Where do Creditor Rights Matter? Creditor Rights, Political Constraints, and Cross-Border M&A Activity

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Abstract:

In this paper, we evaluate the impact of creditor rights and political risk on both the number and the value of cross-border M&A flows in a gravity model using a negative binomial model and Heckman's two-stage selection model, respectively. Our results confirm that creditor-friendly rules and political risk decrease M&A inflows. The impact of formal legal rules is, however, almost entirely driven by politically stable countries, where those rules can be expected to hold. De jure rules therefore only matter where de facto implementation can be expected due to political stability.

Keywords: Mergers and acquisitions, multinational firms, creditor rights, political risk, gravity model.

JEL Classification: F23, G18, G34, O16.

1. Introduction

Cross-border mergers and acquisitions (M&As) have now replaced green-field investments as the key mode of foreign direct investment. Indeed, according to the UNCTAD foreign investment database, the share of M&As in world foreign direct investment (FDI) flows rose from 53% in 1987 to 67.4% in 2006. It even topped 80% in 2000, at the peak of the 1990s wave of M&As. Since the global volume of FDI has also broadly been on the rise over the last twenty years, the volume of cross-border M&As has reached unprecedented levels. It exceeded 880 billion dollars in 2006, admittedly less than the more than 1,140 billion dollars that were recorded in 2000 (UNCTAD, 2003, 2007).

However, while the volume of cross-border M&As has increased, all countries do not equally benefit from that trend, and M&A inflows are unevenly distributed across countries. More precisely, most M&As take place between rich countries. M&As therefore fit Lucas's (1990) paradox, according to which capital should, but does not, flow from rich to poor countries. Brakman et al. (2007) report that between 2001 and 2005 on average more than 84% of the world value of cross-border deals originated in Europe and North America alone, while the same two regions attracted 75.7% of the value of world M&As over the same period. Understanding what drives M&A flows away from those countries that need capital the most is therefore an urgent question of development economics and international finance.

Following the law and finance literature spurred by La Porta et al.'s (1997, 1998, 2000) influential papers, research has so far emphasized the legal determinants of cross-border M&As. This is in particular the route chosen by Rossi and Volpin (2004). Focusing on differences in laws and regulation, they found that acquirers tend to come from richer countries with better accounting standards and stronger shareholder protection than their targets. Similarly, Antràs et al. (2009) found that American firms held a larger share of their affiliates abroad where investor protection was weaker. Hyun and Kim (2010) observe that countries with stronger law and order host more cross-border M&As.

Nevertheless, Dixit (2009) stresses that informal rules matter as much as formal ones. Focusing on formal rules, the law and finance approach, however, overlooks the fact that the application and credibility of formal rules obviously matters: a rule, no matter how efficient, is of little value if it is not applied, or is likely not to be applied in the future. In other words, de jure rules have little impact if they are not de facto implemented and stable. This is particularly relevant in developing countries, which often suffer from weak institutions and political instability. The analysis of de jure rules should therefore be complemented by the study of de facto rules. This approach was successfully followed by Safavian and Sharma (2007), who found that legal protections and efficient courts were strong complements in determining access to bank credit. Even more striking is the fact that financial outcomes vary across regions of the same country, where the formal law is the same across regions but

court efficiency differs. Such findings were, e.g., reported by Bianco et al. (2005) for Italy, or Laeven and Woodruff (2007) for Mexico. The respective influence of de facto and de jure laws on cross-border M&As has, however, not been investigated, yet.

That neglect of the impact of informal institutional factors on M&A flows is all the more striking since the impact of those factors on total FDI flows has been widely documented, starting with Schneider and Frey's (1985) seminal paper. This finding is robust to the estimation period and the empirical strategy, as contributions by Wei (2000), Busse and Hefeker (2007), Stein and Daude (2007), Alfaro et al. (2008), Asiedu et al. (2009), or Aleksynska and Havrylchyk (2013) underline, although specific deficiencies of the institutional framework may attract FDI, as Egger and Winner (2005) observe. More to the point, Méon and Sekkat (2015) find that the impact on FDI of an upgrade of the quality of formal legal institutions is larger when social trust is low than when social trust is high. In other words, they find that formal and informal institutions are substitutes.

One key informal factor that may determine the credibility of existing rules is political risk, because a government turnover may result in a change of formal rules. The aim of the present paper is precisely to gauge how creditor rights determine cross-border M&A flows in the presence of political risk that may affect existing legal rules. To do so, we consider cross-country bilateral M&A flows on a panel of developed and developing countries over the fifth wave of M&As, i.e., 1990-2001. We estimate a gravity model and focus on the interaction of formal creditor rights and political risk. Our results suggest that formal creditor rights protection and lack of political risk are complements in determining a country's attractiveness to foreign investors. In other words, de jure rules only matter where they can be expected to be implemented de facto.

To reach that conclusion, the next section discusses the impact of creditor rights and political risk on cross-border M&A flows, and why they are likely to interact. Section 3 describes how the gravity model, the workhorse of our analysis, was applied to M&A flows, and presents our dataset, while section 4 displays our results. Section 5 concludes.

2. The impact of creditor rights and political risk on M&A flows

Our main variables of interest are the level of creditor rights and political constraints in the acquiring and target countries. In this section, we discuss their impact on cross-border M&A flows, and argue that they are bound to interact.

2.1. The impact of creditor rights

The role of creditor rights in cross-border M&As was first brought to attention by La Porta et al. (2000). They hypothesized that being acquired by a foreign firm operating in a legal system that protects investors is a way to opt into that system. Rossi and Volpin (2004) provide empirical support to that presumption. In a cross-sectional set-up, they find that the ratio of cross-border to total

completed deals is larger in countries with lower investor protection. When using an ordered-pair model that is in essence bilateral, they observe that acquirers typically come from countries with stronger investor protection than their targets. Bris and Cabolis (2008) discuss in greater detail the impact of cross-border M&As on the law that applies to the target company. Studying a sample of individual mergers, they report that mergers in which the acquirer comes from a country with better investor protection result in larger premia as compared to similar domestic acquisitions.

The role of creditor rights was recently emphasized by Antràs et al. (2009). Using a model where a local entrepreneur must raise capital on the domestic market to start a firm using a foreign inventor's proprietary technology, they argue that weaker investor protection should result in a larger participation of the foreign inventor in the firm. Their argument is that local investors are aware of the risk of expropriation by the entrepreneur, but understand that the foreign inventor is in a better position to monitor the entrepreneur's use of the transferred technology, because she has a privileged knowledge of the technology. Investors will therefore require a larger participation of the foreign inventor in the firm in countries where investor rights are weaker. One should therefore observe a negative relationship between the strength of investor protection in a country and the amount of foreign investment in that country. Where investor protection is stronger, investors should finance local entrepreneurs without requiring the intervention of a foreign firm.

We operationalize investor protection by using an index developed by Djankov et al. (2007) which updates the index developed in La Porta et al. (1998). The index ranges from 0 to 4 with higher values indicating more creditor rights. It assigns one point for each of the following (see Djankov et al. 2007, p. 302): "(1) whether there are restrictions, such as creditor consent, when a debtor files for reorganization; (2) whether secured creditors are able to seize their collateral after the petition for reorganization is approved, that is, whether there is no automatic stay or asset freeze imposed by the court; (3) whether secured creditors are paid first out of the proceeds of liquidating a bankrupt firm; and (4) whether an administrator, and not management, is responsible for running the business during the reorganization."

2.2. The impact of political risk

M&A flows should also be sensitive to political risk for at least two main reasons. The first is that political risk may result in larger taxation, or outright expropriation, by the state. This is the mechanism put forward in theoretical contributions that focus on FDI in general, such as Eaton and Gersowitz (1984) or Asiedu et al. (2009). One should therefore observe a direct negative effect of political risk on M&A inflows. The finding by Coeurdacier et al. (2009) that M&A flows in the manufacturing sector to host countries with poor civil liberties are smaller is suggestive of such a direct impact of political risk. Dikova et al. (2010) also find that political risk reduces the likelihood that announced cross-border M&A deals are completed. Kim (2010) reports that announced M&A deals are more likely to be disapproved in countries with a majoritarian system. Serdar Dinc and

Erel (2013) observe that weak and far-right governments tend to oppose M&As that would result in the takeover of a national firm.

