# Banking Sector Liberalization and Reform in the Post-Communist Region after 1989: Assessing the Impact of Domestic Politics, International Conditionality, and Economic Development

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ABSTRACT This article connects the literature on market liberalization in advanced industrialized countries and that on economic reform in transitional countries. It tests three important theoretical frameworks in the analysis of policy change—domestic politics, international pressures, and economic development—using time series analysis of 25 post-communist states. The findings reveal a complex causal pattern where factors from all three theoretical frameworks are statistically significant. On the domestic level, curbing corruption is strongly related to more banking sector liberalization. The higher the presence of foreign banks in the country, the more banking sector liberalization. On the international level, exposure to stricter IMF conditionality has a positive effect on the extent of banking sector liberalization. The analysis also confirms the importance of structural factors: Measures of economic development such as GDP per capita and stock market capitalization are statistically significant predictors of the extent of banking sector liberalization.

**KEY WORDS** banking sector reform, transition, institutional change, domestic politics, international conditionality, economic development

#### 1. INTRODUCTION

Following the collapse of the Soviet bloc in the early 1990s, policy-makers in the post-communist region confronted daunting tasks. The orthodox principles of running a socialist planned economy no longer applied. Governments faced the challenge of laying the foundations of a market economy: Which economic reforms should be implemented and in what order? One important task was to reduce the involvement of the state in the economy and create a more pluralistic economic arena. Reforming the banking sector is an essential component of economic liberalization and reveals the difficulties of building market institutions in transitional countries. This article investigates what political factors are conducive to banking sector liberalization and reform using time series analysis of 25 post-communist states. To measure the extent of banking sector liberalization, the analysis employs a score developed by the European Bank for Reconstruction and Development (EBRD).

Scholars of public policy and political economy have examined the move toward market liberalization and privatization in advanced industrialized states since the late 1970s in economic sectors such as telecommunications, energy, industry, finance, and transport (Schmidt 1996; Vogel 1996; Thatcher 2002; Clifton *et al.* 2006). They have pointed out that the state has withdrawn from direct ownership and management of the economy, but as Giandomenico Majone (1994) has stressed, "often, deregulation is only a first step towards reregulation, that is, regulation by other means" such influencing market participants' behavior through economic incentives or regulating at a level of government different from the national one. Majone (1994, 1999) has described the rise of the "regulatory state" and, more recently, David Levi-Faur and Jacint Jordana (2005) have analyzed the foundations and dynamics of "regulatory capitalism."

This article connects the literature on market liberalization in advanced industrialized countries and that on economic reform in transitional countries. I test the explanatory power of three important theoretical frameworks in the analysis of policy change—domestic politics, international pressures, and economic development—using time series analysis of 25 postcommunist states. Accounts of economic liberalization and regulatory reform in advanced industrialized states have emphasized the importance of two main groups of factors and their interplay—endogenous domestic developments and international pressures for reform. Thus I first probe the salience of domestic political factors such as the political ideology of the governing party or coalition (Swann 1988; Campbell and Pedersen 2001). Second, international pressures accounts have focused on the external dimension of policy reform. Those analyses have shed light on the role of international organizations in advocating models of policy reform as well as the dynamics of policy diffusion across states (Knill and Lehmkuhl 2002; Featherstone and Radaelli 2003; Brooks 2005; Elkins and Simmons 2005). Third, I test a set of hypotheses derived from the literature on economic development and transition that has stressed the significance of structural factors such as a country's level of economic development (Przeworski et al. 2000). This article applies the general propositions of the three frameworks to the issue of banking sector liberalization and reform in the post communist region.

How are the incentives for banking sector reform structured in the post-communist region? Political actors have certain incentives to pursue reforms that would create a stable and efficient banking sector in order to promote economic development. The advantage of a reformed banking sector with clear rules of the game is that economic actors can assume availability of capital, engage in meaningful long-term planning, and expect prompt servicing of their financial accounts (Levine 2002; Barth *et al.* 2006). Many foreign investors prefer a stable political and institutional environment that guarantees property rights and offers efficient financial intermediation (Jensen 2003; Henisz and Macher 2004; Biglaiser and DeRouen 2006). Domestic businesses seek access to affordable credit in order to develop and grow (Marinov and Marinova 2003; Djarova 2004).

Yet the banking sector also provides fertile ground for political interference and corruption, because influential political figures can provide access to loans and preferential financing. Political actors face incentives to implement partial banking reforms that maximize their discretionary power over the allocation of capital. 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 and the state budget can be used to write off bad loans incurred by the banks. Since 1989, a number of incidents have emerged in which influential political and economic elites in the region have misused public financial resources (Frye and Shleifer 1997; Hellman 1998; Ganev 2001; Barnes 2003; Gould 2003).

The adoption of international benchmark mechanisms can prevent the misuse of the banks. Among those mechanisms are laws that promote transparency in bank operations and information-sharing concerning large loans; laws that allow the central bank to operate independently of political pressure; and institutional mechanisms to monitor the risk exposure and compliance of banks with the legal rules. The puzzle animating this article is: What political and economic factors push governments to liberalize the banking sector and adopt international best practices in banking sector reform?

The article is organized in the following way. Section 2 presents a theoretical discussion of the impact of domestic politics, international pressures, and economic development on banking sector reform. In section 3, I define the dependent variable in my analysis—the extent of banking sector liberalization and reform—and describe the operationalization of the independent variables. Section 4 presents the estimation approach that I use and discusses the results of the analysis. Section 5 sums up the findings of the article.

## 2. THEORIZING THE INFLUENCE OF DOMESTIC POLITICS, INTERNATIONAL CONDITIONALITY, AND ECONOMIC DEVELOPMENT

#### **Domestic politics**

Government partisanship

How do domestic political developments, international pressures, and economic development influence the course of banking sector liberalization and reform? This section

provides an overview of the main mechanisms and relevant findings in the three theoretical frameworks. To begin with, let us examine the expected effects of government partisanship. According to partisan politics accounts, the competition among political parties for office is an essential feature of the political process in democratic regimes (Duverger 1954; Blondel 1968; Sartori 1976). The comparative politics literature on post-communist reform has established that liberal/right and reformed communist successor parties in power have performed better in the initiation and implementation of market-liberalizing reforms compared to their unreformed communist counterparts (Haggard and Webb 1994; Ekiert 1996; Appel 2000; Bunce 2000; Grzymala-Busse 2002; Vachudova 2005). The following hypotheses summarize the expected policy impact of the different types of partisan coloration.

