The Politics of EU Eastern Enlargement: Evidence from a Heckman Selection Model

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The eastern enlargement of the European Union is a twofold process, in which governments of transition countries decide whether or not to apply for membership and in turn EU members decide whether or not to accept these applicants. The authors argue that the level of democracy and the extent of market reforms together determine the first decision, while the second decision is largely determined by the EU observing the reform process in applicant countries imposed by the *acquis communautaire* conditionality. The natural procedure to test this theory is a Heckman selection model. A Heckman specification with panel probit estimators in both stages is used. The data supports the argument that uncontested reforms signal the policy support of relevant political parties to the EU and increase the likelihood of joining the Union. The authors also test for specification errors and check the robustness of the findings.

Most theoretical accounts of European Union (EU) enlargement to Eastern European countries treat application decisions by transition countries and the EU's selection among these applicants implicitly as unrelated. The political process of enlargement has been almost exclusively analysed from an EU-centric perspective, because most scholars intuitively assumed that the EU was the limiting factor of enlargement. Starting from this assumption, a fundamental debate on the EU's selection criteria has emerged. Frontiers in this debate run essentially along the rationalist–constructivist divide. On the one hand, proponents of rationalist approaches consider economic reasons in the very broad sense as the main driving forces behind EU enlargement. Authors working in this tradition suggest that the EU accepted those transition countries whose membership provided the largest economic gains to the old members. Economic gains result from increased trade relations with newly adopted members, the reduction in poverty migration and the stabilization of property rights in transition countries.[1] On the other hand, constructivist approaches claim that shared beliefs and principles matter most. Frank Schimmelfennig, for instance, argues that EU members supporting enlargement achieve their goal by utilizing the community's traditional pan-European orientation and its liberal values to render the arguments of the enlargement's opponents illegitimate. As a consequence, 'the decision of Western organizations to admit or to begin accession negotiations with an outside state appears to be most systematically related with that state's adoption of democratic norms in domestic politics.'[2]

This article takes issue with both sides of the debate. We argue that the EU's repeated declaration to accept only stable democracies with a market-oriented economic system and

[1] Alberto Alesina, Ignazio Angeloni and Frederico Etro, 'The Political Economy of International Unions' (Cambridge, Mass.: National Bureau of Economic Research Working Paper No. 8645, 2001).

[2] Frank Schimmelfennig, 'Liberal Community and Enlargement: An Event History Analysis', *Journal of European Public Policy*, 9 (2002), 598–626, p. 617.

the clearly stated regulatory conditionality resulted in a self-selection process among transition countries. Thus, while the factors identified in the enlargement literature may explain the self-selection among the transition countries, they do not contribute much to the EU's selection amongst applicant countries.

This holds especially true for the view that democracy was the driving force behind enlargement. Leaders in autocratic regimes were unwilling to apply either for purely domestic reasons or because they at least anticipated little or no chance of success. By contrast, democratic governments (with few exceptions) filed an application to the EU. Due to this self-selection process, applicants varied little with respect to democratic institutions. For this reason, the EU had to rely upon other criteria to distinguish between countries selected for early accession and others.

We argue that the EU based its decision mainly upon an evaluation of potential disturbances in EU decision-making processes – disturbances emerging from newly accepted members. The EU cannot assume that even democratically elected governments in transition countries hold policy preferences consistent with its economic, social and political goals. Once accepted, these countries are prone to delay and complicate the decision-making processes of the EU. To avoid political conflicts between old and new members as much as possible, the EU analysed the economic policy preferences of parties in the transition countries' parliaments and governments.

We further claim that the EU gained information about policy preferences of relevant parties in transition countries from two natural sources. First, the EU evaluated partisan platforms and statements of leading politicians to find signs of 'Euroscepticism'. Secondly and more importantly, the EU carefully observed the legislative deliberations triggered by the implementation of the *acquis communautaire*.

Our theory of the accession logic leads to a different perspective on the EU's enlargement process. We argue that one should distinguish carefully between factors influencing application and factors affecting accession. However, it is also vital to note that these two crucial stages in the enlargement process, the application and the accession stage, are intertwined. The group of countries from which the EU has selected new members has not been randomly determined but is the result of earlier self-selection. To empirically account for the interdependence of decisions, we employ a Heckman Probit Selection model.[3] The results of the analysis support our claim that decisions were logically connected. Expectations about the policy preferences of applicant countries rather than the adoption of democratic norms have influenced the EU's accession decisions.

ECONOMIC GAINS, DEMOCRACY AND EU ENLARGEMENT

The European Union's eastern enlargement has attracted much attention from political scientists and economists, yet little consensus has emerged on what has motivated EU members to accept countries with relatively low per capita income and a fragile industrial basis. For a broad cut through the literature it seems useful to distinguish approaches trying to identify economic gains from enlargement and approaches that mainly perceive enlargement as a quasi-natural, norm-driven political process. Economic approaches

[3] James J. Heckman, 'The Common Structure of Statistical Models of Truncation, Sample Selection, and Limited Dependent Variables and a Simple Estimator for Such Models', *Annals of Economic and Social Measurement*, 5 (1976), 475–92; James J. Heckman, 'Sample Selection Bias as a Specification Error', *Econometrica*, 47 (1979), 153–61.

usually start by justifying the assumption that enlargement has to be Pareto-efficient. EU enlargement must at least be cost-neutral for both insiders and outsiders if it is to become a viable political alternative. Starting from here, scholars see little need to explain why transition countries gain from EU membership. Instead, they seek to rationalize EU members' support of enlargement.

A first general theoretical account of enlargement has been adopted from the broad literature on trade integration and free-trade areas. In a nutshell, the trade theory of enlargement states that EU members gain from enlargement because barriers to trade are removed and markets become more fully integrated.[4] There can be little doubt that economic welfare in EU member countries is likely to rise from enlargement, though markets in transition countries are still relatively unimportant for most EU industries. All ten applicant countries account for less than 5 per cent of the EU's total exports and imports.[5] But still, transition countries' economies currently grow much faster than the EU economies, and these countries provide natural opportunities for EU corporations to increase efficiency by slicing up the product chain.

However, even if there are potential gains from market integration, alternative integration strategies – free-trade agreements in particular – could easily be more advantageous for EU members than the enlargement of the union. Such a free-trade agreement equally guarantees market access for Western corporations to Central and Eastern European markets (and vice versa) without forcing the EU to grant membership rights to transition countries. The trading explanation resembles an argument stating that Roald Amundsen undertook the Antarctica expedition because he liked skiing.[6] Even though this might have been true, easier ways to accomplish this objective surely existed. Thus, the trade integration approach to enlargement fails to take competing political strategies sufficiently into consideration. The limits of the trade theory to enlargement recently gave rise to various complementary explanations. For instance, Dawn Brancati argued that members of the EU gain from enlargement because membership prevents governments in transition countries from expropriating foreign investors.[7] In brief, the argument states that EU membership reduces the political risks faced by foreign direct investors.

Political debates mostly focused on agricultural subsidies as being the main obstacle to enlargement. Since Central and Eastern European countries would certainly gain from the EU's common agricultural policy, current beneficiaries would have to accept a reduction in transfers, assuming that total agricultural subsidies were to remain constant.[8] In this case, possessing a small agricultural sector should be an advantage in gaining acceptance. As

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[4] Patrick Bolton and Gerard Roland, 'The Breakup of Nations: A Political Economy Analysis', *Quarterly Journal of Economics*, 112 (1997), 1057–90; Gerard Roland, 'The Political Economy of Transition', *Journal of Economic Perspectives*, 16 (2002), 29–50.

