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Cross-Border Mergers and Acquisitions and the Influence of Country  
Corruption in the European Union

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## **Abstract**

The worldwide increase of Mergers and Acquisitions (M&A) activity makes it essential to understand the determinants that drive M&A cross-border deals. The present dissertation aims to further increase the understanding of how corruption influences the number of M&A deals in the European Union, and in each region, namely North, South, East, and West.

The sample is constituted by 6.879 cross-border deals, announced, and completed between the years of 2012 and 2018 where the target country is from Europe 27, and obtained from the Zephyr database from Bureau van Dijk (BvD). This resulted in 1.898 country-pair observations, from which 1.192 are observations in which both the acquiring and target country belong to the European Union.

Corruption in the target country has a negative influence in the number of M&A deals between country-pairs. The negative influence of corruption on cross-border M&A is also verified for each of the 4 EU regions analysed, North, South, East, and West.

Results reveal that bilateral flows between country-pairs have a positive relationship with the number of M&A deals. Likewise, a higher Market-to-Book valuation of the firms from the acquiring country than the firms of the target country has a positive influence on the number of M&A deals. Contrary, culturally distant countries have fewer M&A deals. Geographical distance influences differently the number of M&A deals depending if both countries belong to the European Union or not.

**Key words:** Mergers and Acquisitions, Corruption, Geographical Distance, Cultural Distance, European Union

## Resumo

O aumento mundial de atividade de Fusões e Aquisições (F&A) torna essencial perceber os determinantes que induzem as F&A transfronteiriças. A presente dissertação tem como objetivo aprofundar a compreensão de como a corrupção influencia o número de F&A transfronteiriças na União Europeia (UE) e em cada uma das regiões, nomeadamente, Norte, Sul, Este e Oeste.

A amostra é constituída por 6.879 operações transfronteiriças de F&A, anunciadas e concluídas entre os anos de 2012 e 2018, nos quais o país alvo pertence à UE. As informações sobre as operações foram obtidas da base de dados Zephyr da Bureau van Dijk (BvD). Os dados são transformados em 1.898 observações a nível de par de países, dos quais 1.192 são observações entre países pertencentes à UE.

A corrupção no país-alvo tem uma influência negativa no número de F&A entre pares de países. Esta influência negativa da corrupção sobre as F&A transfronteiriças é verificada também para cada uma das 4 regiões da UE analisadas, Norte, Sul, Este e Oeste.

Os resultados revelam que os fluxos bilaterais entre pares de países têm uma relação positiva com o número de negócios de F&A. De forma semelhante, um rácio Market-to-Book mais alto das empresas do país adquirente do que das empresas do país de destino tem uma influência positiva no número de negócios de F&A. De forma contrária, os países culturalmente distantes têm menos negócios de F&A. A distância geográfica influencia de forma diferente o número de negócios de F&A dependendo se ambos os países pertencem ou não à União Europeia.

**Palavras-chave:** Fusões e Aquisições; Corrupção; Distância Geográfica; Distância Cultural; União Europeia

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# Chapter 1

## Introduction

Mergers and acquisitions (M&A) activity is becoming increasingly important worldwide. Foreign Direct Investment (FDI) has decreased by three consecutive years worldwide, from 2016 to 2018. In 2018, FDI flows to developed countries reached its lowest point since 2004.

By contrast, cross-border M&A, a subset of FDI, have risen 18% in 2018, going from \$694 billion in 2017 to \$816 billion in 2018. In Europe, the rise in cross-border M&A deals was 21%. (UNCTAD, 2018, 2019).

Countries need to attract foreign investment since it is closely related to economic growth, allowing capital to flow to where it is needed and productive, helping discipline managers, and also comes together with the knowledge to enhance productivity to the best international practices (Mody, 2004). Many new industrial policies adopted in recent years rely to a significant degree on attracting investment. (UNCTAD, 2019).

This growth in M&A could be explained by the advantages it offers to the company over other types of investments. It allows the company to eliminate competition and it is a powerful tool that enables fast growth (OECD, 2002). M&A deals are increasingly used as instruments for entering international markets, to gain access to new and lucrative markets or to acquire firms due to their knowledge and capabilities (Shimizu, Hitt, Vaidyanath, & Pisano, 2004).

Due to its importance, there is an extensive literature concerning M&A deals and many determinants have been studied and proved to influence the number of cross-border M&A deals, for instance, geographical distance, cultural distance, countries tax system, international bilateral flows, financial ratios, market size and potential, and valuation differences in currency and stock price movements. Nevertheless, despite existent literature, there are knowledge gaps concerning the country-level determinants of cross-border M&A deals (Xie, Reddy, & Liang, 2017).

Corruption, defined as *the abuse of public office for private gain* (Rodriguez, Uhlenbruck, & Eden, 2005), has had an increasing focus in recent literature. It is, however, seen as a problem of emerging economies, despite available data demonstrates that corruption, in its many formats, is a problem that also affects wealthy countries. As Ourvoie (2016) has already mentioned, a 2015 comprehensive literature review on determinants of cross-border M&A



(Reddy, 2015) that listed 240 articles revealed that there is less research on the different European countries. The same literature review also pointed out that there are very few studies examining the impact of host country corruption on inward foreign direct investments. A more recent comprehensive literature review on the same subject (Xie et al., 2017) revealed that there is less research on the impact of corruption in M&A deals on the different European countries.

There is a general concern among the European public that corruption is rising. In 2012, several streets in diverse European countries were the stage for protests against corruption and a perceived unfair austerity towards ordinary citizens (Transparency International, 2012b).

By using a sample of 6,879 deals, announced and completed between the years of 2012 and 2018, in which the target country belongs to the European Union, from a total of 25 European Union countries, the present dissertation intends to better understand the influence of corruption on the inflow of M&A deals in the European Union.

The dissertation contributes in the following ways. First, it extends the existing literature by studying the influence of corruption in the likelihood of M&A deals in countries that belong to the European Union. With this, it addresses the gap in the literature regarding the reduced M&A literature concerning corruption on the different European countries and also the reduced literature concerning the impact of host country corruption on inward foreign direct investments, in this case, M&A. Second, a recent sample from the years 2012 to 2018 is used with a total of 25 different host countries that belong to the European Union. Third, by focusing on deals between European Union countries, which belong to an economic and political union with unique characteristics, it allows policymakers and business practitioners to draw inferences from the empirical results and adjust their policies accordingly.

This dissertation is structured as follows. Chapter 2 discusses previous literature on cross-border M&A and fundamentals the hypotheses developed. Chapter 3 describes the data and validates the use of the selected control variables. Chapter 4 presents the results obtained. Chapter 5 concludes.

## Chapter 2

### Literature Review and Hypothesis Development

With the worldwide increase of M&A and its growing impact on countries' FDI, it is imperative to understand what drives cross-border deals since it is important for countries to attract M&A investment considering it stimulates the economic growth (UNCTAD, 2018, 2019).

M&A deals are an increasingly important topic that has extent literature analysing the determinants that influence the number of M&A deals between countries (Xie et al., 2017). Geographical distance has been proved to influence the number of M&A deals, the greater the geographical proximity between countries the higher the likelihood of M&A deals between them (Dow, 2000; Dunning & Lundan, 2008). Firms from countries with distant cultures are less likely to have an M&A deal since cultural distance increases costs and lowers performance (Pothukuchi, Damanpour, Choi, Chen, & Ho Park, 2002). Tax structure and policies affect the attractiveness of a country (Xie et al., 2017), the higher the tax rates the lower the M&A deals inflow (di Giovanni, 2005; Nagano, 2013). Erel, Liao, & Weisbach (2012) studied the influence of valuation in the likelihood of M&A deals. They concluded that a company from a country which currency has appreciated has a higher chance to acquire a company from a country which currency has depreciated and that a company from a country with a superior stock market performance has a higher chance to acquire a firm from a worse stock market performance country. Market-to-book ratio is another financial market variable that affects the likelihood of M&A deals, being that firms from countries with a higher stock market valuation are more likely to make cross-border M&A deals (Shleifer & Vishny, 2003). Bilateral flows have also been proved to be a variable that can predict the likelihood of M&A deals between country pairs, seeing that goods trade flow is positively related to investment flows (di Giovanni, 2005). Additionally, countries with a more prosperous outlook, that could be perceived by a higher GDP per capita and a higher real growth rate, are more likely to have their firms targeted by M&A deals (Stephen, 1976).