**Hypothesis 1:** Liberal/right political parties in power introduce more banking sector liberalization than unreformed communist successor parties in power.

**Hypothesis 2:** Reformed communist successor parties in power introduce more banking sector liberalization than unreformed communist successor parties in power.

The literature has emphasized two mechanisms that help explain the association between partisanship and the degree of economic liberalization in general. The first mechanism is party ideology. According to Valerie Bunce (1999), the correlation between the liberal/right opposition in power and more economic liberalization can be attributed to the ideological foundations of the liberal/right opposition parties in the region. Because they rejected the economic policies pursued under communist rule, the opposition parties in most Eastern European states have adopted a market-liberalizing economic agenda. The second mechanism is political competition. Milada Vachudova (2005) has shown that due to the increased quality of political competition, in countries where the right-wing opposition defeated the communist incumbents in the first post-1989 elections, the communist successor parties were forced to become more transparent, revised significantly their policy agenda, and endorsed at least some form of market-liberalizing reforms in order to "get back in the political game." By contrast, unreformed communist successor parties implement limited banking sector reforms that preserve and enhance clientelistic linkages among state officials, enterprise managers, and bankers (Hellman 1998; Ganev 2001; Barnes 2003).

The argument about the salience of partisanship rests on the assumption that political parties are key actors in setting public policy. This may be a plausible hypothesis for many advanced industrialized countries, but less so for post-communist states. As Herbert Kitschelt (1995: 448) 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." Petr Kopecky (1995: 517) has demonstrated in his case study of the Czech Republic that even in political systems where relatively cohesive and programmatic parties are prevalent, political parties are rather insulated from their grass-root citizen supporters. Therefore, we need to investigate the influence of other groups such as organized business and economic interests on the policy positions of political parties in the region.

#### Domestic stakeholders

One way to gauge which groups influence the policy positions of political parties is to examine the relationship between the governing parties and different types of 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.

A first strategy to understand the impact of those actors focuses on the role of rent-seeking domestic stakeholders. Joel Hellman (1998) has argued insightfully that the most significant threat to consolidating democracy and market economy in the post-communist region has come from a small group of partial reform "winners." Branislav Slantchev (2005) has confirmed statistically this finding. According to Hellman (1998: 204), the main groups which have stalled reforms are "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." Unreformed communist successor parties in power preserve and enhance clientelistic linkages among state officials, enterprise managers, and bankers inherited from the old regime and tend to limit banking sector liberalization and reform (Nenovksy *et al.* 2003: 6-7). Therefore, I expect that banking sector liberalization will be more extensive in political systems with low levels of clientelism and corruption.

**Hypothesis 3:** The less corruption and clientelism are present in the domestic political system, the more banking sector liberalization.

A second strategy to understand the impact of mobilized domestic stakeholders focuses on the role of foreign investors. In contrast to the clientelistic alliances forged by unreformed communist governing elites, liberal/right and reformed left governments have pursued economic reform and growth by establishing domestic alliances with foreign investors and export-oriented domestic businesses. Scholars of political economy have found that inflows of foreign direct investment (FDI) have a positive effect on the economic performance of transitional economies in the region (Dunning and Narula 1996; Schröder 2001; Marinov and Marinova 2003). FDI provides both physical capital and employment possibilities that may not be available in the host market otherwise. Because of its significant benefits, attracting FDI has become an integral part of economic development strategies of many developing countries (Jensen 2003: 588).

In what ways may foreign direct investors influence the path of banking sector reform? Foreign direct investment is a long-term type of international capital flows, in contrast to short-term types such as portfolio investment. The purpose of FDI is to establish lasting commercial relations and exert a noticeable managerial influence in the foreign country (Barrell and Holland 2000: 478). According to Leslie Lipschitz, Timothy Lane, and Alexandros Mourmouras (2002: 4), FDI is unlikely to be withdrawn in response to short-term market volatility. If a government can put in place institutional mechanisms that reduce

political risk, guarantee stable property rights, and ensure efficient financial intermediation, it will attract and retain more foreign investment (Jensen 2003: 594; Li and Resnick 2003: 178). The long-term commitment of FDI investors may motivate them to take an active part in enterprise decision-making and press the country's government for a more transparent and predictable business environment, including a more efficient banking sector.

**Hypothesis 4:** The stronger the presence of foreign direct investors in the country, the more banking sector liberalization.

A third strategy to understand the policy influence of economic actors refers to a country's pattern of trade and its impact on domestic political institutions. Trade patterns are influenced predominantly by considerations about economic efficiency, comparative advantage, and production costs. Yet does a country's trade profile influence banking sector policies? Helen Milner (1999: 106) has pointed out that the impact of trade on domestic institutions is most visible in organized trade regimes such as the EU, NAFTA, and ASEAN. According to Milner (1999), when a regional trade regime is deeply institutionalized and has the capacity to enforce trade rules, it can demand from its trading partners to comply with "best practices" observed by the members of the trade regime, including issues such as banking sector liberalization. I use the degree of post-communist countries' trade orientation toward advanced industrialized economies as a proxy for their exposure to the influence of international trade regimes.

**Hypothesis 5:** The more a country's trade is oriented toward advanced industrialized economies, the more banking sector liberalization.

#### Constitutional set-up

This article also tests whether the distinction between parliamentary and presidential constitutional-set up has an impact on the extent of banking sector liberalization and reform in the post-communist area. Most parliamentary systems in the region have a proportional representation electoral system, which is conducive to the formation of coalition governments. In turn, coalition governments are less likely to undertake abrupt policy reversals (Jensen 2003; Li 2006). By contrast, in presidential post-communist systems such as Russia and Kazakhstan, the president has extensive power to shape (even arbitrarily) property rights laws, concession contracts, and the extent to which foreign economic actors are allowed to operate in the domestic market. In addition, a constitutional set-up that gives extensive policy-making powers to the president may hamper banking sector liberalization by limiting political competition and the availability of viable political and economic alternatives (Hellman 1996: 56; Keefer 2007: 636).

**Hypothesis 6:** We expect more banking sector liberalization in parliamentary political systems in the post-communist region than in presidential ones.