[5] International Monetary Fund, *Direction of Trade Statistics* (Washington, D.C.: IMF, various years).

[6] Some copyright fees go to Dani Rodrik: 'Saying that trade policy exists because it serves to transfer income to favored groups is a bit like saying Sir Edmund Hillary climbed Mt. Everest because he wanted to get some mountain air' (Dani Rodrik, 'Political Economy of Trade Policy', in Gene Grossman and Kenneth Rogoff, eds, *Handbook of International Economics*, Vol. 3 (Amsterdam: Elsevier, 1995), pp. 1457–94).

[7] Dawn Brancati, 'The Wisdom of Widening: The Enlargement of the EU to Central and Eastern Europe' (unpublished paper, Columbia University, Department of Political Science, 1999); Allessandra Casella and J. S. Feinstein, 'Public Goods in Trade: On the Formation of Markets and Jurisdictions', *International Economic Review*, 43 (2002), 437–62.

[8] Walter Mattli, *The Logic of Regional Integration: Europe and Beyond* (Cambridge: Cambridge University Press, 1999), p. 99.

closer inspection of the agricultural size of applicant countries reveals, Poland would have been the main candidate for exclusion if the EU selected new members solely upon consideration of the agricultural sector. Thus, while having a small agricultural sector might serve as an advantage in gaining access to the EU, having a large agricultural sector is not an exclusion criterion.

In contrast to economic theories of enlargement, other scholars have incorporated political factors such as geopolitics and shared norms. In Gerard Roland's view, for instance, former satellite countries of the Soviet Union find it essential to belong to the Western world.[9] Schimmelfennig claims that the single most important reason for accession stems from jointly shared values and norms.[10] In his view, the European Union is a liberal international community and admits 'all countries that share its collective identity and adhere to its constitutive norms'.[11] Yet neither accounts for the dynamics of enlargement processes. Both perceive enlargement as a one-shot game, in which countries that belong to the EU become members for historical, geographical, cultural and political reasons.

To sum up, the existing literature has not adequately captured the fact that the enlargement process consists of two separate, albeit related, choices: the transition countries' decision to apply for EU membership and the EU's decision to accept applicants. They therefore fail to explain the apparent diplomatic tensions along with the fact that only ten of twenty-four 'European' transition countries applied and only eight out of ten applicants became members in 2004. Ignoring the way in which these two decisions influence each other could lead to wrong inferences and to biased empirical analyses. In the next section, we intertwine the existing arguments and highlight how economic as well as political factors interact, using a unified framework to distinguish carefully between application and accession.

THE LOGIC OF EU APPLICATION AND ACCESSION

This section develops a unified framework of application and accession.[12] In the first step, the application decision, we offer an explanation based on the idea that opportunistic governments maximize political support from voters and interest groups, whereas both groups favour different levels of market distortions. Under this condition, the emerging equilibrium level of market distortions affects a country's decision to apply for EU membership, because the *acquis communautaire* formulates a minimum level of regulatory quality, below which the EU will not accept applicant countries. As a consequence, the higher the equilibrium level of market distortions, the more costly it becomes for governments in transition countries to carry out reforms that aim at satisfying the EU's requirements.[13] Hence, the lower a country's equilibrium level of regulatory quality, the

[9] Roland, 'The Political Economy of Transition'.

[10] Frank Schimmelfennig, 'The Double Puzzle of EU Enlargement: Liberal Norms, Rhetorical Action, and the Decision to Expand to the East', *Arena Working Papers*, 99/15 (1999); Frank Schimmelfennig, 'The Community Trap: Liberal Norms, Rhetorical Action, and the Eastern Enlargement of the European Union', *International Organization*, 55 (2001), 47–80; Schimmelfennig, 'Liberal Community and Enlargement'.

[11] Schimmelfennig, 'The Double Puzzle of EU Enlargement'.

[12] This also means that we do not intend to draft an alternative to the theories discussed above. In other words: economic and political gains explain the incentive to enlarge the EU. Starting from there, we aim at formulating a more convincing explanation; one that explicitly integrates application and accession as contingent choices in a coherent framework.

[13] Walter Mattli and Thomas Plümper, 'The Internal Value of External Options: How the EU Shapes the Scope of Regulatory Reforms in Transition Countries', *European Union Politics*, 5 (2004), 307–30.

less likely it is to apply for EU membership. The second step models the EU's choice among self-selected applicants. We argue that the *acquis communautaire* reforms imposed upon applicants allow EU member states to identify countries that are likely to produce high political costs once accepted as new members.

Application Stage

Following the basic tenor of the literature, transition countries have an inherent incentive to apply for EU membership.[14] Contrary to this view, some of these governments were reluctant to apply for membership rights in the EU. Starting from this puzzling observation, Mattli and Plümper argue that governments in transition countries that abstain from applying for EU membership minimize political costs that would occur as a result of implementing the required *acquis communautaire* reforms.[15]

In this model, political leaders calculate their individual political benefits and losses resulting from pro-integration reforms. They do not assess the impact of EU membership on the wealth of their nation. An EU application affects the government's political support in two ways. On the one hand, a majority of voters expects to profit from EU transfers along with welfare gains from required market reforms and EU membership. On the other hand, the EU requires a severe reduction in market distortions. Thus, special interest groups that profit from these adverse institutions and policies oppose EU membership which is conditioned upon *acquis* conditionality. Market-building reforms which seem promising for economic growth and prosperity would directly impair rent-seeking activity by potentially powerful interest groups. Serving these diverging interests, the government's choice of the level of market distortions hinges upon the relative importance of the two groups within the society. While leaders in democratic regimes primarily have to rely on voters' support, the political survival of authoritarian leaders mainly results from the support of the military and economic elite.[16] The greater the electoral accountability of a government towards the voter, the more weight an incumbent places on voters' preferences and the less influential special interest groups are. Democracies are therefore less prone to implement distorting public policies.

This standard political-economic setting has important implications for the decision to apply for EU membership. The EU stated at the onset of the enlargement process that it would accept only stable democracies. The rule of law, the existence of a functioning market economy, the capacity to cope with competitive pressures and the ability to take on the obligations of membership were all considered indispensable (European Council meeting in Copenhagen in 1993).

[14] Schimmelfennig, 'The Double Puzzle of EU Enlargement'; Schimmelfennig, 'The Community Trap'; Roland, 'The Political Economy of Transition'.

[15] Walter Mattli and Thomas Plümper, 'The Demand-Side Politics of EU Enlargement: Democracy and the Application for EU Membership', *Journal of European Public Policy*, 9 (2002), 550–74. Their model is a simple variant of the common-agency model proposed by Bernheim and Whinston and the version suggested by Grossman and Helpman (Douglas Bernheim, (Bezalel Pheleg) and Michael Whinston, 'Coalition-Proof Nash Equilibria I and II', *Journal of Economic Theory*, 42 (1987), 1–29; Gene M. Grossman and Elhanan Helpman, *Interest Groups and Trade Policy* (Princeton, N.J.: Princeton University Press, 2002).

[16] Bruce Bueno de Mesquita and Randolph Siverson, 'War and the Survival of Political Leaders: A Comparative Study of Regime Types and Political Accountability', *American Political Science Review*, 89 (1995), 841–55; Thomas Plümper and Christian W. Martin, 'Democracy, Government Spending, and Economic Growth: A Political-Economic Explanation of the Barro Effect', *Public Choice*, 117 (2003), 27–50.