The second effect of political risk is indirect. It runs through the impact of political events on the application of existing legal rules. Political changes and turmoil may indeed result in a revision, abolishment or simple non-application of existing formal laws. As argued in the introduction, rules that theoretically protect investors may therefore have little impact if investors expect them not to be applied. Apart from the impact of creditor rights and of the probability of sudden changes in the political decision process, we must therefore expect the impact of creditor rights to depend on the stability and credibility of the political system. In other words, we must check whether legal rules still matter if they are likely to be changed. In statistical terms, this means considering an interaction between the two processes.

To proxy political constraints in a country we use three alternative measures. First, we use the Political Constraints III (POLCONIII) index developed by Henisz (2002). This measure of political constraints estimates the feasibility of policy changes by using data on the number of independent branches of government (executive, lower and upper legislative chambers) with veto power over policy. Besides the number of veto players this index also captures the distribution of preferences of the members of the different branches of government. In a nutshell, the index quantifies how easy it is to change the legislative status quo for the government. If there are no veto players and the executive is free to alter policy at their discretion, the index takes a value of zero. In contrast, if there is one veto player whose preferences do not overlap with the executive the value of the index would be one, as it is certain that no deviation from the status quo will be made. The more veto players are present, the higher is the value of the political constraints index. The distribution of preferences is measured by the fractionalization of the different branches of government. The more fractionalized the branches are, the higher is the political constraint. In our sample the value of the POLCONIII index ranges from 0, e.g., Jordan over the entire sample period, to 0.72, for Belgium in 2000 and 2001.

As a first alternative measure for the constraints on the executive we take the Political Constraints V (POLCONV) index developed by Henisz (2000). It uses the same methodology as the POLCONIII described above but also takes two additional potential veto players into account: sub-federal units and the judiciary. Given the two potential additional veto players the values of the POLCONV are generally higher as compared to the POLCONIII. In our sample the POLCONV ranges between 0 and 0.89, again for Belgium in 2000 and 2001.

Our second alternative measure is the variable "Checks and Balances," developed by Keefer and Stasavage (2003) and available at the Database of Political Institutions. The variable assigns the minimum value of one if a single party won all seats of the legislature or the legislature is not competitively elected at all. If this is not the case then one point is added for each of the following: the presence of a chief executive, the competitive election of the chief executive, the opposition having

control over the legislature. Additionally, in presidential systems one point is added for each chamber of the legislature and for parties which are allied with the president but ideologically closer to the opposition. In parliamentary systems, one point is added for each pivotal party in the coalition and for each party in the coalition that is closer to the opposition than to the party of the executive. In our sample the variable ranges from one, e.g., again Jordan over the entire period, to 18 in India in 1997 and 1998.

The largest values of this variable are not assigned to Western countries, which are typically referred to as the "politically stable" countries. For the European Union the highest score is ten for France in 1993. We will come back to this when we discuss our results. This feature is owed to the fact that the number of parties that play a political role is typically limited in developed countries.[1]

As argued above, the key contention of the present analysis is that de jure rules must be de facto applied to have any effects. Since Djankov et al.'s 2007 index is only based on de jure regulations, it does not take into account the possibility that written rules may not be systematically applied. One way to model such a question econometrically would be via the introduction of an interaction term between our two central variables. Unlike in linear models (such as the OLS) the t-statistic of the coefficient of the interaction term by itself is essentially meaningless, since the interaction term is not an independent variable but rather the product of two regressors. Instead statistical significance has to be calculated separately, e.g., via the delta method.

3. Methodology and data

Our main variable of interest is the number of cross-border M&As originating from the EU-15. We model these M&As bilaterally, taking into account both the acquiring and the target country by applying the gravity model. In a nutshell, the gravity model argues that the volume of a flow between two countries is related positively to the sizes of those countries and negatively to the distance between them.[2] While in economics this model was originally applied to study trade flows, it has since then been applied to capital flows. Influential examples are de Ménil (1999), Wei (2000), or Portes et

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[1] A final potential alternative to measure constraints on the government is the variable "Political Risk" taken from the International Country Risk Guide (ICRG) produced by Political Risk Services. This index is based on experts' assessments of the political risk associated with a particular country. It is more perception based that our three main indicators. Furthermore, the ICRG measure confounds orthogonal components of risk (Berggren et al: 2009). Nonetheless we replicated all results presented in this paper with the political risk variable. Given that the results obtained by this index are comparable to the results presented in this paper, we refrain from including them in this study. They are, however, available upon request.

[2] For a theoretical foundation of the gravity model applied to trade flows see Anderson and van Wincoop (2003), for a well known application see Rose (2004).

al. (2001). Moreover, di Giovanni (2005), Coeurdacier et al. (2009), as well as Huizinga and Voget (2009) use it specifically to model M&A flows.

The bilateral cross-border M&A figures are extracted from the Thomson Financial Products *SDC Platinum* database. This dataset documents merger operations worldwide. We extracted the number and value of operations involving world-wide acquisitions by firms in the European Union. As mentioned in the introduction, European firms are among the most important players for cross-border M&As. Focusing on deals originating in Europe ensures a group of more or less homogenous acquirers. To apply the gravity model, the information provided by *SDC Platinum* was aggregated by pair of countries and year of activity. We thus obtain a panel dataset in which the units of observation are annual country-pairs.

As *SDC Platinum* is supposed to be exhaustive, a lack of reported operation must be interpreted as a true absence of operation rather than as an omission or missing data. We start our empirical analysis with a standard fixed effects regression but a look at the data reveals that there are many country-pair-year observations with zero entries. Hence, the distribution of our dependent count variable is skewed to the right and exhibits over-dispersion (i.e., the variance is larger than the mean). The more appropriate econometric technique to cope with such a set-up is a negative binomial model. As we are using panel data we have to take this feature of the data into account as well. To do so, we use a random effects negative binomial model. In contrast to linear estimation techniques, the random effects only apply to the dispersion parameter.[3] While it is not possible to plug country-pair dummies ude to the incidental parameter problem, we include target and acquiring country fixed effects. This is possible due to the lower dimensionality of the two sets of single countries vis-à-vis the country pairs. To be more concrete consider that the number of M&As (y_{ijt}) originating from country i and targeted at country j in year t have the following mean and variance:

$$E(y_{ijt}) = e^{(\beta' X_{ijt})} = \lambda_{ijt} \tag{1}$$

$$Var(y_{ijt}) = \lambda_{ijt}(1 + \delta_{ij}), \tag{2}$$

Moreover, $y_{ijt}|\gamma_{ijt} \sim \text{Poisson}(\gamma_{ijt})$, where $\gamma_{ijt}|\delta_{ij} \sim \text{gamma}(\lambda_{ijt}, \delta_{ij})$ and δ_{ij} is the dispersion parameter, which is constant in the time dimension but allowed to vary randomly across country-pairs as $1/(1 - \delta_{ij}) \sim \text{Beta}(r, s)$. As described in Hausman et al. (1984) these assumptions lead to the following log-likelihood function:

$$\ln L = \sum_{i=1}^{n}\left[\ln \Gamma(r + s) + \ln \Gamma\left(r + \sum_{k=1}^{n_i} \lambda_{ik} \right) + \ln \Gamma\left(s + \sum_{k=1}^{n_i} y_{ik} \right) - \ln \Gamma(r) - \ln \Gamma(s)\right.$$

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[3] While conditional fixed effects negative binomial models exist, Guimarães (2008) has shown that they do not necessarily remove the individual fixed effects.

$$-\ln \Gamma \left(r + s + \sum_{k=1}^{n_i} \lambda_{ik} + \sum_{k=1}^{n_i} y_{ik} \right) + \sum_{k=1}^{n_i} \left\{ \ln \Gamma(\lambda_{it} + y_{tk}) - \ln \Gamma(\lambda_{it}) - \ln \Gamma(y_{it} + 1) \right\} \Bigg], \quad (3)$$

where Γ is the gamma distribution.[4] Due to the apparent over-dispersion the negative binomial model is econometrically the most appropriate specification. For tests of robustness we have rerun all estimations using the random effects Poisson estimator, the other commonly used count data model. As the results remain qualitatively unchanged we suppress them.[5]

While our dependent variable is available for all country-year observations, this is not true for some of our explanatory variables. Thus our panel dataset is unbalanced and the number of observations also depends on the choice of explanatory variables. To account for common shocks, we include annual time dummies in all specifications. Our selection of the covariates follows the logic of the gravity model as applied to M&As in the literature.

