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Country-level Evidence

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Does accession to the European Union foster competition policy? Country-level evidence

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Abstract

This paper argues that the accession to the European Union improves the quality of competition policy via the implementation of pro-competitive policies, especially antitrust and competition policies, embedded in the Community Acquis. We assess this conjecture empirically for the (former) transition economies of Central and Eastern Europe, using member states as well as developing and developed countries in Europe and Central Asia as a control group. The data used is a macro-economic panel of 48 countries covering six 3-year periods between 1995 and 2012. We find that EU-accession positively affected the quality of competition policies over and above an overall trend towards more market oriented policies. The improvement in competition policy was not reversed in a single country of the sample. The findings are robust when controlling for endogeneity issues. We also document a slow-down in policy reform efforts in the aftermath of the crisis, challenging previous literature which expects a reform enhancing effect of crisis.

JEL Classifications: K21, L53, O52, P20, P21

Keywords: competition policy, regulation, economic transition, Community Acquis, EU accession

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1. Introduction

A country's accession to the European Union affects its economic and legal setting on many levels. Acceding countries are required to implement the legal body of the European Union, i.e. the Community Acquis. Both the development of new and the restructuring of existing institutions are fundamental prerequisites to accession. These policy reforms are thought to improve the quality of the institutional and regulatory environment, thereby positively affecting a country's economic development (Voigt, 2009).

Parts of this systemic change are both competition policies and the implementation of pro-market policies. These policy fields are of particular relevance to transition economies that, in the period examined in this study, were surpassing their economic planning heritage. The switch from a state-controlled economic system to market allocation implies the introduction of market forces and competition as the antithesis to a command economy (e.g., Kornai, 1992; Friesenbichler et al., 2014a). On their way towards EU membership, countries introduced competition laws aiming at promoting competitive markets within domestic economies. Implemented regulatory instruments *inter alia* include bankruptcy, company law as well as competition law and regulations. Acceding countries were required to align their legislation with the European Union, which prominently included the competition policy chapters of the Community Acquis (Hoelscher and Stephan, 2009, 2004). These reforms are not an end in themselves. Positive effects on economic performance have been shown empirically (Boeheim, 2004). More efficient competition policies at the country level lower transaction costs and thereby increase firm dynamics. This mechanism has been linked to more firm and employment growth, which justifies market oriented reforms (Friesenbichler et al., 2014b). Firm level evidence shows that pro-competitive policies due to the EU-accession led to less concentrated market structures, as well as greater allocative efficiency (Friesenbichler, 2014).

This paper analyses if the EU-accession process affected the implementation of market oriented policies, especially competition policies. We first make a conceptual argument by elaborating on how acceding countries are required to adopt the legal framework of the EU, the Community Acquis, thereby altering the regulatory regime and its institutions. The contribution of this paper to the literature is threefold. First, EU-accession has a positive effect on the improvement of competition policies that exceed the international trend towards pro-market policies. Second, we document a level shift in competition policies due to EU-accession, which was not reversed in a single country of the sample. Third, the chosen indicator for competition policies implies that EU-accession not only improved the required de-jure legislation, but also the de-facto quality of competition policies.

The remainder of this paper is organised as follows. The next section provides a brief survey about how the EU exports its legal foundations in form of the Community Acquis, in particular its competition policies, as part of enlargement process. The subsequent section provides empirical evidence on the macro-economic level, before the final chapter summarises and concludes the findings.

2. Exporting the competition policy regime of the European Union

2.1 The role of competition policy in the transition process

Competition law and market-oriented policies are well established in the European Union, and can be appraised to a large extent as successful. In order to establish a level playing field for European companies abroad, the EU seeks to 'export' the pro-competitive and competition policies to other countries (Hoelscher and Stephan, 2009, 2004). Accession countries to the EU incorporate competition policies into their legal system, and as they approach membership, the legal harmonisation equates to this 'exporting' effect. While the adoption of the EU competition law is mandatory before accession to the EU as full member state, countries with a more loose relationship to the EU are free to what extend EU competition law is transformed into national law. It may be, however, tempting also for these associated countries to adopt EU competition law.