With M&A deals having a growing interest and importance in the global market landscape, research concerning this topic is extensive. Nevertheless, despite the extent variables presented above, there are knowledge gaps concerning the country-level determinants of cross-border M&A deals (Xie et al., 2017).

Most cross-border M&A regressions concerning the influence of variables in the prediction of deals have a reduced R squared, which can be interpreted as a need for other relevant variables in the regression that explain the likelihood of occurring M&A deals (Rossi & Volpin, 2004; Vorachen, 2016; Xie et al., 2017).

Corruption is a variable of interest that has the potential to influence the likelihood of cross-border M&A deals (Malhotra, Zhu, & Locander, 2010; Xie et al., 2017). Corruption is broadly defined as *the abuse of public office for private gain* (Rodriguez et al., 2005). Corruption can have a variety of formats, being the most traditional kickbacks and bribes (Transparency International, 2012b), which the latter can be defined as the offering, promising or giving something in order to influence a public official in the execution of his/her official duties and can take the form of money, other pecuniary advantages or nonpecuniary benefits (Rajib Sanyal & Subarna Samanta, 2008; Teixeira & Guimarães, 2015). Corruption can also have the format of patronage or nepotism, which are the recruitment of civil servants based on political or personal loyalty, or recruitment based on kinship, respectively (Sundell, 2014), or even embezzlement of government funds, the fraudulent appropriation of government funds by a person to whom it has been entrusted (Fantaye, 2004) and sale or misuse of government property (Fjeldstad & Isaksen, 2008).

The effect of corruption in the economy is not consensual, existing two opposing theories: the “grease the wheel” and the “sand the wheel”. “Grease the wheel” hypothesis suggests that corruption could be beneficial by helping circumvent inefficient regulations. When regulations on starting a business are tight due to inefficient bureaucracy, constituting an impediment to investment, bribing public officers can speed up some processes and overcome such inefficiency (Gründler & Potrafke, 2019). Leff (1964) asserts that corruption could increase investment by mitigating risks that originate in the political system.

The opposing hypothesis, “sand the wheel” has its rationale from the costs that corruption creates, despite possible benefits (Leff, 1964). The inefficiency of regulations can be enhanced by corruption, increasing the number of individuals that require to be bribed. The awareness of bribes could even increase bureaucracy, with the intent of corrupt public officers to obtain a higher number of bribes and with a higher amount (Méon & Sekkat, 2005). The benefits of the risks mitigated by the corruption that arise in the political system are undermined by the exposure of foreign investors to the operational uncertainty that comes with the weak commitment to comply with the terms of a corrupt agreement (Luu, Nguyen, Ho, & Nam, 2019; Méon & Sekkat, 2005; Rose-Ackerman & Palifka, 2016). The

existence of high corruption in the target country could arise problems of information asymmetry, in which potential target firms could pay bribes to distort or deliberately conceal information from the acquiring company, having better information than the potential acquirer (Javorcik & Wei, 2009; Luu et al., 2019). Summarizing, “sand the wheel” hypothesis suggests that economic growth decreases with the increase of corruption since it prevents efficient production and innovation (Gründler & Potrafke, 2019; Méon & Sekkat, 2005).

Nevertheless, the research concerning the effect of corruption in Europe is not extensive (Xie et al., 2017) because corruption is seen as a problem of emerging economies (Bardhan, 1997), despite available data showing that it is a problem that affects also wealthy countries (Bellos & Subasat, 2012; Di Guardo, Marrocu, & Paci, 2016; Kaufmann, 2005; Weitzel & Berns, 2006).

Across the European region, there is a general concern among the public that corruption is rising. Global Corruption Barometer from Transparency International 2010/11 brought to light that the generality of Europeans felt that corruption was increasing in their countries, a feeling that endured in a 2012 Eurobarometer poll, where 74% percent of Europeans stated that corruption is a major problem in their country (Transparency International, 2012b).

Popular discontent has brought people onto the streets, in several European countries, to protest against a combination of political corruption and perceived unfair austerity towards ordinary citizens. Corruption has worsened the austerity suffered by ordinary citizens since researches suggest a strong correlation between corruption and fiscal deficits (Transparency International, 2012b).

The European countries with the highest budget deficits also perform worst on global indicators measuring the control of corruption (Transparency International, 2012b).

To allow measuring the fight against corruption, Transparency International has developed and promoted the National Integrity System which *provides a framework to analyse the robustness and effectiveness of a country's institutions in preventing and fighting corruption* (Transparency International, 2012b). Even though corruption was assumed to exist only in developing countries, National Integrity Systems showed that there is much to be done in Europe in the fight against corruption (Transparency International, 2012b).

Considering what has been previously exposed, the first hypothesis from this research aims to understand the influence of the target country corruption in M&A deals where the target is a company from a European country:

**H1:** The higher the level of corruption, the fewer the number of cross-border M&A deals where the target is from a European country

Notwithstanding that corruption does not spread evenly among the European countries. By analysing Transparency International (2012, 2017) it is possible to verify that differences across European regions exist, and one of the differences is between Southern European countries and the rest of Europe.

As found by Svendsen (2003), Northern countries of the European Union hold less corruption and higher Gross Domestic Product (GDP) per capita when compared to Southern countries of the European Union. The division between Northern and Southern European countries is not recent. Such division existed even before the Industrial Revolution, and it is visible in the economic development, wages, and, most recently, in corruption levels, among other aspects (Allen, 2001; Fochesato, 2018; Transparency International, 2012b, 2017).

Southern European countries have significantly higher levels of corruption than Northern European countries (Svendsen, 2003). National Integrity Systems assessment found that a cluster composed of Southern European countries were lacking a legal framework of accountability and integrity mechanisms. From the cluster mentioned, Greece, Portugal, and Spain were the countries with higher inefficiency in controlling and sanctioning corruption. In Greece, only two percent of public officers were subjected to disciplinary procedures in the reported cases of corruption. In Portugal, less than five percent of all proceedings related to corruption end in a conviction (Transparency International, 2012b).

Considering the importance of M&A as an attraction of Foreign Direct Investment for countries, it is relevant to study if corruption in the target country could affect M&A activity differently in European regions and be a source of difference in the development of this region and the rest of the European Union. The next hypothesis poses as follow:

**H2:** Corruption will have a more negative impact in the number of M&A deals in Southern countries of the European Union than in the rest of the European Union

A European region that has long concerns with corruption is Eastern Europe (Transparency International, 2012b, 2017, 2018). Eastern European countries post-communist transitions offered many opportunities for corruption (Kostadinova, 2012).

Svendsen and Schjødt (2002) suggested that because the transitions were non-violent in Eastern European countries, the old state monopolies were not removed. That enabled

bureaucrats to continue rent-seeking, maintaining high levels of corruption that resulted in the non-enforcement of contracts and prevented the building of trust among trading partners and among the population. The power centralization during communism flourished corruption, that was not properly eliminated in the regime transition, which led to the continuance of corruption and destruction of trust. The consequence was a slowdown of economic growth in Eastern European countries (Svendsen, 2003).