#### **International conditionality**

International organizations such as the European Union (EU), the International Monetary Fund (IMF), and the World Bank have gained much policy salience. Scholars have demonstrated the far-reaching impact of international conditionality on domestic policy-making (Mayhew 1998; Schmitter 2001; Kelley 2004; Schimmelfennig and Sedelmeier 2004; Vachudova 2005; Grabbe 2006). In the realm of banking sector reform, the IMF has pushed for legal provisions that guarantee the independence of the central bank from political pressure; open the banking sector to foreign investors and competition; strengthen banking supervision; and improve the bankruptcy legal framework (Bonin and Wachtel 1999; Berglöf and Bolton 2002). As described in greater detail in Appendix I, I have coded four types of exposure to IMF conditionality in the post-communist area: 1) No IMF agreement; 2) Standby agreement; 3) Poverty Relief and Growth Facility; 4) No IMF program and reform frontrunner. In addition, I test the effect of the amount of loans obtained from the IMF.

**Hypothesis 7:** We expect countries enrolled in stricter IMF conditionality programs to pursue more banking sector liberalization.

**Hypothesis 8:** We expect countries that owe large amounts to the IMF to pursue more banking sector liberalization.

The EU has also demanded that the post-communist candidate countries comply with the banking sector standards of the Union. For credible future members, the specific policy demands of EU conditionality in banking are part of the comprehensive and compulsory pre-accession harmonization with EU law organized into 31 accession chapters. Provisions concerning the banking sector feature in the following accession negotiations chapters: Economic and Monetary Union, Free Movement of Capital, Freedom to Provide Services, Financial Control, and Finance and Budgetary Provisions. As described in greater detail in Appendix I, I have coded five levels of EU conditionality in the post-communist region: 1) No EU conditionality program, but the country is eligible; 2) Accession conditionality program; 3) Stabilization and Association Agreement program (SAA); 4) European Neighborhood Policy program (ENP); and 5) No EU conditionality program, but the country is practically ineligible. However, in section 4, I explain in greater detail my decision to exclude the EU conditionality variables from the statistical test because they would produce multicollinearity in the estimation process.

#### **Economic development**

Adam Przeworski *et al.* (2000) have examined systematically the relationship between regime type (democratic or authoritarian) and economic performance. As part of the analysis, the authors have drawn conclusions about the relationship between the nature of political and institutional arrangements and the corresponding levels of economic development. Although Przeworski *et al.*'s (2000: 163) analysis is more sophisticated and nuanced than earlier modernization accounts, it contends in essence that "poor countries cannot afford a strong state." Poor countries often lack the administrative and monetary resources to engage in long-term development programs and are particularly vulnerable to the implementation of partial

reforms that benefit only the rulers (Chaudhry 1994; Brownbridge *et al.* 1998). Following the logic of the economic development argument, we should expect predominantly wealthy countries in the post-communist region to pursue extensive banking sector liberalization.

**Hypothesis 9:** The more economically developed the country, the more banking sector liberalization.

#### 3. DATA AND OPERATIONALIZATION

To evaluate banking sector reform, I use benchmarks identified as "best practices." The literature has demonstrated that in the banking sphere it is desirable to: provide clear market entry and exit conditions (Kroszner 1998; Fries 2005); ensure the ability of banks to function without excessive state intervention in their decision-making (Berglöf and Bolton 2002; Fries 2005); guarantee central bank independence (Cukierman 1992; Eijffinger and De Haan 1996; Maxfield 1998; Epstein 2006; Johnson 2006); and establish independent banking oversight (Nord 2000). Those are key policy standards, according to which I judge a country's banking sector framework at any given time point. International actors such as the International Monetary Fund (IMF) and the World Bank have been adamant proponents of the so-called "Washington consensus" policies in the region, including in the realm of banking sector reform. Thus the benchmark liberalization reforms in my analysis inevitably reflect international pressure to adopt "best practices" used in advanced industrialized economies such as introducing more competition in the sector, streamlining bankruptcy procedures, and strengthening the central bank and bank supervision.

The analysis employs a measure of banking reform developed by the European Bank for Reconstruction and Development (EBRD) that takes into account the policy benchmarks described above. As described in Appendix I, the scale of this variable comprises 11 categories and ranges from 1 to 4.3, where 1 indicates little progress in banking sector reform beyond establishing a two-tier banking system and 4 indicates the presence of institutions that ensure competition in the sector, effective prudential supervision, liberalization of interest rates and credit allocation, and deepening of financial intermediation (EBRD 2005). For the purposes of my analysis, the 11 categories provide a sufficient range and gradation to treat this variable as continuous rather than ordinal.

I use a dataset developed by Klaus Armingeon and Romana Careja (2005) to code the partisanship of the governing political parties in the region. Substantively, my analysis yields hypotheses about the impact of the liberal/right and left partisan categories from the Armingeon and Careja dataset. I use the year of joining the Socialist International as a proxy for the switching point between being an unreformed or reformed left post-communist party. The Socialist International is an international alliance of Social Democratic parties. It would not admit left parties from the post-communist region as full members unless they prove their democratic credentials, minimize their vulnerability to corruption and clientelism, and break from their authoritarian past (Socialist International 2001). Appendix I provides detailed descriptions of all variables in my model, the coding, and the data sources.

To detect the presence of a strong clientelistic relationship between the governing elites and rent-seeking domestic stakeholders, I use a composite variable developed by Daniel Kaufmann, Aart Kraay, and Massimo Mastruzzi (2006) at the World Bank that taps into the presence of corruption in the domestic political system. Although corruption is not a perfect measure for the extent of clientelism, it is a good proxy used in the political economy literature. As Guillermo Rosas (2006: 178) has pointed out, it is reasonable to expect that where corruption is low, the chances that politicians, bankers, and enterprise managers will be enmeshed in clientelistic relationships will also be low, and vice versa.

I operationalize the role of foreign investors in two ways. First, I analyze the effect of the aggregate inflow of FDI as percentage of the country's GDP. Second, I include a measure of the assets of foreign-owned banks as a percentage of the total banking sector assets in the country. To operationalize the trade hypothesis, I use the percentage of trade with industrialized countries from a country's total trade flows. All three variables are lagged by one year in the model to avoid endogeneity. The analysis incorporates a set of dummy variables to control for the constitutional set-up of post-communist states. The coding is based on the Armingeon and Careja (2005) dataset. I coded the four IMF conditionality programs based on the Fund's (2001) reports. The data concerning the amount of IMF funding was obtained from the World Bank's (1999, 2005) "Global Development Finance" reports.

