# Institutional Distance and Free Trade Agreements in the Context of Cross-Border M&A Performance



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# Abstract

This paper contributes to the understanding of cross-border M&A performance, by employing a multilevel view of institutional distance. While prior research has focused mostly on select institutional distance variables such as cultural distance, we use a multi-faceted approach, employing both formal and informal institutional distance variables to the context of cross-border M&A performance. Furthermore, our paper introduces Free Trade Agreements as a new supra-national variable, adding nuance to the multi-level view of institutional distance. Specifically, we test whether formal and informal distance variables affect cross-border M&A performance and whether Free Trade Agreements are able to mitigate the effects of formal and informal institutional distance on cross-border M&A performance. Our findings indicate partial empirical support for the former and no empirical support for the latter.

# **Table of Contents**

1. Introduction	1
2. Literature review	4
2.1 Traditional M&A research	4
2.2 Institutional Theory and Institutional Distance	8
2.3 Existing research on M&As and Cultural Distance	13
2.4 M&A performance and Institutional Distance	16
2.5 M&As, Institutional Distance and the role of Free Trade Agreements	20
3. Hypothesis Development	23
3.1 Economic Distance	26
3.2 Regulatory Distance	
3.3 Cultural Distance	
3.4 Free Trade Agreements and Institutional Distance	
3.5 The moderating effect of Free Trade Agreements on Institutional Distance	
4. Methodology	40
4.1 Sample Selection	40
4.2 Sample Description	42
4.2.1 Completion Year	42
4.2.2 Large Transactions	43
4.2.3 Home Country of Targets	43
4.2.4 Method of Payment	44
4.2.5 Relative Size of Target	44
4.2.6 FTA Distribution	45
4.2.7 Age of FTA	45
4.3 Dependent Variable	45
4.3.1 Accounting-based Performance Measures	46
4.3.2 The Use of ROE, ROA and PM	46
4.3.3 Outliers	
4.3.4 Adjusting for Industry Effects	49
4.4 Empirical Model	51
4.5 Independent Variables	51
4.5.1 Method of Distance Calculation	
4.5.4 Regulatory Distance	53

4.5.5 Cultural Distance	55
4.5.6 Economic Distance	56
4.5.7 Why we do not use more measures of distance?	58
4.5.8 FTA as Explanatory Variable	58
4.6 Control Variables	59
5. Results	62
5.1 Control Variables	
5.2 Economic Distance and M&A Performance	
5.3 Regulatory Distance and M&A Performance	
5.4 Cultural Distance and M&A Performance	85
5.5 M&A Performance, FTAs and Institutional Distance	85
5.3.1 Analysis with Non-Linearly Transformed Distance Variables	86
5.3.2 Analysis using FTAAGE	86
5.4 Alternative Model Specifications - Absolute Performance Measures	86
5.5 Alternative Model Specifications - Logistic Model	87
5.6 Limitations	87
5.6.1 Analysis of Sample and Data Quality	87
5.6.2 Analysis of employed Performance Measurements and Timeframes	90
6. Discussion	93
6.1 Economic Distance	93
6.2 Regulatory Distance	93
6.3 Cultural Distance	94
6.4 The moderating effect of FTAs on Institutional Distance	95
6.5 Implications for Managers and Policymakers	97
7. Conclusion	99
8. Bibliography	101

# List of tables

Table 1	Overview of previous M&A studies
Table 2	Overview of previous studies on Institutional Distance
Table 3	
Table 4	Completion Year
Table 5	
Table 6	
Table 7	
Table 8	
Table 9	
Table 10	Properties of Euclidean and Mahalanobis distance
Table 11	Overview of Institutional Distance Dimensions and measurements proxies
Table 12	Correlation Matrix
Table 13	
Table 14	
Table 15	
Table 16	
Table 17	
Table 18	
Table 19	
Table 20	
Table 21	
Table 22	Regression Model for ROE with FTAAGE instead of FTA
Table 23	Regression Model for ROA with FTAAGE instead of FTA
Table 24	
Table 25	Alternative Regression Model for ROE – Absolute ROE
Table 26	
Table 27	Alternative Regression Model for PM – Absolute PM
Table 28	Alternative Logistic Regression Model for ROE
Table 29	Alternative Logistic Regression Model for ROA
Table 30	Alternative Logistic Regression Model for ROA

## **1. Introduction**

In the present paper, we aspire to investigate how cross-border M&A performance of US firms can be explained by institutional distance. A considerable amount of literature has been focused around the concept of institutional distance (Bae & Salomon, 2010; Berry et al., 2010; Liou & Rao-Nicholson, 2017), and the concept has been employed to explain a variety of dependent variables in the international business literature (Xu & Shenkar, 2002; Berry et al., 2010). Institutional distance is a measure of differences in institutions between countries (Kostova, 1996), a derivative of institutional theory, which sees the institutional environment as the main determinant of firm behavior and structure (DiMaggio & Powell, 1983; Scott, 2001). We concentrate our effort on cross border M&A's of US firms, because of a growing importance of cross-border M&As as a way to chase growth internationally, and because a firm conducting cross-border M&A faces multiple institutional environments. We focus on US firms because they dominate the global M&A market, being involved in more than 35% of all M&A transactions and more than 50% of total M&A deal value globally (IMAA, 2018). As such, they constitute a good sample to base our study on.

M&A is a general term that refers to the consolidation of companies or assets. M&A can include a number of different transactions, such as mergers, acquisitions, consolidations and tender offers. The opportunity to acquire a competitor or to expand horizontally or vertically along the value chain has proven to be a useful way to obtain success with strategic objectives and to obtain specific growth targets for companies throughout the last decades (J.P. Morgan, 2017). Cross-border M&A's share of total M&A activity has been steadily increasing over the last decade and accounted for 36% of the value of the global M&A market in 2016, showing that it is becoming a more important strategy for firms who wish to expand their operations internationally. Low GDP growth rates in developed countries (J.P. Morgan, 2017), combined with low cost funding has increased the appetite for cross-border M&A (Ibid), as firms are looking to international markets to complement organic growth strategy for firms in the coming future, necessitating a deeper understanding of how institutional factors affect cross-border M&A. As firms are under pressure from shareholders to deliver not only growth in sales but also in returns, managers of firms must be aware of how the additional complexity posed by cross-border M&As affects performance. In the present paper, we attempt to show how the institutional distance construct may

contribute to the understanding of the complex nature of cross-border M&As and specifically crossborder M&A performance.

However, the current political environment with growing protectionist tendencies and geopolitical tensions creates uncertainty for the future of cross-border M&A. The new US administration has crossborder tariffs on the agenda, which implies increased uncertainty for domestic players engaging in global trade (J.P. Morgan, 2017). Negotiations around proposed Free Trade Agreements (FTA) such as the Transatlantic Trade and Investment Partnership (TTIP) between the US and the EU have broken down under the current US administration (Wallace, 2016). In a time where FTAs have seemingly fallen out of favor, we believe it is time to take a closer look at these, in order to reiterate the objectives they were set out to achieve. Further, it is pertinent to investigate what consequences FTAs or the lack of such imply for US firms conducting cross-border M&As. We consider institutional theory and institutional distance to be a solid theoretical framework for studying the impact of FTAs on cross-border M&A performance. While the concept of institutional distance is primarily focused on differences between institutions on a national level, scholars such as Kostova et al. (2008) and Bae & Salomon (2010) have proposed a multilevel view of institutional distance, considering both industry level, national level and supra-national levels of institutions. We believe that the multilevel view of institutions will help elucidating the relationship between FTAs, institutional distance and the performance of cross-border M&A. Whereas some previous studies on M&A performance have considered institutional distance as an explanatory variable (Liou & Rao-Nicholson, 2017), none have considered the role of FTAs in this context and whether they may influence institutional distance. For this reason, we find it relevant to investigate what effect institutional distance has on the performance of cross-border M&A, and whether FTAs are able to mitigate that effect. Explicitly we arrive at the following research question:

# To what extent do Free Trade Agreements mitigate the negative effect caused by Institutional Distance on M&A performance of US firms who acquire targets abroad?"

In the following, we will quickly outline the structure of our thesis. We commence with a review of institutional theory and the concept of institutional distance, followed by a review of previous research investigating M&A performance, institutional distance and free trade agreements. The review allows us to develop specific hypotheses regarding M&A performance in the context of institutional distance and free trade agreements. Next, the dataset and methods used to explain M&A performance are introduced.

Finally, we employ OLS regression to test the previously developed hypotheses, followed by an analysis and discussion of the empirical results, in the context of existing institutional distance and M&A research. We end the paper with a conclusion where we evaluate the theoretical and managerial implications of our study.

# 2. Literature review

As explained earlier, the purpose of our paper is to investigate the relationship between institutional distance, Free Trade Agreements (FTAs) and the performance of cross-border M&A. There is an extant amount of research in the three separate areas. Cross-border M&A is researched in the finance literature and international business literature. Free Trade Agreements (FTAs) have been studied in the international economics literature, often in relation to FDI. Institutional distance on the other hand, is found in the organizational literature, sociology literature and international business and strategic management literature. As cross-border M&A and institutional distance are two quite different areas, this literature review will commence by looking at existing literature on cross-border M&A's before moving on to institutional distance and finally looking into Free Trade Agreements. However, as the focus is on cross-border M&A, the scope of the review of literature will be confined mainly to studies that somehow incorporate cross-border M&A.

#### 2.1 Traditional M&A research

M&A has been a topic of research for several decades. In particular, the performance of M&A has been studied extensively in academia (Das & Kapil, 2012). The reason for the particular interest of academics in the performance of M&As is that it has been a well-favored business growth strategy for firms all around the world (J.P. Morgan, 2017). Whereas most managers would likely contend the benefits of M&A in terms of its potential for shareholder wealth creation, the academic community is still divided on whether M&As provide actual benefits for the acquiring firms. In the finance literature, many empirical studies arrive at the conclusion that M&As are not able to create value or growth for the acquirer (Cartwright & Schoenberg, 2006; Das & Kapil, 2012). On the other hand, strategic management and industrial organization literature posits that the opposite is true (Lubatkin, 1987). Even for studies using the US as a sample basis, research on the improvement of post-merger performance is first of all limited, and second, the results are contradictory. Studies like Healy et al. (1992), Heron & Lie (2002) and Rahman & Limmack (2004) show significant improvement in performance following M&As, Clark & Ofek (1994), Yeh & Hoshino (2001) and Kruse et al (2002) the opposite. Finally, most find no significant improvement in performance following an M&A (Ghosh, 2001; Sharma & Ho, 2002; Moeller & Schlingemann, 2004). Several explanations exist as to why there is such disagreement. Some argue that the reason lies in the fact that M&A deals are inherently unique, which leaves findings incomparable (Lubatkin, 1987). Others argue that M&A's do not create value for all stakeholders (Datta et al, 1992). Yet another part of academics argue that the employed measurement constructs are not appropriate for analyzing such a complex phenomenon like M&A (Zollo & Meier, 2008).