Since the accession to the European Union in 2004, from Eastern European countries, the results in the fight against corruption are mixed. There is a general improvement in the integrity framework of the countries, except in Czech Republic, Hungary, and Slovakia. In these countries, there was a regression in the fight against corruption, prompted by constitutional changes that diminished transparency and enable the widespread of corruption (Transparency International, 2012b).

This led to Eastern Europe being behind the EU in economic terms, with corruption being one of the causes for that economic difference (Svendsen, 2003). Again, it would be pertinent to understand if corruption is decreasing M&A activity and be an additional source of economical difference between this region and the rest of the European Union. The next hypothesis poses as follow:

**H3:** Corruption will have a more negative impact in the number of M&A deals in Eastern countries of the European Union than in the rest of the European Union

To sum up, by dividing European countries into regions with distinct corruption levels between them and studying the impact of corruption levels in M&A activity, this dissertation aims to shed some light on the importance of the fight against corruption in attracting investment and being a source of competitiveness for countries in different regions on the European Union.

## Chapter 3

### Methodology

In this chapter, it is presented the methodology used in this dissertation. It will be explained the variables used in the regression model and how the sample was selected and obtained.

#### 3.1 Variables

##### 3.1.1 Dependent Variables

The purpose of this dissertation is to study corruption and its influence on cross-border M&A on member countries of the European Union. To be able to do that, the following dependent variable will be used:

- Number of cross-border M&A between two countries where the target country belongs to the European Union

Inspired by Malhotra et al. (2010), the variable selected will allow a better understanding of how corruption influences the number of cross-border M&A. This will enable to identify if any member state of the European Union benefits from an increase in corruption or if all will aim to decrease the corruption inside their borders.

Since the dissertation has a country-level approach, the sample was aggregated by acquiring country, target country, and year. For example, five Austrian firms were acquired by German firms in 2018. The value “five” becomes one observation in the country-level regressions.

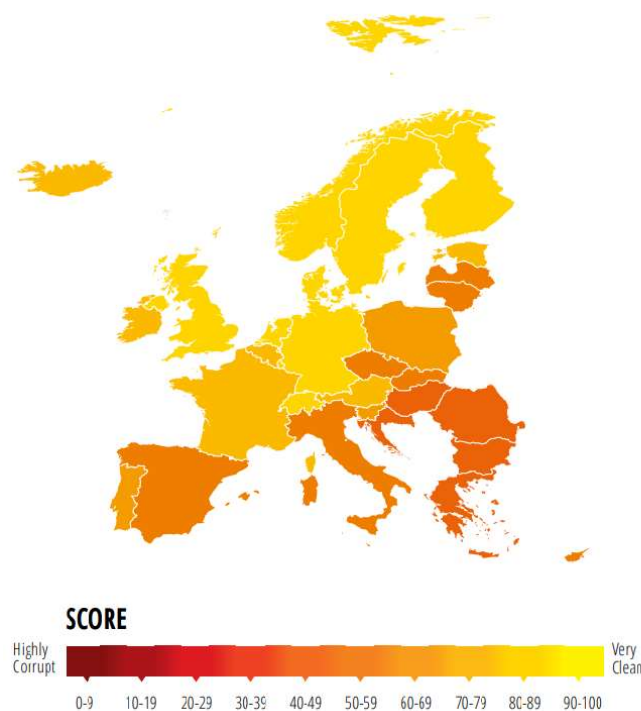
##### 3.1.2 Independent Variables

The data used as a proxy for the level of corruption of a country is the reversed Corruption Perceptions Index (CPI). The index mentioned is constructed by Transparency International, which ranks countries by their perceived levels of public sector corruption, using expert assessments and opinion surveys (Transparency International, 2018). The reversed data will be used in this dissertation, which is read as values between 0 (no corruption) and 100 (extreme corruption).

There have been some changes regarding the construction of the variable and is only after 2012 that the variable is comparable over time and across countries (Gründler & Potrafke, 2019). That has been stated by Transparency International, in 2012 Short Methodological Note: *“Following a rigorous review process, some important changes have been made to the methodology in 2012. The method we use to aggregate different data sources has been simplified and also now includes just*

one year's data from each data source. Crucially, this method will allow us to compare scores over time, which was not methodologically possible previously. Given the changes to the methodology, it must be emphasised that country scores of the CPI 2012 cannot be compared against those of 2011 or previous editions. Year to year comparisons will be possible from 2012 onwards.”(Transparency International, 2012, p.1)

**Figure 1 - Corruption levels in Europe 2018. The figure shows the extent of corruption in Europe, measured via the (non-reversed) CPI index from Transparency International (2018). Image obtained from Corruption Perceptions Index 2018 from Transparency International.**



### 3.1.3 Control Variables

To isolate the effect of corruption in cross-border M&A, an extensive number of control variables are used. First, geographic distance is used to control the geographical proximity between countries. Internationalization theories suggest that geographical proximity between countries affects positively the likelihood of a firm's internationalization decision (Dunning & Lundan, 2008; Johanson & Vahlne, 1977). The cost of an international merger or acquisition is proportional to the geographical distance since an increase in the distance is reflected as an increase in the transaction cost due to higher management and transportation costs (Chetty, 1999; Dow, 2000; Rose, 2000). In this dissertation, the geographical distance was obtained by using the geographical coordinates (latitude and longitude) of capital cities of each country to calculate the great circle distance<sup>1</sup> between each country pair. Then, a logarithmic transformation was applied to the value.

<sup>1</sup> Great Circle Distance formula used is:  $6371.0 * \arcsin[\sin(\text{lat}1) * \sin(\text{lat}2) + \cos(\text{lat}1) * \cos(\text{lat}2) * \cos(\text{lon}2 - \text{lon}1)]$ , where lat and lon are the latitudes and longitudes of the capital cities of the acquirer and the target country locations, respectively.



The second control variable is cultural distance. Angwin's (2001) study shows that the cultural distance between countries affects the completion and post-merger integration phases. Time and cost committed to conflict resolution and increasing cooperation between merged or acquired firms from distant cultures lowers the performance of firms and increases post-acquisition costs (Pothukuchi et al., 2002). Variable was constructed based on Hofstede & Minov's (2010) index values. The formula used is similar to Kogut & Singh's (1988) formula and combines Hofstede & Minov's six cultural dimensions: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long Term Orientation, and Indulgence.

$$CD_j = \sum_{i=1}^4 \{(I_{ij} - I_{iu})^2 / V_i\} / 4 ,$$

2

The third control variable is countries bilateral flows. Goods trade flow is positively related to direct investment flows (di Giovanni, 2005). Based on Erel et al., (2012), bilateral flows is the maximum of bilateral imports or exports between target and acquirer countries. To construct the variable, it was used the percentage of imports (exports) by the target country from (to) the acquirer country. All data for this variable was obtained from the United Nations Commodity Trade Statistics database.

The fourth control variable is corporate tax rate. Researches concluded that a country's tax policy and structure affect the likelihood of cross-border deals (Xie et al., 2017). Studies found evidence that a decrease (increase) in a country's corporate tax rate results in an increase (decrease) of cross-border inflow (di Giovanni, 2005; Nagano, 2013). Variable is constructed as the difference between acquiring country Corporate Statutory Tax Rate and target country Corporate Statutory Tax Rate. Data from countries' corporate tax rates was obtained from KPMG's Corporate Tax Rates Table.

The fifth control variable is countries Market-to-book ratio. M&A deals are more likely to be made from a country with a higher stock market valuation since firms have a higher incentive to make acquisitions with stocks (Shleifer & Vishny, 2003). Data concerning MTB ratio was obtained from VW/Reuters through Datastream, with price-to-book value datatype which returns the price to book value for a country Equity Indices. Variable was constructed as the difference between the acquirer price-to-book ratio and the target price-to-book ratio.

