasoning even further – to Uzbekistan. Since some countries in the post-communist region by virtue of their geographical location are not eligible for the strictest and most effective kind of EU conditionality, it becomes difficult to disentangle the flow of causality between the factors that *qualify* a country to participate in an EU conditionality program to begin with, and the *independent impact* of EU conditionality on the target country.

In addition, Appendix II shows the results of variance inflation factor analysis of the explanatory variables. Based on looking at the correlations among the variables and the variance inflation factor analysis, I have decided not to include the administrative and judicial capacity variables and the participation in EU conditionality program dummy variables in order to avoid multicollinearity (their variance inflation factor is above or close to 10).

Table 1: EGLS regression analysis of banking sector reform in the post-communist region

Explanatory variable	Effect	pcse
Government coloration		
Unreformed left in government - baseline category -		
Reformed left in government	0.142**	(0.07)
Liberal/right in government	0.072	(0.06)
Nationalist/personalistic party in government	0.065	(0.08)
Domestic alliances		
Lack of corruption	0.197**	(0.09)
Foreign direct investment (per capita)	0.265***	(0.08)
Percentage trade with industrialized countries	0.459**	(0.22)
Conditionality		
No IMF agreement - baseline category -		
Stand-by agreement with IMF	0.109*	(0.06)
Poverty relief and growth facility agreement with IMF	0.124**	(0.06)
No IMF program (and reform front-runner)	0.058	(0.09)
Economic development		
Log GDP (per capita)	0.259***	(0.07)
Percentage of GDP from agriculture	0.238	(0.50)
Culture		
Percentage population protestant	0.667**	(0.29)
Percentage population muslim	- 0.325***	(0.11)
Coding refinement	0.111	(0.07)
Constant	0.253	
Adjusted R-squared	0.728	
275 observations		
AR1 autocorrelation process: rho	.704	

Note: The table presents estimated generalized least squares (EGLS) unstandardized regression coefficients obtained by applying a Prais-Winsten transformation model (AR1), with panel-corrected standard errors (pcse) in parentheses. The significance levels are as follows: *p< 0.10, **p<0.05, ***p<0.01

The theoretical model presented in this paper fits the data well. The explanatory variables account for seventy-three percent of the variance in the quality of banking sector reform in the post-communist region. The positive intercept of 0.253 suggests that there is a ‘good’ banking reform component common to all countries in the sample.

The empirical analysis supports the theoretical argument developed in the literature concerning the different impact of reformed left and unreformed left parties in government. For reformed left parties in government, the intercept is 0.4, compared to 0.25 for the baseline category: unreformed left parties in government. Having a liberal/right party in government is also associated with a better quality of banking reform compared to having an unreformed left party in government, but the result is not statistically significant.

The test of the domestic alliance variables supports Joel Hellman’s (1998) argument about partial reform in the post-communist region. I use the level of corruption in the political system as a proxy variable to measure the presence of partial reform alliances that hinder full-scale economic reform. The analysis shows that the less corruption is present in the domestic system, the better the quality of banking legal reform. The presence of foreign direct investors is also a statistically significant predictor of good quality banking legal reform. The last variable that I use to tap into the impact of alliances is also statistically significant: the more a country trades with advanced industrialized countries, the better the quality of its banking sector legal framework. The effects of foreign direct investment (FDI) and trade with advanced industrialized countries are sizeable. For one unit of increase in inflow of FDI, the quality of banking reform increases by seven per cent (0.3 units). For one unit of increase in trade with advanced industrialized countries, the quality of banking reform increases by eleven per cent (0.5 units).

Does enrollment in an IMF program influence the quality of banking reform in the post-communist region? Participation in the stricter Stand-by Agreement program and participation in the Poverty Relief and Growth Facility program both register a statistically significant positive effect on the quality of banking sector reform in post-communist countries, compared to the baseline category of the dummy variable enrollment in IMF program, which is “no IMF agreement.”

With respect to the variables that measure economic development, the log of the GDP per capita is statistically significant and positively associated with the quality of banking sector reform. For a unit of increase in the log GDP per capita, the quality of banking reform increases by seven per cent (0.3 units). The degree to which an economy is agricultural is not a statistically significant predictor of the quality of banking reform.