As the gravity model relates attraction to the size of the parties involved, the first question is then to choose a measure of size. The literature that applies the gravity model to capital flows has not yet reached a consensus on how to measure a country's size. Portes et al. (2001) and di Giovanni (2005), for instance, employ market capitalization. This measure is, however, only available for a limited set of countries, most of them developed. Using that measure would accordingly bias our dataset towards richer and more politically stable countries. Eaton and Tamura (1994) or Loungani et al. (2002) simply measure size by a country's population. De Ménil (1999) or Wei (2000) suggest to use total GDP instead.

To keep the better of two worlds, we therefore measure the size of countries by using both (log of) population and (log of) GDP of the acquiring and the target country.[6] To allow for comparisons both over time and across countries we use purchasing power parity GDP in constant year 2000 international dollars. Both size measures are taken from World Bank (2006).

Distance has both a geographic and a cultural/historical dimension. We measure geographic distance by the (log of) geographic distance between the countries' largest cities, as well as a set of dummy variables inspired by Rose (2004) detailed below. This set of measures of distance is

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[4] To enhance readability, the cross-sectional dimension of our panel in equation (3) is just denoted *i*. Of course, it is actually bilateral, i.e., pairs of acquiring and target countries (*ij*).

[5] One may note that the negative binomial model does not control for reverse causality. While it is difficult to imagine that FDI affects domestic institutions through – e.g., foreign lobbying – it is particularly hard to make such a claim on a bilateral basis. Accordingly, reverse causality is unlikely here.

[6] As a test of robustness we have also used the measures proposed in Egger and Pfaffermayr (2004): the logarithm of the sum of the two countries' GDP (as a measure of size) and $\log(1 - ((GDP_{it}/(GDP_{it} + GDP_{jt}))^2) - ((GDP_{jt}/(GDP_{it} + GDP_{jt}))^2))$ as a measure of similarity. See also Bergstrand and Egger (2007). This did not affect our findings.

complemented by a variable indicating if the country-pair shares a common border.

Geographic distance has been repeatedly found to negatively affect bilateral capital flows, see, e.g., de Ménil (1999), di Giovanni (2005) or Portes and Rey (2005). That distance may hinder the movements of an immaterial phenomenon may seem odd at first glance. Unlike the costs of transporting material goods, the costs of trading capital should not increase with geographic distance. The current consensus is, therefore, to interpret geographic distance as a proxy of informational costs. Portes et al. (2001), Loungani et al. (2002), as well as Portes and Rey (2005) provide evidence that part of the impact of geographic distance indeed captures informational costs. Moreover, Hijzen et al. (2008) find a direct relationship between trade costs and the number of M&As between countries. Geographic distance can therefore also be viewed as a proxy for trade costs.

If informational costs matter, it is important to complement geographic distance by other dimensions of distance. For that reason, we have an indicator of sharing a common official language, to control for cultural proximity. We also control for historical ties by employing a dummy variable taking on a value of 1 if the country-pair has ever been in a colonial relationship. The source for all distance related variables is CEPII (2006). More M&A specific, we include a dummy variable indicating whether the acquiring and the target country share a common legal origin according to Easterly and Sewadeh (2001). Stein and Daude (2007), for instance, found a positive impact of common legal origin on bilateral FDI flows.

To protect foreign investors from expropriation by the state, bilateral investment treaties (BITs) have become increasingly popular. UNCTAD (2000, p.1) even goes as far as stating that they are "the most important instrument for the protection of foreign direct investment." Among other things, BITs signal the host country's willingness to refrain from expropriating, and provide a set of formal legal protections to foreign investors, as UNCTAD (1998) recalls.

When studying the impact of investors protection on M&A flows, it is therefore important to take into account the extra protection provided by BITs. Moreover, the formal protection provided by BITs is subject to the same caveats as other legal rules. If they are not applied, or not credible, they will be of little effect. This is consistent with Egger and Pfaffermayr's (2004) finding that while signing an agreement has a positive effect on FDI, it is often statistically insignificant, and much smaller in magnitude than the effect of ratified BITs. Egger and Merlo (2007) report that the long term impact of BITs is twice as large as their short term impact may also suggest that formal BITs take time to become credible. Consequently, we add a dummy set equal to one whenever a country pair has ratified a bilateral investment treaty. It is taken from UNCTAD (2000).

Because we concentrate on cross-border deals, double taxation treaties (DTT) could play a crucial role. Their importance has been documented by Huizinga and Voget (2009).[7] In contrast to the

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[7] Egger et al. (2006) show that DTT also affect outward FDI.

BITs we only have information on when a DTT was signed, however.[8] As our final control variable we thus include a dummy variable indicating a signed DTT between the country pair.

Summing up our argumentation we argue that cross-border M&A activity can be empirically assessed using following function:

M&A = f (GDP, population, proximity, BIT, DTT, political constraints, creditor rights).

Overall, our dataset spans the years 1990-2001, i.e., the whole fifth wave of M&As. We thus exclude the current crisis period which can have very special implications for M&As as documented by Beltratti and Paladino (2013). The summary statistics of all variables are presented in Table 5, while the list of target and source countries is reported in Table 6 in the Appendix.

4. Results

In this section, we present and discuss our econometric results. We first consider the number of deals between pairs of countries and then turn to their values (following Huizinga and Voget 2009).

3.1. The number of M&A deals

Tables 1 shows our basic bilateral fixed effect setup for the number of cross-border M&As originating from the EU. Note that all regressions include standard errors clustered at the country pair level and time fixed effects. As discussed above due to the excessive zero observations, this is not the proper econometric setup. Thus we discuss the results only briefly focusing on our central variables and elaborate on further results when turning to the negative binomial results. We clearly see that strong creditor rights facilitate M&As from a acquiring country's perspective while the opposite is true for the target country. The magnitude of the effect might seem small in absolute terms but a 1 point increase leads to a reduction of about one fourth of the average of the dependent variable. While there seems to be no statistically significant effect for the political constraints measure in the acquiring country the coefficients for the target country indicate a significant negative effect. This is in contrast to our expectations and we will come back to this below.

*** Insert Table 1 here ***

To test the hypothesis whether political risk and creditor rights work in tandem we include interaction variables of the two central variables in Table 2. The rsults show that strong creditor rights only matter more in politically unstable acquiring countries. In fact at the maximum values the effect for creditor rights are statistically not different from zero. The evidence for an interaction is much weaker for the target countries. Only for the POLCONIII we get a statistically significant result. This

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[8] This variable is taken from the UNCTAD statistical database (see http://archive.unctad.org/Templates/Page.asp?intItemID=4505&lang=1).

shows that our previous result that less creditor rights increase incoming M&A activity is stronger for politically less risky country. This means the more secure the rules of the games are the stronger the effect.

*** Insert Table 2 here ***

Let us now turn to the negative binomial results, as almost 88% of our observations indicate no M&A activity. Remember that we can no longer incorporate country pair dummies but instead we have acquiring and target fixed effects (in addition to time fixed effects). The coefficients given in the Table 3 represent incidence-rate ratios. As such, a one unit change in the corresponding variable represents an expected change in the number of M&As of (coefficient–1)*100 percent. Hence, all values above 1 indicate an M&A increasing relationship while the reverse is true for values below 1. The lower bound of the incidence-rate ratio is zero which would indicate that an increase in X by one unit would set the expected value of y to zero (i.e., a change by −100 percent).

*** Insert Table 3 here ***

For concreteness, take the dummy variable indicating a common official language in Table 3, column 1. The coefficient value of 1.423 indicates that, *ceteris paribus*, a common official language leads to an increase in the expected number of M&As by 42.3%. While this number might seem very large, consider the following: cross-border M&As are infrequent events. The unconditional mean over all country-pair-year observations is 0.45 in our sample (in contrast to an estimated 0.47 according to the specification in column 1 in Table 1). So a doubling of the expected effect at the predicted mean would essentially raise the expected number of M&As from zero to one. Looking at the other cultural distance measure we can confirm the importance of culture. A common colonial relationship increases the expected number of mergers around 150%. Both cultural proximity proxies are significant at least at the 5% level across all specifications. Evidence of the importance of common legal origin is also strongly present, the estimated effect corresponds to an expected increase in our dependent variable of about 70%.