<sup>2</sup> Kogut & Singh's (1988) formula where  $I_{ij}$  is the acquirer country score for Hofstede's cultural dimension  $i$ ,  $I_{iu}$  is the target country corresponding score for the same Hofstede's cultural dimension  $i$  and  $V_i$  is the variance of the index for cultural dimension  $i$ .

The next set of variables aims to control for the market potential of the country. Firms tend to choose prosperous countries to invest, so the expected benefits exceed the cost of entering a new market (Stephen, 1976). Based on Malhotra et al. (2010), it is used the logarithmic absolute difference of GDP per capita between acquiring and target countries and the annual real GDP growth rate of the target country as control variables. The annual real growth rate of the acquirer country is also used in the model to determine which of the two has a greater influence, if the target country or the acquirer country annual real GDP growth rate, and how each one influences the likelihood of M&A deals.

An additional set of variables aims to control for valuation differences. Valuation differences can be temporary, which will incentive firms to acquire foreign targets that are relatively more inexpensive (Shleifer & Vishny, 2003) or they can be permanent, which will also incentive firms to acquire foreign targets in countries that suffer a depreciation since that leads to lower costs to raise capital for the targeted firms (Froot & Stein, 1991). The valuation differences can occur through currency movements or through stock price movements. M&A deals are more likely to occur when the acquiring firm is valued highly compared to the target firm. A company from a country with a superior stock market performance has a higher chance to acquirer a company from a country with a worse stock market performance just like a company from a country which currency has appreciated has a higher chance to acquirer a company from a country which currency has depreciated . Following Erel et al. (2012), to control for valuation differences it is used the real exchange rate returns and real stock market returns. To construct the variables, it was obtained from Datastream the annual data for Consumer Price Index (CPI), stock market return, and exchange rates. Then, all values were converted to 2012 price level. Real stock market returns, and real exchange rate returns were calculated by taking the percentage difference of the annual value.

Finally, the variables CommonLaw and GDPAT are used to control for possible sample specificities. Variable CommonLaw, which is a dummy variable with value equal to one if both countries have a common law legal system, and 0 if not, is used due to a high number of deals between certain country-pairs, which could skew the results. Variable GDP<sub>AT</sub>, which is the absolute difference between target country and acquirer country logarithmic transformation of GDP, is used to control for the dimension of the countries in the sample.

### **3.2 Sample**

The sample was obtained from the Zephyr database from Bureau van Dijk (BvD) and is constituted by deals announced and completed between 2012 and 2018 were the target

country is from Europe 27. Since Croatia only joined the European Union on July 1<sup>st</sup>, 2013, it was decided not to include it as part of the sample since that could skew the results. Were excluded LBOs, spin-offs, recapitalizations, self-tender offers, exchange offers, repurchases, partial equity stake purchases, acquisitions of remaining interest, and privatizations, as well as deals in which the target or the acquirer is a government agency or in the financial or utilities industry.

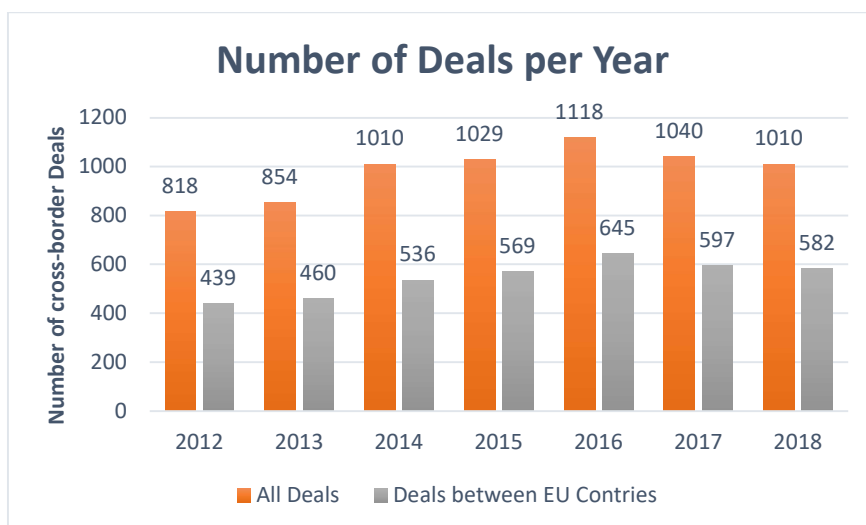
It was obtained 27,832 deals, of which 4,251 deals was obtained the value deal amount, having a total amount of 988 billion euros.

From the deals obtained, 7,199 are cross-border deals, of which 1,846 have information about the deal value, having a total amount of 638 billion euros. Further, were excluded deals for which the variables were not available, being the final sample constituted by 6,879 deals, of which 1,740 have information about the deal value, having a total amount of 615 billion euros.

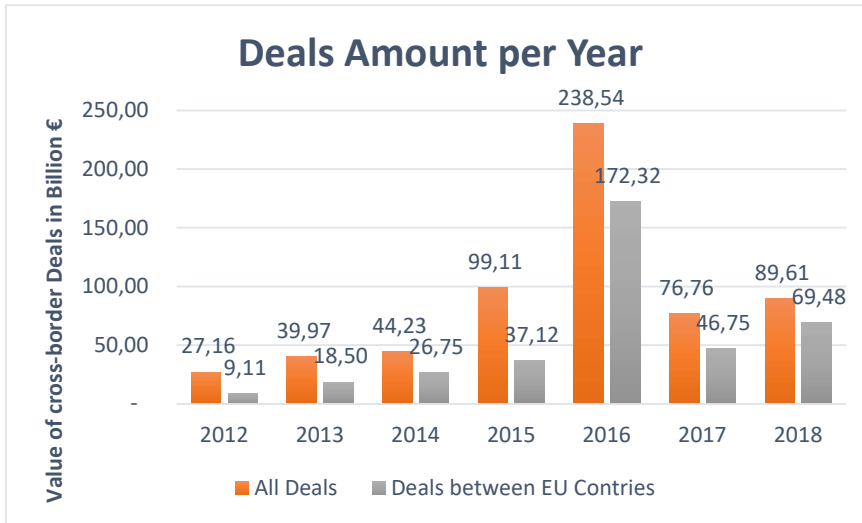
Panel A from figure 2 shows that there is an increase in the sample deals starting in 2012 until 2016. The year with the highest number of cross-border deals in the sample is 2016, with 1,118 cross-border deals. Panel B from the same figure shows an increase in the total value of the cross-border deals, hitting the highest amount in 2016 and then decreasing. The amount in 2016 is much higher than the other years due to the acquisition of SABMiller by AB InBev (115 billion euros).

**Figure 2 - M&A deals sample. Bars in Panel A represent the number of M&A deals per year for the entire sample used and for the sample subset, while bars in panel B represent the total transaction value per year of the 1,740 M&A deals for which exist value deal information, and the total transaction value per year of the sample subset of the 899 M&A deals.**

**Panel A**



Panel B



To allow a more in-depth analysis of the European Union region, a subset of the sample composed only by deals between countries that belong to the European Union is used. The European Union has unique economic and political characteristics, thus becoming essential to understand how companies from countries within that region are affected by the determinants of M&A deals.

Panel A from figure 2 also shows the data for the subset sample used. It is visible an increase of M&A deals since 2012 until 2016, similar to the entire sample. 2016 is the year with the highest number of cross-border deals, with 645. Identical to the entire sample, the value of cross-border deals increased since 2012, hitting the highest amount in 2016, with the help of the acquisition of SABMiller by AB InBev.

In figure 3 it is possible to observe the top five acquiring countries and the top 5 target countries. United States of America is the top acquiring country, with 27% of the acquisitions. This is a high level of acquisitions, that is controlled when using a subset of the sample only with deals between countries that belong to the European Union.

The sample subset removes possible specificities caused by the high number of deals involving the United States of America as acquiring country, and also the high number of deals involving United Kingdom as target.