The Copenhagen criteria have two consequences for transition states. First, there is little if any chance of becoming an EU member without democratization. Secondly, implementing market reform is a necessary prerequisite of membership. A commitment to push towards necessary regulatory reforms would compel interest groups to withdraw their support. By applying for EU membership, autocratic incumbents deliberately agree upon reforms, which are likely to remove them from positions of power. Democratic governments also lose interest groups' support, but the gains in voter support, resulting from EU membership, more easily compensate for losses in interest-group support.

Thus, a country's decision to apply for membership and to push forward regulatory reforms crucially depends on the quality of its regulation and its regime type. Since both variables influence the perception of the likelihood that the EU will accept an application, the group of applicant countries is clearly not determined by random selection. Leaders in autocratic transition countries not only knew of the EU conditionality *vis-à-vis* applicants in advance, but have also shied away from taking action against the interest of protectionist and anti-liberal special interest groups.

Accession Stage

Public choice theories suggest that political unions accept new members if the arising gains from enlargement exceed the costs. Most importantly, the size of the internal market increases, thus providing old member states with additional gains from trade and capital market integration.[17] Moreover, potential negative externalities from economic disturbances in transition countries – especially negative externalities of poverty migration and destabilized political systems – decline because these countries are likely to profit from free access to the internal market. At least in the long run, enlargement leads to more political stability and more peaceful relations on the European continent.

Politicians from EU member states in favour of enlargement have always emphasized these economic and political gains. Shortly after the Copenhagen Summit in 1993, German Foreign Minister Klaus Kinkel announced a comprehensive EU *Ostpolitik*. He stressed that in order to make it as effective as possible, an *Ostpolitik* should be limited to Hungary, Poland, Slovenia, the Czech Republic, Romania and Bulgaria, but should also include the Ukraine, Russia and other states to the east of the EU into the enlargement process.[18] However, not all EU members agreed. In the mid-1990s, a debate on enlargement unfolded. Sceptical voices in this debate supported a gradual and more selective approach. They pleaded that only well-prepared countries should be accepted. In a moderate form, this approach became official EU policy. Once the EU members agreed upon being selective in granting membership rights to applicants, the question emerged what criteria should be applied.

We argue that the EU selected new members primarily upon evaluation of the parties in the political arena. This was necessary because the more different the policy preferences of applicants are, relative to those of current members, the more complicated decision-making procedures become after having accepted new members. Along with considering the potential economic and political gains from enlargement, members also asked what ramifications enlargement would have for the effectiveness and efficiency of the EU's decision-making processes.

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[17] Alesina, Angeloni and Etro, 'The Political Economy of International Unions'.
[18] Mattli and Plümper, 'The Demand-Side Politics of EU Enlargement', p. 550.

We therefore start by assuming that enlargement reduces the leverage of at least some old members on political decision making in the EU.[19] The impact of new members on the decision-making processes of the EU is highest under a unanimity rule. The EU has reacted to this by reducing the number of issues decided by consensus. In addition, new members *ceteris paribus* exert a larger influence on EU decisions (a) the larger the heterogeneity of preferences among the old members, (b) the more contiguous the preferences of new members, and (c) the more the mean positions of old and new members diverge. To make the emergence of option (b) and option (c) less likely, old members have an incentive not to accept countries with volatile and/or deviant policy preferences.

In trying to identify these countries, however, EU members find it difficult to evaluate prospective policy preferences of potential new members, for two reasons. First, political parties in transition countries come and go. In Poland, to mention an extreme case, seventeen parties held cabinet shares between 1990 and 1998. Secondly, these parties frequently and radically change their names or the content of their manifestos. They were (and still are) in the word's truest sense, opportunistic, that is, lacking a stable ideological basis.

We therefore posit that even if EU members may directly observe the level of democracy and the revealed policy preferences of governments in transition countries, they still have problems detecting future policy preferences of currently influential parties and find it even harder to identify parties that may gain political leverage. The EU cannot easily rule out that transition countries have not applied, in which parties with interventionist or even market-hostile preferences shape policies. Such countries might – if they became members – increase tensions in the prospective EU decision-making processes. A country would almost certainly delay or impede EU decision making if an anti-integrationist party came into power or an anti-integrationist opposition party obtained veto-power. In the case of a new EU member holding relatively radical positions in all policy dimensions, the use of log-rolling strategies becomes increasingly difficult and potentially more expensive. To avoid these complications, current EU members are inclined to accept only those countries whose governments hold policy preferences similar to those typical in EU countries.

Fortunately for EU members, the implementation process of *acquis communautaire* reforms offers a source of information about the policy preferences of parties in transition countries that can easily be evaluated. The parliamentary reform debates and the duration of decision-making processes reveal the true policy preferences of the participating parties. If *acquis* reforms lead to controversies in the parliament of an applicant country, that country then is likely to disturb the smooth agreement on common European standards and policies.[20]

What does this mean for the selection process? Our theory suggests that democracy matters only in the first stage, where political leaders in transition countries decide whether to apply or not. In the second stage, the EU primarily uses information on the revealed preferences of political parties. We expect that the strength of parties hostile to the EU and the capability of these countries to implement *acquis communautaire* reforms have the greatest influence on EU's accession decision.

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[19] Kjell Hausken and Matthias Mohr, 'The Value of a Player in *N*-Person Games', *Social Choice and Welfare*, 18 (2001), 465–83.

[20] In cases where parliamentary parties sought to co-ordinate their position as to increase the likelihood of EU admission, the resulting 'grand coalition' was short-lived, as in Hungary in 2000, where the coalition failed shortly after its establishment.

We test this theory in the next section. In exploiting the cross-sectional and the time-series variance in the timing of application and accession, our empirical model highlights the contrast between Schimmelfennig's norm-driven approach and our interest-based model. While Schimmelfennig claims an unconditional effect of democracy on the EU's decision at the second stage, our theory suggests a strong positive influence of democracy at the application stage, but that it has either no effect or only a conditional effect on accession. Hence, our causal mechanism is supported if and only if we demonstrate a direct impact of the number of closed *acquis* chapters on accession without democracy completely determining our main variable.

ANALYSIS OF A HECKMAN SELECTION MODEL

In the last section we described EU enlargement as an inseparable process of self-selection and EU accession decision. Due to the self-selective character of applications, severe estimation problems occur that have not yet been adequately addressed in the literature. To deal with these estimation problems, we employ a Heckman selection model. This procedure not only captures our theory appropriately, it is also more efficient and robust than competing procedures and – most importantly – the only consistent estimator given the truncated distribution of the sample in the second stage. The properties of the estimator will be described in detail in the discussion later on and we formally derive the Heckman estimator in the Appendix.

The statistical analysis includes all European transition countries in the first step (applicants and non-applicants).[21] In the second stage, we exclude non-applicant countries from the dataset leading to a sample population of ten countries.[22] The period under observation spans from 1990 to 2001 for applicant and non-applicant countries. This leaves us with 112 observations (country-years) in the first and seventy observations in the second stage.[23]

First Stage Variables

Dependent variable. In the first stage, the dependent variable indicates whether or not a state applies for membership in the European Union. It is operationally defined as 1 if a state applies and 0 otherwise.

Independent variables. The European Bank for Reconstruction and Development, from which we took the information on regulations, measures regulatory quality along nine dimensions: large-scale privatization, small-scale privatization, enterprise restructuring, price liberalization, trade and foreign exchange system, competition policy, banking reform and interest rate liberalization, securities markets and non-bank financial

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[21] Countries in the first step are Albania, Belarus, Bulgaria, Croatia, the Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, Slovakia, Slovenia and Ukraine. Countries at war and Central Asian countries are excluded.