Turning to geographic measures we can confirm the importance of distance. Note, that the bilateral distance (in kilometers) has been entered in logarithmic terms. Hence, a one point increase has different implications pending on the starting point. In our sample the mean value for the log of bilateral distance is 8.3. Increasing this by 1 to 9.3 equals an increase in the distance of 7,000 km. According to the estimations such an increase would lead to a reduction in the expected number of M&As of approximately 60%. In contrast to the distance variable, the common border measure is always statistically insignificant at conventional levels.

As regards our measures of size, we can confirm the importance of both GDP and population only for the target country. They are both significant at the ten percent level at least across all specifications. As both measures are entered in logarithmic form, we again have to be cautious when interpreting the magnitude of the estimated effect The target countries in our sample are heterogeneous. Thus a one point increase of the log of GDP in the targeted country (starting from the mean value) corresponds to an increase of approximately 150 billion $. According to the estimations this would roughly double the number of M&A deals.

The results with respect to the size of the population suggest that an increase 26 million in the target country increases M&A deals between the factor 5 and 12.

Columns (4) to (6) include dummy variables indicating whether the country pair has ratified a BIT or signed a DTT. The estimated coefficients are significant at the one percent level and suggest that the presence of a ratified BIT increases the expected number of M&As by approximately 40% while a signed DTT has less than half of that effect.

After evaluating the impact of the control variables, we can now turn to the two central variables. First, consider the role of creditor rights. In contrast to the expectations and the fixed effects results, the coefficients for the acquiring country are are statistically not significant in five out of six specifications. A look at the target country reveals a different pattern. Here an increase in creditor rights leads to a reduction of cross-border mergers. A one point increase in the index leads to a 18% decrease in the number of predicted mergers and acquisitions, this result is significant at the 5% level.. The magnitude of those effects is very stable across specifications and not much affected by the set of control variables. Our results therefore suggest that M&A activity targets countries with low protection and tends to originate in countries with high creditor protection.[9] The latter result is not confirmed by the negative binomial regressions, however.

This result is reminiscent of Rossi and Volpin (2004), who report that the probability that a successful merger is cross-border is higher in countries where investor protection is lower. More to the point, they also report that acquiring firms tend to originate in countries with stronger shareholder protection that target firms. One should, however, recall that those authors do not estimate a full-fledged gravity model where the dependent variable is the number of deals. Instead, they obtain the result thanks to cross-country regressions in which the dependent variable is the cross-border ratio, i.e., the share of completed deals that are indeed cross-border. The second result is obtained with an ordered-pair analysis where the dependent variable is the share of cross-border deals in the target country that originate from the source country.

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[9] As an alternative we have also run models using the difference in creditors' rights between the acquiring and the target country and can confirm the finding that the direction seems to be from strongly to weakly protected countries.

The result that less strong creditor protection in target countries is associated with more M&As is also consistent with Antràs et al.'s (2009) finding that the share of foreign affiliates financed by the parent firm is larger in countries that do not provide creditors with strong legal protections. Our results complement and generalize theirs because we control for the impact of geography and take a more aggregate view, but also because acquiring firms in our sample do not originate from a single country, whereas Antràs et al. (2009) only consider U.S. parents.

Finally, we focus on the impact of political constraints. The POLCONIII result suggests that an increase of the index value of one standard deviation in the acquiring country (equal to an increase of 0.1 or a jump from Austria to Spain) would yield a 50% increase in M&As. The coefficient for the target country is statistically not significant.

Taking the additional veto players of the POLCONV index into account, it is apparent that this changes the verdict especially for the target countries. An increase in constraints by one standard deviation (equivalent to an increase of the index by 0.3, e.g., replacing Honduras with Singapore) would result in an expansion of M&As by 95% or 81%, respectively. This is interesting since one of the two additional veto players that are taken into account in POLCONV and that are not taken into account in POLCONIII is the judiciary. The finding that a standardized shock yields a larger effect in the former than in the latter points to an important role of the application of legal rules, which is precisely what we want to focus upon. The effect for the acquiring countries while being statistically significant is unbelievably large. One reason might be that the European countries, which form the acquiring countries in our sample, are rather homogenous according to this measure.[10] This makes it difficult to properly quantify the effect. .

Our third political measure, the checks and balances index is significant at the one percent level for the acquiring and at the ten percent level the target country without controlling for BITs and DTTs. For the acquirer an increase by one standard deviation (i.e., 1.5 points) would raise the number of deals by 15%, while in the target country the magnitude of the effect is much smaller as before: a one standard deviation increase (i.e., 1.9 points or roughly moving from Thailand to Ireland in 1995) only leads to an increase of 5% in M&As.[11]

In contrast to the fixed effects specifications all interactions are statistically insignificant in the negative binomial estimation. Thus we suppress the results.

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[10] While the minimum and maximum values of 0.40 and 0.89 suggest some variability, the mean and standard deviation of 0.78 and 0.05 illustrate that most countries score high in our sample.

[11] All these results are in line with Moser et al. (2008), who find that politically riskier countries tend to receive fewer exports.

3.2. The value of deals

So far we have learned that low creditor rights and high political security individually increase the number of cross-border mergers and acquisitions in target countries. Moreover, we have some suggestive evidence that creditor rights matter particularly when they are highly secured. Looking at the sheer number of transactions might not be enough, however. Many people would rate one giant M&A such as the acquisition of Mannesmann by Vodafone in the year 2000 with a total value of more than 200 billion US$ as much more important than three "minor" M&As valued each at 100 million US$. Moreover, from a macroeconomic point of view, the volume of capital flows in a country is determined by the value of deals and not by their number. Finally, Antràs et al. (2009) argue and document that creditor rights should not only affect the probability of investing abroad but also the amount of capital transferred to the host country.

To take those considerations into account, we change our dependent variable. Instead of the count variable we are using the total value of all M&As for each country-pair-year observation. This change in the explanatory variable also forces us to alter the estimation set-up. The total value of the annual M&A activity is certainly not a count variable. However, standard OLS is not applicable given the zero observations. If these zero entries were random, OLS would be applicable. Clearly, they are not: if the price for an M&A exceeds the net present value of such a deal, the observed value will be zero. To account for this non-randomness we resort to a two-step Heckman approach as developed and described by Heckman (1979). In the first step, a probit estimation is conducted determining the probability of observing a non-zero outcome. From this first step one can calculate the hazard of non-observance, i.e., the inverse Mills' ratio. Due to this first step, standard bilateral fixed effects cannot be included (incidental parameter problem). As befor we include targe and acquiring country fixed effects instaed. In the second step, a linear regression is augmented by the inverse Mills' ratio to correct for the non-randomness of selection. Instead of using a "selection" variable, we rely on the non-linearity of the first stage to tackle selection.. For the regression analysis, we use the logarithm of the M&A values to account for the vast range of observations.[12]

The result of the empirical exercise is presented in Table 4. For each of our constraint measures, the first column represents the result of the second stage which explains the annual total values of each country-pair. Note that the coefficients of the second stage now represent (semi-) elasticities depending on the explanatory variable being logarithms, or not. Hence, having a common language increases the value of M&As by roughly 75%, while a 1% increase in the target country's population leads to a 4% increase in the value of M&As. In the second column of each specification,

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[12] Taking logarithms turns all zero observations into missing values. This has no implications for the two-step estimator, however, because in the first step a dummy variable is used and in the second step missing values are treated as zeros.

denoted, e.g., (1a), the first stage results are displayed. Note that these are the coefficients of a probit estimation and, hence, only the sign and significance level are directly interpretable. We see that most covariates influence both the probability of observing a positive value and the actual amount of the M&As. All the signs correspond to the previous results.

*** Insert Table 4 here ***

Turning the attention to creditor rights we see a differentiated picture for acquiring countries. While all POLCONIII coefficients are statistically insignificant, POLCONV suggest a positive effect on the values of M&A but not on the selection. The opposite seems true for checks and balances. Regarding the target countries, both POLCON variants are positive and significant in the selection equation while POLCONV again is also positive and significant in the outcome equation. Turing to creditor rights they do not seem to matter from a aquiring country's perspective. The important role in target countries is confirmed, however. As with the number of deals, lower values stimulate M&As, but now this is only true for the total value and not for the likelihood of a positive number of M&As. A one point decrease of the creditor rights index leads to a 35% increase in the total value of the mergers and acquisitions.[13]

While a ratified BIT turns out positive and significant in the selection equation, DTT do not seem to influence the value of M&As.