**Figure 3 –Representation of top five countries by deals. Panel A represents the top five target countries, in the entire sample and in the sample subset. Panel B represents the top five acquiring countries, in the entire sample and in the sample subset. Number of deals for each country as target or acquirer is provided, as well the percentage those deals have in the sample.**

**Panel A**

All Deals			Only EU Deals		
Target Country	Number of Deals	% of Total Deals	Target Country	Number of Deals	% of Total Deals
United Kingdom	1695	25%	United Kingdom	558	15%
Germany	999	15%	Germany	539	14%
Netherlands	549	8%	Netherlands	334	9%
France	540	8%	France	308	8%
Spain	454	7%	Spain	305	8%

**Panel B**

All Deals			Only EU Deals		
Acquiring Country	Number of Deals	% of Total Deals	Acquiring Country	Number of Deals	% of Total Deals
United States of America	1837	27%	United Kingdom	586	15%
United Kingdom	586	9%	Germany	522	14%
Germany	522	8%	France	477	12%
France	477	7%	Netherlands	378	10%
Netherlands	378	5%	Sweden	374	10%

### 3.3 Econometric Model

This dissertation aims to study how corruption impacts the number of M&A deals between country-pairs. To isolate and identify the impact of corruption, determinants that have been proved to influence the number of M&A deals must be taken in consideration. Following the empirical and theoretical literature, determinants of various dimensions are used. Specifically, corruption, distance (GeoDist, CulDist), goods trade (BilFlow), tax policy ( $STR_{AT}$ ), valuation differences ( $MTB_{AT}$ , ER,  $SMR_{AT}$ ), market potential ( $RGDP_T$ ,  $RGDP_A$ ), wealth ( $GDP_{C_{AT}}$ ), countries dimension ( $GDP_{AT}$ ), and a dummy variable for when both countries have common law.

The following model is used in the dissertation:

$$\begin{aligned} \text{Number of M\&A deals} = f(\text{Corruption, Distance,} \\ \text{Goods Trade, Tax Policy, Valuation Differences,} \\ \text{Market Potential, Wealth, Common Law}) \end{aligned} \tag{3.1}$$

A similar model to 3.1 with an additional interaction variable between corruption and each European Union region is also used. The interaction variable will provide a comparison of corruption between a European Union region and the remaining regions from the European Union.

It is used the OLS estimation with robust variances, which provides a consistent estimation of the variances and covariances of the coefficient estimators.

## Chapter 4

### Results

The goal of the analyses is to measure the determinants that affect the propensity of firms from one country to acquire firms from a European country. To analyse the determinants, multivariate OLS regressions are used.

The dependent variable is the number of deals between a country-pair. To control for specificities concerning the volume of deals and the predominance of some countries, the variables “common law” and “GDP\_TA” were added to the models. For each model, two regressions are presented. One regression with the entire sample and other regression with a sample only with deals between countries from the European Union. This will provide an analysis of a unique economic and political union, both with countries outside the union and with countries within the union.

To use the OLS method, it's necessary to assume a set of assumptions related to the variables. After checking the regressions, the homoscedasticity assumption was not valid, so an estimator for heteroscedasticity was included, which corrects variances and covariances of the estimators and the t-statistics.

Table 1 examines hypothesis H1, checking the impact of corruption in the European Union. Table 2 examines hypothesis H2 and H3, comparing the European Union regions.

#### 4.1 Analysis of Determinants of Cross-Border Mergers and Acquisitions

Table 1 shows the results of the initial 2 regressions.

Looking at regression 1, it is possible to see that the geographical distance (GeoDist) has a sign contrary to what was expected. This means that the greater the geographical distance, the higher the likelihood of a firm from that country to acquire a firm from a country that belongs to the European Union. This could happen because of a specificity in the sample, either because of the volume of some country-pairs present or because the analyses focus only on deals in which the target country is from the European Union. Another explanation is the willingness of firms to enter the European Single Market and the expected economies of scale linked to it and the Euro. There is a need for further literature and research concerning these factors (Zademach & Rodríguez-Pose, 2009).

The variable Cultural Distance (CulDist) is consistent with Angwin (2001) and to what was expected. The greater the cultural distance, using Hofstede & Minov's (2010) 6 index values and Kogut & Singh's (1988) formula, the less likely it is that a firm from one country to acquirer a firm from a country that belongs to the EU.

**Table 1 – OLS Estimation Results.** Column 1 uses all the entire sample of cross-border deals, while column 2 uses the cross-border deals from one country that belongs to the EU to another country that belongs to the EU. Refer to section 3 for variable definitions. Heteroscedasticity-corrected t-statistics are in parenthesis. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% level, respectively

Variable	All Deals	Only EU countries
	1	2
Corruption	-0.108 *** (-7.684)	-0.051 *** (-7.329)
GeoDist	0.439 *** (3.186)	-0.239 * (-1.689)
CulDist	-0.774 *** -4.287	-0.391 *** (-4.150)
BilFlow	29.620 *** (7.687)	14.09 *** (9.034)
STR <sub>AT</sub>	0.052 ** (2.444)	-0.022 * (-1.869)
MTB <sub>AT</sub>	1.762 *** (5.068)	0.275 * (1.850)
RGDP <sub>T</sub>	-0.314 *** (-4.111)	-0.093 ** (-2.525)
RGDP <sub>A</sub>	0.090 ** (2.486)	-0.030 (-0.930)
ER	-2.027 (-0.727)	-
SMR <sub>AT</sub>	-1.406 ** (-1.872)	-
GDP_C <sub>AT</sub>	0.134 *** (5.630)	0.059 *** (4.766)
CommonLaw	9.350 *** (3.400)	4.955 *** (5.889)
GDP <sub>AT</sub>	-0.685 *** (-6.865)	-0.767 *** (-10.066)
Constant	3.397 *** (4.105)	7.224 *** (7.322)
Number of Observations	1898	1192
R-Squared	0.200	0.264
Adjusted R-Squared	0.194	0.257

Considering the results for Bilateral Flows (BilFlow), it is evident the relevance of the variable. As shown by di Giovanni (2005) and Erel et al. (2012), goods trade flow is positively



related to direct investment flows. The greater the goods trade flow between a country-pair, the greater the likelihood of M&A deals between firms from those countries.

The variable Statutory Tax Rate ( $STR_{AT}$ ) has a positive sign, as expected and in accordance with Xie et al. (2017). It is more likely that a firm from a country with a higher statutory tax rate to acquire a firm from a country with lower statutory tax rate.

As predicted, the Market-to-Book ( $MTB_{AT}$ ) variable has a positive sign. Since firms from the acquiring country have a higher stock market valuation, they have more incentives to acquire firms from countries with a lower stock market valuation (Shleifer & Vishny, 2003).

Although it was expected that firms tend to invest in more prosperous countries, the results obtained are not in line with that expectation. Variable  $GDP_{CAT}$  shows that firms tend to acquire other firms in countries with lower GDP per capita than the acquiring firm country GDP per capita, contrary to expected. Likewise, variables  $RGDP_T$  and  $RGDP_A$  show that firms from countries with a higher real GDP growth rate tend to acquire firms from countries with a decreasing real GDP growth rate, contrary to what was expected. Results are similar to the ones obtained by Costa (2017).

Concerning the valuation variables, opposite results were obtained. Variable Exchange Rate (ER) uses the exchange rates EUR/Foreign Currency. Bearing that, the negative sign demonstrates that a depreciation of the exchange rate EUR/Foreign Currency increases the likelihood of M&A deals, where the target is a country from the European Union. Notwithstanding, the variable mentioned is not statistically significant. Stock Market Returns ( $SMR_{AT}$ ) has a negative sign, contrary to what was expected. Taking advantage of valuation differences, firms from countries with a higher stock market return should acquire firms from countries with a lower stock market return. However, the results show that target firms are from countries with a higher stock market return comparing to the acquiring firm host country stock market returns. Results are significant at 5% level. Nonetheless, results are consistent with Erel et al.' (2012) results for private target-private acquirer pairs. And because the sample of the current dissertation doesn't discriminate between private or public firms, it's not the expected sign but is still consistent with Erel et al. (2012).