The implementation of pro-competitive policies and anti-trust laws has substantially fostered competition in transition economies. The results for the countries in Central and Eastern Europe are much stronger than for other developing countries (Dutz and Vagliasindi, 2000; Vagliasindi 2001; Clarke, 2011). An 'unconditional' adoption may be, however, an inadequate approach. Introducing competition laws, which may be compatible with the level of development of the industrialised world, but not with that of the developing world, is likely to render their enforcement exceedingly difficult. Merely adopting some other country's laws and formal regulations is no guarantee of achieving the same institutional performance (Fingleton et.al. 1996, World Bank, 2005), because many countries in transition lack the institutional capacity to both implement and enforce such extensive and advanced competition policy. In addition, accession countries may miss the particular development oriented aspects of competition policy. That is, gradualism in its implementation, flexibility in its enforcement, and competition advocacy may be under-developed. Furthermore a range of preconditions, obstacles and opportunities have to be addressed, especially concerning institutional capacity, the informal economy and competition advocacy (Gustafsson, 2008).

2.2 Competition policy and the Community Acquis

The Community Acquis (AC), or Acquis Communautaire, provides the legal framework for all member states of the European Union (Borchardt, 2010). Its adoption is mandatory to become a full member of the EU. The AC comprises common rights as well as obligations for all member states. Those include the content, principles and political objectives of the European Union's treaties, laws, resolutions, declarations, international agreements and judgments given by the Court of Justice. Furthermore, the AC comprises measures relating to justice and common foreign and security policy adopted by the European Union. Title VII, chapter 1 of the Treaty on the Functioning of the European Union (TFEU) describes the relevant basis for the Community rules on competition (European Union, 2013).

The AC considers various dimensions of market-oriented policies, which jointly constitute the regulatory cornerstones of a market economy. Regulations are set to establish and maintain market efficiency, as well as they seek to preclude anticompetitive behaviour (Motta, 2004; Lyons, 2009a; Friesenbichler et al., 2014a). Antitrust and competition policy are embedded in Community Acquis. Hence, they are not a stand-alone matter, but interact with other subchapters of the Community Acquis, such as freedom of labour and capital. These also include other forms of competition-enhancing policies, such as the reduction of administrative burdens, the removal of entry barriers for new firms on the market, consumer protection or ex-ante sectoral regulations.

Competition law and its enforcement are pivotal elements of a pro-competitive policy mix (Buccirossi et al., 2011). This notion builds on the subchapter competition policy of the Community Acquis building a common foundation of rights and obligations, which binds together the member states of the European Union. The part of the Community Acquis which covers competition comprises anti-trust as well as state-aid control policies, including rules and procedures to fight anti-competitive behaviour by companies, to scrutinise mergers and acquisitions, and to prevent governments from granting state-aid which distorts competition in the internal market. EU competition regulations are directly applicable in all member states. Member States are obliged to co-operate fully with the European Commission in enforcing them.

2.3 Exporting competition policy

As part of the accession process, the European Union requires candidate countries to implement the Community Acquis. However, this occurred at a varying degree. Competition policies and other conditions of membership leave some interpretive flexibility, and were not implemented to the same extent in all countries that have joined the EU (Grabbe, 2002). Then again, this can also be interpreted as a means to flexibly consider country-specific characteristics. Institution-building and legislation were developed fast, and maintained an at least decent level of enforcement of anti-trust practices (Hoelscher and Stephan, 2004). Altogether, CEE countries do not seem to struggle with competition policy reforms demanded by the Community Acquis, even though their levels of competition tend to be lower (Hoelscher and Stephan, 2009).

The implementation of pro-competitive policies and anti-trust laws was fuelled by the prospect of EU-membership, which has effectively increased competition in the economies of Eastern Europe and Central Asia (Estrin, 2002; Dutz and Vagliasindi, 2000; Vagliasindi, 2001; Friesenbichler et al., 2014a).