I use several indicators that tap into a country's level of economic development. A country's GDP per capita is a widely-used measure of economic development that I incorporate in the model. I use annual change in GDP to control for the health of the economy. Because the literature has found a curvilinear effect of GDP growth, I also included a square term for the annual change in GDP. In addition, my analysis employs a measure of the country's stock market capitalization as a percentage of its GDP. This variable is commonly used to distinguish between coordinated market economies and liberal market economies (Hall and Soskice 2001: 8), but in post-communist states stock market capitalization gauges the strength of the emerging financial sector. I also consider the potential effects of a large agricultural sector and a strong industrial sector, both measured as percentage of GDP. We expect a large agricultural sector to indicate a low level of economic development. A strong industrial sector could indicate a high level of economic development, but in the post-communist context, it could also indicate that the economy is not very diversified and much of the GDP is generated by the remnants of the big state-owned industrial conglomerates from the previous regime. The EBRD has refined its coding procedure starting in 1997. Therefore, I include a dummy variable to check for the potential effects of coding refinement. Table 1 below presents a succinct description of the variables included in the final specification of the model and the hypothesized effects.

**Table 1:** Description of the variables and hypothesized effects for the analysis of banking sector reform in the post-communist region

| Variable                                              | Description                                                                                                    | Hypothesis |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------|
| Dependent variable                                    |                                                                                                                |            |
| EBRD Banking reform                                   | Score measures progress in liberalization and adopting "best practices" in the banking sector. Scale: 1 to 4.3 |            |
| <b>Explanatory variables</b>                          |                                                                                                                |            |
| Domestic politics                                     |                                                                                                                |            |
| Government partisanship                               |                                                                                                                |            |
| Reformed left in government                           | Scored 1 if reformed left party in government; 0 if other party in power.                                      | +          |
| Unreformed left in government                         | Scored 1 if unreformed left party in government; 0 if other party in power.                                    | -          |
| Liberal/right in government                           | Scored 1 if liberal/right party in government; 0 if other party in power.                                      | +          |
| Domestic stakeholders                                 |                                                                                                                |            |
| Lack of corruption                                    | Composite expert survey score. Scale -2.5 to 2.5                                                               | +          |
| Foreign direct investment                             | Inflow of FDI as percentage of GDP. Included in the model using a moving average formula.                      | +          |
| Foreign-owned bank assets                             | Assets of foreign-owned bank as percentage of total bank assets. Scale 0 to 1                                  | +          |
| Trade with industrialized countries                   | Trade with advanced industrialized countries as percentage of total trade flows. Lagged 1 year. Scale 0 to 1   | +          |
| Constitutional set-up                                 |                                                                                                                |            |
| Presidential system                                   | Dummy variable coded 1 for presidential political systems, all other=0.                                        | -          |
| Semi-presidential system, dominated by president      | Semi-presidential political system, where president is dominant=1, all other=0                                 | +          |
| Parliamentary system                                  | Parliamentary political system=1, all other=0                                                                  | +          |
| International conditionality                          |                                                                                                                |            |
| No IMF program                                        | Dummy variable coded 1 when the country has no agreement with the IMF, all other=0                             | -          |
| Stand-by agreement with IMF                           | Stand-by agreement with IMF=1, all other=0                                                                     | +          |
| Poverty relief and growth facility agreement with IMF | Poverty relief and growth facility agreement with IMF=1, all other=0                                           | +          |
| No IMF program and reform front-                      | No IMF program (and reform front-runner)=1, all                                                                | 1          |
| runner                                                | other=0                                                                                                        | none       |
| Inflow of IMF funding                                 | Total funding received from the IMF expressed as percentage of GDP. Scale 0 to 1                               | +          |
| <b>Economic development</b>                           |                                                                                                                |            |
| GDP per capita                                        | GDP per capita in thousands USD                                                                                | +          |
| GDP growth                                            | Annual change in GDP in percentages. Scale 0 to 1                                                              | +          |
| Stock market capitalization                           | Stock market capitalization as a percentage of GDP. Scale 0 to 1                                               | +          |
| Percentage non-performing loans                       | Non-performing loans as percentage of total loans.<br>Scale 0 to 1                                             | +          |
| Percentage of GDP from industry                       | Percentage of GDP that comes from industry. Scale 0 to 1                                                       | + or -     |
| Percentage of GDP from agriculture                    | Percentage of GDP that comes from agriculture.<br>Scale 0 to 1                                                 | -          |
| Coding refinement                                     | Dummy variable scored 1 for period 1997-2005, scored 0 for period 1995-1996.                                   | none       |

#### 4. ESTIMATION PROCEDURE, RESULTS, AND DISCUSSION

This article employs pooled cross-sectional time series analysis using data from 25 states in the post-communist region: the Central European states, the Baltic states, the Southeast European states, and all post-Soviet states over a period of 11 years, 1995-2005. From the states of ex-Yugoslavia, I have excluded Bosnia-Herzegovina and Serbia-Montenegro due to frequently missing data. In total, the model has 275 observations and the panel is balanced: It contains 25 countries and observations on each variable for the 11-year period. The literature has shown that using standard OLS estimation on pooled cross-sectional data violates several regression assumptions. For example, it lowers the size of the standard errors and artificially increases the significance of the estimated coefficients (Ostrom 1978; Sayrs 1989; Hicks 1994).

To overcome these problems and correct for heteroskedasticity, I follow Nathaniel Beck and Jonathan Katz's (1995) recommended procedure to use panel-corrected standard errors. I apply a Prais-Winsten transformation model specifying a first-order auto-regressive process and a common *rho* for all cross-sections to amend for the serial correlation in the data. This technique has been advocated by Thomas Plümper, Vera Troeger, and Philip Manow (2005) as an estimation strategy that in most cases allows researchers to test substantive theoretical propositions more accurately than models that employ a lagged dependent variable or fixed country effects. I have chosen not to include a lagged dependent variable in the model specification in light of Christopher Achen's (2000: 13) analysis demonstrating 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 dataset, the year-to-year changes in countries' evaluation of banking sector liberalization are small. In this case, 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; Kittel and Obinger 2002). In fact, Beck and Katz (2004: 16-17) have shown that correcting for a first-order auto-regressive process does include a lagged dependent variable on the right hand side of the equation, and thus it deals with the serial correlation problem without suppressing the power of the independent variables.