Finally, examining the main variable under analysis, the corruption in the target country, its importance is evident. Corruption has a negative impact on the likelihood of M&A deals, where the target is a firm from a country that belongs to the European Union. An increase in corruption in the target country causes a decrease in the inflow of M&A deals.

Focusing on regression 2, it is used the same model, except without the variables ER and SMR. Being that the sample used on regression 2 is only M&A deals between countries that belong to the European Union, valuation difference variables were removed because were not statistically significant.

When comparing to regression 1, the majority of signs of the variables have not changed. Among the few that have changed is Geographical Distance, which has a negative sign in regression 2, as expected initially. By using a sample with deals in which the target and the acquiring firms are from a country that belongs to the European Union, the volume of some country-pairs was controlled, as was the willingness to enter the European Single Market. In regression 2, the greater the geographical distance between a country-pair, the less likely it is an M&A deal between firms of those countries. Although no assumptions can be made on what drives the positive sign in regression 1 because both possible causes have been controlled for, the positive sign is a strong indicator of a willingness to enter the European Single Market that requires further investigation.

The other significant variable for which the sign has changed is  $STR_{AT}$ . Firms could obtain specific deductions that will make the effective tax rate lower than the statutory tax rate. Considering that was not possible to obtain additional information concerning specific tax deductions neither the effective tax rate, no conclusions will be drawn.

Finalizing the analyse to table 1, it can be observed both in regression 1 and regression 2 that corruption in the target country has a negative influence on the likelihood of M&A deals in which the target firm belongs to a country from the European Union. Although regression 2 shows that corruption has a smaller negative impact when it comes to deals involving only firms from countries from the European Union, it is still statistically significant. Hypothesis H1 is verified.

## **4.2 Analysis of Determinants of Cross-Border Mergers and Acquisitions across European Regions**

Using a geographical division of Europe, based on the United Nations geographical definition of regions, the present dissertation will address the differences in corruption across the European Union.

Having the same base model, additional interaction variables between corruption and geographical regions of the European Union, namely North, South, East, and West, will be added.

Table 2 shows the results of the regressions with the geographical regions being targeted for M&A, with all deals and with deals involving only European Union countries.

**Table 2 – OLS Regression Results for European Regions. Columns 1 to 4 use all the entire sample of cross-border deals, while columns 5 to 8 use the cross-border deals from one country that belongs to the EU to another country that belongs to the EU. Refer to section 3 for variable definitions. Heteroscedasticity- corrected t-statistics are in parenthesis. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% level, respectively**

Variable	All Deals				Only EU countries			
	1	2	3	4	5	6	7	8
Southern_EU*Corruption	0.014 ** (2.459)				0.016 *** (3.161)			
Eastern_EU*Corruption		-0.019 *** (-2.884)				-0.024 *** (-4.496)		
Western_EU*Corruption			0.040 *** (3.160)				0.008 (0.897)	
Northern_EU*Corruption				-0.029 ** (-2.078)				0.012 (1.126)
Corruption	-0.119 *** (-7.992)	-0.094 *** (-5.822)	-0.098 *** (-7.061)	-0.114 *** (-7.289)	-0.062 *** (-8.104)	-0.032 *** (-3.823)	-0.050 *** (-6.797)	-0.048 *** (-6.573)
GeoDist	0.388 *** (2.753)	0.378 *** (2.648)	0.406 *** (3.018)	0.414 *** (3.074)	-0.346 ** (-2.386)	-0.348 ** (-2.433)	-0.219 (-1.530)	-0.239 * (-1.681)
CulDist	-0.743 *** (-4.125)	-0.753 *** (-4.142)	-0.728 *** (-4.033)	-0.777 *** (-4.281)	-0.357 *** (-3.836)	-0.343 *** (-3.683)	-0.382 *** (-4.000)	-0.387 *** (-4.122)
BilFlow	29.168 *** (7.566)	28.961 *** (7.423)	28.982 *** (7.569)	29.235 *** (7.675)	13.449 *** (8.772)	13.344 *** (8.835)	14.041 *** (8.991)	14.272 *** (9.163)
STR <sub>AT</sub>	0.059 *** (2.673)	0.067 *** (2.965)	0.076 *** (3.070)	0.061 *** (2.655)	-0.013 (-1.030)	-0.003 (-0.221)	-0.017 (-1.389)	-0.026 ** (-2.292)
MTB <sub>AT</sub>	1.766 *** (5.079)	1.705 *** (4.782)	1.613 *** (4.570)	1.727 *** (5.058)	0.275 * (1.852)	0.186 (1.201)	0.246 * (1.652)	0.284 * (1.923)
RGDP <sub>T</sub>	-0.294 *** (-3.764)	-0.287 *** (-3.580)	-0.307 *** (-4.029)	-0.301 *** (-3.967)	-0.060 (-1.504)	-0.049 (-1.216)	-0.092 ** (-2.507)	-0.099 *** (-2.614)
RGDP <sub>A</sub>	0.093 ** (2.559)	0.098 *** (2.730)	0.099 *** (2.687)	0.090 ** (2.488)	-0.030 (-0.942)	-0.023 (-0.708)	-0.028 (-0.846)	-0.029 (-0.906)
ER	-2.000 (-0.717)	-2.086 (-0.749)	-2.012 (-0.722)	-2.000 (-0.717)				
SMR <sub>AT</sub>	-1.400 * (-1.867)	-1.359 * (-1.799)	-1.295 * (-1.702)	-1.430 * (-1.898)				
GDP <sub>CAT</sub>	0.134 *** (5.654)	0.135 *** (5.721)	0.136 *** (5.696)	0.134 *** (5.640)	0.059 *** (4.748)	0.060 *** (4.890)	0.060 *** (4.907)	0.058 *** (4.748)
CommonLaw	9.409 *** (3.421)	9.240 *** (3.350)	9.649 *** (3.497)	9.761 *** (3.492)	4.996 *** (5.959)	4.739 *** (5.438)	5.030 *** (5.926)	4.787 *** (5.649)
GDP <sub>AT</sub>	-0.681 *** (-6.833)	-0.701 *** (-7.060)	-0.705 *** (-6.936)	-0.674 *** (-6.814)	-0.763 *** (-10.094)	-0.791 *** (-10.248)	-0.771 *** (-10.134)	-0.773 *** (-10.033)
Constant	3.900 *** (4.450)	3.560 *** (4.298)	2.985 *** (3.404)	3.871 *** (4.655)	8.075 *** (7.894)	7.541 *** (7.666)	6.967 *** (6.742)	7.074 *** (7.222)
Number of Observations	1898	1898	1898	1898	1192	1192	1192	1192
R-Squared	0.200	0.201	0.202	0.200	0.268	0.273	0.264	0.264
Adjusted R-Squared	0.194	0.195	0.196	0.194	0.261	0.265	0.257	0.257

First, it is possible to observe the positive signs for the Southern region of the European Union which mean that the region is less affected by an increase in the level of corruption than the rest of the European Union. Results in regressions 1 and 5 are statistically significant. These results invalidate hypothesis H2.

Second, the Eastern region of the European Union is more affected by an increase in the level of corruption than the rest of the European Union. Results in regressions 2 and 6 are statistically significant and validate hypothesis H3.

Third, the Western region of the European Union is the least affected by an increase in corruption levels, comparing to the rest of the European Union. Regression 3 shows that an increase in corruption does not have such a negative impact as in the rest of the European Union (-0.098+0.040). Regression 7 shows that there is no statistically significant difference from the rest of the European Union.