[22] Countries of the second step are the Czech Republic, Estonia, Hungary, Poland, Slovenia, Latvia, Lithuania, Slovakia, Bulgaria and Romania.

[23] Note that considering country-years as the level of analysis in the second stage generates correlated errors because the EU concluded the accession negotiations with eight out of ten applicants from Central and East European countries simultaneously in December 2002 rather than accepting applicants once they passed a certain threshold level. As a consequence, the standard errors we obtain in the second stage estimation of the Heckman model are probably too large. We investigate and discuss the severity of this error in the robustness tests.

institutions, and the extensiveness of commercial law. The dimensions range from 1 to 4, where 1 denotes very low regulatory quality and 4 denotes the quality typical of advanced industrial economies.[24] Since the dimensions are highly inter-correlated, we compute an integrated score by taking the mean of these nine dimensions.[25] The lower the quality of regulation within a country, the less likely is a country to apply for membership in the EU. The widely used Polity IV standard serves as a proxy for the level of democracy. We have normalized the 'Polity' variable so that 0 denotes completely autocratic systems while 10 refers to fully democratic countries.

Although there is no theoretical necessity to include additional independent variables, we nevertheless control for several more exogenous effects for a simple reason. Only the inclusion of ostensibly unnecessary controls allows us to test the robustness of the estimated coefficients. To conduct such a test, we add variables other scholars have found to be correlated with the likelihood of reforms. The presidential power variable measures the dependence of the government on presidential intervention. Thus, 1 means the government is completely independent of the president (or no president exists) and 4 means the president has almost complete control over policies and the composition of the government.[26] We further include general government final consumption expenditure (per cent of gross domestic product (GDP)) and exports of goods and services (per cent of GDP).[27]

Second Stage Variables

Dependent variable. All theories dealing with enlargement make predictions on the country sample to which the EU grants membership rights. Rather than analysing the formal enlargement that took place in May 2004, we analyse the Copenhagen decision, in which the Commission selected eight transition countries for early accession. The variable takes the value 1 if a country has been selected for early accession, 0 otherwise. The data used to generate this variable can be obtained from the European Union homepage for enlargement.

Independent variables. In the second stage we focus on the effect of political variables providing EU members with information on the political preferences of parties in the applicants' parliaments. Specifically, we evaluate the effect of the number of closed chapters and of the existence of Eurosceptic parties in parliament and government on the EU's accession decision. Since applicants have to negotiate and close each of the thirty chapters of the *acquis communautaire*, the chapter variable comprises scores from 0 to 30. Data is derived from the annual reports of the European Commission revealing the exact time of closure of the single chapters.[28]

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[24] For a detailed coding scheme, see European Bank for Reconstruction, *Transition Report: Economic Transition in Central and Eastern Europe, the Baltic States and the CIS* (London: EBRD, various years, 1990–2001).

[25] Since the correlation between all the different types of regulation is extremely high, taking the mean does not omit much of the difference between countries. A factor analysis also supports that the variance over all dimensions can be reduced to a single proxy (factor).

[26] This variable was originally coded by Mattli and Plümper and is available upon request as is the whole dataset (Mattli and Plümper, 'The Demand-Side Politics of EU Enlargement').

[27] All economic control variables are from the World Bank's Development Indicators.

[28] The EU publishes regular reports on the progress the candidate countries have made, based on the single chapters; see http://europa.eu.int/comm/enlargement/negotiations/chapters/index.htm.

The opposition variables measure the strength of political parties opposing EU membership. The first variable counts the percentages of all votes Eurosceptic parties received based on previous election results. A second variable accounts for whether a Eurosceptic party is part of an executive coalition. Our theory holds that the participation of Eurosceptic parties in a governmental coalition slows down the reform process. We code the variable 1, if a Eurosceptic party participates in government, 0 if not. Information used for coding the strength of Eurosceptic parties is taken from Taggert and Szczerbiak, 'Zarate's Political Collection', and from 'Parties and Elections in Europe'.[29]

In the second stage, we control for the total size of the agricultural sector – a good proxy for the expected redistribution of agricultural subsidies once applicants are accepted.[30] In addition, we estimate the influence of the level of democracy at this stage.

Results

Mirroring our theoretical model, the empirical analysis follows a two-stage process. In the first stage, we endogenize transition countries' decision to apply for EU membership. The estimated probability of non-application is then used as a regressor in the second stage analysing the likelihood that the EU short-lists an applicant as an early accession candidate.

The selection character of the enlargement process gives rise to serious but nevertheless solvable estimation problems. Simply excluding non-applicant countries would cause a severe estimation bias that might lead to wrong inferences.[31] To deal with these problems, we run a dynamic Heckman selection model, in which the estimated mean function in the second stage is conditioned on the selection process of the first stage.[32] The econometric logic behind the Heckman model nicely fits our theoretical problem. It reflects well the self-selection process in the first stage and also assumes that the probability of a country's non-application bears an influence on the likelihood of accession in the second stage.

Since our dependent variable in the second stage is binary, a standard Heckman model would be inconsistent and biased. We therefore employ a modified Heckman selection model. As in the original approach, it consists of two stages. While the original Heckman selection model employs a probit estimator in the selection equation and an ordinary least squares estimator in the second stage, we run a probit estimator in both stages. In the first stage, we analyse the universe of cases (all possible applicant countries for EU membership); in the second stage we consider a self-selected sample.

As already mentioned above, the first stage of the Heckman model tests the decision for or against an EU membership application. In the second stage, we regress the likelihood of closing accession negotiations on the estimated probability of non-application and the

[29] Paul Taggart and Aleks Szczerbiak, 'The Party Politics of Euroscepticism in EU Member and Candidate States' (Brighton: Sussex European Institute Working Paper, No. 51, 2002). See also http://www.terra.es/personal2/monolith/home.htm; http://www.parties-and-elections.de/europe.html.

[30] Agricultural subsidies to new members will probably be phased-in over a relatively long period of time. Since the conditions are identical for all new members, the total size of agriculture measures the relative stress new members put on the EU's common agricultural policy.

[31] Heckman, 'The Common Structure of Statistical Models'.

[32] Heckman, 'Sample Selection Bias as a Specification Error'.

other variables of interest. To control for potential panel heteroscedasticity across countries, the robust Huber–White sandwich estimator is employed.

The results of the Heckman panel probit selection model are presented in Table 1. While Model 1 includes only the variables central to our theoretical argument, Models 2–5 add variables that other scholars have identified as main driving forces behind either application or accession or both. We refer to Model 3 as the 'full model', from which the predicted probabilities of EU application and closing accession negotiations will be computed later. Model 4 adds a (significant) time trend to the model, which does not correlate with the substantive exogenous variables and therefore does not significantly affect the variables of theoretical interest. Model 5 adds democracy to the second level's independent variables to examine whether democracy influences the EU's accession decision beyond stage 1 as Schimmelfennig's theory suggests.

Table 1 shows that even our baseline model (Model 1) fits the data reasonably well. If science aims to identify parsimonious models with large explanatory power, the inclusion of other factors into the theory is not warranted.