In order to get a better understanding of how M&As are measured, it is of interest to examine some of the studies in more detail. Studies that have researched the performance of M&As, can broadly be divided into two categories. One of the categories is event studies, and the other one is outcome studies (Das & Kapil, 2012). Whereas event studies analyze stock market reactions to M&As, outcome studies look at pre- and post-acquisition performance of firms. There are some underlying assumption behind both approaches, which are important to bear in mind, when analyzing M&As. The event study approach assumes an efficient stock market, seeing the change in share price of the target and/or acquiring firm as a reflection of the value or synergies generated by the transaction (Das & Kapil, 2012). The timeframe is rather short term with the event study approach, as the performance is typically measured in the weeks leading up to a deal or shortly after the announcement of the deal. Albeit the event study approach is not without its flaws, it has been extensively applied in the finance literature (Das & Kapil, 2012). On the other hand, the outcome based approach looks at the actual accounting performance of M&As, by comparing the pre-acquisition state of a firm with the post-acquisition state of a firm, mostly adjusted for industry performance against a specified peer or control group (Das & Kapil, 2012). Similar to the event study approach, the outcome approach is subject to its own limitations, in that factors such as the size of the target firm relative to the acquirer and the choice of peer or control groups have a large impact on the subsequent results of a study. Having two relatively different approaches to measuring M&A performance, makes it hard to compare the results of studies, especially if one aims at evaluating the influence of separate independent variables on M&A performance. Nevertheless, in the following we will try to shed light on some of the most employed independent variables in previous studies of M&A performance.

Traditional M&A research has looked at various independent variables in its quest for explaining M&A performance. A wide range of studies have looked at how industry relatedness between the acquiring firm and the target firm impacts M&A performance, using both an outcome (Fowler & Schmidt, 1989) and an event study approach (Lien & Klein, 2006). The answers of the various studies are not conclusive. Some show a significant negative relationship between industry relatedness and subsequent performance

(André et al, 2004), whereas others demonstrate a significant positive relationship (Finkelstein & Haleblian, 2002). The majority of the studies however seem to find no significant relationship between industry relatedness and M&A performance (Fowler & Schmidt (1989); Lien & Klein (2006); Gerbaud & York (2007).

Further independent variables employed historically are variables such as acquisition experience of the acquirer, the age of the firm, leverage, book to market value, debt to equity value, size of the acquirer and finally Tobin's q. For acquisition experience, a similar picture to the one with industry relatedness emerges, as generally studies have found little (Hayward, 2002) or no significance (Fowler & Schmidt; Grimpe & Hussinger, 2008) in terms of relationship between the experience variable and M&A performance. Of the mentioned independent variables, especially size of the acquirer has been studied a lot, with several studies showing a significant positive relationship between size of the acquirer and M&A performance, suggesting that big firms are better at conducting M&A's. Some of the studies having found this include Simerly and Li (2000), who use an outcome approach with Return on Assets (ROA) and Return on Investment (ROI) as a dependent variable. Weiner and Mahoney (1981), Luypert and Huyghebaert (2008) and Seth et al. (2002) also arrive at the same conclusion. Of the remaining previously mentioned independent variables, few have been studied as much as acquirer size and industry relatedness; however, it is worth mentioning some of the results. Age of the firm for example, does not seem to have a significant impact on M&A performance, which is confirmed by three different studies (Fowler and Schmidt, 1989; Corner and Kinicki, 2005; Grimpe and Hussinger, 2008). Debt to equity ratio of the acquirer seems to have a significant negative effect on M&A performance (Markides, 1995; Kumar & Panneerselvam, 2009) and with book value to market value the findings are not very consistent, with Andre et al (2004) showing a significant negative relationship and Francoeur (2006) showing a significant positive relationship. Lastly, Tobin's q, the ratio between a firm's total market value to the replacement cost of the firm's assets, seems to have a significant positive effect on M&A performance, as this is found by the majority of studies we have looked at including Doukas & Lang (2003), Agrawal & Sensarma (2007) and Kayo et al. (2010).

### Table 1 – Overview of previous M&A studies

Dependent Variable	Authors	Explanatory Variable	Significance and coefficient			
Studies on whether M&A improves performance						
Improvement of Cash flow performance	Healy et al. (1992)	Various	Significant positive			
Operating performance	Heron & Lie (2002)	Various	Significant positive			
Operating cash flow performance	Rahman & Limmack (2004)	Various	Significant positive			
Post-merger performance	Clark & Ofek (1994)	Various	Significant negative			
Operating performance	Yeh & Hoshino (2001)	Various	Significant negative			
Operating performance	Ghosh (2001)	Various	No significant results			
Post-acquisition operating performance	Sharma & Ho (2002)	Various	No significant results			
Stock & operating performance	Moeller & Schlingemann (2004)	Various	No significant results			
Studies on M&A performance and various explanat	tory variables					
ROE & Long Term Shareholder Returns	Fowler & Schmidt (1989)	Industry relatedness	No significant results			
Acquirers short-term market performance / CAR	Lien and Klein (2006)	Industry relatedness	No significant results			
Acquirers short-term market performance / CAR	Gerbaud & York (2007)	Industry relatedness	No significant results			
Alpha - Fama-French 3 factor model	André et al. (2004)	Industry relatedness	Significant negative			
Acquirers long-term market return	Finkelstein & Haleblian (2002)	Industry relatedness	Significant positive			
Acquirers short-term market performance / CAR	Hayward (2002)	Acquisition experience	Significant			
Deal Value	Grimpe & Hussinger (2008)	Acquisition experience	No significant results			
ROE & Long Term Shareholder Returns	Fowler & Schmidt (1989)	Acquisition experience	No significant results			
Profitability	Weiner and Mahoney (1981)	Acquirer size	Significant positive			
ROA & ROI	Simerly & Li (2000)	Acquirer size	Significant positive			
Total short term gain to acquirer and target	Seth et al (2002)	Acquirer size	Significant positive			
Acquisition indicator/occurrence of M&A	Luypert and Huyghebaert (2008)	Acquirer size	Significant positive			
ROE & Long Term Shareholder Returns	Fowler & Schmidt (1989)	Age of the firm	No significant results			
ROA. ROCE. ROE	Corner & Kinicki (2005)	Age of the firm	No significant results			
Deal Value	Grimpe & Hussinger (2008)	Age of the firm	No significant results			
	$M_{\rm eff}$	Debt to a suite	Cianificant manting			
Industry-weighted KOS	Markines (1995)	Debt to equity				
Acquirers snort-term market performance / CAR	$\kappa$ umar & Panneerseivam (2009)	Debt to equity	Significant negative			
Acquirers short-term market performance / CAR	Doukas & Lang (2003)	Tobin's q	Significant positive			
Acquisition indicator/occurrence of M&A	Agrawal & Sensarma (2007)	Tobin's q	Significant positive			
Acquisition indicator/occurrence of M&A	Kayo et al. (2010)	Tobin's q	Significant positive			

Note: The list is not exhaustive, but merely a reflection of the studies we have deemed relevant

Generally, of the M&A studies reviewed so far, the employed independent variables appear to explain relatively little of the variance in M&A performance, as measured by the R-squared of the employed statistical models. As such, it seems appropriate to look for variables outside the field of finance in the quest for explaining M&A performance. Scholars such as King et al. (2004) have made the same point, namely that there exist unidentified variables that would better explain variance in M&A performance, than the ones employed historically. As the following sections will demonstrate, a fair amount of research has been conducted into the matter of alternative variables outside the field of finance that may explain M&A performance. Specifically, we will look into how institutional distance has been employed and can be employed as an "alternative" variable in the context of M&A research.

#### **2.2 Institutional Theory and Institutional Distance**

As pointed out previously, M&As have been and are still a popular growth and internationalization strategy for firms. A firm wishing to internationalize, is faced with a wide array of strategy options, including exporting, licensing, strategic alliances such as joint ventures and finally mergers and acquisitions. Of all these internationalization strategies, M&A constitutes the most serious and financially significant commitment. The M&A strategy can be considered the most serious commitment, because it cannot be reversed as easily as the other internationalization strategies, such as the export or licensing agreement. The irreversibility of a cross-border M&A emphasizes the importance of understanding the factors that may affect the subsequent performance of such. Further, a better understanding of factors that negatively influence cross-border M&A performance can help managers make better decisions regarding cross-border M&As in the future. We believe that the institutional perspective offers important additional insights to the understanding of these factors. In the following, we will explain what institutions are, what pressures derive from them and why they may offer a deeper understanding of cross-border M&A performance.

Institutions have been studied in academia for decades, in fact already in the late 19th century; social theorists began to systematically develop a body of literature on this topic (Scott, 2001). A particularly noteworthy contribution to this systematization stemmed from the German economist, sociologist and philosopher Max Weber, who studied bureaucracy within society and famously coined the term iron cage, to describe how individuals increasingly became trapped in a web of bureaucratic, rule-based and rational control (DiMaggio & Powell, 1983). In 1983, Paul DiMaggio and Walter Powell revisited Max

Weber's iron cage construct, arguing that the bureaucratization of the corporation and the state had been accomplished. Even though organizations are still becoming more homogenous, the drivers behind the process of organizational change have been altered. Where under Weber those drivers were primarily competition between firms and states, DiMaggio & Powell (1983) argued that the drivers today are less driven by competition or need for efficiency. They identified three key drivers of homogenization of firms, which they call isomorphism, namely coercive, mimetic and normative isomorphism. A firm operating in one country will as such be affected by all three drivers, and needs to consider how it will react to these pressures. Typically, these pressures will lead to costs, which will affect performance. A firm that conducts a cross-border M&A is faced with a much more difficult task. It must consider not only the isomorphic pressures that it faces in its home country, but also the isomorphic pressures it faces in the country where it has conducted the cross-border M&A. In other words, the internationalizing firm conducting a cross-border M&A is faced with an additional layer of complexity because of having to evaluate the different isomorphic pressures of both its home country, but also the country where it has invested in. These institutional drivers of homogenization create costs for firms, both nationally and abroad, subsequently affecting not only performance at home, but also the performance of cross-border M&As. We will elucidate the mechanism by which these drivers create costs in more detail throughout our paper. In the following, we will review each of the drivers of homogenization of firms.

DiMaggio & Powell's (1983) coercive isomorphism is a product of informal and formal pressures, which are applied upon organizations. The formal pressures stem from other organizations upon which the organization in question is dependent or other external forces, and the informal pressures are the cultural expectations put forth by the society within which the organization is nested. Examples of such coercive isomorphism includes legal frameworks, regulations and technical requirements. Because of this coercive isomorphism, organizations are increasingly homogenized as they are coerced to conform to rules set up by wider institutions such as governments.

DiMaggio & Powell (1983)'s mimetic isomorphism, is a different form of isomorphism. It is not driven by the rule-based, coercive authority, but instead by uncertainty. The uncertainty encourages firms and organizations to imitate each other. The authors use Japan's impressive economic growth in the end of the 19th century as an example hereof, as it was based on copying successful Western government initiatives and business models. Lastly, DiMaggio & Powell (1983) develop the concept of normative isomorphism. In its essence, normative isomorphism is change driven by the professionalization of employees and the emergence of legitimated professional practices. These norms, whether developed during education or within organizations, are carried on and lead to isomorphism between firms as employees shift jobs.