Fourth, regression 4 shows that the Northern region of the European Union is the most affected by an increase in the corruption level, having a coefficient for corruption of -0.143 (-0.114-0.029). The impact is greater than the one in the Eastern region, -0.113 (-0.094-0.019). Contrarily, regression 8 shows that with a sample of only EU countries, the Northern region has no statistically significant difference from the rest of Europe.

Concluding the analyse of table 2, hypothesis H2 was not verified. The Southern region of the European Union is not more affected by an increase of corruption than the rest of the European Union. Hypothesis H3 was verified. The Eastern region of the European Union is more affected by an increase of corruption than the rest of the European Union. Additionally, it was observed in regression 4 that the most affected region is the Northern region of the European Union. The results, however, are not similar to the ones obtained for the Eastern European Union. While results for the Eastern region show that an increase of corruption affects that region more than the rest of Europe, for both regressions, for the Northern region it only happens in regression 4. Due to the Northern countries of the European Union being recognized and valued by the low levels of corruption, acquiring firms are drawn in consequence of that characteristic. An increase of corruption removes that advantage, and by consequence the attractiveness of Northern countries, then being more affected by an increase of corruption than the rest of the regions.

## Chapter 4

### Conclusion

With the worldwide increase of M&A and its growing impact on countries' FDI, it is essential to understand the determinants that drive M&A cross-border deals.

Despite several determinants that have already been proved to influence M&A cross-border deals, there are knowledge gaps concerning this topic. The objective of the present dissertation is to further reduce the gap in the literature and understand how corruption in the target country influences the likelihood of cross-border M&A deals.

6.879 cross-border deals, constituted by deals announced and completed between 2012 and 2018 where the target country is from Europe 27, were obtained from the Zephyr database from Bureau van Dijk (BvD). This resulted in 1.898 country-pair observations, from which 1.192 are observations where both the acquiring and target country belong to the European Union.

Initially, the results of two regressions with the determinants of cross-border deals were presented. One regression used all the deals while the other used only deals in which the acquirer and target firms were from countries that belonged to the European Union. The other sample which only contains deals between European Union countries was used to analyse a unique economic and political union and understand the internal dynamic inside the union. Additionally, it ensures that no specificity was present in the sample.

All control variables had the expected sign, according to the literature, except the variable Geographical Distance in the regression with all the sample, the variable Statutory Tax Rate in the regression using deals only between European Union countries and the market potential variables. It was not possible to determine if the positive sign in the variable Geographical Distance was driven by a specificity in the sample or a willingness from the acquiring firms to enter the European Single Market. The positive sign is a strong indicator of a willingness to enter the European Single Market that requires further investigation. The sign of the Statutory Tax Rate could be driven by specific deductions obtained by acquiring firms. However, no additional information about deductions or effective tax rates was obtained, so no conclusions were drawn concerning the result. The variables  $GDP_{CAT}$ ,  $RGDP_T$  and  $RGDP_A$  reveal that firms from prosperous countries tend to invest in firms from countries that are not so prosperous. It is more significant the prosperity of the acquiring country than the prosperity of the target country.

Results from both initial regressions demonstrated that corruption has a negative influence on the likelihood of M&A deals in which the target firm belongs to a country from the European Union.

In a second stage, additional interaction variables between corruption and geographical regions of the European Union, namely North, South, East, and West, were added to the initial models.

The Southern region of the European Union is not more affected by corruption when compared with the rest of the European Union. An increase in corruption in the Southern region will not turn it the most corrupt region of Europe, thus not having such a great impact.

The Eastern region of the European Union is more affected by corruption when compared with the rest of the European Union. An increase in corruption will negatively increase the difference to the other regions' corruption level.

The Northern region of the European Union is, surprisingly, the most affected region by an increase in corruption. Seeing that Northern countries of the European Union are recognized and valued by the low levels in corruption, acquiring firms are drawn by that characteristic. An increase in corruption in the Northern region removes such attractiveness, thus being more affected by an increase in corruption than the rest of the regions. When considering only deals between countries that belong to the European Union, there is no statistically significant difference between the Northern region and the rest of the European Union, which means that what drives this effect are deals with countries outside the European Union.

The Western region of the European Union is the least affected by an increase in corruption. The corruption levels are lower than the Southern and Eastern regions, but not so low that the region has low corruption as a distinguished and valued characteristic. With an increase in corruption, the Western region will have a lower level in corruption than the Southern and Eastern regions but will not be affected by that due to not being one distinctive reason for attractiveness.

The present dissertation contributes in the following ways. First, it extends the existing literature by studying the influence of corruption in the likelihood of M&A deals where the host country belongs to the European Union. Second, a recent sample from the years 2012 to 2018 is used with a total of 25 different host countries that belong to the European Union.

Third, it allows policymakers and business practitioners to draw inferences from the empirical results and adjust their policies accordingly.

Nevertheless, the present dissertation faced some limitations. It was not possible to obtain better data, namely, data concerning countries' effective tax rate. Additionally, it was not possible to extend the sample to the 27 countries due to a lack of available data.

As perspectives for future investigations, a more extensive sample could be used, having deals from all the European Union countries, and replacing the Statutory Tax Rate variable for an Effective Tax Rate variable. Additionally, future investigations could study the impact of corruption in each country of the European Union, to understand how corruption impacts each country individually. Finally, in the present dissertation, not all forms of corruption were studied because not all are captured by the Corruption Perceptions Index (CPI). It would be interesting for future investigations to understand how lobbying in the European Union affects the likelihood of M&A deals.

## Appendix

**Table 3 - Countries Geographical Region.** The table provides information about the region to which each European Union country belongs to

<b>Country</b>	<b>Region</b>
Austria	Western Europe
Belgium	Western Europe
Bulgaria	Eastern Europe
Cyprus	Western Asia
Czech Republic	Eastern Europe
Denmark	Northern Europe
Estonia	Northern Europe
Finland	Northern Europe
France	Western Europe
Germany	Western Europe
Greece	Southern Europe
Hungary	Eastern Europe
Ireland	Northern Europe
Italy	Southern Europe
Latvia	Northern Europe
Lithuania	Northern Europe
Luxembourg	Western Europe
Malta	Southern Europe
Netherlands	Western Europe
Poland	Eastern Europe
Portugal	Southern Europe
Romania	Eastern Europe
Slovakia	Eastern Europe
Slovenia	Southern Europe
Spain	Southern Europe
Sweden	Northern Europe
United Kingdom	Northern Europe