The results presented in Table 1 also demonstrate the superiority of a Heckman selection model over competing specifications. Both the likelihood ratio test (first stage model) and the Wald test (whole model) are highly significant, which allows for a rejection of the null-hypothesis that all coefficients jointly equal zero. Before taking a closer look at the estimated results, we also statistically test the advantage of the Heckman panel probit selection model over two independent probit models. Only if the estimation errors in the first stage and the errors of the second stage are correlated, does the Heckman procedure become the model of choice. If ρ differs significantly from 0 (theoretically, it should be negative), a Heckman model is the only efficient and unbiased estimator in light of our theoretical model. We use a likelihood ratio test to examine whether ρ indeed differs significantly from 0. The test reveals a significant negative ρ for all models, except for Model 5, which suffers from misspecification due to the inclusion of democracy in both stages. The estimation of two independent probit (or logit) models would have caused severe bias and rendered the coefficient estimates of the second stage inconsistent.

The estimated coefficients in both stages back our theoretical claims. The 'signs' of all relevant coefficients point into the theoretically expected direction. In the first stage, the level of regulatory quality and democracy significantly enhance the likelihood of an EU application, thus lending support to the theory developed by Mattli and Plümper, as well as the theory suggested by Schimmelfennig.[33] These results are robust throughout different model specifications. Both variables together clearly have the largest impact on the application decision. The control variables presidential power, exports and government consumption influence the likelihood of an application in the predicted direction, although only the estimated coefficient of government consumption turns out to be significant. Accordingly, countries with a larger public sector are less likely to apply for EU membership. The positive and significant coefficient of the trend variable included in Model 4 indicates that the likelihood for application increases over time. Since, however, the variable does not substantially influence the theoretically interesting variables, the inclusion of this variable is not required.

We now turn to a discussion of the results of the second stage, which allows us to discriminate better between the competing theories. Again, our baseline model

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[33] Mattli and Plümper, 'The Demand-Side Politics of EU Enlargement'; Schimmelfennig, 'Liberal Community and Enlargement'.

TABLE 1   *Heckman Panel Probit Selection Model for the Likelihood of EU Admission†*

Variables	Model 1 baseline model	Model 2	Model 3 full model	Model 4	Model 5
Second stage: accession negotiations					
Chapter	0.128 (0.042)***	0.124 (0.041)***	0.256 (0.077)***	0.275 (0.084)***	0.313 (0.097)***
Power of Eurosceptic parties			−0.004 (0.001)***	−0.005 (0.009)	0.009 (0.012)
Governmental participation of Eurosceptic parties	−0.599 (0.254)**	−0.483 (0.225)**			
Agriculture (total expenditure in bn. US$)			−0.505 (0.113)***	−0.561 (0.209)***	−0.363 (0.221)
Level of democracy					−0.135 (0.084)
ρ Corr $(\varepsilon_{it}, \upsilon_{it})$	−1***	−1***	−1***	−0.999***	−0.426
atanh ρ (est.)	−12.844	−13.477	−14.930	−7.475	−0.401
LR test of indep. $[p > \chi^2]$	29.15 [0.0000]	25.28 [0.0000]	9.80 [0.0017]	10.80 [0.0010]	0.18 [0.6752]
First stage: EU application					
Regulatory quality	1.975 (0.381)***	2.039 (0.351)***	2.223 (0.357)***	1.803 (0.479)***	2.325 (0.421)***
Level of democracy	0.444 (0.152)***	0.404 (0.125)***	0.442 (0.131)***	0.502 (0.207)**	0.372 (0.192)**
Presidential power		−0.245 (0.185)	−0.303 (0.250)	−0.382 (0.294)	−0.365 (0.272)
Exports of goods and services (% of GDP)		0.004 (0.005)	0.003 (0.010)	0.011 (0.013)	0.009 (0.013)
Government consumption (% of GDP)		−0.046 (0.021)**	−0.070 (0.027)***	−0.086 (0.049)*	−0.083 (0.047)*
Time trend				0.205 (0.076)***	
Intercept	−9.564 (1.456)***	−8.080 (1.317)***	−8.156 (1.719)***	−8.943 (2.236)***	−7.627 (2.108)***
N (Censored N)	182 (70)	171 (70)	169 (68)	168 (68)	169 (68)
Wald χ^2 $[p > \chi^2]$ whole model	12.47 [0.0020]	11.77 [0.0028]	106744.90 [0.0000]	12.80 [0.0051]	10.69 [0.0303]
LR χ^2 $[p > \chi^2]$ 1st stage	147.75 [0.0000]	144.51 [0.0000]	140.90 [0.0000]	148.19 [0.000]	140.90 [0.0000]
Pseudo R^2 1st stage	0.609	0.625	0.619	0.654	0.619

†The displayed Heckman probit results are not replicable with STATA 7. In the left–right (LR) test of independence equations, the null hypothesis is that $\rho = 0$ $[p > \chi^2]$.
*Significant for $p < 0.1$; **significant for $p < 0.05$; ***significant for $p < 0.01$. Estimated standard errors are shown in parentheses. All exogenous variables in both stages are one year lagged.

demonstrates that our theory provides a good parsimonious explanation for the EU's application and accession process. Adding variables does not improve our model significantly.

The variables serving as short-hand information for the political preferences of relevant political actors largely affect the decision of EU insiders to select an applicant for early admission. While the likelihood of acceptance rises with the number of closed chapters, the power of Eurosceptic parties within the political system negatively co-varies with the accession probability of an applicant country. However, the significance of the latter variable crucially depends on the operationalization. The EU seems to accept applicants regardless of Eurosceptic parties in parliament, but remains reluctant to accept countries where adverse political interests are represented in government.

We also found evidence in favour of the 'agriculture matters' theory. At least, the absolute size of the agricultural sector seems to reduce the likelihood of accession. However, this variable is significant only if we exclude the level of democracy. Controlling the impact of democracy along with the size of the agricultural sector renders both coefficients insignificant. For now, we leave this result without a broader discussion. However, we return to this issue in the next section, where we examine the potential for multicollinearity and endogeneity.

For the rationalist vs. constructivist debate on enlargement it seems to be most important that the level of democracy has no impact on accession beyond its influence through the non-application hazard, which becomes insignificant once we control for the level of democracy in the second stage. We interpret this result as an indicator for a misspecification of Model 5. Democracy matters for enlargement through its impact on application and should be considered as an independent factor affecting accession. Therefore, our estimation casts doubts on Schimmelfennig's claim that democracy was the most important factor driving enlargement. At any rate, the enlargement process is less simple than Schimmelfennig suggests. Thus, the absence of democracy provokes a negative self-selection of transition countries, but democracy appears not to be important for the EU's selection of countries that became members in 2004.

Until now we have discussed only the sign of the estimated coefficients. Now we turn to analysing the effect of the size of all the exogenous variables to establish whether, for instance, regulatory quality or democracy have the greater impact on the likelihood of application. Since the coefficients estimated by probit regressions cannot be interpreted straightforwardly, we calculate the conditional effects of the most interesting variables on the probability of a country's application for EU membership (Table 2) and the completion of accession negotiations (Table 3). The computations of these conditional effects are based on the coefficients of the full model (Model 3) in Table 1. Taking Model 1 as a reference would not change our results substantially. In the first stage we focus mainly on the effects of regulatory quality and the level of democracy respectively, holding all other exogenous variables constant at various levels.