Overall results for both the count and the value of deals confirm Daude and Stein's (2007) finding that political stability is the institutional dimension that affects FDI the most.

After confirming the findings of our separate analysis of creditor rights and political constraints, we also revisit our key interaction result. None of the interations turns out significant, however.

Our results may at first seem to be at odds with Daude and Fratzscher's (2008) finding that the volume of FDI is little affected by investor protection. At the same time, they offer a possible rationale. When running pooled regressions, we indeed find an impact of creditor rights on M&A inflows, which contrasts with their result. A first rationalization of that contrast may lie in methodological differences. Daude and Fratzscher (2008) focus on foreign capital stocks while our dependent variable is the volume of bilateral M&A flows. Also their result rests essentially on a cross-section of country fixed effects. They first estimate a gravity equation including fixed effects for target and source countries. In a second step, they take the estimated target country fixed effects, and regress them on (time-invariant) institution proxies.

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[13] Note that technically the pvalue is 0.11 in the checks and balance specifications.

To assure that the results reported so far indeed reflect the importance of de facto implementation of de jure rules we augment the results by including the number of domestic firms listed on the domestic stock exchange as well as the share of the stocks traded as a percentage of GDP. Both variables constitute a measure of "take-over availabilities." If this is larger in politically stable countries this could confound our results. While we find a positive effect on M&As in particular for the number of domestic firms listed on the domestic stock exchange, the inclusion of either variable does not change our results reported above. We do not include these variables in the main specification as they reduce the sample size by more than one third.

As a further test of robustness, we have replicated all our approaches incorporating the sub-index of social globalization taken from the KOF Index of Globalization 2008 developed by Dreher (2006) and updated by Dreher et al. (2008). This sub-index consists of variables measuring personal contact, data on information flows and data on cultural proximity. It ranges from 0 to 100, where higher values indicate a higher level of social integration. While social globalization itself is positively and significantly related to M&As both from the acquirer's and the target's perspective our other results remain unchanged. That ensures that our results are not driven by some countries on which it is easy for investors to obtain information. If such "easy access" countries had a particular pattern of regulation and political constraints our interpretation of the results would not be justified. However, this is apparently not the case.[14]

5. Concluding remarks

In this paper, we evaluated the determinants of both the number and the value of cross-border M&A flows in a gravity model, with a view to measuring the impact of creditor rights and political risk. We studied both the number and the value of cross-border deals. Since the number of deals between two countries is small and discrete, the model was estimated thanks to a negative binomial model. It was fitted to the value of deals with Heckman's two-stage approach, to account for the large number of countries for which no deal was reported over our period of study.

When using pooled regressions, our results confirm that formal creditor rights and political risk affect foreign M&A flows in target countries. More precisely, political stability increases M&A inflows, while creditor-friendly rules deter them. The finding that creditor-friendly rules deter foreign M&As is in line with the view that being acquired by a foreign firm operating in a legal system that protects investors is a way to opt into a better legal system. Our key finding, however, materializes when distinguishing target countries according to political stability. It then appears that previous results on formal creditor rights are mainly driven by relatively stable countries, where those rights can

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[14] The results of all tests of robustness are suppressed to save space. They are available upon request.

be reasonably expected to hold. More precisely, creditor-friendly rights only deter M&A inflows in target countries that are sufficiently stable.

From a general point of view, those results draw a link between the law and finance literature and the literature that emphasizes the sensitivity of capital flows to political risk. While the former has shown that formal legal rules impact financial phenomena, the latter has emphasized the sensitivity of financial phenomena to political factors. Our results suggest that if formal legal rules matter, they only matter where political stability allows them to be reliable enough.

Our results have broad policy implications. If formal rules only matter in stable political environments, then any reform of legal rules would likely prove futile in political unstable countries. Time and resources devoted to writing laws would be wasted if the political system is still subject to political instability. This suggests an optimal timing for political and legal reforms. Namely, a country should first achieve political stability before engineering a legal reform. In other words, legal reforms will only be efficient if they follow, but not precede, political reforms.

References

Aleksynska, M., and O. Havrylchyk (2013) FDI from the South: The role of Institutional Distance and Natural Resources, *European Journal of Political Economy* 29: 38-53.

Alfaro, L., S. Kalemli-Ozcan, and V. Volosovych (2008) Why doesn't Capital Flow from Rich to Poor Countries? An Empirical Investigation, *Review of Economics and Statistics* 90(2): 347-368.

Anderson, J.E., and E. van Wincoop (2003) Gravity with Gravitas: A Solution to the Border Puzzle, *American Economic Review* 93(1): 170-192.

Antràs P., C.F. Foley, and M. Desai (2009) Multinational Firms, FDI Flows and Imperfect Capital Markets, *Quarterly Journal of Economics* 124(3): 1171-1219.

Asiedu, E., Y. Jin, and B. Nandwa (2009) Does Foreign Aid Mitigate the Adverse Effect of Expropriation Risk on Foreign Direct Investment?, *Journal of International Economics* 78(2): 268-275.

Beltratti, A., and Paladino, G. (2013) Is M&A Different During a Crisis? Evidence from the European Banking Sector, *Journal of Banking and Finance*, forthcoming.

Berggren, N., A. Bergh, and C. Bjørnskov (2009) The Growth Effect of Institutional Instability, Ratio Institute Working Paper 09-135.

Bergstrand, J.H., and P. Egger (2007) A Knowledge-and-Physical-Capital Model of International Trade Flows, Foreign Direct Investment, and Multinational Enterprises, *Journal of International Economics* 73(2): 278-308.

Bianco, M., T. Jappelli, and M. Pagano, (2005) Courts and Banks: Effects of Judicial Enforcement on Credit Markets, *Journal of Money, Credit and Banking* 37(2): 223-244.

Brakman S., H. Garretsen, and C. van Marrewijk (2007) Cross-border Mergers and Acquisitions: The Facts as a Guide for International Economics, in G. Gregoriou and L. Renneboog (eds.), *International Mergers and Acquisitions Activity since 1990: Recent Research and Quantitative Analysis*, Amsterdam: Elsevier, 23-49.

Bris, A., and C. Cabolis (2008) The Value of Investor Protection: Firm Evidence from Cross-border Mergers, *Review of Financial Studies* 21(2): 605-648.

Busse, M., and C. Hefeker (2007) Political Risk, Institutions and Foreign Direct Investment, *European Journal of Political Economy* 23(2): 397-415.

Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) (2006) *Distances Database*, http://www.cepii.fr/anglaisgraph/bdd/distances.htm.

Coeurdacier N., R.A. De Santis, and A. Aviat (2009) Cross-border Mergers and Acquisitions and European Integration, *Economic Policy* 24(57): 55-106.

Daude C., and E. Stein (2007) The Quality of Institutions and Foreign Direct Investment, *Economics & Politics* 19(3): 317-344.

Daude C., and M. Fratzscher (2008) The Pecking Order of Cross-border Investment, *Journal of International Economics* 74(1): 94-119.

de Ménil G. (1999) Real Capital Market Integration in the EU: How Far Has It Gone? What Will the Effect of the Euro Be?, *Economic Policy* 28(4): 165-189.

Desbordes, R., and V. Vicard (2009) Foreign direct investment and bilateral investment treaties: An international political perspective, *Journal of Comparative Economics* 37(3): 372-386.

di Giovanni J. (2005) What Drives Capital Flows? The Case of Cross-border M&A Activity and Financial Deepening, *Journal of International Economics* 65(1): 127-149.

Dikova, D., P.R. Sahib, and A. Van Witteloostuijn (2010). Cross-border Acquisition Abandonment and Completion: The Effect of Institutional Differences and Organizational Learning in the International Business Service Industry, 1981–2001, *Journal of International Business Studies* 41(2): 223-245.

Dixit, A., 2009. Governance Institutions and Economic Activity, *American Economic Review* 99(1): 3–24.

Djankov, S., McLiesh, C, Shleifer, A. (2007) Private Credit in 129 Countries, *Journal of Financial Economics* 84(2): 299-329.