The effects of culture, broadly operationalized as the percentage of citizens that have protestant or muslim religious affiliation, are statistically significant. However, cultural, or in this case religious, boundaries frequently coincide with regional boundaries. In particular, the Central European and Baltic front-runners of economic reform have the highest percentages of protestant population, whereas the Central Asian countries have the highest concentrations of muslim population. Due to the overlapping regional and cultural cleavages, the culture variables probably tap into regional effects as much as cultural effects. With that caveat in mind, the analysis suggests that having a largely protestant population is associated with a higher quality of banking reform, whereas having a largely muslim population is associated with a lower level of banking reform. We have to conduct a more careful analysis of what factors within the broad cultural context drive these results.

Conclusion

This paper started out with the puzzle what factors push governments to pursue good quality banking sector reform in the post-communist region. I draw on the comparative politics literature that has analyzed policy outcomes as a result of the interplay of domestic and international actors. I endorse an agent-driven theoretical framework, assuming that actors such as the government elites, foreign direct investors, and domestic business associations are the key factors in the process of policy change. The time series analysis that I conducted confirms the importance of government coloration and, in particular, the significant difference between unreformed and reformed left governments in power. Reformed left governments in power are associated with a better quality of banking sector reform. The analysis also confirms the expectation that the higher the presence of foreign direct investment in a country and the more a country trades with advanced industrialized economies, the better the quality of its banking reform. A limited presence of corruption in the polity is also associated with a higher quality of banking reform. Participation in the stricter Stand-by agreement program and taking part in the looser Poverty Relief and Growth Facility program run by the IMF are both associated with a better quality of banking reform in the post-communist area.

At the outset, I conceptualized structural factors such as the level of economic development and intrinsic cultural characteristics as an alternative explanation. The results from the time series estimation that I conducted suggest that rather than being an alternative explanation to agent-driven accounts, structural factors play an important complementary role in the overall explanation of the quality of banking sector reform in the post-communist region. The structural variables set the broad parameters within which reform takes place. However, the agency variables become very important when we try to understand what pieces of the domestic political system are moving during reform.

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Appendix I: Variables and coding

Variables included in the final model specification

Quality of banking reform
The quality of banking reform variable measures progress in adopting banking regulations such as bankruptcy laws and guarantees for Central Bank independence. The scale runs from the lowest score (=1) to the highest score (=4.3). Scores such as 2.3 or 3.7 are possible. The following qualitative description of the scores is taken from the EBRD methodology report:

1= Little progress beyond establishment of a two-tier banking system.
2= Significant liberalization of interest rates and credit allocation; limited use of directed credit or interest rate ceilings.
3= Substantial progress in establishment of bank solvency and of a framework for prudential supervision and regulation; full interest rate liberalisation with little preferential access to cheap refinancing; significant lending to private enterprises and significant presence of private banks.
4= Significant movement of banking laws and regulations towards BIS (Bank for International Settlements) standards; well-functioning banking competition and effective prudential supervision; significant term lending to private enterprises; substantial financial deepening.

Source: European Bank for Reconstruction and Development. 2005. “EBRD Transition indicators by country.” In *Transition Report 2005: Business in Transition.*
Available at: <http://www.ebrd.com/pubs/econo/6520.htm>.

Government coloration
The party in government and its party family (i.e. left, nationalist, liberal/right) are coded using the Armingeon et al. dataset. The distinction between reformed and unreformed left for the ex-communist parties is established by taking the year of joining the Socialist International as a switching point.

Source: Armingeon, K. and Careja, R. *Comparative Data Set for 28 Post-Communist Countries, 1989-2005*, Institute of Political Science, University of Berne, 2005.

`partisan1:` Unreformed left in government=1, all other=0
`partisan2:` Reformed left in government=1, all other=0
`partisan3:` Liberal/right in government=1, all other=0
`partisan4:` Nationalist/personalistic party in government=1, all other=0

Domestic alliances
`corruption:` Lack of corruption
This variable is a composite score based on expert surveys obtained from different organizations. It taps into public trust in the honesty of politicians; frequency of making extra payments in order to ‘get things done’; percentage of government officials, judges, and elected leaders involved in corruption.
The scale runs from the lowest score (= –2.5) to the highest score (=2.5)

Source: Danial Kaufmann, Aart Kraay and Massimo Mastruzzi’s project *Governance Matters V*.

`fdi_pc:` Inflow of foreign direct investment per capita
Source: European Bank for Reconstruction and Development. 2005. “EBRD Transition indicators by country.” In *Transition Report 2005: Business in Transition.*
Available at: <http://www.ebrd.com/pubs/econo/6520.htm>.