As Table 2 displays, the likelihood of an EU application depends mainly on the regulatory quality within the applicant country. Unless a country combines an almost perfect regulatory quality with extremely unfavourable institutional conditions, it is likely to file an application. A country with fairly advantageous institutional conditions would apply only if the level of regulatory quality was not below average. Specifically, countries with a high level of democracy, low presidential power, low government consumption and a high level of exports apply for membership only after achieving at least a median level of regulatory quality. Median levels of all other variables require high

TABLE 2   *Predicted Probabilities (in Percentages) of a Country's EU Application for Different Values of the Exogenous Variables (Stage 1)*

	Other exogenous variables	Worst sample value	25% sample percentile	Sample median	75% sample percentile	Best sample value
Regulatory quality						
Worst sample value	1	0.00* (−9.226)	0.00 (−5.227)	0.00 (−4.291)	0.04 (−3.355)	2.81 (−1.914)
25% sample percentile	1.67	0.00 (−7.731)	0.01 (−3.732)	0.26 (−2.796)	3.14 (−1.860)	33.27 (−0.419)
Sample median	2.59	0.01 (−5.677)	4.65 (−1.678)	22.96 (−0.743)	57.53 (0.194)	94.84 (1.635)
75% sample percentile	3.14	0.02 (−4.450)	32.64 (−0.451)	68.44 (0.485)	92.22 (1.421)	99.79 (2.862)
Best sample value	3.73	0.13 (−3.133)	80.78 (0.866)	96.41 (1.802)	99.69 (2.738)	99.99 (4.179)
Level of democracy						
Worst sample value	0	0.00* (−9.226)	0.00 (−6.987)	0.01 (−4.432)	0.65 (−2.485)	43.60 (−0.161)
25% sample percentile	7.5	0.00 (−5.971)	0.01 (−3.732)	11.97 (−1.177)	77.94 (0.770)	99.90 (3.094)
Sample median	8.5	0.00 (−5.537)	0.05 (−3.298)	22.96 (−0.743)	88.57 (1.204)	99.98 (3.528)
75% sample percentile	9	0.00 (−5.32)	0.10 (−3.081)	29.95 (−0.526)	92.22 (1.421)	99.99 (3.745)
Best sample value	10	0.01 (−4.886)	0.40 (−2.647)	46.33 (−0.092)	96.82 (1.855)	99.99 (4.179)

*Note that we have displayed probabilities (in percentages), whereas in round brackets one can find the actual predicted values of the latent dependent variable (EUAPP) ranging from − ∞ to ∞ (normal distribution). A predicted value of 0 equals a probability of 50 per cent.

regulatory quality to ensure a probability of an application for EU membership that is higher than 50 per cent.

The second crucial variable at the first stage is the level of democracy. High levels of democracy clearly increase the likelihood of application, if and only if the other variables take values above their sample median. A country that had not implemented most market-building measures would not apply for EU membership even if it is a stable democracy. Thus, while regulatory quality is an (almost) sufficient condition, democracy is not.

However, regulatory quality is not independent of the level of democracy. The appropriate interpretation of our results therefore distinguishes between a direct and an indirect influence of democracy on the likelihood of EU application. If we consider both linkages, democracy exerts a relevant influence on application.

Table 3 displays the predicted probabilities for the completion of accession negotiations in the second stage. We compute the estimated conditional effect of the theoretically most

TABLE 3   *Predicted Probabilities (in Percentages) of Accession Negotiations for Different Values of the Exogenous Variables (Stage 2)*

Number of closed chapters	Other exogenous variables	Worst sample value	25% sample percentile	Sample median	75% sample percentile	Best sample value
0		0.00*	0.00	2.87	26.43	45.39
		(-48.001)	(-4.220)	(-1.900)	(-0.627)	(-0.116)
7		0.00	0.71	44.87	87.33	95.20
		(-46.230)	(-2.449)	(-0.129)	(1.144)	(1.655)
14		0.00	24.88	94.97	99.82	99.97
		(-44.459)	(-0.678)	(1.642)	(2.915)	(3.426)
21		0.00	86.21	99.97	99.99	99.99
		(-42.688)	(1.093)	(3.413)	(4.686)	(5.197)
28		0.00	99.79	99.99	99.99	99.99
		(-40.917)	(2.864)	(5.184)	(6.457)	(6.968)

*Note that we have displayed probabilities (in percentages), whereby in round brackets one can find the actual predicted values of the latent dependent variable (accession negotiations) ranging from $-\infty$ to ∞ (normal distribution). A predicted value of 0 equals a probability of 50 per cent.

interesting variable, the number of closed chapters, given the different levels of all other exogenous variables controlled for in the second stage (power of Eurosceptic parties, total agricultural expenditures and the non-selection hazard-rate for application in the first stage). We only consider the range of independent variables of applicant countries to calculate the conditional probabilities of accession.

As Table 3 demonstrates, the closure of *acquis communautaire* chapters cannot be replaced by other variables influencing accession. Indeed, the closure of chapters signals that an applicant country will most likely not impede the smooth operation of future decision-making processes within the EU. Moreover, the power of Eurosceptic parties also exerts an impact on the accession decision of EU members. Accordingly, the failure to close all chapters never jeopardized the accession of Hungary and the Czech Republic, while Slovakia would probably not have been accepted for early membership if the country had not performed well in implementing *acquis* reforms.

Summing up, the empirical test evidenced the crucial importance of the *acquis communautaire* reforms in the EU's selection process – supporting our hypothesis that the EU selected candidates on an evaluation of political preferences represented in the applicants' political arena. Concerned about the impact of potential new members on decision making, current EU countries designate conditional membership to transition states in order to gain the necessary information about the distribution of policy preferences in applicant countries. The next section tests the robustness of our model in various perspectives.

TESTS OF ROBUSTNESS, CORRELATED ERRORS, MULTICOLLINEARITY AND ENDOGENEITY

In the preceding section, we have discussed the results from a Heckman estimation of our baseline model. In addition, we have demonstrated the robustness of our results to the

inclusion of control variables that other scholars have identified as important influences on the likelihood of application or accession.

However, other potential limitations to the validity of our estimates may exist. In this section, we use more advanced econometric tools to test the robustness of our model to potential biases that might have emerged from the particularities of the Heckman model we have estimated in the previous section. More specifically, we discuss the potential for and the impact of correlated errors, multicollinearity and the impact of endogeneity between the exogenous variables of our richer models. We address these issues in turn.

Correlated Errors

A central issue is the question whether our results are spurious, because both the likelihood of accession and the number of closed chapters increase over time.[34] At least in principle, our estimates could mirror this parallel development rather than indicate causality. To check up on this, we delete the time-dimensional information of our accession estimation and run a pure cross-section of the accession stage for the decision year. This estimation suffers from low degrees of freedom. Partly as a consequence, even our relatively 'empty' baseline model (Table 1, Model 1) perfectly predicts the actual outcome if we employ a probit estimator. Thus, we increase the variance of the dependent variable by regressing the estimated probabilities of accession from Model 5 on the explanatory variables. A cross-sectional ordinary least squares (OLS) regression reveals that only the number of chapters is positively and significantly related to the estimated probability of accession. All other variables are correctly signed but insignificant.[35] This test suggests that we do not derive wrong inferences from the parallel development of two unrelated time-series. Our model makes correct predictions in the cross-section as well.

A related question asks whether our results are likely to be biased, because countries might have qualified for EU membership before the EU filed its final accession decision. Specifically, it is likely that countries such as Hungary and the Czech Republic would have been accepted if the EU had selected new members as early as 1999 or perhaps even in 1998. As a consequence, our model produces correlated and overestimated errors for countries whose governments were quicker at implementing *acquis* reforms than the EU was at accepting new members. Nevertheless, the bias is not likely to be large, since we use a maximum likelihood estimator. This procedure does not minimize errors (as does OLS), but computes coefficients that maximize the number of 'right' predictions as well as maximizing the likelihood that the predicted probabilities of accession are normally distributed.