The three mentioned institutional drivers of homogenization of firms are developed from the perspective of sociologists. However, the economist Douglass North with his Nobel-prize winning 1991 paper on institutions (North, 1991), managed to combine much of the sociological notions from DiMaggio & Powell (1983) with his previous work on transaction costs and property rights. The result was a succinct definition of institutions as "humanly devised constraints that structure political, economic and social interactions". The constraints are in North's (1991) universe made up of two sets of rules. The first set of rules, the formal rules, consist of laws, property rights and constitutions. The second set of rules are the informal rules or restraints, such as customs, traditions, codes of conduct and taboos. These two sets of constraints contribute to the perpetuation of order and safety within a market or within society. Even though North's (1991) division of institutions into informal and formal institutions offers a good and solid basis to explore M&A performance from, we wish to highlight one more contribution to the concept of institutions, as it has since been widely cited in and forms the basis of the first version of the institutional distance construct by Kostova (1996). This important contribution comes from Scott (2001).

Scott's (2001) book on Institutions & Organizations, managed to cleverly link together disparate threads of literature on the subject of institutional theory, some of them already touched upon earlier, into one conceptual framework. Scott (2001) provides his own definition of what constitutes an institution. In his words, institutions are "social structures that have attained a high degree of resilience" and they are "composed of cultured-cognitive, normative and regulative elements that, together with associated activities and resources, provide stability and meaning to social life" (pp. 48, Scott 2001). Scott (2001) goes further than that, by asserting that institutions are not static, "but are subject to change, processes, both incremental and discontinuous" and those institutions "operate at multiple levels of jurisdiction, from the world system to localized interpersonal relationships" (pp. 48, Scott 2001). The institution as understood by Scott (2001) consists of three vital ingredients or pillars. These include regulative systems, normative systems and cultural-cognitive systems. These three ingredients, Scott (2001) argues, contribute in mutually reinforcing and interdependent ways to a powerful social framework. Scott's

(2001) regulative pillar of institutions, describes how institutions can constrain and regulate behavior. The regulative pillar is therefore mainly concerned with how rules can be established, how they can be enforced and how non-conformity to said rules is punished. The rules can be part of informal mechanisms, which are enforced through shaming or shunning, or they can be part of a formal mechanism and anchored in the law, the courts and the police. Scott (2001) highlights that economists such as North (1990) traditionally see institutions as resting primarily on the regulative pillar, as it is part of the economic agents pursuit of self-interest to conform to rules. As such the primary mechanism of control is through coercion, as also described by DiMaggio and Powell (1983) and non-conformity to the rules are legally sanctioned.

Scott's (2001) normative pillar emphasizes how rules *"introduce a prescriptive, evaluative and obligatory dimension into social life"* (pp. 54, Scott 2001). Scott's (2001) normative pillar bears resemblance to DiMaggio & Powell's (1983) normative isomorphism. In Scott's (2001) words, the normative systems encompass both values and norms. Values, or goals, suggest what is preferred or desirable. Norms, or means, specify how something should be accomplished (Scott, 2001). In general, normative systems can be seen as constraining social behavior, while simultaneously empowering and enabling social action. An example of the normative pillar is provided from the organizational literature: Behavior in an organization is specified by standard operating procedures or codes of conduct, which contains both the values or goals that the organizations views as attainable, and the norms or means of achieving those valued goals (Scott, 2001). In general, certifications, accreditations or operating procedures serve as indicators of normative systems. In contrast to the regulative pillar, the normative pillar does not achieve legitimacy by legal sanctions, but instead rather through social obligation and by appealing to morality (Scott, 2001).

Scott's (2001) last pillar, the cultural-cognitive pillar, resembles DiMaggio & Powell (1983)'s mimetic isomorphism. The indicators of cultural cognitive systems are common beliefs or shared logics of action. Scott (2001) describes how the individual acts in accordance to their internalized representation of their environments, meaning that symbols such as signs, words and gestures work because they shape the meanings we attribute to objects and activities. For the outsider, it might be difficult to distinguish between the normative and cultural-cognitive pillars, but they are grounded in two different sociological theory streams. In its essence, the cultural-cognitive system is enforced simply through the notion that in

a given situation, other types of behavior are not conceivable. Scott (2001) formulates it in this way: *"Routines are followed because they are taken for granted as the way we do these things"* (pp. 57, Scott 2001).

Now that we have shown Scott's (2001) work, we can move on to the first conceptualization of institutional distance. Kostova (1996) pioneered the institutional distance approach by constructing country institutional profiles based on each of Scott's (2001) dimensions. The differences between the institutional profiles of the countries, Kostova (1996) termed institutional distance. Kostova and Zaheer (1999) employ the construct of institutional distance to suggest that an increasing degree of dissimilarity between the institutions of two countries makes it more difficult for a multinational company to gain legitimacy in the country it is investing in and to transfer strategic routines to foreign subsidiaries in those countries. As such, institutional distance constitutes a quantifiable estimate of the extra cost of operating in another country. Therefore, it is a good measure in the context of cross-border M&A's, because it attempts to quantify the cost for the acquiring company of being foreign and unexperienced in the country where they have conducted the cross-border M&A. As such, we argue that it should be a variable of interest for all researchers interested in factors that affect cross-border M&A performance.

Even though, Kostova (1996) was the first to coin the term institutional distance, researchers interested in the internationalization process of firms, had already previously come to the conclusion that firms interested in expanding the reach of their operations internationally, did face some degree of costs. Stephen Hymer termed this "the liability of foreignness" (Hymer, 1976). Johanson and Vahlne's (1977) theory of the gradual internationalization process of the firm, explained how firms followed a pattern of internationalization that started with expansion into markets that were the most similar to a firm's home market. Johanson and Vahlne (1977) used the term "psychic distance" to describe the uncertainty of operation in an international environment triggered by "the lack of market information" available to the company (Johanson and Vahlne, 1977). A lot of research came to understand the striking features of this environment that represent uncertainty for the internationalizing firm as "cultural distance" or differences in culture. Combined with Geert Hofstede's study of work-related values published in 1980, researchers were for the first time given concrete numerical data to test and measure cultural distance.

In other words, the notion of institutional distance was precipitated by a significant body of research that dealt with factors that create costs. In fact, the conceptualizations of cultural distance employed by the

studies we will present in the following strongly resemble what Scott (2001) includes in his normative and cultural-cognitive pillars. As such, we see cultural distance as a sub-dimension of institutional distance. We will return to other institutional distance dimensions later in this paper. The next section will review the results of M&A studies that included measures of cultural distance, to understand how cultural distance, as one of the dimensions of institutional distance, influences M&As.

#### 2.3 Existing research on M&As and Cultural Distance

Indeed, several cross-border M&A studies have delved into the issue of liability of foreignness and psychic distance, by using cultural distance as a proxy (Kogut & Singh, 1988; Kanter & Corn, 1994; Cal1ori et al. 1994). Especially since the late 1980's, where the world saw a steep increase in M&A transactions across different national markets (Jansen & Müller Stevens, 2000), the body of literature on M&A and cultural distance has been growing.

Of the studies who have investigated the influence of cultural distance on the entry mode choice, perhaps Kogut and Singh's (1988) study is the most famous one to do so. However, others such as Brouthers and Brouthers (2000) have followed their lead and done the same. The findings are not consistent, as Kogut and Singh (1988) find that cultural distance is negatively associated with acquisition entry mode, whereas Brouthers and Brouthers (2000) find that cultural distance is not significantly related to entry mode choice. Studies have also investigated the influence of cultural distance on the integration process (Calori et al., 1994), concluding that cultural distance influences the type of control mechanisms used by acquirers (Calori et al., 1994). In contrast, Kanter and Corn (1994) find that differences in culture do not impact the integration of acquired companies and their organizational effectiveness.

Some studies even look at the influence of cultural distance on the turnover rate in top management (Krug & Nigh, 1998); finding that cultural distance is positively associated with higher top management turnover after the acquisition has taken place. Krug & Hegarty (1997) support these findings with their study on how cultural differences affect management turnover, finding that cross-border acquisitions in general are associated with higher management turnover rates when compared to purely domestic acquisitions.

Aside from influencing the entry mode choice, top management turnover and post-M&A integration, differences in national culture affect cross-border M&A's in more ways as well. As workforces from

different national cultures meet, it must be expected that the culture gap lead to clashes between the workforce mentalities, which in the end can hurt the process of post-M&A integration, and finally M&A performance. There are additional ways in which cultural distance affects M&A performance. Bae & Salomon (2010) argue that cultural distance may lead to difficulties in communication and coordination between a parent and its foreign subsidiary, which harms the operational effectiveness. Furthermore, the cultural distance may dampen the parent firm's ability to understand and successfully penetrate the local market. When applied to an M&A context, these findings provide support for the notion that cultural distance negatively affects cross-border M&A performance. David & Singh's (1993) case study analysis further supports this. They identified nine cross-border M&A's and found that cultural distance significantly impacts merger and acquisition performance.

Even though scholars have applied varying variables to gauge M&A performance; nevertheless, it is useful to understand what they have found so far, when looking at cultural distance. A number of studies use sales or sales growth as the dependent variable, such as Morosini et al. (1998), Uhlenbruck (2004) and Slangen (2006). Morosini et al. (1998) find that there is a positive relation between cultural distance and performance of cross-border M&As whereas Uhlenbruck (2004) finds the opposite to be true, noting that cultural distance impedes the sales growth of acquired firms. Slangen (2006) shows that the influence of cultural distance on performance of cross-border M&As is higher if there has been a high level of planned integration and a positive impact on performance at low levels of planned integration. Other studies have used measures such as cumulative abnormal returns and find that cultural distance has a negative indirect impact on acquisition performance (Rottig, 2009).

Lastly, there are studies that employ dependent variables such as shareholder value change (Markides & Ittner, 1994; Datta & Puia, 1995). Datta and Puia (1995) looked at 112 cross-border M&As in the chemical industry and found that cultural distance is negatively associated with abnormal returns. Further, Ahammad and Glaister (2011) show that cultural distance hinders communication between acquirers and acquired units, leading to a negative indirect effect on acquisition performance. Markides and Ittner (1994) are not able to find support for a negative effect of cultural distance on shareholder value creation and thus on performance. Some scholars even find that cultural distance has a positive influence on performance, and that cross-border M&A's perform better in the long-run if acquirer and the target come from culturally disparate countries (Chakrabarti et al., 2009).