To evaluate the robustness of the coefficient estimates, I re-estimated the model using a very different estimation strategy—fixed effects—even though this technique is not appropriate given the goals and data structure in this research project. The results are reported in Appendix III. The estimates produced by the fixed effects model are generally in line with those obtained from the Prais-Winsten transformation model reported in table 2. At the end of this section, I discuss important differences in the estimates derived from the two techniques. Why is a fixed effects model not advisable in my case? Plümper *et al.* (2005: 330-334) have shown that the inclusion of country fixed effects eliminates any variation in the dependent variable which is due to time-invariant factors such as difference in constitutional set-up in my research. Furthermore, the use of fixed effects completely absorbs differences in the level of the independent variables across units. As my theoretical framework anticipates the existence of such level effects, Plümper *et al.* (2005: 333) advise against the inclusion of country dummies. Several independent variables of interest in my model vary mainly across

countries, which is another reason why Plümper *et al.* (2005) suggest not to use fixed effects because this procedure would reduce artificially the size of the coefficients.

Before I present and discuss the coefficient estimates, I need to consider the relationships among the explanatory variables in the model. After conducting a variance inflation factor analysis, reported in Appendix IV, I have decided to exclude the measures for EU conditionality from the analysis. The variance inflation factor for two of the EU conditionality programs is well above 10, which indicates the presence of multicollinearity. Furthermore, countries in the post-communist region display significant variation in the degree of economic development, transparency, trade integration with the Western economies, and political stability. The data shows that the states that have been involved in the strictest and most effective EU conditionality program—the Accession process—are largely the ones with stable liberal democratic governments, the highest degree of economic development, trade integration with the West, and freedom from corruption. From a theoretical standpoint, it is more plausible that the political and economic variables listed above have a causal impact on banking sector liberalization, rather than EU conditionality. 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 Belarus or, to stretch this reasoning even further, Uzbekistan. Because 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 problematic to disentangle the flow of causality between the bundle of factors that qualify a country to participate in a particular kind of EU conditionality program and the *independent impact* of EU conditionality on the target country. In my view, in-depth case study analysis would be a more appropriate method to analyze this dynamic. Additional diagnostic tests confirmed that the model has no omitted variables.

Table 2 presents the results of the time series analysis. The model fits the data well. The explanatory variables account for 78 percent of the variance in the quality of banking sector reform in the post-communist region. The statistically significant positive intercept of 2.296 suggests that there is a tendency to introduce some degree of banking sector liberalization that is common to all countries in the region.

Table 2: Analysis of the determinants of banking sector reform in the post-communist region

| Explanatory variables                    | Effect   | pcse    | Implied effect (coefficient × one standard deviation) | Intercept<br>effect<br>(dichotomous<br>variables) |
|------------------------------------------|----------|---------|-------------------------------------------------------|---------------------------------------------------|
| Domestic politics                        |          |         |                                                       |                                                   |
| Government partisanship                  |          |         |                                                       |                                                   |
| Unreformed left in government            |          |         |                                                       |                                                   |
| - baseline category -                    |          |         |                                                       |                                                   |
| Reformed left in government              | .012     | (.093)  |                                                       | 2.308                                             |
| Liberal / right in government            | .057     | (.072)  |                                                       | 2.353                                             |
| Domestic stakeholders                    |          |         |                                                       |                                                   |
| Lack of corruption                       | .178*    | (.109)  | .120                                                  |                                                   |
| Foreign direct investment (t-1)          | .461     | (.912)  | .024                                                  |                                                   |
| Foreign-owned bank assets (t-1)          | .417***  | (.119)  | .126                                                  |                                                   |
| Trade with industrialized countries(t-1) | .226     | (.225)  | .046                                                  |                                                   |
| Constitutional set-up                    |          |         |                                                       |                                                   |
| Presidential system                      |          |         |                                                       |                                                   |
| - baseline category -                    |          |         |                                                       |                                                   |
| Semi-presidential system,                |          |         |                                                       | 2 2 4 0                                           |
| dominated by president                   | .052     | (.099)  |                                                       | 2.348                                             |
| Parliamentary system                     | .351**   | (.116)  |                                                       | 2.647                                             |
| International conditionality             |          |         |                                                       |                                                   |
| Stand-by agreement with IMF              |          |         |                                                       |                                                   |
| - baseline category -                    | 104      | (0.50)  |                                                       | 2.112                                             |
| No IMF agreement                         | 184**    | (.078)  |                                                       | 2.112                                             |
| Poverty relief and growth facility       | 0.60     | (0.50)  |                                                       |                                                   |
| agreement with IMF                       | 069      | (.069)  |                                                       | 2.227                                             |
| No IMF program                           |          |         |                                                       |                                                   |
| and reform front-runner                  | .004     | (.075)  |                                                       | 2.300                                             |
| Inflow of IMF funding (t-1)              | 1.586*   | (.847)  | .059                                                  |                                                   |
| Economic development                     |          |         |                                                       |                                                   |
| GDP per capita                           | .050***  | (.013)  | .151                                                  |                                                   |
| GDP growth                               | .394     | (.478)  | .021                                                  |                                                   |
| GDP growth square                        | -2.561   | (3.360) |                                                       |                                                   |
| Stock market capitalization              | .036***  | (.009)  | .125                                                  |                                                   |
| Percentage non-performing loans (t-1)    | .105     | (.160)  | .017                                                  |                                                   |
| Percentage of GDP from industry          | -1.059** | (.361)  | .080                                                  |                                                   |
| Percentage of GDP from agriculture       | 877*     | (.426)  | .089                                                  |                                                   |
| Coding refinement                        | .054     | (.068)  |                                                       |                                                   |
| Unreformed left*corruption               | .029     | (.090)  |                                                       |                                                   |
| Liberal/right*corruption                 | .002     | (.099)  |                                                       |                                                   |
| Unreformed left*FDI                      | .633     | (.882)  |                                                       |                                                   |
| Reformed left*FDI                        | 1.526    | (1.445) |                                                       |                                                   |
| Constant                                 | 2.296*** | (.222)  |                                                       |                                                   |
| Adjusted R-squared                       | .783     | ,       |                                                       |                                                   |
| 275 observations                         |          |         |                                                       |                                                   |
| AR1 autocorrelation process: rho         | .498     |         |                                                       |                                                   |

**Note:** The table presents 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 < .05, \*\*p < .01, \*\*\*p < .001, one-tailed test.