Unfortunately, there is no straightforward econometric way to deal with the problem of serially correlated errors in probit estimates. We can, however, evaluate the magnitude of the bias caused by correlated errors. In doing so, we can easily analyse the extent to which correlated errors have an impact on the credibility of our results.

To examine the bias, we estimate the same models as in Table 1 with a slightly modified dependent variable. Rather than regressing the Copenhagen decision on the battery of right-hand-side variables, we regress the predicted date at which an applicant country passed the threshold for EU accession on the very same variables. To find the predicted date we use Model 5 of Table 1 and predict how long it would take for enough chapters

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[34] We thank an anonymous referee for bringing this issue to our attention.
[35] Estimation results will be supplied upon request.

to be closed for each of the ten countries to meet the criteria for accession formally. What is the purpose of this procedure? While the model specification of Table 1 reports potentially upward-biased errors, the adjusted regressions are based on the lowest possible standard errors, given that we hold the estimation model constant. Lowest possible standard errors (which are likely to be downward-biased) emerge here as a by-product of the maximum likelihood estimator minimizing the likelihood function along with maximizing the number of correct predictions. Since the procedure eliminates errors due to the fact that the EU files its decision later than some applicants have qualified for accession, standard errors must be smaller. This procedure should give downward-biased standard errors while the errors reported in Table 1 are likely to be upward-biased. Accordingly, the 'true' standard errors fall between those estimated in the two models. We find that the results differ only slightly from those reported in Table 1. Neither the estimated standard errors nor the coefficients deviate much due to the change in the operationalization of the dependent variable. Perhaps most importantly, the confidence intervals of all variables overlap. Thus, all interpretations remain in order.

Tests of Multicollinearity and Endogeneity

Up to this point we found no evidence that our results have to be interpreted cautiously. In this subsection, we shed some light on the question of whether our exogenous variables included into the second stage are multicollinear or endogenous to the first stage variables. Multicollinearity would leave coefficients consistent but would render the standard errors upwardly biased. Endogeneity could influence the interpretations of our results. Most importantly, democracy could still play a major role in accession if it largely determined the relative power of Eurosceptic parties and the political handling of the *acquis communautaire* reforms.

   We begin with a less important test of multicollinearity and report the cross-correlation of exogenous variables in Table 4.

   A first glance at Table 4 reveals that our estimates do not suffer much from multicollinearity. With the exception of the correlation between regulatory quality and the relative power of Eurosceptic parties, no correlation appears to be high enough to render

TABLE 4   *Cross Correlation of Exogenous Variables in Stage 2*

	Democracy	Regulatory quality	Closed chapters	Participation	Relative power
Level of democracy	1.000				
Regulatory quality	0.272	1.000			
Closed chapters	0.132	0.372	1.000		
Govern. participation of Eurosceptic parties	0.219	0.348	− 0.049	1.000	
Relative power of Eurosceptic parties	0.053	0.555	0.218	0.528	1.000

TABLE 5   *An Empirical Evaluation of the Endogeneity Problem*

Variables	Model 1	Model 2
Non-selection hazard of EU application	− 3.618*** (1.021)	− 3.257*** (0.996)
Governmental participation of Eurosceptic parties	− 1.053** (0.5329)	− 1.328** (0.6323)
Level of democracy	0.267*** (0.364)	0.271*** (0.047)
Agriculture		− 0.089 (0.123)
α	4.326 (1.415)	4.775 (1.631)
N	60	58
Wald χ^2 [$p > \chi^2$]	65.70 [0.0000]	60.59 [0.0000]
Log likelihood	100.549	91.399
Pseudo R^2	0.397	0.383
Estimation	Negative binominal	Negative binominal

*Significant for $p < 0.1$; **significant for $p < 0.05$; ***significant for $p < 0.01$. Estimated standard errors are shown in parentheses.

the obtained z-values unreliable.[36] We may therefore claim that the standard errors we have reported in Table 1 are correct. Yet our critique of the theoretical nexus between democracy and accession could be hampered by endogeneity, especially from a causal link between democracy and the number of closed chapters. We run a negative binominal regression of the number of chapters on the right-hand side variables of substantive interest in stage 2 to test for this possibility, again applying a robust Huber–White sandwich estimator to account for panel heteroscedasticity.[37] Table 5 presents the results of this analysis.

Table 5 demonstrates the existence of a minor endogeneity problem, which gives room for an indirect link between the level of democracy and accession. However, computing the conditional impact of democracy on the chapter variable proves that the link remains far from being the most important source of influence. On average, 'democracy' accounts for approximately 30 per cent of total *acquis* reforms. Considering this indirect effect on the interpretation of Table 1, democracy turns out to exert an indirect influence on accession – an effect which is conditioned upon implementation of the *acquis communautaire* reforms. However, democracy is not the most important factor driving the enlargement process.

We may therefore conclude that while democracy does not influence accession in an unconditional manner, it exerts a moderate indirect influence on accession via the

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[36] Note that multicollinearity has no impact on the coefficients. Even if two or more variables were collinear, the estimated coefficients would remain unbiased. Therefore, our inferences are not hampered by multicollinearity problems.

[37] Likelihood ratio tests have shown that we have to deal with overdispersion ($\alpha \neq 0$), which means the sample variance is larger than the mean. Consequently, we cannot run a simple Poisson model but have to use a negative binomial regression procedure that allows for overdispersion.

non-selection hazard in the first stage and via the number of closed chapters in the second stage. This result renders the following causal chain most likely:

1. The transition country chooses its political regime.
2. The more democratic the constitution, the more comprehensive reforms will be implemented and the better the level of regulatory quality.
3. The higher the level of regulatory quality, the more easily the EU's *acquis* conditions can be accomplished – the more a country is likely to apply for EU membership.
4. The emerging compliance between transition countries' political preferences and EU standards largely increases the likelihood of accession.

CONCLUSION

This article puts forward three interrelated arguments: first, we demonstrated that the application and the accession processes are theoretically intertwined; secondly, we gave evidence that the factors influencing application and accession are not identical; and, thirdly, we supported the claim that the level of democracy and regulatory quality drive the application process, whereas the decision to grant membership rights is dominated by the EU's evaluation of policy preferences represented in the political system of applicant countries.

EU members' concerns about the potential impact of new members on future decision-making processes within an enlarged EU sway strategies employed in the accession process. To avoid deadlock and backlashes in integration, EU members attempt to discriminate against countries with widely diverging policy preferences.

From a methodological perspective, it is important to recognize how interrelated decisions can be efficiently analysed by a Heckman panel probit estimator. This holds even if decisions are not determined by identical factors or in the presence of parameter heterogeneity. The estimator is efficient, robust and unbiased.

Expected utility mattered on both sides of the former Iron Curtain: political leaders in transition countries calculate the impact of *acquis communautaire* reforms on their 'political economy' and the likelihood of getting accepted. EU members calculate the effect of granting membership rights to applicant countries on the EU's future decision-making processes.

APPENDIX: DERIVATION OF THE PANEL PROBIT HECKMAN ESTIMATOR

To start with, the selection equation of the Heckman probit selection model can be written as

$$euapp_{it}^* = z_{it}'\gamma + \upsilon_{it}, \tag{A1}$$

where $euapp_{it}^*$ is assumed to be a latent continuous dependent variable of the selection equation, z_{it}' denotes the vector of independent variables in the first stage,[38] γ stands for the vector of coefficients to be estimated and υ_{it} is the error term of the selection equation.

$$euapp_{it} = \begin{cases} 1 & if \quad euapp_{it}^* \geq 0 \\ 0 & otherwise \end{cases} \tag{A2}$$

denotes the measured dichotomous dependent variable of the first stage.