Dreher, A. (2006) Does Globalization Affect Growth? Evidence from a New Index of Globalization, *Applied Economics* 38(10): 1091-1110.

Dreher, A., N. Gaston, and P. Martens (2008). *Measuring Globalisation - Gauging Its Consequences,* New York: Springer.

Easterly, W., and M. Sewadeh (2001) Global Development Network Growth Database, World Bank, Economic and Development Research Group.

Eaton, J., and A. Tamura (1994) Bilateralism and Regionalism in Japanese and U.S. Trade and Direct Foreign Investment Patterns, *Journal of the Japanese and International Economies* 8(4): 478-510.

Eaton, J., and M. Gersovitz (1984) A Theory of Expropriation and Deviations from Perfect Capital Mobility, *Economic Journal* 94(373): 16-40.

Egger, P., M. Larch, M. Pfaffermayr, and H. Winner (2006) The Impact of Endogenous Tax Treaties on Foreign Direct Investment: Theory and Evidence, *Canadian Journal of Economics* 39(3): 901-931.

Egger, P., and V. Merlo (2007) The Impact of Bilateral Investment Treaties on FDI Dynamics, *World Economy* 30(10): 1536-1549.

Egger, P., and M. Pfaffermayr (2004) The Impact of Bilateral Investment Treaties on Foreign Direct Investment, *Journal of Comparative Economics* 32(4): 788-804.

Egger, P., and H. Winner (2005) Evidence on Corruption as an Incentive for Foreign Direct Investment, *European Journal of Political Economy* 21 (4): 932-952.

Guimarães, P. (2008) The Fixed Effects Negative Binomial Model Revisited, *Economics Letters* 99(1): 63-66.

Hausman, J., B.H. Hall, and Z. Griliches (1984) Econometric Models for Count Data with an Application to Patents-R&D Relationship, *Econometrica* 52(4): 909-938.

Heckman, J. (1979) Sample Selection Bias as a Specification Error, *Econometrica* 47(1): 153-161.

Henisz, W.J. (2000) The Institutional Environment for Economic Growth, *Economics & Politics* 12(1): 1-31

Henisz, W.J. (2002) The Institutional Environment for Infrastructure Investment, *Industrial and Corporate Change* 11(2): 355-389.

Hijzen, A., H. Görg, and M. Manchin (2008) Cross-border Mergers and Acquisitions and the Role of Trade Costs, *European Economic Review* 52(5): 849-866.

Huizinga, H.P. and J. Voget (2009) International Taxation and the Direction and Volume of Cross-Border M&As, *Journal of Finance* 64(3): 1217-1249.

Hyun, H. J., and H. H. Kim, (2010). The Determinants of Cross-border M&As: The Role of Institutions and Financial Development in the Gravity Model, *World Economy* 33(2): 292-310.

Keefer, P. and D. Stasavage (2003) The Limits of Delegation: Veto Players, Central Bank Independence and the Credibility of Monetary Policy, *American Political Science Review* 97(3): 407-423.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny (1997) Legal Determinants of External Finance, *Journal of Finance* 52(3): 1131-1150.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny (1998) Law and Finance, *Journal of Political Economy* 106(6): 1113-1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny (2000) Investor Protection and Corporate Governance, *Journal of Financial Economics* 58(1-2): 3-27.

Laeven, L., and C. Woodruff (2007) The Quality of the Legal System, Firm Ownership, and Firm Size, *Review of Economics and Statistics* 89(4): 601-614.

Loungani P., A. Mody, and A. Razin (2002) The Global Disconnect: The Role of Transactional Distance and Scale Economies in Gravity Equations, *Scottish Journal of Political Economy* 49(5): 526-543.

Lucas, R. E. (1990) Why Doesn't Capital Flow from Rich to Poor Countries?, *American Economic Review* 80(2): 92-96.

Méon, P. G., and K. Sekkat. (2015). The Formal and Informal Institutional Framework of Capital Accumulation, *Journal of Comparative Economics* 43(3): 754-771.

Moser, C., T. Nestmann, and M. Wedow (2008) Political Risk and Export Promotion: Evidence from Germany, *World Economy* 31(6): 781-803.

Portes R., and H. Rey (2005) The Determinants of Cross-border Equity Flows, *Journal of International Economics* 65(2): 269-296.

Portes R., H. Rey, and Y. Oh (2001) Information and Capital Flows: The Determinants of Transactions in Financial Assets, *European Economic Review* 45(4-6): 783-796.

Rose, A. K. (2004) Do We Really Know that the WTO Increases Trade?, *American Economic Review* 94(1): 98-114.

Rossi, S., and P.F. Volpin (2004) Cross-country Determinants of Mergers and Acquisitions, *Journal of Financial Economics* 74(2): 277-304.

Safavian, M., and S. Sharma (2007) When do Creditor Rights Work?, *Journal of Comparative Economics* 35(3): 484-508.

Schneider, F., and B.S. Frey (1985) Economic and Political Determinants of Foreign Direct Investment, *World Development* 13(2):161-175.

Serdar Dinc, I., and I. Erel. (2013). Economic Nationalism in Mergers and Acquisitions. *Journal of Finance*, 68(6), 2471-2514.

Stein, E., and C. Daude (2007) Longitude Matters: Time Zones and the Location of Foreign Direct Investment, *Journal of International Economics* 71(1): 96-112.

United Nations Conference on Trade and Development (UNCTAD) (1998) *Bilateral Investment Treaties in the mid-1990s*, United Nations: New York: 1998.

United Nations Conference on Trade and Development (UNCTAD) (2000) *Bilateral Investment Treaties 1959-1999*, United Nations: New York and Geneva.

United Nations Conference on Trade and Development (UNCTAD) (2003) *World Investment Report Transnational Corporations, FDI Policies for Development: National and International Perspectives*, United Nations: New York and Geneva.

United Nations Conference on Trade and Development (UNCTAD) (2007) *World Investment Report Transnational Corporations, Extractive Industries and Development*, United Nations: New York and Geneva.

Wei, S.-J. (2000) How Taxing Is Corruption on International Investors?, *Review of Economics and Statistics* 82(1): 1-11.

World Bank (2006) World Development Indicators, CD-ROM, Washington, DC.: World Bank.

Table 1: Determinants of the Number of European Cross-Border M&As, 1990-2001

	(1)	(2)	(3)	(4)	(5)	(6)
GDP acquiring country (log)	0.276	0.271	0.302	0.213	0.203	0.239
	(0.70)	(0.66)	(0.75)	(0.54)	(0.50)	(0.59)
GDP target country (log)	0.439	0.448	0.408	0.431	0.440	0.399
	(3.55)***	(3.62)***	(3.07)***	(3.46)***	(3.52)***	(2.99)***
Population acquiring country (log)	-7.142	-7.022	-7.220	-7.383	-7.203	-7.452
	(2.55)**	(2.39)**	(2.59)***	(2.56)**	(2.42)**	(2.61)***
Population target country (log)	-2.121	-2.133	-2.141	-2.155	-2.166	-2.167
	(7.61)***	(7.69)***	(7.53)***	(7.32)***	(7.39)***	(7.22)***
Bilateral investment treaty				-0.210	-0.211	-0.211
				(3.82)***	(3.87)***	(3.76)***
Double taxation treaty				0.055	0.061	0.060
				(0.72)	(0.80)	(0.77)
Creditor rights acquiring country	0.078	0.079	0.085	0.082	0.083	0.088
	(2.05)**	(2.05)**	(1.99)**	(2.13)**	(2.13)**	(2.05)**
Creditor rights target country	-0.111	-0.110	-0.099	-0.097	-0.096	-0.085
	(3.07)***	(3.03)***	(2.66)***	(2.64)***	(2.60)***	(2.26)**
Political constraints III acquiring country	-0.086			-0.106		
	(0.36)			(0.44)		
Political constraints III target country	-0.276			-0.267		
	(4.13)***			(3.96)***		
Political constraints V acquiring country		-0.028			-0.048	
		(0.12)			(0.22)	
Political constraints V target country		-0.140			-0.130	
		(2.38)**			(2.25)**	
Checks and balances acquiring country			-0.010			-0.009
			(0.85)			(0.80)
Checks and balances target country			-0.014			-0.014
			(1.40)			(1.37)
Observations	15,484	15,386	15,148	15,484	15,386	15,148
R-squared	0.033	0.033	0.033	0.034	0.034	0.034
Number of pairs	1,372	1,358	1,358	1,372	1,358	1,358

Notes: The table reports the results of country-pair fixed effect panel regressions. The dependent variable is the number of cross-border mergers and acquisitions originating from Europe. All regressions include annual time dummies. Absolute t-values based on clustered standard errors are given in parentheses below the coefficient.
*/**/*** indicate significance at the 10/5/1-% level.