`trade_industrialized:` Percentage trade with industrialized countries from the total trade flows.
Source: International Monetary Fund. 1999-2004. *Direction of Trade Statistics Yearbook.* Washington, D.C.: IMF Publication Services.

Conditionality
`imf1:` No IMF agreement=1, all other=0
`imf2:` Stand-by agreement with IMF=1, all other=0
`imf3:` Poverty relief and growth facility agreement with IMF=1, all other=0
`imf4:` No IMF program (and reform front-runner)=1, all other=0

Source: *IMF Members' Financial Data by Country Database.*
Available at: <http://www.imf.org/external/np/fin/tad/exfin1.aspx>.

Economic development
`log_gdp_pc:` Log GDP (per capita)
Source: European Bank for Reconstruction and Development. 2005. "EBRD Transition indicators by country."
In *Transition Report 2005: Business in Transition.*
Available at: <http://www.ebrd.com/pubs/econo/6520.htm>.

`agri:` Percentage of GDP from agriculture
Source: European Bank for Reconstruction and Development. 2005. "EBRD Transition indicators by country."
In *Transition Report 2005: Business in Transition.*
Available at: <http://www.ebrd.com/pubs/econo/6520.htm>.

Culture
`protestant:` Percentage population protestant
Source: The annual editions of the CIA World Factbook
Available at: https://www.cia.gov/cia/publications/factbook/

`muslim:` Percentage population muslim
Source: The annual editions of the CIA World Factbook
Available at: https://www.cia.gov/cia/publications/factbook/

`coding refinement:` The coding of the EBRD banking reform variable became more nuanced starting 1997. This is a dummy variable.
1=1997-2005
0=1995 and 1996

Variables excluded from the final model specification

`admin:` Administrative capacity
The scale runs from the lowest score (= –2.5) to the highest score (=2.5)
Source: Danial Kaufmann, Aart Kraay and Massimo Mastruzzi's project *Governance Matters V*.

`judiciary:` Judicial capacity
The scale runs from the lowest score (= –2.5) to the highest score (=2.5)
Source: Danial Kaufmann, Aart Kraay and Massimo Mastruzzi's project *Governance Matters V*.

EU conditionality

`eu1:` No EU conditionality program, but eligible=1, all other=0
`eu2:` Accession conditionality program=1, all other=0
`eu3:` Stabilization and Association Agreement program=1, all other=0
`eu4:` European Neighborhood Policy program=1, all other=0
`eu5:` No EU conditionality program, and ineligible=1, all other=0

Source: Official website of the European Union: http://europa.eu.org

Appendix II: Variance inflation factor analysis to detect multicollinearity

Model specification *including* the administrative and judicial capacity variables and the EU program participation dummy variables.

Variable	VIF	1/VIF
admin	16.44	0.060838
log_gdp_pc	13.73	0.072828
judiciary	11.27	0.088731
eu2	9.07	0.110252
corruption	7.75	0.128971
eu5	5.75	0.173971
imf4	5.25	0.190364
partisan1	5.18	0.192925
agri	5.15	0.194249
trade_indu~r	4.82	0.207389
partisan4	3.91	0.255981
imf2	3.04	0.329197
imf3	2.85	0.350556
muslim	2.73	0.366556
partisan3	2.46	0.406000
eu4	2.13	0.469208
eu3	2.10	0.476192
fdi_pc	1.95	0.512313
protestant	1.93	0.517716
Mean VIF	5.66	

Model specification *excluding* the administrative and judicial capacity variables and the EU program participation dummy variables.

Variable	VIF	1/VIF
log_gdp_pc	9.29	0.107683
corruption	5.63	0.177649
agri	4.44	0.225234
imf4	3.95	0.253158
partisan1	3.86	0.258787
partisan4	3.08	0.324326
trade_indu~r	2.79	0.358714
imf2	2.60	0.384668
imf3	2.50	0.400183
muslim	2.22	0.450032
partisan3	2.22	0.450449
fdi_pc	1.85	0.541134
protestant	1.68	0.596231
Mean VIF	3.55	