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[38] These include regulatory quality, level of democracy, the potential power of a president and economical control variables, such as exports of goods and services and the government consumption as a percentage of gross domestic product.

The second stage of the Heckman panel probit selection model can then be written

$$accneg^*_{it} = x'_{it}\beta + \varepsilon_{it},$$ (A3)

where $accneg^*_{it}$ specifies the assumed underlying continuous dependent variable. $x'_{it}\beta$ represents the vector of exogenous variables and includes the main variable of interest, the number of closed *acquis communautaire* chapters as well as the power of Eurosceptic parties or their participation within the government, and the size of the agricultural sector as control variables. We have also controlled for other variables with no significant changes in the estimated coefficient of our 'chapter' variable. Unfortunately, endogeneity problems do not allow for the inclusion of more control variables in the second stage model.

$$accneg_{it} = \begin{cases} accneg^*_{it} & if \quad euapp^*_{it} \geq 0 \\ 0 & otherwise \end{cases}$$ (A4)

denotes the measured dichotomous dependent variable of the second stage.

As we explained before, the estimation of the second stage is conditioned on the outcome of the first estimation.

The model itself can be derived from the Equations A1 to A4. As the conditional mean function we get

$$E[accneg_{it}|euapp^*_{it} \geq 0] = E[x'_{it}\beta + \varepsilon_{it}|z'_{it}\gamma + v_{it} \geq 0]$$ (A5)

$$\Rightarrow E[accneg_{it}|euapp^*_{it} \geq 0] = x'_{it}\beta + E[\varepsilon_{it}|v_{it} > -z'_{it}\gamma]$$ (A6)

whereby the elements of the error term are

$$\varepsilon_{it} = \frac{\sigma_{\varepsilon v}}{\sigma^2_v} v_{it} + \xi_{it},$$ (A7)

with $\xi_{it} \sim N(0, V[\xi_{it}]); \quad E[v_{it}\xi_{it}] = 0.$

By replacing the error term with its components we get

$$E[accneg_{it}|euapp^*_{it} \geq 0] = x'_{it}\beta + \frac{\sigma_{\varepsilon v}}{\sigma_v} E\left[\frac{v_{it}}{\sigma_v}\bigg|\frac{v_{it}}{\sigma_v} > -\frac{z'_{it}\gamma}{\sigma_v}\right]$$

$$= x'_{it}\beta + \frac{\sigma_{\varepsilon v}}{\sigma_v} \lambda\left(-z'_{it}\frac{\gamma}{\sigma_v}\right)$$ (A8)

where $-(z'_{it}\gamma)/\sigma_v$ is the inverse of the Mill's Ratio or the non-selection hazard-rate that measures the likelihood that a country *does not* apply for EU membership in the first stage. This probability is used as additional regressor in the second stage (see below). From here, the derivation of the second-stage estimator is straightforward. Assume $\sigma_v = 1$ (this is an usual assumption and leaves the results unchanged). Then the mean function of the second stage to be estimated is

$$E[accneg_{it}|euapp^*_{it} \geq 0] = x'_{it}\beta + \sigma_{\varepsilon v}\hat{\lambda}_{it} + \omega_{it}$$ (A9)

where $\omega_{it} = \sigma_{\varepsilon v}(\lambda_{it} - \hat{\lambda}_{it})$. It follows

$$accneg_{it} = x'_{it}\beta + \sigma_{\varepsilon v}\hat{\lambda}_{it} + \omega_{it} + v_{it}$$ (A10)

where $v_{it} = accneg_{it} - E[accneg_{it}|euapp^*_{it} \geq 0]$, so that

$$x'_{it}\beta + \sigma_{\varepsilon v}\hat{\lambda}_{it} + \tilde{\varepsilon}_{it}, \text{ where } \tilde{\varepsilon}_{it} = \omega_{it} + v_{it}.$$ (A11)

The two-step estimation process can be described as follows: we first estimate $\hat{\gamma}$, the coefficient vector in the selection equation (first stage) by calculating the panel probit model $euapp_{it} = z'_{it}\gamma + v_{it}$ on the overall sample. Secondly, we compute

$$\hat{\lambda}_{it} = \frac{\varphi(z'_{it}\hat{\gamma})}{1 - \Phi(z'_{it}\hat{\gamma})},$$ (A12)

by inserting the estimated $\hat{\gamma}$. $\hat{\lambda}_{it}$ denotes the estimated non-selection hazard-rate for country i in year t. Finally, we estimate a probit model with $\hat{\lambda}_{it}$ as additional regressor on the sample with $euapp_{it} = 1$. As one can see in Equation A12 the estimated coefficient of $\hat{\lambda}_{it}$ denotes the correlation between the error terms of the first and second stage. For a Heckman type model it is crucial that this correlation differs significantly from 0. Otherwise the result of the second stage does not depend on the first stage and two separate estimations are more appropriate. In our special case this correlation should significantly differ from 0 and it should be negative since we assume the higher the probability of non-application, the lower the likelihood of closing the accession negotiation.[39]

TABLE A1   *Descriptive Statistics*

Variable name	Number of observations	Mean	St.dev.	Minimum	Maximum
EU application	246	0.325	0.469	0	1
Accession negotiations	246	0.098	0.297	0	1
Chapter	130	4.8	8.642	0	28
Power of Eurosceptic parties	129	23.176	21.157	0	70.7
Governmental participation of Eurosceptic parties	130	0.315	0.466	0	1
Agriculture (total exp. in bn. US$)	212	4.000	9.368	0.228	89.528
Regulatory quality	218	2.429	0.826	1	3.73
Level of democracy	201	7.796	2.343	1.5	10
Presidential power	208	2.928	0.845	2	4
Exports of goods and services (% of GDP)	200	42.884	17.873	7.225	89.406
Government consumption (% of GDP)	194	17.805	4.844	5.862	29.865

[39] Note that the selection equation has to include at least one regressor z_{it} that is not a part of x_{it} and it should include a constant. The second equation, however, need not include a constant.

TABLE A2   *Number of Closed Chapters per Country*

	1998	1999	2000	2001	2002
Czech Rep.	3	10	13	25	26
Estonia	3	8	16	20	28
Hungary	3	8	14	24	26
Poland	3	9	13	20	26
Latria	0	0	9	23	27
Lithuania	0	0	8	23	28
Slovakia	0	0	10	22	27
Bulgaria	0	0	8	14	19
Romania	0	0	6	9	13
Slovenia	3	9	14	26	28

Table A2 exhibits the accumulated number of chapters a country closed within a given year. This table suggests that the EU Copenhagen decision in 2002 was a consequence of the candidates' regulatory reform progress. It also shows that the EU might have accelerated the reform process by distinguishing between wave 1 and wave 2 countries in 1998. At that point in time, the EU gave the impression that it would only accept wave 1 countries for early accession. Upon that declaration, wave 2 countries even showed signs of frustration and slowed down the speed of reforms.[40] However, some governments also reacted defiantly. Lithuania, which was classified as a wave 2 country by the EU, provides the best example: within less than two years the government closed negotiations over twenty-eight chapters, leaving only budget and agriculture open for further negotiations. Thereby, it passed former frontrunners and found itself at the top of the accession list.

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[40] Mattli and Plümper, 'The Demand-Side Politics of EU Enlargement'.