As can be seen from the review of previous studies on cultural distance and its influence on M&As and especially cross-border M&A performance, the results are relatively mixed. The reasons for this can be manifold, such as the variety of methods employed to study the influence of cultural distance, ranging from survey methods, interviews, case studies and archival methods. What is particularly interesting is that the majority of the previously mentioned studies employ Hofstede's (1980) cultural dimensions or Kogut and Singh's (1988) construct based upon the same, as proxies for cultural distance. This could potentially be problematic, as several researchers have criticized Hofstede's cultural dimensions. Shenkar (2001) points out that Hofstede's cultural dimensions construct is based on questionable methodological properties, which undermine the validity of the construct and that it contains unsupported hidden assumptions. Shenkar (2001) provides a thorough review of the flaws of the cultural distance construct, as we know it, pointing out the conceptual and methodological flaws. In the category of conceptual flaws, he highlights the illusion of symmetry, stability, causality, linearity and discordance as problematic. The illusion of symmetry lies in the fact that by calculating distance between home and host countries, one assumes that firm A (from country A) investing in country B is faced with the same cultural distance as a firm B investing in country A (Shenkar, 2001). Shenkar (2001) argues that there is no support for such an assumption. The illusion of stability is also problematic, in that it is assumed that cultural distance implicitly is assumed constant. Shenkar (2001) argues that cultures change over time, and constructs such as Hofstede's cultural dimensions do not take this into account. Shenkar (2001) also points out that cultural distance does not necessarily impact entry modes, control mechanisms and performance linearly. Instead, cultural distance has a varying impact, depending on whether it is in the operational or in the strategic phase. Shenkar (2001) argues that in the strategic phase, cultural distance may form a base for synergies, whereas at the operational phase, cultural distance may depreciate the parent firm's abilities to operate as effectively as it does in its home market. Even though, the points just reviewed, are only a part of Shenkar's (2001) critique of the Hofstede cultural dimension construct, they give a reasonable explanation as to why much of the research on the influence of cultural distance on M&A is relatively contradictory and comes with a wide amount of conclusions for the role of cultural distance.

The last critique point from Shenkar (2001) included in this review, is what he calls illusion of causality. Shenkar (2001) argues that it is problematic that there seems to be a connotation among scholars that culture is the only determinant of distance relevant in a Foreign Direct Investment, or M&A context. This does not seem to be a reasonable assumption and leads us on to the next part of the literature review.

#### 2.4 M&A performance and Institutional Distance

Even though culture is an important aspect to consider for firms conducting M&A's in an international context, there has been a growing critique coming from the field of internationalization research (Pogrebnyakov & Maitland, 2011). The critique argues that reducing Johanson and Vahlne's (1977) psychic distance construct to cultural distance only, unnecessarily narrows the scope of internationalization research (Brewer, 2007; O'Grady and Lane, 1996). It can be argued that the same is true for cross-border M&A research, and that focusing solely on cultural distance leaves out important variables. This is in line with Shenkar's (2001) illusion of causality critique of cultural distance. Bae & Salomon (2010) make the same point, and argue that to solely focus on one institutional dimension, namely cultural distance, would be to ignore the complexity of a system of institutions (Bae & Salomon, 2010). Other scholars like Aoki (2001) provide support for this argument. Bae & Salomon (2010) encourage scholars to consider measures of several institutional distance dimensions, such as political distance, regulatory distance, cultural & cognitive distance and economic distance. Failing to consider all, will lead to the continued production of inconclusive and often contradicting research regarding institutional distance and its impact on international business, so Bae & Salomon (2010) argue.

Whereas there is extant research on the role of institutional distance in the wider international business literature (Pogrebnyakov & Maitland, 2011), there is relatively little research on how institutional distance as an overall concept influences cross-border M&As and specifically cross-border M&A performance. The former section focused on studies looking at the cultural dimension, in other words informal institutions, in relation to M&A. We will now review studies who have looked at the formal institutions, specifically economic or regulatory dimensions of institutions, and their relationship with cross-border M&A. However, due to the limited amount of studies on the impact of these variables on M&A, we will first review some results of studies from the wider international business literature.

One of the most significant recent studies, who have empirically investigated the impact of institutional distance, is the study by Berry et al. (2010). They identify a wide range of institutional distance variables, ranging from economic distance, financial distance, political distance and administrative distance, to cultural, demographic, knowledge distance and geographic distance. Using foreign market entry by US

manufacturing firms as their dependent variable, they find that all of the employed distance variables have a significant negative effect on foreign market entry. Berry et al. (2010) concur with Bae & Salomon (2010) and highlight the importance of considering multiple dimensions of institutional distance, and not just cultural distance, when studying the impact of institutional distance.

Pogrebnyakov & Maitland (2011) investigate how institutional distance influences the internationalization of mobile operators. They find that regulatory distance does not have a significant effect on the time to entry, whereas cognitive-cultural distance has a significant negative impact on the time to entry. Manning & Møller Larsen (2015) show how outsourcing location choices by firms are impacted both by national level institutional distance and by industry level factors such as industry standards. They employ regulatory distance as a measure of institutional distance, and find that regulatory distance has a negative impact on outsourcing location choices.

Now, that we have reviewed some results from the wider international business literature, we will return to studies that investigate institutional distance in the context of M&A. Rossi and Volpin (2004) focus on the regulatory part of institutional distance and study how differences in laws and regulations can explain M&A patterns. They find that countries that have strong shareholder protection and good accounting standards experience significantly larger volumes of M&A activity. Most interestingly, Rossi and Volpin (2004) find that cross-border M&A deals often see target companies coming from countries with comparatively worse investor protection compared to the country of the acquiring firm. Hence, Rossi and Volpin (2004) suggest that cross-border M&A serves as a governance tool. It helps improve the degree of investor protection within the target companies.

Others such as Erel et al. (2012) study the determinants of cross-border M&As by specifically looking at accounting disclosure, geography and bilateral trade. Their findings indicate that high quality of accounting disclosure and existing bilateral trade increase the likelihood of M&A between a country pair.

Moeller and Schlingemann (2005) find that cross-border M&A deals by US firms perform worse than purely domestic M&A deals. Furthermore, they find that the performance of an M&A deal, measured as bidder gains, is positively related to legal systems offering better protection of shareholder rights. Furthermore, economic restrictiveness of the target firm's country is negatively related to bidder gains. Bris and Cabolis (2008), find that if the acquirer firm's country has high accounting standards and shareholder protection, the higher is the merger premium in cross-border mergers, relative to similar domestic acquisitions. An interesting contribution comes from Ellis et al. (2011) who find that acquirers from high governance standard countries have higher gains from cross-border M&A if the targets are from countries with worse governance. Translated into an institutional distance context, this would equate to saying that greater regulatory distance in terms of governance, specifically investor protection, serves as a predictor of increased performance of a cross-border M&A deal. This is in line with Rossi and Volpin's (2004) findings suggesting that cross-border M&A serves as a governance tool, by transferring good governance standards from the acquirer country into the target firm.

As our review has shown, M&A research that includes an element of institutional distance or vice versa, can be divided into those looking at informal institutions only, which are mostly related to cultural distance, and those looking at formal institutions, which are mostly looking into regulatory distance. Unfortunately, to this point, still only a limited amount of studies have tried to combine all elements of institutional distance as encouraged by Bae and Salomon (2010), and look at their effect on cross-border M&A. Nevertheless, a few studies have in fact attempted to do so.

One group of scholars to do so is Reis et al. (2013). Reis et al. (2013) have written a conceptual framework about how institutional distance affects the completion of cross-border M&A deals. They take into account both the economic, political and social contexts of institutional distance, and as such, they go beyond what prior M&A research has done. Based on their review of prior research they come up with several propositions. First, they propose that a greater economic distance between the acquirer and target country reduces the likelihood of completing an announced M&A deal. Further, they propose that greater social distance between acquirer and target nation reduces likelihood of completing an announced M&A deal and that greater social distance between acquirer and target nation reduces likelihood of completing an announced M&A deal mathematical distance between acquirer and target nation reduces likelihood of completing an announced M&A deal mathematical distance between acquirer and target nation reduces likelihood of completing an announced M&A deal and that greater social distance between acquirer and target nation reduces likelihood of completing an announced M&A deal. However, Reis et al. (2013) do not empirically test their propositions, as their work is only a conceptual framework.

Dependent Variable	Authors	Explanatory Variable	Significance and coefficient
Studies on economic distance or rela	ated constructs		
	D 1 (2010)		
Entry mode	Berry et al. (2010)	Economic distance	Significant negative
Post M&A operating performance	Liou & Rao-Nicholson (2017)	Economic distance	Not significant
Studies on regulatory distance or re	lated constructs		
Entry mode	Berry et al. (2010)	Political distance	Significant negative
Likelihood of setting up foreign	Manning & Møller Larsen (2015)	Institutional distance	Significant
sourcing facilities	Withining & Wigner Edison (2013)	instructional distance	Significant
Instance of entry of operators	Pogrebnyakov & Maitland (2011)	Regulative distance	Not significant
M&A patterns	Rossi & Volpin (2004)	Differences in laws and	Significant
The Participant		regulations	- g.m. e uni
Likelihood of cross-border M&A	Erel et al. (2012)	Ouality of disclosure &	Significant positive
		institutions	- <del>3</del>
Bidder gains	Moeller and Schlingemann (2005)	Level of shareholder rights	Significant positive
and Grand		protection	8
Merger premium	Bris and Cabolis (2008)	Accounting standards and	Significant positive
	× ,	shareholder protection	
Acquirer gains	Ellis et al. (2011)	Level of governance standard	Significant positive
Post M&A operating performance	Liou & Rao-Nicholson (2017)	Political distance	Significant negative
Studies on cultural distance or related	ed constructs		
Entry mode choice	Kogut & Singh (1088)	Cultural distance	Significant nagativa
Diversification mode choice	Prouthers & Prouthers (2000)	Cultural distance	Not significant
Integration process & performance	Calori et al. (1004)	Informal control	Not significant
M&A Integration & organizational	Caloffet al. (1994)	Cultural differences	Not significant
effectiveness	Kantel & Colli (1994)	Cultural differences	Not significant
Turnover rate of ton management	Krug & Nigh (1998)	Cultural distance	Significant positive
Turnover rate of top management	Krug & Hegarty (1997)	Cultural distance	Significant positive
M&A performance	David & Singh (1993	National cultural differences	Significant negative
Sales & Sales growth	Morosini et al (1998)	Cultural distance	Significant positive
Sales & Sales growth	Uhlenbruck (2004)	Cultural distance	Significant negative
Sales & Sales growth	Slangen (2006)	Cultural distance	Significant positive
Cumulative abnormal returns	Rottig (2009)	Cultural distance	Significant negative
Shareholder value	Markides and Ittner (1994)	National cultural differences	Not significant
Abnormal return	Datta and Puia (1995)	Cultural distance & National	Significant negative
	(1770)	cultural differences	
Stock market returns	Chakrabarti et al. (2009)	Cultural distance	Significant positive
Entry mode	Berry et al. (2010)	Cultural distance	Signifcant negative
Post M&A operating performance	Liou & Rao-Nicholson (2017)	Cultural distance	Not significant

## Table 2 – Overview of previous studies on institutional distance

Note: The list is not exhaustive, but merely a reflection of the studies we have deemed relevant

By only looking for scholars who have investigated the role of all institutional distance measurements and their impact on M&A's, the amount of literature is reduced dramatically. By only taking into account studies who have also empirically tested their propositions, the amount is reduced further. Narrowing the scope of the literature down to studies who have specifically looked at the role of institutional distance and its influence on cross-border M&A performance, leaves to our knowledge only one. The study has been published fairly recently, in 2017, and appears to take into account previous critiques of M&A studies and their lacking consistency in employing international distance dimensions. Liou and Rao-Nicholson's (2017) study investigates the role of institutional distance in relation to cross-border M&A performance of deals by South African firms acquiring targets in developed economies. They break down institutional distance as independent variables. Cultural distance is included as a control variable in their empirical model. They find that political distance has a negative impact on cross-border M&A performance, but that economic distance does not have a significant impact on performance and neither does cultural distance.