Appendix III: Correlations among the variables in the model

	ebrd_b~g	partis~1	partis~2	partis~3	partis~4	corrup~n	fdi_pc	trade_~r
ebrd_banking	1.0000							
partisan1	-0.5459	1.0000						
partisan2	0.4029	-0.3317	1.0000					
partisan3	0.4382	-0.4762	-0.2808	1.0000				
partisan4	-0.2178	-0.3622	-0.2136	-0.3066	1.0000			
corruption	0.7886	-0.5491	0.3381	0.5338	-0.2632	1.0000		
fdi_pc	0.5752	-0.2884	0.2837	0.2628	-0.2182	0.5348	1.0000	
trade_indu~r	0.6859	-0.4843	0.3715	0.4294	-0.2535	0.6758	0.4088	1.0000
admin	0.8792	-0.5934	0.4134	0.4900	-0.2294	0.9052	0.5785	0.7171
judiciary	0.8190	-0.6016	0.3841	0.5423	-0.2520	0.8629	0.4755	0.6787
imf1	-0.4835	0.4734	-0.1775	-0.2284	-0.1487	-0.3422	-0.1817	-0.3430
imf2	0.1010	-0.0314	0.0668	0.0530	-0.0859	-0.0420	-0.1033	-0.0485
imf3	-0.2192	-0.0284	-0.1534	-0.2255	0.4404	-0.3345	-0.2036	-0.0987
imf4	0.5529	-0.3793	0.2401	0.3774	-0.1981	0.7107	0.5026	0.4820
eu1	-0.6545	0.3138	-0.2461	-0.3154	0.2122	-0.4737	-0.2911	-0.6449
eu2	0.6460	-0.4296	0.2761	0.4882	-0.2984	0.6626	0.5090	0.5334
eu3	0.1612	-0.1380	0.3054	-0.0716	-0.0366	0.0266	0.0555	0.1012
eu4	-0.2411	0.3332	-0.2510	-0.2293	0.0937	-0.4194	-0.2019	-0.3434
eu5	0.1568	-0.1463	0.0845	0.0658	0.0235	0.1966	-0.0665	0.4041
log_gdp_pc	0.7798	-0.4075	0.4045	0.4497	-0.4023	0.8203	0.5553	0.6977
agri	-0.6196	0.2890	-0.3002	-0.4024	0.3943	-0.6455	-0.4601	-0.5083
protestant	0.4636	-0.2726	0.0101	0.4305	-0.1728	0.4589	0.4678	0.3369
muslim	-0.5763	0.3669	-0.2071	-0.3570	0.1584	-0.6179	-0.2736	-0.3440

	admin	judici~y	imf1	imf2	imf3	imf4	eu1	eu2
admin	1.0000							
judiciary	0.9085	1.0000						
imf1	-0.4136	-0.4918	1.0000					
imf2	-0.0215	0.0645	-0.3869	1.0000				
imf3	-0.2739	-0.2690	-0.2351	-0.4303	1.0000			
imf4	0.6918	0.6555	-0.2325	-0.4255	-0.2586	1.0000		
eu1	-0.5645	-0.5459	0.2628	-0.0164	0.0534	-0.2813	1.0000	
eu2	0.7207	0.6672	-0.2628	-0.0579	-0.3160	0.6365	-0.3438	1.0000
eu3	0.0588	-0.0092	-0.0307	0.1771	-0.0941	-0.0930	-0.1023	-0.1137
eu4	-0.3456	-0.3358	0.1854	-0.1337	0.2740	-0.2870	-0.3158	-0.3507
eu5	0.1359	0.1944	-0.1673	0.1440	0.0435	-0.0622	-0.2876	-0.3195
log_gdp_pc	0.8464	0.7440	-0.2206	0.0112	-0.4489	0.6460	-0.5262	0.6228
agri	-0.6673	-0.6357	0.1403	-0.1264	0.5358	-0.5170	0.4526	-0.5318
protestant	0.4975	0.4732	-0.1684	0.1294	-0.2185	0.2203	-0.2321	0.3765
muslim	-0.6245	-0.6561	0.2699	-0.2313	0.3771	-0.3510	0.3857	-0.4086

	eu3	eu4	eu5	log_gd~c	agri	protes~t	muslim
eu3	1.0000						
eu4	-0.1044	1.0000					
eu5	-0.0951	-0.2934	1.0000				
log_gdp_pc	0.1190	-0.3676	0.2002	1.0000			
agri	-0.1078	0.2278	-0.0811	-0.8517	1.0000		
protestant	-0.0732	-0.2252	0.0979	0.3698	-0.3643	1.0000	
muslim	-0.0291	0.1529	-0.1018	-0.6366	0.5932	-0.2899	1.0000