The coefficients of the reformed left and liberal/right partisanship variables are positive as hypothesized. However, the results are not statistically significant. The test of the other domestic-level variables supports my argument about the dynamics of partial reform in the post-communist region. I use the level of corruption in the political system as a proxy for the presence of clientelism that hinders comprehensive banking sector reform. The analysis confirms that the less clientelism and corruption are present in the domestic system, the more banking sector liberalization, and the result is statistically significant. Because the reported coefficients are unstandardized, I have assessed the implied effects of one standard deviation move from the mean of the respective independent variable in order to compare the size of the effects. Thus one standard deviation increase in the degree of freedom from corruption in a political system results in a 0.120-unit increase in the extent of banking sector liberalization and reform. A stronger presence of foreign banks is also a statistically significant predictor of banking sector liberalization. This variable is lagged for one year in the model in order to avoid endogeneity. One standard deviation increase in the share of foreign banks' assets results in a 0.126-unit increase in the extent of banking sector liberalization, and the effect is highly statistically significant. Yet a country's trade profile is not a statistically significant predictor of the degree of banking sector liberalization and reform. A country's constitutional set-up also has a statistically significant impact on the extent of banking sector liberalization: For parliamentary systems the value of the intercept is 2.647 and statistically significant. The coefficient of the semi-presidential system variable is positive as hypothesized, but it is not statistically significant.

What are the important findings concerning the impact of international pressures? The analysis shows that countries that have not participated in the stricter Stand-by IMF program, the baseline category, have undertaken less banking sector liberalization. The value of the intercept for those countries is 2.112 and statistically significant. As hypothesized, obtaining funding from the IMF creates significant pressures to follow the Fund's prescriptions and introduce more banking sector liberalization. One standard deviation increase in the amount of funding that a country has received from the IMF results in a 0.059-unit increase in the extent of banking sector liberalization, and the effect is statistically significant.

Several of the economic development measures in the model are strong and highly statistically significant predictors of the extent of banking sector liberalization and reform in the region. One standard deviation increase in GDP per capita produces a 0.151-unit increase in the extent of banking sector liberalization. The same move in the stock market capitalization variable results in a 0.125-unit increase in the EBRD score. However, the health of the economy, measured as annual change in GDP, is not statistically significant. A higher share of both agriculture and industry in a country's GDP is associated with a statistically significant decrease in the extent of banking sector liberalization. One standard deviation increase in the agriculture variable produces a 0.089-unit decrease in the EBRD score, and an equivalent move in the industry variable leads to a 0.080-unit decrease in the extent of banking sector liberalization. I also test for the presence of interaction effects between partisanship and corruption level and partisanship and the level of foreign direct investment, as implied in the domestic alliances argument presented in the theoretical section. However, the interaction effects are not statistically significant.

The coefficient estimates produced by the fixed effects model specification reported in Appendix III are generally in line with those obtained from the Prais-Winsten model. However, the fixed effects model reveals the presence of significant country differences. For several reform 'front-runners' such as Hungary the value of the intercept is higher and statistically significant—they have pursued more banking sector liberalization—whereas for several reform 'laggards' such as Turkmenistan the value of the intercept is lower and statistically significant—they have implemented less banking sector liberalization.

As expected based on the discussion of estimation techniques presented earlier, time-invariant variables such as constitutional set-up and variables with predominantly cross-sectional variation such as stock market capitalization and percentage of GDP from industry and agriculture are no longer significant in the fixed effects model. A Hausman test performed to evaluate whether the coefficients obtained from a fixed effects model are systematically different from those obtained from a random effects model was not significant. This suggests that the fixed effects are not correlated with the predictors and it is acceptable to apply Prais-Winsten and random effects specifications rather than a fixed effects model in order to test the research hypotheses presented in this article.

#### 5. CONCLUSION

This article has investigated what political and economic factors have pushed postcommunist governments to pursue banking sector liberalization and reform. Factors from all three theoretical frameworks—domestic politics, international pressures, and economic development—are statistically significant predictors of the extent of banking sector liberalization and reform, which suggests the presence of a complex conjunctural causal pattern. We have seen that variables that explain institutional and policy change in advanced industrialized states matter in the post-communist context as well, but in addition structural factors are very important determinants of banking sector liberalization in the region. On the domestic level, the analysis has confirmed that the higher the presence of foreign banks, the more banking sector liberalization. Curbing corruption is also strongly related to more banking sector liberalization, and so is the choice of a parliamentary constitutional set-up over a presidential one. On the international level, exposure to stricter IMF conditionality in terms of a Stand-by agreement has a positive effect on the extent of banking sector liberalization. The analysis has confirmed the importance of structural factors: Measures of economic development such as GDP per capita and stock market capitalization are highly statistically significant predictors of the extent of banking sector liberalization.

As a possible direction for further research, case study analyses of banking sector liberalization in the region could illuminate better the causal mechanisms, possible sequencing patterns, and interplay between the important explanatory factors, thus contributing to our deeper understanding of institutional change. In light of the finding that structural factors are very important in banking sector liberalization and reform, it is worthwhile to investigate the extent to which initial economic conditions influence the types of domestic stakeholders who are mobilized and motivated to influence policy-making.

#### Notes

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Developed for Latin American countries in the late 1980s, the "Washington Consensus" policy package was subsequently extended to other transitional countries, including the post-communist states (Williamson 2003; Ortiz 2003: 15). It has generated much controversy after countries that implemented the prescribed policies were hit by major economic crises such as the "tequila crisis" in Mexico in 1994–1995 and the financial crisis in Argentina in 2001. John Williamson (1994) has outlined ten policy objectives of the "Washington consensus": fiscal discipline; reorientation of public expenditure; tax reform (broadening the tax base and cutting marginal rates); financial liberalization (ending interest rate controls); unified and competitive exchange rates; trade liberalization (reducing tariffs and eliminating non-trade barriers); liberalization of foreign investment; privatization; deregulation; and securing property rights.

#### Appendix I: Description of the variables, coding, and data sources

#### Variables included in the final model specification

#### Quality of banking reform

ebrd banking: 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). Overall, the scale comprises 11 categories: Scores such as 2.3 or 3.7 are possible and occur in the EBRD dataset. The following qualitative description of the four *main* 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
- 3= Substantial progress in establishment of bank solvency and of a framework for prudential supervision and regulation; full interest rate liberalization 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: <a href="http://www.ebrd.com/pubs/econo/6520.htm">http://www.ebrd.com/pubs/econo/6520.htm</a>.