#### 2.5 M&As, Institutional Distance and the role of Free Trade Agreements

While it has been made relatively clear from recent empirical and theoretical development reviewed here, that cross-border M&A's are conducted in an environment that is highly complex, the institutional distance construct often leads to a narrow focus on national level differences. Often however, there are other factors than solely national factors that play a role in an international business context. Several researchers have started to look into non-national level factors such as international industry standards and intra-organizational logic and how these influence firms in an internationalization context (Kostova et al., 2008). As an example, Manning & Møller Larsen (2015) show how outsourcing location choices by firms are impacted both by national level institutional distance and by industry level factors such as industry standards and demonstrate that industry standards can have a moderating effect on the negative impact of institutional distance. Kostova et al. (2008) argue that institutional distance should be defined at multiple levels, subnational, national and supra-national, as solely focusing on national institutional distance may not accurately reflect the complexity of the international environment faced by the MNE. Whereas the national level is the level most institutional distance studies have focused their efforts on, the subnational level is concerned with the industry the MNE operates in. The supra-national level in

turn could be business practices and legal frameworks, which span across borders, such as is the case with the EU and global industry standards (Bae & Salomon, 2010).

The definition of a Free Trade Agreement (FTA) is that it is a commitment by the signatory members of the agreement to abolish tariffs across member states, while at the same time maintaining independent tariffs on imports on from countries not part of the FTA (Plummer et al., 2010). If one looks at FTAs from an institutional perspective, FTAs can thus be considered to operate on what Bae & Salomon (2010) term the supra-national level of institutions, as FTAs per definition are a supra-national legal framework. In other words, FTAs are a form of institution themselves, as they meet the criteria set forth by North (1990). Using North (1990)'s terminology, Free Trade Agreements are humanly devised rules or constraints that structure economic, political and social interactions between firms of different countries. As such, there appears to be a logical connection between institutional distance and FTAs. If we apply the multi-level view of institutions as proposed by Kostova et al. (2008) and Bae & Salomon (2010), one can argue that FTAs as supra-national institutions should be able to influence national level institutions, and in doing so, affect institutional distance between countries. To our knowledge, no research has yet been conducted into this matter, leaving open the question: how do FTAs impact institutional distance? This leads to the next question: if FTAs affect institutional distance, do they then have an indirect impact on M&A performance?

The main reason for the lack of research on this matter in our view is that research has been going on in three separate fields of study, M&A research, institutional distance research and international economics research. As shown in this literature review, there is a growing body of literature on institutional distance and M&A. Furthermore, we have found one study looking at the relationship between FTAs and M&A. Li et al. (2018) investigate how FTAs influence cross-border M&A's and find that FTA's between countries increase the amount of M&A. However, there seems to be a lack of research into the relationship between FTAs and institutional distance.

For the sake of clarity, we will quickly review some of the most important findings regarding FTAs from the international economics literature. The international economics literature has used the gravity model as the empirical base to study international trade and specifically the effects of customs unions, tariffs and FTAs on bilateral trade for more than 40 years (Baier & Bergstrand, 2007). The results of studies regarding the role of FTAs have been mixed to say the least. Tinbergen's (1962) study was the first of

its kind to use the gravity model to evaluate the effects of FTAs on international trade flows. He found that FTAs had insignificant economic effects on trade flows, only leading to an increase of 4% in trade flows (Tinbergen, 1962). Studies by Frankel et al. (1995) and Bergstrand (1985) showed similar results. Nevertheless, there is ample evidence that shows the opposite result, such as the studies of Aitken (1973), Abrams (1980) and Brada and Mendez (1985) who all find that membership in the European Community had both an economically and statistically significant impact on FDI between member states.

The sheer explosion in the amount of FTAs worldwide during the last 20 years (Baier & Bergstrand, 2007), and the simultaneous increase in the amount of cross-border M&A's globally, calls for the attention of scholars. Combined with the encouragement from the likes of Bae & Salomon (2010) to move institutional distance research from a strictly national-level matter to a multi-level matter, a deeper understanding of how supra-national institutions such as FTAs influence national level institutional distance affect cross-border M&A performance can be enhanced, contributing to a growing body of M&A research taking into account more untraditional variables.

To our knowledge, no studies have investigated the role of FTA's as a supranational institutional dimension and its influence on national institutional distance in the context of cross-border M&A performance. None of the reviewed studies looking at the role of both informal and formal institutions in the context of cross-border M&A addressed the issue of Free Trade Agreements. We wish to address this research gap with the present paper, by drawing on contributions from the three separate research fields of institutional distance, M&A research and international economics.

# 3. Hypothesis Development

Looking at cross-border mergers and acquisitions from an institution-based perspective, suggests that differences in both formal and informal institutions between countries of the target and acquirer firm might materially impact both the likelihood of a deal to be completed, the time it takes to complete it and its subsequent performance. The following will explain why this is the case.

When firms make the decision to conduct M&A abroad, these firms face a myriad of uncertainties that lead to costs (Berry et al., 2010). These costs can be of financial nature, in terms of integration costs and costs associated with the completion of the deal, such as fees for lawyer and bankers. These costs can also be of non-financial nature, and might include, but are not limited to, communication problems because of differences in language or culture and reduction in employee morale because of misalignment between strategic goals of the management and employee wants or needs. More importantly, the nonfinancial costs might end up becoming financial costs as well, if not addressed properly by the senior management of the acquiring firm. In order for the M&A to be successful and subsequently generate a positive return, firms must find a way to overcome these costs. The institution-based perspective suggests that firms conducting cross-border M&A can only overcome these costs by taking into account the formal and informal institutions of the target country. Thus, the acquiring firm must adapt to the local settings and may acquire legitimacy by incorporating and adhering to the idiosyncrasies of the local institutions, both formal and informal (DiMaggio & Powell 1983; Scott, 1995). Furthermore, the more distant the institutions of the target firm's country are from the institutions of the acquiring firm's country, the more costly it will be for the acquiring firm to conduct a cross-border M&A transaction. Increased institutional distance increases costs, because it makes it more difficult for the acquiring firm to conform to the idiosyncrasies of local institutions, consequently retarding the process of establishing legitimacy in the target country (Kostova and Zaheer, 1999). Moreover, the increased institutional distance prolongs the time it takes to transfer strategic routines to the target firm, creating additional costs as the target firm continues to operate below the desired level of efficiency. The added costs because of increased institutional distance eventually materialize as financial costs, which depress the returns and the profitability of the acquiring firms. This leads us to our general hypothesis, that institutional distance creates tangible financial costs, and in doing so, negatively influences the accounting-performance of cross-border M&A's. However, in order to be able to empirically test our hypothesis and for the sake of clarity, we have chosen to break down institutional distance into three underlying dimensions. Doing so, enables us to have a more nuanced debate around the impact of institutional distance on the performance of cross-border M&A's and contributes to a more thorough understanding of what constitutes institutional distance.

In the following, we will outline which institutional distance dimensions we have chosen to base our empirical analysis on, and our motivations for choosing each one. Inspired by North's (1990) distinction between formal and informal institutions, we aspire to study both the effect of differences in formal and informal institutions between the target and acquirer country on M&A performance. Under informal institutions, we include the concept of cultural distance, which has been widely employed in M&A research. We divide formal institutions into two parts, one being differences in economic institutions, or economic distance, is perhaps, more fittingly described by what Berry et al. (2010) calls differences in economic distance has received relatively little attention in the institutional distance literature, compared to for instance regulatory or cultural distance, we will devote a little extra time to developing our argument for why economic distance is important to consider in the context of cross-border M&A performance. Afterwards, we will explain why we also see regulatory and cultural distance as key determinants of M&A performance.

Our understanding of economic distance is based upon Berry et al.'s (2010) definition, as well as on contributions from other scholars. For one, we acknowledge and employ parts of Ghemawat's (2001 & 2007) understanding of economic distance. However, we also employ concepts based on the localization advantages from Dunning's eclectic paradigm (Dunning, 2000), such as the importance of wage levels, exchange rates and inflation rates. Exchange rates and inflation rates are connected with the macroeconomic stability of the target country, making it an important factor to consider for acquirer firms. If macroeconomic stability of the target country is high, an M&A in to the target country is more risky for the acquirer firm, because they cannot know for sure how much of the economic rents of the target firm they can extract. Surely, the acquirer firm may try to hedge any currency or inflationary risks using complex derivatives, however, this comes at an additional cost. Wage levels in the target country, are also an important factor influencing the acquirer firm. A lower GDP per capita in the target country

will affect the buying power of the local consumers, so prices need to be adjusted. However, changes in buying power do not necessarily imply that lowering prices is sufficient to adjust to the economic distance. Consumer needs in lower GDP per capita countries are constrained by the limited buying power, causing consumers to spend less on frivolous items. Therefore, an acquiring firm that is not capable of adjusting both the price level but also its range of products to different demands, will most likely suffer extensive costs, in terms of lost revenue, excess inventory and write-downs of worthless inventory. Such costs will eventually decrease the profitability of the firm. Lastly, the extent of international trade as measured by the level of imports and exports of the target country plays an important role, because it makes the target country more attractive for the MNE when it is highly engaged in international trade (Zaheer & Zaheer, 1997). This is because, international trade in a country facilitates and fosters the existence of financial intermediaries, brokers and economic and financial infrastructure, a process described in agglomeration and cluster theories (see Porter, 1990). The existence and the higher quality of such economic institutions in a target country makes it easier and less risky for acquiring firms to commence operations in the target country. In other words, economic distance or differences in the economic development between acquirer and target country, as measured by the amount of international trade, wage level and macroeconomic stability, play a vital role in explaining the subsequent performance of M&As, which is why we include it as the first one of our three institutional distance dimensions.

The other part of formal institutions we have chosen to focus on is the difference in regulatory institutions. With respect to the regulatory institutions, we employ Scott's (2001) operationalization of what he calls the regulatory pillar. It rests on the setting, monitoring and enforcement of rules. The basis of legitimacy is legal sanctioning, meaning that it forces the acquiring firm to comply with local regulations. We therefore see regulatory distance as a crucial part in explaining M&A performance, as it concerns all the coercive forces affecting the acquiring firm, which is why we include it as the second one of our three institutional distance dimensions. It should be noted that there are many similar concepts to regulatory distance present in the institutional distance literature, such as political and administrative distance. For the purpose of this paper, we see these as being a part of regulatory distance.