Table 2: M&As and the Interaction between Constraints and Creditor Rights, 1990-2001

	(1)	(2)	(3)	(4)	(5)	(6)
GDP acquiring country (log)	0.392	0.464	0.096	0.331	0.400	0.034
	(1.00)	(1.11)	(0.26)	(0.84)	(0.96)	(0.09)
GDP target country (log)	0.438	0.451	0.409	0.430	0.443	0.400
	(3.55)***	(3.65)***	(3.11)***	(3.46)***	(3.55)***	(3.03)***
Population acquiring country (log)	-8.671	-9.499	-5.301	-8.973	-9.773	-5.536
	(3.00)***	(2.96)***	(2.58)**	(3.01)***	(2.99)***	(2.62)***
Population target country (log)	-2.099	-2.120	-2.145	-2.134	-2.154	-2.166
	(7.58)***	(7.68)***	(7.55)***	(7.29)***	(7.39)***	(7.28)***
Bilateral investment treaty				-0.216	-0.217	-0.208
				(3.89)***	(3.93)***	(3.77)***
Double taxation treaty				0.057	0.062	0.070
				(0.74)	(0.81)	(0.91)
Creditor rights acquiring country	0.382	2.694	0.306	0.397	2.791	0.308
	(3.46)***	(3.11)***	(1.81)*	(3.55)***	(3.18)***	(1.84)*
Political constraints III acquiring country	0.773			0.783		
	(2.36)**			(2.38)**		
Political constraints V acquiring country		3.683			3.795	
		(3.04)***			(3.12)***	
Checks and balances acquiring country			0.047			0.047
			(1.36)			(1.39)
Interaction acquiring country	-0.580	-3.393	-0.044	-0.601	-3.515	-0.044
	(3.23)***	(3.07)***	(1.55)	(3.32)***	(3.14)***	(1.56)
Creditor rights target country	-0.091	-0.097	-0.111	-0.076	-0.081	-0.100
	(2.71)***	(2.94)***	(2.22)**	(2.18)**	(2.38)**	(1.97)**
Political constraints III target country	-0.141			-0.128		
	(1.90)*			(1.73)*		
Political constraints V target country		-0.067			-0.051	
		(0.88)			(0.68)	
Checks and balances target country			-0.021			-0.022
			(0.78)			(0.81)
Interaction target country	-0.078	-0.035	0.004	-0.080	-0.037	0.005
	(2.73)***	(1.33)	(0.34)	(2.77)***	(1.42)	(0.40)
Observations	15,484	15,386	15,148	15,484	15,386	15,148
Number of pairs	1,372	1,358	1,358	1,372	1,358	1,358
R-squared	0.034	0.034	0.034	0.035	0.035	0.035

Notes: The table reports the results of country-pair fixed effect panel regressions. The dependent variable is the number of cross-border mergers and acquisitions originating from Europe. All regressions include annual time dummies. *Interaction* represents the interaction between creditor rights and one of the three measures of political risk. Absolute t-values based on clustered standard errors are given in parentheses below the coefficient.
*/**/*** indicate significance at the 10/5/1-% level.

Table 3: Determinants of the Number of European Cross-Border M&As, Negative Binomial, 1990-2001

	(1)	(2)	(3)	(4)	(5)	(6)
Common border	0.976	0.978	0.987	0.999	1.002	1.014
	(0.17)	(0.15)	(0.09)	(0.01)	(0.01)	(0.09)
Common official language	1.423	1.438	1.404	1.416	1.432	1.398
	(2.35)**	(2.40)**	(2.23)**	(2.29)**	(2.35)**	(2.19)**
Colonial history	2.547	2.531	2.547	2.512	2.493	2.501
	(6.32)***	(6.23)***	(6.26)***	(6.16)***	(6.07)***	(6.07)***
Distance (log)	0.395	0.396	0.395	0.384	0.385	0.383
	(9.61)***	(9.54)***	(9.56)***	(9.83)***	(9.75)***	(9.81)***
Common legal origin	1.699	1.701	1.694	1.720	1.720	1.716
	(5.59)***	(5.56)***	(5.51)***	(5.65)***	(5.63)***	(5.58)***
GDP acquiring country (log)	0.860	0.888	1.168	0.976	0.996	1.349
	(0.32)	(0.25)	(0.33)	(0.05)	(0.01)	(0.64)
GDP target country (log)	1.873	2.133	1.767	1.919	2.164	1.812
	(2.07)**	(2.45)**	(1.85)*	(2.14)**	(2.48)**	(1.93)*
Population acquiring country (log)	15.48	12.48	0.0523	9.564	7.869	0.0274
	(0.73)	(0.67)	(0.83)	(0.60)	(0.55)	(1.02)
Population target country (log)	9.202	7.649	13.62	6.550	5.909	9.726
	(3.12)***	(2.82)***	(3.62)***	(2.64)***	(2.46)**	(3.14)***
Bilateral investment treaty				1.434	1.345	1.431
				(3.74)***	(3.02)***	(3.64)***
Double taxation treaty				1.178	1.176	1.204
				(2.46)**	(2.42)**	(2.78)***
Creditor rights acquiring country	0.850	0.856	0.827	0.865	0.872	0.842
	(1.50)	(1.44)	(1.76)*	(1.33)	(1.27)	(1.60)
Creditor rights target country	0.820	0.829	0.807	0.822	0.831	0.813
	(2.46)**	(2.31)**	(2.65)***	(2.39)**	(2.26)**	(2.53)**
Political constraints III acquiring country	5.144			5.387		
	(4.26)***			(4.37)***		
Political constraints III target country	1.434			1.378		
	(1.55)			(1.36)		
Political constraints V acquiring country		25,075			31,498	
		(4.56)***			(4.65)***	
Political constraints V target country		4.191			3.716	
		(5.43)***			(4.92)***	
Checks and balances acquiring country			1.095			1.098
			(5.01)***			(5.16)***
Checks and balances target country			1.024			1.019
			(1.76)*			(1.44)
Observations	15,484	15,386	15,148	15,484	15,386	15,148
Number of pairs	1,372	1,358	1,358	1,372	1,358	1,358

Notes: The table reports the results of random effects negative binomial panel regressions. The dependent variable is the number of cross-border mergers and acquisitions originating from Europe. The coefficients reported in the table are incidence-rate ratios, i.e., a one unit change in the corresponding variable represents an expected change in the number of M&As of (coefficient minus 1) times 100 percent. All regressions include acquiring and target country fixed effects and annual time dummies. Absolute t-values are given in parentheses below the coefficient.
*/**/*** indicate significance at the 10/5/1-% level.