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

unref left: Unreformed left in government=1, all other=0 ref left: Reformed left in government=1, all other=0 liberal right: Liberal/right in government=1, all other=0

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

The Socialist International website <a href="http://www.socialistinternational.org/main.html">http://www.socialistinternational.org/main.html</a>

Minutes from voting in the Socialist International Congresses after 1989.

Available at: <a href="http://www.socialistinternational.org/5Congress/previous-e.html">http://www.socialistinternational.org/5Congress/previous-e.html</a>>.

#### **Domestic stakeholders**

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: Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi. 2006. Governance Matters V: Aggregate and Individual Governance Indicators, 1996-2005. Washington, D.C.: The World Bank.

fdi\_gdp: Inflow of foreign direct investment as percentage of GDP

The scale runs from the lowest score (=0) to the highest score (=1)

foreign owned: Assets of foreign-owned bank as percentage of the total assets in the banking system.

The scale runs from the lowest score (=0) to the highest score (=1)

Source for both indicators above: European Bank for Reconstruction and Development. 2005. "EBRD Transition indicators by country." In *Transition Report 2005: Business in Transition*.

**trade\_industrialized:** Percentage trade with industrialized countries from the total trade flows. The scale runs from the lowest score (=0) to the highest score (=1)

Source: International Monetary Fund. 1999-2004. *Direction of Trade Statistics Yearbook*. Washington, D.C.: IMF Publication Services.

#### **Constitutional set-up**

**pres:** Presidential political system=1, all other=0

**semi-pres:** Semi-presidential political system, where president is dominant=1, all other=0

parl: Parliamentary political system=1, all other=0

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

#### **Conditionality**

imf\_no\_agreement: No IMF agreement=1, all other=0
imf standby: Stand-by agreement with IMF=1, all other=0

imf\_prgf: Poverty relief and growth facility agreement with IMF=1, all other=0
imf frontrunner: No IMF program (and reform front-runner)=1, all other=0

Source: IMF Members' Financial Data by Country Database.

Available at: <a href="http://www.imf.org/external/np/fin/tad/exfin1.aspx">http://www.imf.org/external/np/fin/tad/exfin1.aspx</a>.

**imf\_funding:** This variable represents the inflow of IMF funding as percentage of the country's GDP.

The scale runs from the lowest score (=0) to the highest score (=1)

Source: Author's calculations based on data from The World Bank. 1997, 1999, and 2005. *Global Development Finance*. Washington D.C.: The World Bank Publications Department.

#### **Economic development**

gdp pc: GDP per capita, in thousands of USD

gdp growth: Annual change in GDP, in percentages.

The scale runs from the lowest score (=0) to the highest score (=1)

stk mkt: Stock market capitalization as percentage of GDP

The scale runs from the lowest score (=0) to the highest score (=1)

nonperf\_loans: Non-performing loans as percentage of total loans for the particular year.

The scale runs from the lowest score (=0) to the highest score (=1)

agri: Percentage of GDP from agriculture

The scale runs from the lowest score (=0) to the highest score (=1)

industry: Percentage of GDP from industry

The scale runs from the lowest score (=0) to the highest score (=1)

Source for all four indicators above: European Bank for Reconstruction and Development. 2005. "EBRD Transition indicators by country." In *Transition Report 2005: Business in Transition*.

**coding:** The coding of the EBRD banking reform variable became more nuanced starting 1997. This is a dummy variable coded by the author to capture any effects of the coding improvement. The variable=1 for the period 1997-2005 and =0 for the period 1995 and 1996

### Variables excluded from the final model specification

#### **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: Author's coding based on the information available at the official website of the European Union: <a href="http://europa.eu/index\_en.htm">http://europa.eu/index\_en.htm</a>.

Appendix II: Summary statistics of the variables in the model

| Variable                              | N   | Mean  | Standard<br>Deviation | Min   | Max    |
|---------------------------------------|-----|-------|-----------------------|-------|--------|
|                                       |     |       |                       |       |        |
| EBRD banking reform                   | 275 | 2.552 | .778                  | 1     | 4      |
| <b>Domestic politics</b>              |     |       |                       |       |        |
| Government coloration                 |     |       |                       |       |        |
| Unreformed left in government         | 275 | .36   | .481                  | 0     | 1      |
| - baseline category -                 |     |       |                       |       |        |
| Reformed left in government           | 275 | .164  | .371                  | 0     | 1      |
| Liberal / right in government         | 275 | .287  | .453                  | 0     | 1      |
| Domestic stakeholders                 |     |       |                       |       |        |
| Lack of corruption                    | 275 | 405   | .673                  | -1.76 | 1.15   |
| Foreign direct investment (t-1)       | 250 | .047  | .052                  | .001  | .451   |
| Foreign-owned bank assets (t-1)       | 250 | .327  | .301                  | 0     | .98    |
| Trade with industrialized             |     |       |                       |       |        |
| countries (t-1)                       | 250 | .484  | .203                  | .08   | .888   |
| Constitutional set-up                 |     |       |                       |       |        |
| Presidential system                   | 275 | .2    | .401                  | 0     | 1      |
| - baseline category -                 |     |       |                       |       |        |
| Semi-presidential system,             |     |       |                       |       |        |
| dominated by president                | 275 | .258  | .438                  | 0     | 1      |
| Parliamentary system                  | 275 | .542  | .499                  | 0     | 1      |
| International conditionality          |     |       |                       |       |        |
| Stand-by agreement with IMF           | 275 | .415  | .494                  | 0     | 1      |
| - baseline category -                 |     |       |                       |       |        |
| No IMF agreement                      | 275 | .175  | .380                  | 0     | 1      |
| Poverty relief and growth facility    |     |       |                       |       |        |
| agreement with IMF                    | 275 | .207  | .406                  | 0     | 1      |
| No IMF program                        |     |       |                       |       |        |
| and reform front-runner               | 275 | .204  | .403                  | 0     | 1      |
| Inflow of IMF funding (t-1)           | 250 | .032  | .037                  | 0     | .159   |
| Economic development                  |     |       |                       |       |        |
| GDP per capita                        | 275 | 2.902 | 3.012                 | .114  | 17.263 |
| GDP growth                            | 275 | .046  | .053                  | 13    | .243   |
| GDP growth square                     | 275 | .005  | .006                  | 0     | .059   |
| Stock market capitalization           | 275 | .332  | 3.477                 | -9.21 | 4.275  |
| Percentage non-performing loans (t-1) | 250 | .163  | .162                  | 0     | .912   |
| Percentage of GDP from industry       | 275 | .254  | .076                  | .071  | .574   |
| Percentage of GDP from agriculture    | 275 | .143  | .102                  | .025  | .463   |
| Coding refinement                     | 275 | .818  | .386                  | 0     | 1      |