Once countries have joined the European Union, they are subject to further harmonisation processes. One of the main objectives of the European Union's competition law is the convergence of competition policy instruments and practices across member states and the facilitation of cooperation between national competition authorities (European Commission, 2013). For this purpose the European Competition Network (ECN) was established as a platform for co-operation between the competition authorities of individual member states and the European Commission in order to lay the cornerstone for the establishment of a universal standard of competition policy and its enforcement in the EU.

2.4 Legal foundations: Articles 101, 102, 107 TFEU

Any behaviour that possibly restricts or distorts trade and competition between member states is prohibited by the treaty on the functioning of the European Union (TFEU) as laid down in articles 101, 102 and 107 (European Commission 2013).

Illegal anticompetitive practices include the direct or indirect fixation of prices and other trading conditions, limitations and other forms of control of production, investment or technological development, sharing markets or sources of supply, providing different trading conditions for different trading partners, thereby providing some with a competitive advantage and depending the conclusion of contracts on supplementary terms which have no connection with the issue of the contract. While by article 101 TFEU (ex Article 81 TEC) all agreements and decisions and coordinated practices by undertakings or their associations which restrict or distort competition in any of the above mentioned ways is prohibited, article 102 TFEU (ex Article 82 TEC) forbids abuse of a dominant position which is expressed by anti-competitive behaviour such as listed above. Furthermore, cartels, which are defined as groups of independent enterprises which join together to fix prices, to limit production or to share markets or customers between them, are regarded as illegal under the European Union law and is in case of detection substantially fined by the European Commission. The main legislative texts for merger decisions are the EC Merger Regulation[1] and the Implementing Regulation[2]. Mergers and acquisitions will be prohibited by the European Commission, if the merger leads to a substantial impediment of effect competition on the relevant markets.

By article 107 TFEU (ex Article 87 TEC) state aid for companies which distort or limit competition and trade between Member states, by putting those enterprises into an advantageous position is forbidden. Exclusions from this rule include aids which have a social character, especially after natural disasters, or which aim at facilitation of the economic development of areas with especially low standards of living, or abnormally high unemployment rates, or which promote the execution of important projects of common European interest, as long as that aid does not adversely affect trading conditions to an extent contrary to the common interest (European Union, 2012).

3. Empirical analysis

3.1 Data and variables

[1] Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (EC Merger Regulation), Official Journal L 24, 29.01.2004, p. 1-22

[2] Commission Regulation (EC) No 802/2004 of 21 April 2004 implementing Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (Text with EEA relevance) (the "Implementing Regulation") and its annexes (Form CO, Short Form CO, Form RS and Form RM) (Official Journal L 133, 30.04.2004, p. 1-39), as amended by Commission Regulation (EC) No 1033/2008 (Official Journal L 279, 22.10.2008, p.3-12) and by Commission Implementing Regulation (EU) No 1269/2013 of 5 December 2013 (Official Journal OJ L 336, 14.12.2013, p. 1-36).

We use macro-economic data to empirically estimate the effect of EU-membership status on the quality of competition policies. The sample is required to cover acceding countries to the EU, and uses EU member states, other economically developed (e.g., Norway and Switzerland) and yet developing (e.g., Russia) countries as a control group. The analysis covers a total of 48 countries for the time span from 1995 to 2012.

The empirical analysis focuses on structural characteristics. Empirical studies found that adoption of antitrust laws and more generally progress with reforms has been spurred by anticipation of European Union accession (Nicholson, 2004; Piazolo, 2000). In the enlargement rounds of CEE, the adoption of rules appears to have been fostered greatly by anticipation of EU membership (e.g., Piazolo, 2000; Dutz and Vagliasindi 2000b, Hoelscher und Stephan, 2009). To capture that some countries preclude policy reform, we averaged annual fluctuations and created six 3-year periods (1995-1997; 1998-2000; 2001-2003; 2004-2006; 2007-2009; 2010-2012).