Finally, we use cultural distance as a way to incorporate differences in informal institutions between acquirer and target country. Our interpretation of cultural distance is based on the work of Scott (1995 & 2001). We combine both aspects from Scott's (2001) cultural-cognitive pillar and the normative pillar

into our interpretation of cultural distance, as we in line with Bae & Salomon (2010) concur that cultural and normative distance are the same. We believe that cultural distance is important in the context of cross-border M&A, because for an acquirer firm to be able to successfully integrate the target firm, it must gain legitimacy not only by conforming to rules of the target country, as suggested by Scott's (2001) regulatory pillar. The acquiring firm must also gain legitimacy in the eyes of consumers, society and employees of the target firm. It can only do so by conforming to both normative and cultural-cognitive standards of the target country and within the target firm. Failing to do so, will inevitably harm the success of the M&A, which is why we have chosen to include cultural distance as our third measure of institutional distance.

Before we commence to develop our hypotheses, we acknowledge the existence of additional types of institutional distance measures that we could consider in the context of cross-border M&A performance. Examples include demographic distance, knowledge distance and global connectedness. However, in the interest of clarity and due to the limited timeframe of our project, we have chosen not to focus on these.

#### **3.1 Economic Distance**

Previous literature on how economic differences between countries affects MNEs behavior, has mainly focused on how countries differ in terms of their income level, prevailing inflation rates and the degree to which a country trades with the rest of the world (Whitley, 1992; Caves, 1996). The latter is often measured as exports plus imports as a proportion of GDP (Berry et al, 2010). The mentioned indicators are relevant because they have been shown to be correlated with consumer preferences and purchasing power (Berry et al., 2010), factors we argue are key to consider for an acquiring firm conducting cross-border M&A. If the market in which the acquired target operates has consumers, which have a different purchasing power (Ghemawat, 2001), acquirer firms must consider this and adjust their pricing of products to be sold in the target companies market accordingly, otherwise they might suffer financially. In general, the wealth or income of consumers is regarded as one of the most important economic attributes that create distance between countries (Ghemawat, 2001). Research has shown that rich countries engage in relatively more trade with other countries than poor countries, as measured by a higher GDP per capita, tend to have better quality financial institutions, infrastructure and human resources (Ghemawat, 2001), and as such constitute better and more attractive trading partners.

Furthermore, inflation rates are an important proxy of the macroeconomic stability of a country. As explained earlier, it is very important for foreign investors to consider the level of inflation (Dunning, 2000), as this can rapidly eat up any expected synergies and leave the M&A highly unprofitable.

North (1990) argues that economic activity is determined by economic institutions, who are setting constraints and incentives for firm behavior. Economic institutions typically include players such as market intermediaries, who serve the purpose of reducing transaction costs of capital markets and the markets for financial services and products (Khanna & Rivkin, 2001). Economic institutions also include the infrastructure necessary to conduct economic exchange, such as human infrastructures, technological infrastructures and physical infrastructures (Reis et al., 2013). By contributing to increased efficiency, these aspects of economic institutions help reduce transaction costs of firms. Ghemawat (2001) argues that companies whose business models rely heavily on economies of scale, experience and standardization, will suffer the most from economic distance, as they will experience immense difficulties in replicating their traditional business model in a country with different customer incomes, quality and cost of resources.

As Bae & Salomon (2010) note, economic distance has not received as much attention in the institutional distance literature. In general, it has met more interest from macroeconomists interested in international trade and FDI. However, taking into account the results of research in those areas shows that economic distance is important when looking at cross-border M&As. For example, international economics literature explains that countries, that are more alike in terms of economic institutions, are also more likely to transact with each other. In other words, the more similar economic institutions of two countries are, the more likely these two countries are to incur economic exchange (Bae & Salomon, 2010). Likewise, countries, which are more dissimilar in terms of economic institutions, will be less likely to transact with each other. What does this mean for the performance of cross-border M&As and how is the performance of cross-border M&As impacted by economic distance?

First, the dissimilarity between economic institutions creates uncertainty for the acquiring firm, especially if macroeconomic stability is low in the target country. The uncertainty, forces the acquiring firm to take protective measures such as financial hedging, which come at a cost. Further, dissimilarity in economic institutions creates additional transaction costs for the acquiring firm, because it does not have access to the same quality of economic institutions. This implies that acquiring firms have to invest

considerable amounts of capital in upgrading for example human resources or infrastructure, importing production inputs and other resources needed to operate the target company as efficiently as at home. These additional investments necessitated by the lack of or lower quality of economic institutions, reduce the return and profitability-potential of the M&A. Lastly, the dissimilarity in economic institutions forces the acquiring firm to spend considerable amounts of time in trying to understand and learn the specifics and workings of the existing economic institutions in the target country. The acquirers need to devote substantial amounts of time and capital to train and educate themselves, to overcome the lack of experience with the local institutions. This further puts a drain on the potential returns and profitability of the M&A.

This means that, in the context of cross-border M&A, increased economic distance creates uncertainty, additional transaction costs and a knowledge gap for the acquiring firm. As explained before, all three factors materialize into tangible financial costs, which reduce the returns and profitability of the cross-border M&A. Based on these arguments; we put forward the following hypothesis:

# H1: Economic distance between acquirer and target country negatively affects the performance of cross-border M&As.

#### **3.2 Regulatory Distance**

The second dimension of institutional distance we have taken into consideration is regulatory distance. For the sake of clarity, we want to state that we view regulatory distance as conceptually similar to what some researchers have termed political distance. Bae & Salomon (2010) provide an excellent overview of the divergence within institutional distance literature when it comes to distinction between political and regulatory distance. We view regulatory distance from the perspective of Scott's (2001) regulatory pillar. Scott's (2001) regulatory pillar reflects the rules for conducting business, the regulations and laws of a country, and the subsequent enactment and enforcement of these laws and regulations.

The regulatory institutions and the quality of these are vital for the success of cross-border M&As. The regulatory dimension affects cross-border M&As in several ways. Most importantly, they determine the extent to which firms are able to legally safeguard their investments and as such profit from them. Property rights and the protection hereof are of utmost importance in this aspect.
Specifically, US acquiring firms are used to the common law legal system. Countries such as the US and other Anglo-Saxon nations who use a common law legal system generally provide a strong protection of investor's interests and legal enforceability is high (Sarkar, 2011). However, many countries in Latin America or continental Europe use the civil law system, offering less protection of property rights (Sarkar, 2011). This widens the range of potential events that could hinder acquiring firms in operating as effectively in the target countries as in the US, potentially putting the profitability of the investment at risk.

The ability to secure and protect property rights, be it for physical or non-physical assets is vital, and is included in most countries legal system. One thing is to take into account the letter of the law itself, but even more importantly, one should look at the institutions behind the laws and regulations, because these exert a direct influence on them. These institutions are government institutions, and operate at three levels; national, state and local. There might be large differences between such, which complicates the investment process for foreign acquirers, as they have to try to understand the different laws and regulation and how their operations will be impacted by these. Strong property rights protection in the letter of the law does not matter at all, if the governmental institutions are not set up to enforce these effectively. Therefore, the quality of the regulatory institutions and the effectiveness of government are vital in ensuring the proper protection of property rights. Furthermore, as governments change, often the policies and related laws and regulations change with them. Therefore, firms investing abroad must also take into account the stability of the current political environment. Lastly, the regulatory institution (Scott, 2001) also includes the rules of conducting business in a country. These rules can be tied to actual legal requirements, but often there are also less formalized rules that are important to consider. As the Car Wash scandal in Brazil demonstrated, the issue of corruption is still very much present in emerging market countries (Watts, 2017). Corruption hinders the effectiveness of government institutions and can introduce immense transactions costs as the cost of corruption is passed on to the end consumer (Froning, 2000). Foreign firms who enter such a country will find themselves at a disadvantage, as they cannot rely on the rule of law to protect their investments. Therefore, aside from taking into account both the quality and effectiveness of regulatory institutions, acquiring firms must also consider the level of corruption in the target country they are looking to invest in.

To sum up, regulatory and political institutions are important to consider in the context of cross-border M&A, as they can help reduce transaction costs by ensuring the security of property rights and contract enforcement (North, 1997). Likewise, regulatory, specifically government institutions can be equally ineffective in these tasks and as such be the main threat to the enforcement of property rights and contracts. A large difference in the type, quality and effectiveness of regulatory institutions, or regulatory distance, between the acquirer and target country, has a harmful impact on the performance of crossborder M&As. The impact is of tangible financial nature, as different types of regulations and legal systems mean that the acquirer has to spend additional capital on legal advice, in order to understand and properly comply with local laws and regulations. Failing to do so, would potentially lead to even higher costs, as the acquiring company could be subject to prohibitive fines or even expropriation of the target company and its related resources. This resembles what Scott (2001) terms the coercive isomorphism of the regulatory pillar, as the acquirer is forced to comply with local regulation, in order to be seen as a legitimate company operating in accordance with relevant legal and quasi-legal requirements (Scott, 2001). Furthermore, the harmful impact of regulatory distance is exacerbated if the quality of the regulatory institutions is low. On top of having to adjust to new types of regulation, the acquirer firm might encounter weak and inefficient enforcement of property rights, meaning that they could become subjects to unfair competition, because local competitors copy or even steal their physical or intellectual property. If the enforcement of property rights is weak, and courts are inefficient or even corrupt, the acquirer firm stands little chance in protecting itself from unfair competition. This creates tangible financial costs, in terms of lost revenue and additional fees paid for handling the lawsuits in the local courts of the target country. Lastly, regulatory ineffectiveness, such as immense red tape and bureaucracy, slows the process of conducting business and the operational effectiveness, as the acquirer has to wait for the appropriate permits. This can also create tangible costs, as the acquirer firm is stuck with excess inventory and idle production, until the permits are given, which in the worst case leads to larger disruptions in the supply chain, eventually causing lost revenue as well.

To sum up, in the context of cross-border M&A, increased regulatory distance creates costs for acquiring firms on three separate levels. Different types of regulations require investment in legal advice in order to compensate for the lack of experience with local regulations, which acquiring firms are coerced to comply with. Different levels of regulatory quality are a threat to the property rights of the acquiring

firm, leading to potential additional legal costs. Different levels of regulatory effectiveness exacerbate the time it takes to conduct business and reduces operational efficiency. As explained earlier, all three factors materialize into tangible financial costs, which reduce the returns and profitability of the cross-border M&A. Based on these arguments; we put forward the following hypothesis:

# H2: Regulatory distance between the acquirer country and the target country negatively affects crossborder M&A performance.

# **3.3 Cultural Distance**

Cultural distance is the dimension of institutional distance that has received the most attention in the field of M&A research, as highlighted in our literature review. This is unsurprising, as the social or cultural institutions constrain and dictate what behavior is acceptable in a given society (Reis et al., 2013), and thereby directly affect the behavior of the employees in the acquirer and target firms. Scott (2001) defines culture as consisting of beliefs, values and norms. Whereas values define what is desirable, norms define how something should be done (Scott, 2001). Culture therefore affects both management processes, organizational values, organizational action and managerial goals (Hofstede, 1994).

Moreover, culture influences the attitudes of people towards work, democracy, fairness and work ethic. Depending on whether the culture of the target country is similar or dissimilar to the home country of the acquiring firm, culture and social institutions can create immense costs for acquirers (Calori et al., 1994), as there is potential for social and cultural conflict, which might affect employee morale in the target and acquiring firm. Of course, this might also happen in a national merger, as different organizational cultures clash, but international cross-border M&As are even more susceptible to this. Cultural distance, either because of differences in language, religion, norms or values, might hinder free communication and coordination between the employees of the acquiring firm and the employees of the target firm. This reduces operational effectiveness and makes it more difficult for the acquiring firm to run their business as they do at home, thus negatively affecting profitability and performance.