Table 4: Determinants of the Value of European Cross-Border M&As, 1990-2001

	(1)	(1a)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)	(5a)	(6)	(6a)
Common border	-0.259	0.105	-0.251	0.107	-0.249	0.120	-0.264	0.118	-0.259	0.119	-0.254	0.135
	(1.19)	(1.04)	(1.15)	(1.06)	(1.14)	(1.18)	(1.23)	(1.16)	(1.20)	(1.17)	(1.17)	(1.32)
Common official language	0.767	0.273	0.761	0.278	0.749	0.270	0.765	0.270	0.761	0.276	0.745	0.265
	(3.23)***	(3.03)***	(3.20)***	(3.07)***	(3.15)***	(2.97)***	(3.26)***	(3.00)***	(3.23)***	(3.04)***	(3.16)***	(2.92)***
Colonial history	1.222	0.579	1.201	0.572	1.182	0.580	1.187	0.578	1.169	0.571	1.149	0.578
	(5.07)***	(6.32)***	(4.96)***	(6.20)***	(4.88)***	(6.26)***	(4.96)***	(6.30)***	(4.87)***	(6.18)***	(4.79)***	(6.23)***
Distance (log)	-1.573	-0.750	-1.584	-0.747	-1.592	-0.746	-1.550	-0.747	-1.561	-0.744	-1.571	-0.743
	(8.07)***	(11.88)***	(8.07)***	(11.80)***	(8.16)***	(11.73)***	(7.93)***	(11.83)***	(7.94)***	(11.76)***	(8.01)***	(11.69)***
Common legal origin	0.981	0.349	0.982	0.352	0.984	0.348	0.979	0.351	0.982	0.354	0.983	0.351
	(5.96)***	(6.13)***	(5.94)***	(6.17)***	(5.96)***	(6.09)***	(5.96)***	(6.16)***	(5.95)***	(6.18)***	(5.96)***	(6.12)***
GDP acquiring country (log)	-0.509	0.046	-0.662	-0.057	-0.346	-0.045	-0.373	0.087	-0.534	-0.020	-0.231	0.006
	(0.32)	(0.08)	(0.41)	(0.10)	(0.22)	(0.08)	(0.24)	(0.16)	(0.34)	(0.04)	(0.15)	(0.01)
GDP target country (log)	1.326	0.294	1.485	0.387	1.169	0.304	1.302	0.317	1.436	0.403	1.158	0.330
	(1.46)	(1.08)	(1.64)	(1.40)	(1.30)	(1.10)	(1.44)	(1.16)	(1.59)	(1.45)	(1.29)	(1.19)
Population acquiring country (log)	-1.485	-2.954	0.059	-2.006	-6.729	-3.283	-3.164	-2.787	-1.625	-1.896	-7.844	-3.168
	(0.12)	(0.67)	(0.00)	(0.46)	(0.57)	(0.77)	(0.26)	(0.63)	(0.13)	(0.43)	(0.67)	(0.74)
Population target country (log)	4.068	-0.001	4.284	-0.092	5.167	0.333	4.347	-0.052	4.601	-0.136	5.345	0.275
	(1.98)**	(0.00)	(2.08)**	(0.14)	(2.49)**	(0.52)	(2.12)**	(0.08)	(2.24)**	(0.21)	(2.58)***	(0.42)
Bilateral investment treaty							-0.265	0.116	-0.292	0.101	-0.232	0.131
							(1.31)	(1.88)*	(1.43)	(1.62)	(1.12)	(2.09)**
Double taxation treaty							0.082	0.020	0.076	0.016	0.089	0.022
							(0.58)	(0.39)	(0.54)	(0.31)	(0.63)	(0.43)
Creditor rights acquiring country	0.089	0.091	0.110	0.093	0.068	0.085	0.106	0.089	0.126	0.091	0.089	0.083
	(0.34)	(1.03)	(0.41)	(1.04)	(0.26)	(0.95)	(0.40)	(1.00)	(0.47)	(1.02)	(0.33)	(0.92)
Creditor rights target country	-0.352	-0.061	-0.334	-0.058	-0.371	-0.080	-0.339	-0.071	-0.320	-0.067	-0.357	-0.090
	(1.71)*	(0.88)	(1.63)	(0.83)	(1.80)*	(1.16)	(1.66)*	(1.02)	(1.56)	(0.95)	(1.74)*	(1.29)
Political constraints III acquiring country	1.777	0.179					1.628	0.203				
	(1.58)	(0.44)					(1.46)	(0.50)				
Political constraints III target country	0.290	0.386					0.229	0.384				
	(0.41)	(1.77)*					(0.33)	(1.75)*				
Political constraints V acquiring country			11.77	1.957					10.82	2.042		
			(1.89)*	(1.06)					(1.74)*	(1.09)		
Political constraints V target country			1.592	0.930					1.589	0.909		
			(2.36)**	(4.96)***					(2.36)**	(4.82)***		
Checks and balances acquiring country					0.086	0.041					0.083	0.041
					(1.61)	(2.12)**					(1.56)	(2.11)**
Checks and balances target country					0.039	0.013					0.035	0.012
					(0.99)	(0.85)					(0.89)	(0.80)
Observations	15,483	15,483	15,385	15,385	15,147	15,147	15,483	15,483	15,385	15,385	15,147	15,147
Censored observations	13,494	13,494	13,409	13,409	13,176	13,176	13,494	13,494	13,409	13,409	13,176	13,176

Notes: The table reports the results of Heckman two-step regressions. The dependent variable is the logarithm of the value of cross-border mergers and acquisitions originating from Europe. The second step, explaining the value, is presented first while the first step modeling the likelihood of observing a positive outcome (via a probit regression) is presented in the columns marked with (a). All regressions include annual time dummies. Absolute t-values are given in parentheses below the coefficient. */**/*** indicate significance at the 10/5/1-% level.

Appendix

Table 5: Summary Statistics

Variable	Mean	Std. Dev.	Min	Max
Number of M&As	0.445	3.007	0	147
Value of M&As (log)	2.286	6.016	0	26.047
Common border	0.033	0.178	0	1
Common official language	0.075	0.263	0	1
Colonial history	0.052	0.221	0	1
Distance (log)	8.305	0.937	4.088	9.883
Common legal origin	0.268	0.443	0	1
GDP acquiring country (log)	26.594	1.051	24.724	28.384
GDP target country (log)	25.192	1.742	21.553	29.903
Population acquiring country (log)	16.588	1.021	15.070	18.226
Population target country (log)	16.534	1.382	14.388	20.964
Bilateral investment treaty	0.225	0.418	0	1
Double taxation treaty	0.430	0.495	0	1
Creditor rights acquiring country	1.995	1.086	0	4
Creditor rights target country	1.896	1.183	0	4
Political constraints III acquiring country	0.473	0.096	0.225	0.718
Political constraints III target country	0.312	0.214	0	0.718
Political constraints V acquiring country	0.768	0.051	0.391	0.894
Political constraints V target country	0.485	0.315	0	0.894
Checks and balances acquiring country	4.590	1.547	2	10
Checks and balances target country	3.223	1.892	1	18

Notes: This table gives summary statistics based on the 15,484 observations of specification (1) in Table 1.

Table 6: List of target and source countries and the number of associated deals

a) Target countries

Albania	1	Honduras	2	Pakistan	1
Algeria	1	Hong Kong	30	Panama	3
Argentina	122	Hungary	58	Paraguay	0
Armenia	1	India	80	Peru	19
Australia	213	Indonesia	14	Philippines	17
Austria	51	Iran	1	Poland	186
Azerbaijan	1	Ireland	127	Portugal	76
Belgium	134	Israel	43	Romania	29
Bolivia	1	Italy	229	Russian Federation	37
Brazil	151	Jamaica	3	Rwanda	1
Bulgaria	17	Japan	71	Saudi Arabia	0
Burkina Faso	1	Jordan	2	Senegal	2
Canada	176	Kazakhstan	6	Singapore	55
Central African Republic	2	Kenya	1	Slovak Republic	9
Chile	50	Korea, Rep.	34	Slovenia	9
China	31	Kuwait	0	South Africa	76
Colombia	20	Latvia	17	Spain	350
Congo, Rep.	1	Lebanon	1	Sri Lanka	1
Costa Rica	3	Lithuania	24	Sweden	177
Cote d'Ivoire	2	Macedonia	6	Switzerland	102
Croatia	25	Malawi	0	Tanzania	4
Czech Republic	67	Malaysia	20	Thailand	41
Denmark	79	Mali	1	Turkey	39
Dominican Republic	5	Mexico	51	Ukraine	6
Ecuador	2	Moldova	2	United Arab Emirates	2
Egypt	15	Mongolia	1	United Kingdom	469
El Salvador	2	Morocco	9	United States	1644
Finland	82	Netherlands	253	Uruguay	2
France	576	New Zealand	39	Uzbekistan	2
Georgia	1	Nicaragua	1	Venezuela	19
Germany	389	Nigeria	2	Vietnam	2
Ghana	0	Norway	133	Zambia	1
Greece	23	Oman	2	Zimbabwe	3

b) Source countries

Austria	71	Germany	608	Portugal	76
Belgium	232	Greece	32	Spain	318
Denmark	145	Ireland	303	Sweden	355
Finland	140	Italy	330	United Kingdom	3044
France	738	Netherlands	500		

Notes: This table reports the target and source countries and the number of associated deals according to specification (1) in Table 1.