The dependent variable measures the quality of competition policy, which is quantified by the indicator 'regulatory quality' from the World Governance Indicators (Kaufmann et al., 2009). Despite their limited coverage, the variables are only available biannually from 1996 to 2000, and annually from 2002, they provide reliable, comparable and consistent indicators of institutional development for the countries in question. The chosen index captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. It is a construct of 57 items, stemming from six representative and nine non-representative sources. [3] The index ranges from -2.5 to +2.5, and was rescaled to range from 0 to 5. The indicator measures the quality of competition policies, thereby taking into account possible differences between de-jure legislation and de-facto implementation.

The key independent variable is the membership status of the European Union. The European Union accession process comprises several phases. Using official information on the accession process provided by the European Commission, we constructed a discrete index ranging from 1(no affiliation) to 6 (full membership). The index allows for a substantial degree of variation in the status variable. The indicator assigns a one to countries without any documented accession relations to the EU. Phase two describes countries which have a

[3] The data and a detailed description of the methodology are available *at*info.worldbank.org/governance/wgi/ (retrieved on 16 December 2014).

formal bilateral accession procedure with the EU, which is documented by a signed partnership and/or co-operation agreement. Step three denotes a country that was officially identified as a potential candidate, while the formal application for EU membership is considered in stage four. Stage five describes counties during ongoing membership negotiations. Stage six indicates official EU membership.

Over and above the influence of the EU-membership status on regulatory quality we control for other macro-economic factors obtained from the World Bank Development Indicators. We include GDP per capita (in natural logs), GDP growth (in natural logs), the unemployment rate and inflation. These macro-economic variables refer to the period prior to the observed regulatory quality. We therefore account for lag structure in the effect of macro-economic structures on policies. In addition, we account for the impact of the financial and economic crisis which has had substantial effects on competition policy (Lyons 2009b; Boeheim, 2011) by a dummy variable taking on the value 0 for the years before and 1 for the years after 2008 (see Table 1).

Table 1 about here

3.2 Descriptive evidence

The indicators regulatory quality and EU-membership status are highly correlated (ρ = 0.71; p-value = 0.000). Descriptive statistics show that increases in the membership index are accompanied by higher levels of regulatory quality index (see Table 2). Also, the descriptive statistics do not point at any backlashes in regulatory quality during the accession process, confirming the notion that compliances on laws and policies passed as part of the EU-enlargement process are long-lasting (Grabbe, 2014).

Table 2 about here

We next explore if improvements in the regulatory quality can be linked to changes in the EU-membership status. EU accession needs to be interpreted against a convergence trend of competition policies, which is observable among OECD countries during the last decade (Hoj, 2007). To do so, we use both the time dimension and information about the control group. The data shows an overall trend to improve the quality of competition policies, which was however more pronounced in countries that changed their EU-membership status. Countries that held their status constant increased their regulatory quality from a mean of 3.46 for the period 1995 through 1997 to a mean index value of 3.52 for 2009 through 2012. The corresponding values for the countries that changed their membership status were 2.64 and 2.92, respectively. Ceteris paribus, this points at a causal effect of improvements in the quality of competition policies due to changes in the EU-membership status. To further examine this relationship, we control for external developments that potentially affect the regulatory quality, over and above a country's EU membership status.

3.3 Estimation techniques

We study the role of a country's EU membership status as an explanatory factor of regulatory quality by a regression analysis. The baseline regression is an ordinary least squares specification with clustered standard errors at the country level. Using the panel structure of the data, we next implement both a random and a fixed effects panel estimator. Both random and fixed effects were estimated because a Hausman test only weakly rejected a random effects model at the 95% significance level (p-value = 0.041). In the last two specifications, we estimate instrumental variable regressions. We use both 2SLS with standard errors clustered at the country level and a fixed effects model.[4]

The instrumental variable regressions were chosen to control for possible endogeneity issues. The institutional effectiveness interacts with the quality and effectiveness of competition policies (Dutz and Vagliasindi, 2000), and it is unclear if a higher EU-membership status leads to better governance, or if countries with a better governance system are more likely to join the EU. The estimated coefficients of the random effect panel regressions might therefore be biased. We therefore treat the status index as endogenous, and apply an instrumental regression to purge the coefficient for EU-membership from possible bias. We applied two instrumental variable regressions. The first specification considers the random effects specification, and was estimated in the cross-section with standard errors clustered at the country level. Both the first stage and the second stage are reported. Another