Hofstede's (1980) famous dimensions of national culture such as power distance and uncertainty avoidance provide excellent examples of how culture affects the performance of cross-border M&As. Uncertainty avoidance describes the extent to which order and rules are preferred, and the extent to which individuals perceive ambiguous situations as threatening (Dikova et al., 2010). Target countries that

exhibit high uncertainty avoidance, usually see planning as a way to anticipate and overcome uncertainties (Dikova et al., 2010). Therefore, planning is seen as an important step in an M&A process, and takes up a lot of time. This will in some cases hinder the acquiring company in gaining efficient operational scale in the target country, potentially negatively hurting performance in the end. Likewise, power distance, which describes the power distribution between managers and subordinates, affects the way and the speed at which information is disseminated (Dikova et al., 2010).

To truly appreciate how cultural distance may affect cross-border M&A performance, we quote Xu and Shenkar (2002), "(...) a large institutional distance triggers the conflicting demands for external legitimacy (or local responsiveness) in the host country and internal consistency (or global integration) within the MNE system. Balancing these conflicting demands has been a key challenge for the MNE."(pp. 610, Xu and Shenkar, 2002) Although this arguably is applicable for both the regulatory and economic distance as well, we believe this fits especially well when it comes to cultural distance. When integrating the target company, the acquiring firm must decide whether to remain consistent to its own corporate culture, which is likely influenced by the culture in their home country, or whether to allow the target firm culture to coexist with the existing acquirer culture, or even entirely adopt the culture of the target firm. No matter which of the three options the acquirer firm opts for, it will face difficulties. If it chooses to remain consistent with its existing corporate values and norms, it must invest considerable time and resources to educate the employees from the target company. Whereas conformity to norms can be incentivized by extrinsic rewards (Scott, 2001), it will be difficult to get the employees of the target firm to truly accept and internalize the organizational values and the underlying taken-for granted understandings of the national culture of the acquirer firm, especially if the values and beliefs are distant from the existing values and beliefs of target firm employees. If the acquirer firm chooses to let the target firm culture coexist with the existing culture or even completely adopt the target firm culture, it runs the risk of hurting the morale of existing employees, if norms and organizational practices of the target firm are considered bad behavior by the norms and values of the acquiring firm employees. All three scenarios lead to increased costs. These costs can be generated by miscommunication, misunderstanding and lack of coordination between employees, which lead to erroneous investment decisions. These costs might also be of practical nature, such as costs spent to educate new employees about existing norms and values or costs incurred because of depreciation of employee morale, because of non-conformity.

Now we have argued how internal stakeholders, i.e. employees of the acquiring and target firms, are affected by the cultural distance. However, external stakeholders (both in the acquirer home country and in the target country), such as consumers, media, clients and suppliers are also affected by cultural distance. The same conflicting demand for external legitimacy (local responsiveness) and internal consistency (global integration) exists here, and the acquiring firm needs to carefully consider how it will balance both. Our argument is best presented using an example. Let us take the example of an acquirer, conducting an M&A in a country riddled by corruption. It decides that it can only effectively compete with local competitors, if it also conforms to the norm of corruption, i.e. obtains external legitimacy, and as such decides to pay a bribe in order to be able to effectively conduct business. Whereas, consumers, media and clients in the target country might be used to such behavior by firms, and as such tolerate it, the acquirer might be scrutinized in the media in its home country for conforming to such behavior, and as a consequence damage its reputation and loose important clients, customers and even suppliers. Corruption is only an example hereof. Other possible examples would be differing stances towards working hours, women's rights and pay, and stances towards the wearing of religious symbols and clothing.

On the other hand, if the acquirer decides to adhere to internal consistency and the values, beliefs and norms of its national culture, it might run the risk of offending external stakeholders in the target country. Examples that can be imagined include the sale of specific meats in countries where this is forbidden due to different religious beliefs or the transfer of perceived best practices and business model designs from the acquiring country, such as when Walmart tried to enter Germany with the belief that the German consumer was no different from the American consumer (Hamza & Nizam, 2016).

The consequences of "offending" either internal or external stakeholders, or even both, due to conflicting demands for legitimacy are severe. At best, they result in misunderstandings or a small loss of reputation, at worst it results in the loss of important customers, suppliers and business partners, which evidently will lead to a loss of revenue. As such, cultural distance creates and increases tangible financial costs, which negatively affect the returns and profitability of cross-border M&As, which we use as a proxy of performance. To sum up, differences in cultures measured by cultural distance will make it more difficult for acquiring firms to integrate the target company successfully and extract gains from the deal. Thus, we hypothesize:

# H3: Cultural distance between the acquirer country and the target country negatively affects the crossborder M&A Performance.

#### 3.4 Free Trade Agreements and Institutional Distance

As we have argued above, acquirer firms engaging in cross-border M&A are likely to be influenced by powerful institutional forces on a national level. These national level institutional forces can be captured through the operationalization of institutional distance into concrete measures, such as economic, regulatory and cultural distance. However, a multinational company that conducts cross-border M&A faces multiple and often conflicting institutional environments, as well as institutional environments that are nested across levels, such as the subnational, national and supra-national level (Kostova et al., 2008 in Bae & Salomon, 2010). We argue that Free Trade Agreements (FTAs) are institutions operating at a supra-national level, either in between a particular pair of countries, or between several countries. An exemplification hereof is the free trade agreement inherent in the structure of the European Union. This has over time lead to the convergence of business practices and legal frameworks (Bae & Salomon, 2010), as such providing an example of how supra-national level institutions such as FTAs can influence national level institutional forces. As was evident from our literature review, no previous studies on institutional distance have explicitly focused on the relationship between institutional distance and FTA, in the context of cross-border M&A performance. The aim of our paper is to address this research gap. In the following, we will develop our hypotheses for how FTAs might influence institutional distance and cross-border M&A performance. However, first we will start by looking at what an FTA is, why FTAs matter, and what they are designed to achieve as well as how they may influence cross-border M&A performance. Later we will delve into how FTAs influence institutional distance.

In the international economics literature concerned with the matter of free trade, FTAs are known as "second-best" initiatives. This is because the first best option would be multilateral trade liberalization (i.e. all countries in the world trade freely with each other) (Plummer et al., 2010). Given that this "first-best" option is unattainable, FTAs provide a "second-best" policy alternative to free trade. As mentioned previously, the textbook definition of a FTA is that it is a commitment by the signatory members of the agreement to abolish tariffs across member states, while at the same time maintaining independent tariffs on imports from countries not part of the FTA (Plummer et al., 2010). The FTA needs to be distinguished from a customs union. The customs union is a step further than the FTA, in that it unites tariff regimes

between multiple countries. An example hereof was the European Economic Community. Beyond the customs union, we find the common market, which also includes the free flow of goods, services, labor and capital. Finally, we have the economic union, which Plummer et al. (2010) define as a common market with a monetary union.

FTAs matter, because in the absence of FTAs, countries have historically been known to protect industries, which are vital to their own success. Ghemawat (2001) found that government involvement is particularly high in industries that are producers of staple goods, i.e. electricity, large employers, such as farming, large suppliers to government, i.e. mass transportation or airline carriers, national champions, i.e. aerospace companies, vital to national security, exploiters of national resources and industries subject to high sunk costs. Firms conducting cross-border M&A in these industries must expect to meet significant resistance from the local government. Examples of such behavior are plentiful. As an example, India forbids international food retail chains to own more than 50% of a local Indian entity, in order to protect the livelihood of millions of Indians who run small mom-and-pop shops (Chandi, 2018). China puts strict capital controls on the amount of money companies can transfer out of China and limits foreign investment in certain industries (Kärnfelt, 2017). Emerging market countries are not alone in such measures. Western countries have historically also tried and still try to protect infant industries by imposing trade barriers, trade quotas, restrictions on foreign direct investment, high tariffs and preferential treatment of domestic firms in the form of subsidies or in the form of favoritism in regulation and procurement (Ghemawat, 2001).

By erecting and upholding such barriers to free trade, countries are at best protecting industries for the short term, but in the long term, trade barriers hurt countries. The mechanisms through which countries are hurt by trade barriers are simple. Firstly, trade barriers increase the cost of goods for consumers in the importing country, and secondly they harm people in developing economies who rely on the trade to earn a living (Froning, 2000). A blatant example hereof is the European Union's protection of the agriculture industries of member states through import restriction and trade-distorting subsidies (Froning, 2000). The effect hereof is that European consumers pay much more for food products than what the average world market price would be. Furthermore, the export subsidies constitute an immense burden on farmers of other non-EU farmers, particularly those in developing countries (Froning, 2000).

Since the foundation of the World Trade Organization (WTO) in 1995, the world has seen a rapid increase in FTAs (Li et al., 2018). Countries have realized that the gains offered by free trade far outweigh the risks posed by foreign competition for local firms (Froning, 2000). In fact, free trade can be viewed as fostering competition, encouraging companies to be more innovative and develop better products. Likewise, cheaper foreign competition forces local firms to adapt and lower their costs, thus making their operations more effective and streamlined. By opening up to free trade, countries allow their compatriots a wide array of choices in terms of products, which can improve their standard of living. Clearly, by removing costly tariffs, distorting subsidies and legal discrimination against foreign firms, Free Trade Agreements play an important role for the fostering of free trade. The existence of Free Trade Agreements may also indirectly affect cross-border M&A performance positively, in that, it removes costly red tape, legal barriers and additional transaction costs, all factors that are part of national level institutions. In other words, an FTA contributes to the assimilation of national level institutions of signatory members, and in doing so, reduces the institutional distance between the signatory members of the FTA. Through its reduction of institutional distance between signatory member states, the FTA positively affects the performance of cross-border M&As conducted in those member states. This leads us to our general hypothesis, that FTAs moderate the negative impact of institutional distance on crossborder M&A performance. In the following, we will examine how FTAs influence institutional distance on the three previously identified dimensions, economic distance, regulatory distance and cultural distance and how this consequently affects cross-border M&A performance.