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## Annex

### Annex I – Variables Description

**Table 4 - Variables Description.** Table presents the description and construction of variables used in the models

Variable	Description
Corruption	Reverse Corruption (0-no corruption;100-maximum corruption), constructed based on Corruption Perception Index (CPI), from Transparency International
GeoDist	Geographical Distance between acquirer country and target country. Geographical distance was obtained by using the geographical coordinates (latitude and longitude) of capital cities of each country to calculate the great circle distance between each country pair. Then, a logarithmic transformation was applied to the value.
CulDist	Cultural distance was constructed based on Hofstede & Minov's (2010) index values. The formula used is similar to Kogut & Singh's (1988) formula and combines Hofstede & Minov's six cultural dimensions: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long Term Orientation, and Indulgence.
BilFlow	Bilateral flows is the value of imports (exports) by the target country from (to) the acquirer country as percentage of the total imports (exports). To construct the variable, it was used the value of imports (exports) by the target country from (to) the acquiring country as numerator, and the total of imports (exports) of the target country as denominator. All data was obtained from the United Nations Commodity Trade Statistics database.
STR <sub>AT</sub>	Statutory Tax Rate (acquiring country minus target country). Difference between acquiring country Corporate Statutory Tax Rate and target country Corporate Statutory Tax Rate. Data from countries' corporate tax rates was obtained from KPMG's Corporate Tax Rates Table.
MTB <sub>AT</sub>	Market to book ratio (acquiring country minus target country). Data obtained from VW/Reuters through Datastream, with price-to-book value datatype which returns the price to book value for a country Equity Indices. Variable was constructed as the difference between the acquiring price-to-book ratio and the target price-to-book ratio.
RGDP_A	Annual real growth rate of GDP of Acquirer Country. Data obtained from The World Bank
RGDP_T	Annual real growth rate of GDP of Target Country. Data obtained from The World Bank
ER	Real Exchange Rate with annual values with 2012 price level. Variable constructed with data obtained from Datastream: the annual data for Consumer Price Index (CPI) and exchange rates. Then, exchange rates were converted to 2012 price level. Real exchange rate returns were calculated by taking the percentage difference of the annual value.
SMR <sub>AT</sub>	Real Stock Market Returns with Annual values (acquiring country minus target country). Variable constructed as the difference between target country Real Stock Market Return and acquiring country Real Stock Market Return. Data obtained from Datastream, annual data for Consumer Price Index (CPI) and stock market return. Then, stock market return values were converted to 2012 price level. Stock market returns were calculated by taking the percentage difference of the annual value.

GDP_C <sub>AT</sub>	Annual GDP per capita (acquiring country minus target country). Logarithmic Absolute Difference of Annual GDP per capita between Acquiring and Target countries
CommonLaw	Dummy variable with value equal to 1 if both target country and acquiring country have common law legal system, and value equal to 0 if not
GDP <sub>AT</sub>	Absolute difference between target country logarithmic transformation of GDP and acquiring country logarithmic transformation of GDP
Southern_EU	Dummy variable with value equal to 1 if the target country is part of Southern European Union, and value equal to 0 if not
Eastern_EU	Dummy variable with value equal to 1 if the target country is part of Eastern European Union, and value equal to 0 if not
Western_EU	Dummy variable with value equal to 1 if the target country is part of Western European Union, and value equal to 0 if not
Northern_EU	Dummy variable with value equal to 1 if the target country is part of Northern European Union, and value equal to 0 if not

## Annex II – Data Characteristics

**Table 5 - Variables Descriptive Statistics**

Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
Corruption	30.42940	26.00000	64.00000	8.000000	14.68030	1898
GeoDist	3053.624	1318.566	19854.97	82.54884	3754.849	1898
CulDist	1.090400	0.926175	6.864534	0.037793	0.816865	1898
BilFlow	0.049224	0.028189	0.368423	0.000199	0.060242	1898
STR <sub>AT</sub>	2.164294	2.000000	31.00000	-21.49000	8.985862	1898
MTB <sub>AT</sub>	0.187571	0.170000	2.290000	-2.450000	0.664788	1898
RGDP <sub>T</sub>	1.607161	1.490208	23.98551	-6.797861	2.293014	1898
RGDP <sub>A</sub>	1.638031	1.408102	23.98551	-6.797861	2.429275	1898
ER	-0.004704	0.000000	0.554555	-0.318155	0.072073	1898
SMR <sub>AT</sub>	0.068920	0.078915	1.392578	-0.635484	0.189069	1898
GDP_C <sub>AT</sub>	2.162386	8.708261	11.49628	-11.54238	9.373389	1898

**Table 6 - Variables Correlation Matrix**

Variables	Corruption	GeoDist	CulDist	BilFlow	STR <sub>AT</sub>	MTB <sub>AT</sub>	RGDP <sub>T</sub>	RGDP <sub>A</sub>	ER	SMR <sub>AT</sub>	GDP_C <sub>AT</sub>
Corruption	1,000000	-	-	-	-	-	-	-	-	-	-
GeoDist	-0,03847	1,000000	-	-	-	-	-	-	-	-	-
CulDist	0,120647	0,157136	1,000000	-	-	-	-	-	-	-	-
BilFlow	-0,027068	-0,2469	-0,2231	1,000000	-	-	-	-	-	-	-
STR <sub>AT</sub>	0,136764	0,186828	0,060611	0,178833	1,000000	-	-	-	-	-	-
MTB <sub>AT</sub>	0,468619	0,127831	0,077430	-0,00519	0,302600	1,000000	-	-	-	-	-
RGDP <sub>T</sub>	0,159404	-0,02575	0,023498	0,048741	0,265393	0,144149	1,000000	-	-	-	-
RGDP <sub>A</sub>	-0,042582	0,086779	0,053406	-0,0607	-0,14899	-0,09656	0,129769	1,000000	-	-	-
ER	-0,008612	0,031664	-0,00582	-0,02463	-0,01722	-0,08729	-0,01025	-0,06945	1,000000	-	-
SMR <sub>AT</sub>	-0,005913	0,013016	-0,05527	0,054497	0,074146	0,124170	0,149586	0,180231	-0,24596	1,000000	-
GDP_C <sub>AT</sub>	0,443577	-0,10436	0,010882	-0,06914	0,076610	0,383790	0,099538	-0,144	0,007707	0,087957	1,000000





**Table 8 – ISO codes of Acquiring Countries**

Country	ISO Code	Country	ISO Code
Argentina	AR	Italy	IT
Australia	AU	Japan	JP
Austria	AT	Lithuania	LT
Belgium	BE	Luxembourg	LU
Brazil	BR	Malaysia	MY
Bulgaria	BG	Malta	MT
Canada	CA	Mexico	MX
Chile	CL	Morocco	MA
China	CN	Netherlands	NL
Colombia	CO	New Zealand	NZ
Croatia	HR	Norway	NO
Cyprus	CY	Poland	PL
Czech Republic	CZ	Portugal	PT
Denmark	DK	Romania	RO
Estonia	EE	Russia	RU
Finland	FI	Singapore	SG
France	FR	Slovenia	SI
Germany	DE	South Africa	ZA
Greece	GR	Spain	ES
Hong Kong	HK	Sweden	SE
Hungary	HU	Switzerland	CH
India	IN	Thailand	TH
Indonesia	ID	Turkey	TR
Ireland	IE	United Kingdom	GB
Israel	IL	United States of America	US

## Annex IV – Corruption Level in Target Country

Table 9 - Corruption Level in the Target Country for the Sample Years

Country	Reversed CPI Score 2012	Reversed CPI Score 2013	Reversed CPI Score 2014	Reversed CPI Score 2015	Reversed CPI Score 2016	Reversed CPI Score 2017	Reversed CPI Score 2018
Denmark	10	9	8	9	10	12	12
Finland	10	11	11	10	11	15	15
Sweden	12	11	13	11	12	16	15
Netherlands	16	17	17	16	17	18	18
Luxembourg	20	20	18	15	19	18	19
Germany	21	22	21	19	19	19	20
United Kingdom	26	24	22	19	19	18	20
Austria	31	31	28	24	25	25	24
Belgium	25	25	24	23	23	25	25
Estonia	36	32	31	30	30	29	27
Ireland	31	28	26	25	27	26	27
France	29	29	31	30	31	30	28
Portugal	37	38	37	36	38	37	36
Poland	42	40	39	37	38	40	40
Slovenia	39	43	42	40	39	39	40
Cyprus	34	37	37	39	45	43	41
Czech Republic	51	52	49	44	45	43	41
Lithuania	46	43	42	41	41	41	41
Latvia	51	47	45	44	43	42	42
Spain	35	41	40	42	42	43	42
Malta	43	44	45	40	45	44	46
Italy	58	57	57	56	53	50	48
Slovakia	54	53	50	49	49	50	50
Romania	56	57	57	54	52	52	53
Hungary	45	46	46	49	52	55	54
Greece	64	60	57	54	56	52	55
Bulgaria	59	59	57	59	59	57	58