[4] It is likely that autocorrelation affects the results, whose consideration is statistically unfeasible. The data reflects economic structures that change slowly over time. Panel fixed effects would absorb the bulk of the variance and render other estimations unfeasible. Yet, the results are robust to the inclusion of the regulatory quality in the initial period of the sample (1995-1997) in a random effects panel regression; they turn slightly insignificant in an OLS regression with clustered standard errors, even though the sign of the coefficient remains positive.

instrumental regression considers the panel structure in the data, and is estimated as a fixed-effect instrumental variable regression; again, the results for the first (5) and second stage (6) are reported.

Instrumental variables for EU-membership need to be external predictors that control for reverse causality. A viable instrument must be unrelated with the outcome variable 'regulatory quality', but at the same time predict EU-membership status. Also, they must be exogenous and independent from the other variables in the estimated equation (Greene, 2003; Antonakis et al., 2010).

We use a set of three instrumental variables which reflects "proximity to the EU" as a control for instantaneous causation:

- The geographical proximity of a country to the EU,
- The ideological affinity of a country with the policies of EU member states, and
- The country's initial membership status to control for the entry level in the cross-sectional regression.

The geographical distance from a country's capital to the capital of the nearest EU-membership country serves as a proxy for the likelihood of EU-membership. The measure captures that the enlargement processes occur in 'concentric circles' around current member states, and is therefore preferred over alternative measures which for instance use the distance between the capital of the given country and Brussels, the administrative centre of the EU. The further away countries are from the nearest EU member state, the less likely EU-membership becomes. The mean distance is 583 kilometres, with a standard deviation of 975. We therefore expect a negative sign for the coefficient of this instrument in the first stage regression.[5]

The second instrumental variable was constructed from the presently used dataset, and informs about the initial membership status. That is, we use the lowest membership status value for each country to control for the country-specific initial relations of each country with the EU. The mean of the initial value of the status index is 4.3 (standard deviation 2.14).

The third instrument captures ideological proximity. Empirical evidence about potential EU accessions shows that political and ideological convergence is a key determinant (Kim and

[5] Only once a 'new' EU member state had no joint border with at least one current member state (Greece 1981). This does not consider the accession of the islands Cyprus, Malta and the UK, which is irrelevant for the enlargement of the Union towards Eastern Europe.

Russett, 1996). Our analysis draws on United Nations voting data as an approximation for institutional or political proximity (for applications in different contexts, see Lavallée 2006; Gartzke, 1998; Dixon and Moon, 1993; Umana Dajud, 2013); Oatley and Yackee, 2004). We use data on affinity scores in United Nations General Assembly voting behaviour provided by Strezhnev and Voeten (2013).6 The index can take on 3 values measuring the voting affinity of a country pair; 1 = "yes" or approval for an issue; 0 = abstain, -1= "no" or disapproval for an issue). The affinity indicator then captures the annual average for a country pair. We calculated the mean affinity score of each country in the sample for all EU member states for each year, and then averaged the years to arrive at the periods used. We expect that countries whose UN votes are similar to EU member states are more likely to have a higher value in the EU membership status index. The mean overlap is 0.88, with a standard deviation of 0.13 (a value of one indicates identically voting).

3.4 Regression results

To corroborate the results from the descriptive statistics, we estimated five regression models to examine the effect of the EU-membership index on regulatory quality (Table 3). We used an OLS regression with standard errors clustered at the country level (1), a random (2) and a fixed (3) effects panel model, a 2SLS model with standard errors again clustered at the country level where we report both the first (4) and the second stage (5), and a fixed effect instrumental variable regression with robust standard errors, (6) and (7).

The results for the key variable - membership status - confirm the conjecture that EU membership is a driver of competition policy reform. Higher membership status values correspond to higher regulatory quality, controlling for GDP per capita, GDP growth, unemployment and inflation. This result is found in all but one specification – only fixed effects estimator shows an insignificant, yet positive coefficient for the membership index.