Appendix III: Model estimation using fixed effects

| Explanatory variables                 |               | Effect   | Standard<br>error |
|---------------------------------------|---------------|----------|-------------------|
| <b>Domestic politics</b>              |               |          |                   |
| Government partisanship               |               |          |                   |
| Unreformed left in governm            | nent          |          |                   |
| - baseline category -                 |               |          |                   |
| Reformed left in governmen            |               | .100     | (.105)            |
| Liberal / right in government         | nt            | .227**   | (.074)            |
| Domestic stakeholders                 |               |          |                   |
| Lack of corruption                    |               | .151*    | (.091)            |
| Foreign direct investment (           | (t-1)         | .154     | (.774)            |
| Foreign-owned bank assets             |               | .195*    | (.091)            |
| Trade with industrialized co          | ountries(t-1) | .108     | (.286)            |
| Constitutional set-up                 |               |          |                   |
| Presidential system                   |               |          |                   |
| - baseline category -                 |               |          |                   |
| Semi-presidential system,             |               |          |                   |
| dominated by president                |               | 214      | (.220)            |
| Parliamentary system                  |               | 034      | (.170)            |
| International conditionali            | •             |          |                   |
| Stand-by agreement with IN            | ΛF            |          |                   |
| - baseline category -                 |               | 0.50     | (0(4)             |
| No IMF agreement                      | ***           | .050     | (.064)            |
| Poverty relief and growth fa          | acility       | 110      | (076)             |
| agreement with IMF                    |               | .112     | (.076)            |
| No IMF program                        |               | 0.1.5    | (000)             |
| and reform front-runner               |               | 015      | (.086)            |
| Inflow of IMF funding (t-1)           |               | 289      | (.980)            |
| <b>Economic development</b>           |               |          | (010)             |
| GDP per capita                        |               | .083***  | (.016)            |
| GDP growth                            |               | 1.019*   | (.483)            |
| GDP growth square                     |               | -5.145   | (3.890)           |
| Stock market capitalization           |               | 004      | (.013)            |
| Percentage non-performing loans (t-1) |               | .162     | (.140)            |
| Percentage of GDP from in             |               | .059     | (.584)            |
| Percentage of GDP from ag             | riculture     | -1.017   | (.587)            |
| Coding refinement                     |               | .062     | (.057)            |
| Unreformed left*corruption            |               | 148      | (.098)            |
| Liberal/right*corruption              |               | .102     | (.099)            |
| Unreformed left*FDI                   |               | .232     | (.913)            |
| Reformed left*FDI                     |               | 1.492    | (1.463)           |
| Constant                              |               | 2.187*** | (.186)            |
| R-squared                             | overall       | .609     |                   |
| 275 observations                      | within        | .488     |                   |
|                                       | between       | .630     |                   |
|                                       | sigma-u       | .484     |                   |
|                                       | sigma-e       | .210     |                   |
|                                       | rho           | .842     |                   |

**Note:** The significance levels are as follows: \*p<.05, \*\*p<.01, \*\*\*p<.001, one-tailed test.

Appendix IV: Variance inflation factor analysis to detect multicollinearity

Model specification including the EU program participation dummy variables.

| Variable                                                                                                                                                                                                                         | VIF                                                                                                                                                                                                                                 | 1/VIF                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| eu2 par1 eu5 corruption trade_lagged gdp_pc agri eu3 log_stk_mkt semi_pres imf_frontr~r liberal_ri~t imf_prgf ref_left gdp_growth2 foreign_~ged eu1 imf_fundin~d industry gdp_growth imf_no_agr~t nonperf_lo~d coding fdi lagged | 20.41<br>  17.36<br>  12.64<br>  6.90<br>  5.89<br>  4.78<br>  4.73<br>  4.20<br>  3.66<br>  3.35<br>  3.19<br>  3.03<br>  2.94<br>  2.89<br>  2.81<br>  2.76<br>  2.72<br>  2.61<br>  2.53<br>  2.01<br>  1.79<br>  1.50<br>  1.40 | 0.048986<br>0.057587<br>0.079125<br>0.144879<br>0.169899<br>0.209030<br>0.211491<br>0.238095<br>0.248714<br>0.273035<br>0.298951<br>0.313340<br>0.329966<br>0.340063<br>0.346504<br>0.356447<br>0.362788<br>0.366974<br>0.383230<br>0.394969<br>0.498470<br>0.558763<br>0.665117<br>0.712972 |
| Mean VIF                                                                                                                                                                                                                         | -+<br>  5.01                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                              |

Model specification excluding the EU program participation dummy variables.

| Variable                                                                                                                                                                                                         | VIF                                                                                                                                                                            | 1/VIF                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| parl corruption gdp_pc agri trade_lagged semi_pres log_stk_mkt imf_frontr~r liberal_ri~t gdp_growth2 ref_left imf_prgf gdp_growth industry imf_fundin~d foreign_~ged imf_no_agr~t nonperf_lo~d fdi_lagged coding | 6.39<br>  4.64<br>  4.55<br>  4.45<br>  3.55<br>  3.47<br>  3.05<br>  3.04<br>  2.83<br>  2.79<br>  2.70<br>  2.51<br>  2.35<br>  2.15<br>  2.13<br>  1.90<br>  1.65<br>  1.37 | 0.122582<br>0.156465<br>0.215609<br>0.219614<br>0.224584<br>0.282084<br>0.287963<br>0.328089<br>0.328544<br>0.352925<br>0.359058<br>0.370114<br>0.398910<br>0.424764<br>0.464203<br>0.469047<br>0.526560<br>0.606223<br>0.727615<br>0.746505 |
| Mean VIF                                                                                                                                                                                                         | 3.25                                                                                                                                                                           |                                                                                                                                                                                                                                              |

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