Table 3 about here

[6] For further information and the data see http://thedata.harvard.edu/dvn/dv/Voeten/faces/study/StudyPage.xhtml?studyId=38311&studyListingIndex=0_dee53f12c760141b21c251525332.

This result is robust when we control for possible endogeneity issues between regulatory quality and EU membership. We used a set of three external variables – (i) geographical proximity measured by the distance from a country's capital to the capital of the nearest EU member state, (ii) ideological proximity measured by affinity scores based on UN voting behaviour, and (iii) the membership status in the initial period. Post-estimation tests confirm the validity of both instrumental variable regressions. The Hansen J statistics are insignificant, thus pointing at the exogeneity of the instruments. The Kleibergen-Paap rk LM statistic indicate that the instruments are sufficiently strong.

The coefficients for distance to the EU are significant and negative in the first stage, indicating that distance from the EU is a hampering factor to the membership status. The coefficients for political affinity are both positive, reflecting that countries with similar voting behaviour are likely to have closer relations to the EU. Yet, the coefficient is insignificant in the 2SLS specification. The instrument 'initial status' was positive and significant in the 2SLS model. Yet, it was dropped in the fixed effect instrumental variable regression. It seems that the fixed effects dominated the effect for the initial level.

Interestingly, the first stage results of the 2SLS weakly indicate that GDP per capita is positively, and the economic crisis negatively related to the EU membership status. This indicates that relations with the European Union and the pursuit of membership are ideological and therefore political questions rather than economic ones.

Two control variables relate to uncertainty – inflation and the dummy that denotes the period after 2008 that marked the beginning of the economic. Both are negative and significant, indicating less economic reform under uncertainty. The other control variables unemployment, GDP per capital and GDP growth were statistically insignificant.

4. Summary and Conclusion

In this paper we argued that European Union accession positively affected the implementation of market oriented policies, especially competition policies. The conceptual basis is provided by the accession procedure of the EU. Accession countries to the European Union are required to implement the Community Acquis, the legal framework of the EU. This greatly affects the regulatory and institutional framework, which subsequently affects the economy on multiple levels. Pro-competitive and market oriented policies are of particular relevance to transition economies. Competitive market allocation is the antithesis to a command economy, whose legacy many Eastern European accession countries try to overcome.

We used macro-economic data on a total of 48 countries for six 3-year periods to empirically analyse the impact of EU-accession on competition policies. The quality of competition policies was approximated by the 'regulatory quality' index from the World Bank's World Governance Indicators. Public information provided by the European Commission served as a basis to construct an EU-membership index ranging from 1 (no affiliation) to 6 (member state). Descriptive statistics suggests an overall trend in the improvement of competition policies. However, policy reforms seem more pronounced in countries that accessed the EU, i.e. changed their membership status. These policy reforms seem to be lasting, because not a single country fell back in its regulatory quality index in the time span covered.

The relationship between regulatory quality and the EU membership status was estimated in a regression analysis, which also controlled for macro-economic developments. The finding that EU-membership was conducive to policy reform was found in all but one specification. The result is also robust to endogeneity controls that treat EU-membership status as endogenous. We used a set of three instrumental variables. First, we calculated the geographical distance of a country's capital to the nearest EU member state. Second, we considered the membership status in the initial period of the sample. Third, we computed an index for ideological proximity based on UN voting behaviour. These variables sufficiently explained the status index. The distance to the EU exerted a negative, ideological proximity and the initial status a positive influence on EU-membership status.

While the macro-economic control variables were largely insignificant, inflation and a dummy variable denoting the period after the economic crisis showed statistically significant results. Both coefficients were negative. In particular, the negative coefficient for the economic crisis indicates a declining will in many countries of both the public and policy makers to support market oriented reforms (EBRD, 2013). This seems to challenge the notion that policy reforms are frequently attributed to a crisis-type culmination of economic problems (Rodrik, 1996; Korpi and Palme, 2003; Pitlik and Wirth, 2003; Heinemann, 2004; Duval and Elmeskov, 2006; Høj, Galasso, Nicoletti and Dang, 2006; Starke 2006; Pitlik, 2007; Vis and van Kersbergen, 2007; Campos, Hsiao and Nugent, 2010).

This may reflect a, perhaps temporary, change of economic thinking order in the wake of the recent crisis. Market oriented reforms were hitherto seen as a solution to many problems, and a deep crisis made status-quo-preserving interest groups more likely to accept uncertainties associated with substantial reforms, and governments to bear higher risks involved with temporary economic hardships associated with structural changes. The slow-down in policy reform efforts occurs despite evidence that the efficient implementation of competition policies increases employment and firm growth via lowering transaction costs. Then again, it is unclear whether the crisis-induced change in reform efforts is lasting. If it is, countries may be 'stuck in 'transition' (EBRD, 2013).

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Tables

Table 1 – Descriptive statistics

	N	Mean	Std. Dev.	Min	Max
Reg. Qual.	153	2.80	0.83	0.38	4.10
EU status	157	3.85	1.91	1.00	6.00
GDP p.c., laged	181	8.41	1.21	5.36	10.96
GDP growth, lagged	182	12.60	7.38	2.63	37.07
Unemployment, lagged	181	4.35	7.64	-16.70	88.96
Inflation, lagged	179	15.50	43.18	-17.06	430.55
Crisis	182	0.43	0.50	0.00	1.00

Table 2 – Regulatory Quality and EU-membership status

Index	Status	Mean	Std. Dev.
1	Unaffiliated	2.40	1.02
2	Partnership Agreement	2.07	0.70
3	Potential Candidate	2.57	0.60
4	Formal application	3.08	0.48
5	Candidate	3.32	0.36
6	Member State	3.82	0.37

Table 3 – Regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Estimation technique	OLS	RE	FE	IV, 2SLS		IV, FE	
Dependent Variable	RQ	RQ		Status	RQ	Status	RQ
Status	0.10**	0.05**	0.02		0.11**		0.17*
	(0.031)	(0.018)	(0.020)		(0.040)		(0.068)
GDP p.c., lagged	0.43**	0.49**	0.40**	-0.26	0.35**	0.99**	0.15
	(0.053)	(0.038)	(0.077)	(0.217)	(0.059)	(0.293)	(0.131)
Unemployment, lagged	-0.01	0.00	0.00	0.00	-0.01	0.01	0.00
	(0.007)	(0.005)	(0.005)	(0.022)	(0.007)	(0.017)	(0.006)
GDP growth, lagged	-0.01	0.00	0.00	-0.01	-0.01*	-0.00	0.00
	(0.005)	(0.002)	(0.002)	(0.012)	(0.003)	(0.007)	(0.002)
Inflation, lagged	-0.35	-0.09+	-0.09+	-1.12	-1.10**	-0.05	-0.22+
	(0.245)	(0.046)	(0.046)	(0.667)	(0.217)	(0.356)	(0.119)
Crisis	-0.11*	-0.06*	-0.02	0.41**	-0.10*	0.06	-0.03
	(0.046)	(0.026)	(0.031)	(0.119)	(0.050)	(0.106)	(0.036)
IV: Affinity				1.13		2.52**	
				(1.004)		(0.908)	
IV: Initial status				0.80**			
				(0.079)			
IV: Distance to EU				-0.09*		-0.09**	
				(0.037)		(0.030)	
Constant	-0.62	-1.37**	-0.42	3.34	0.88		
	(0.640)	(0.354)	(0.702)	(3.021)	(0.593)		
Observations	260	260	260	221	221	220	220
R-squared	0.837		0.288	0.857	0.826	0.420	0.209
Hansen J (p-value)				0.227		0.312	
Under-ident. test (p-value)				0.020		0.000	

Note: Heteroskedasticity controlled standard errors are reported in parentheses for regression (1), (2), (5) and (6); standard errors are clustered at the country level for regression (3) and (4). ** denote significance at the 99%, * at the 95% and + at the 90% level.