#### 3.5 The moderating effect of Free Trade Agreements on Institutional Distance

If we go back to how we defined economic distance earlier, we stated that we view economic distance between the acquirer country and the target country, as the differences in the economic development of the countries, as measured by the amount of international trade, wage level and macroeconomic stability. In order to understand how FTAs affect economic distance between the acquirer and target country, we will look at each of the three. For starters, let us investigate how FTAs impact the amount of international trade in a country. By reducing tariffs, FTAs increases signatory member states amount of trade with each other. This means that if a target country has had low trade before the FTA, the removal or reduction of tariffs increases both its imports from the other signatory members of the FTA, as it now has to pay less. Further, it increases the target country's exports to the other members of the FTA (Plummer et al.,

2010). The FTA similarly has an impact on the wage level of the target country. By fostering international trade, the FTA increases trade volumes. As the demand for exports rises, the target firm producers must produce more, to satisfy demand. This creates an additional demand for workers, subsequently increasing the wage level and employment, and as such constitutes a general welfare improvement in the target country. Empirical data shows that FTAs and the subsequent access to trade freely with signatory members, benefits all layers of the target country's society. Some economists even suggest that free trade and the subsequent economic growth benefit the poorest layers of society just as much, and in some cases even more than the wealthy (Dollar & Kraay, 2000). Specifically, this means that the income or wage level of consumers in the target country increases. Finally, FTAs also impact the macroeconomic stability of target countries. Plummer et al. (2010) argue that FTAs that are properly designed have the capability to foster and contribute to greater stability in macroeconomic conditions of target countries. This is partially due to the lock-in effect of FTAs, which we will explain in detail in the next section. The lockin effect forces the member countries to comply with the commitments stipulated in the FTA, which also decreases their incentives to conduct adverse macroeconomic policy experiments, which could foster inflation or large currency fluctuations (Plummer et al., 2010). The incentives to engage in such behavior are diminished by the FTA, because it would undermine and reduce the amount of imports and exports.

To sum up, we argue that FTAs substantially increase the amount of international trade, increase the wage level and reduce macroeconomic stability of target countries. As such, FTAs contribute to reduce economic distance between the target and acquirer country, which indirectly benefits the performance of cross-border M&As. Consequently, we hypothesize:

# H4a: The existence of a Free Trade Agreement between the acquirer country and the target country moderates the negative effect of economic distance on cross-border M&A performance.

The moderating effect of Free Trade Agreements is not only limited to economic distance. Free trade resulting from Free Trade Agreements fosters the support for the rule of law. In order to be able to trade internationally and freely, companies are interested in abiding by rules and laws, to fulfill their contractual obligations. Countries who sign Free Trade Agreements with each other are members of the World Trade Organization (WTO, 2018), which compels its members to honor international trade agreements and to follow the decisions made by the WTO's mediating body. This is the so-called "lock-in" effect. The FTA locks member countries into a particular set of economic policies and insulates their

economic and political reform from future domestic political interference (Plummer et al., 2010). If member countries breach the commitments stipulated in the FTA, they are subject to hefty penalties. Through this mechanism, integration into an FTA can help push structural reforms of regulatory institutions in target countries with weak regulatory institutions (Plummer et al., 2010). Potential areas of reform include the stipulation of better laws related to public and corporate governance, competitions policy, reform of financial services sectors, property rights protection and reform of state-owned enterprises (Plummer et al., 2010).

By supporting the rule of law through structural political and economic reforms, free trade agreements also reduce the amount of corruption. Corruption typically takes place when the government cannot pay appropriate salaries to its officials. Officials would require a bribe for each permit that needed to be given, or each customs checkpoint that needed to be passed. However, with free trade and its positive effects on economic growth, the countries' government will see an increase in tax revenues, allowing them to pay their officials better salaries, decreasing the incentive to engage in corruption. As such, free trade agreements contribute to increasing the quality of regulatory institutions in target countries.

To sum up, we argue that FTAs substantially increase the quality and effectiveness of regulatory institutions in the target country through encouraging structural political and economic reforms, and increasing political and regulatory stability. As such, FTAs contribute to reduce regulatory distance between the target and acquirer country, which indirectly benefits the performance of cross-border M&As. Consequently, we hypothesize:

# H4b: The existence of a Free Trade Agreement between the acquirer country and the target country moderates the negative effect of regulatory distance on cross-border M&A performance.

Finally, we argue that Free Trade Agreements indirectly also foster the dissemination of ideas, values and beliefs between the countries that have signed the agreement. In the same manner as FTAs increase the quality and effectiveness of regulatory institutions, they also increase the amount of cultural goods, which are traded between signatory members of FTAs. Cultural goods such as TV-series, movies, books, music and arts are all expressions of some level of beliefs, norms or values. Often but not always, these carry distinct tones, ideas and values of the national culture from which they originate. As people in other countries consume these cultural goods, they are exposed to different beliefs, norms and values from

other nations. Along of the export of cultural goods such as TV-series or movies, goes an increasing understanding of national culture, and such an interest for other national cultures. As the FTA grows older, culture is disseminated not only with cultural goods, but also with norms and best practices, that go along with the investment of foreign companies in target countries. Of course, FTAs do not directly encourage investments, as exports might be preferable, but with time, companies might choose to go into alliances, joint ventures and other investments in the target country, where they will try to implement their best practices. We acknowledge that the process of dissemination of cultural values, norms and beliefs is much more time-consuming than the ones related to economic or regulatory norms. However, we argue that it is still important to acknowledge that FTAs do provide a platform where different cultural beliefs, values and norms are traded along with the goods and services they are connected to. We believe, that Scott's (2001) normative and mimetic isomorphism provide a useful understanding of how increased exposure to different aspects of other cultures, reduces the aversion to these. Through this mechanism, cultural distance is reduced. In other words, the FTAs can over time contribute to the reduction in cultural distance between acquirer and target country. Reduced cultural distance, will lead to fewer costs for acquirers in target countries, allowing them to reap greater returns and more profit from their investments. As such, we hypothesize the following:

H4c: The existence of a Free Trade Agreement between the acquirer country and the target country moderates the negative effect of cultural distance on cross-border M&A performance.

# 4. Methodology

The objective of our master thesis is to answer the research question: "To what extent do Free Trade Agreements mitigate the negative effect caused by Institutional Distance on M&A performance of US firms who acquire targets abroad?" We have chosen to answer the latter using a positivistic, deductive approach, applying a quantitative statistical analysis of secondary data obtained from various sources. The following section will elucidate our reasons for doing so, and further specify the sources, content and motivations for the selection of the data and variables included in our sample.

To investigate the relation between FTAs and institutional distance and the subsequent effect on the performance of cross-border M&A transactions, it is necessary to present the statistical model we are going to apply. Moreover, we will present how the sample has been obtained, followed by a series of summary statistics on our sample. Lastly, we will go through our dependent, independent and control variables, and describe the considerations behind each, how we measured these and where we obtained the data. We start with a description of our sample selection process.

# 4.1 Sample Selection

Our sample is obtained through the Mergers and Acquisitions database of Bloomberg (Bloomberg, 2018) and comprises of all completed M&A deals above US\$ 1 million, where the home country of the acquirer is the US and the host country of the target is outside the US. The US market was chosen because of the relative size and importance in the global M&A market (J.P. Morgan, 2017) and because US firms conduct cross-border M&A into a large variety of countries. The final sample includes acquisitions in 40 different countries covering all six continents. Bloomberg also holds data on bids and incomplete deals, but these are excluded, as it is not possible to measure the post-performance effect on these.

The lower threshold of US\$ 1 million is applied because of poor data availability and bad reliability for those deals with a deal value below. Many of the deals below the threshold are private firms, limiting availability of data. The sample period is limited to 2000-2017, because the industry classification system we use to define the industry of the acquirer does not go further back than 2000. Applying these criteria left us with data on 3639 deals, which had been completed within the period. The data includes transaction value, percentage of shares acquired and owned after the transaction, country and industry of each bidder and target, and mode of payment.

From the "raw" data extract we exclude deals in which the target is a subsidiary of the bidding company or where the target and the acquirer belong to the same business group or have the same owner. These intercompany transactions are excluded as they are often carried out for other reasons than improving the competitive situation of the acquirer. We also exclude M&As in which either the acquirer or the target is a financial institution (banks, mutual funds and pension funds) and transactions related to real estate. This is in line with previous studies that analyze similar problems related to long-term operating performance of M&As (Martynova et al., 2007). We further exclude deals where multiple acquirers are involved, as the true performance of these prior to the transaction can be difficult to measure. We also exclude deals with no data on performance, industry, completion-date or target country. This sorting of the data resulted in 513 deals. Furthermore, we excluded 102 deals where the percentage of shares acquired was below 50%, as suggested by previous studies (Liou & Rao-Nicholson, 2017). Acquirers that do not buy a majority stake in the target company are not necessarily considered to have influence on the post-transaction performance and are therefore excluded. This leaves 411 deals in the dataset.

To be able to measure the performance of both the acquirer and target before and after the transaction, we require financial information on both balance sheet and profit/loss statements to be available minimum two years and ideally three years before and after completion of the transaction. The data from the financial statements is collected through Bloomberg and matched to the companies involved in specific deals using the Bloomberg tickers, which are unique for each company. Hence, we selected deals that were completed between 2000 and 2016 and collected data on performance for the years 1997–2018. This means that 57 transactions with 2017 as completion year were excluded and the final sample is 354 deals. This procedure is consistent with empirical studies in this area, as the measurement of performance induced from corporate acquisitions might not materialize before some years after the transaction (Healy et al., 1992). An overview of the full data sorting procedure can be seen in table 3 below.

# Table 3 – Sample Selection Procedure

Final Sample	354	(9.6%)
No of deals where A and T have at least 2 year pre- and 2 year post-acquisition financials available	-57	
	411	(11.1%)
No of deals where minimum 50% is acquired	-102	
	513	(13.8%)
missing data, Multiple acquirers	-3183	
Financial institutions and real estate, Deals with		
Subsidiaries and transactions with same owner,		
No of deals exluded because of:		
	0070	(100/0)
above USD 1M (2000-2017):	3696	(100%)
Total number of completed deals with a deal value		

# **4.2 Sample Description**

# **4.2.1 Completion Year**

As can be seen in Table 4 the distribution of deals is relatively evenly distributed across the sample period (2001-2016) ranging from 13 to 29 cross-border deals per year with the exception of 2011 (n=37) and 2013 (n=8). An even sample distribution across time will help prolong our conclusions to cover the entire sample period, because there is no significant bias towards a specific period in the sample. We do though observe an effect of macroeconomic conditions on the deal size for some years. In 2007-2009, we see a decrease in the mean value of deals as a result of the financial crisis and an increase in the following years. This is in line with a study from 2012 (Grave et al., 2012), which suggest that the increase in deal value is explained by a shift in the geographical M&A target locations for American firms, caused by the financial crisis. Furthermore, we observe a significant decrease in 2012-2015, which is caused by improved domestic conditions leading to a bigger focus on domestic M&A activity for American firms (Stebbins & Wolff, 2014). The cross-border M&A market does though improve drastically in 2016 with the highest average deal value across the sample period.

Year	No. of deals	Percent (%)	Mean value of deals	Minimum Deal	<b>Maximum Deal</b>
			per year (\$ millions)	Value (\$ millions)	Value (\$ Millions)
2001	20	6%	671	19	4.337
2002	24	7%	835	7	7.707
2003	16	5%	934	4	5.766
2004	29	8%	715	11	11.639
2005	18	5%	945	7	5.121
2006	26	7%	835	38	5.028
2007	20	6%	649	21	6.616
2008	27	8%	744	26	4.524
2009	13	4%	475	36	2.951
2010	26	7%	1.104	4	21.421
2011	37	10%	1.210	13	10.296
2012	25	7%	439	2	1.911
2013	8	2%	261	15	650
2014	20	6%	797	24	4.969
2015	20	6%	585	10	2.402
2016	25	7%	1.728	8	9.975
Total	354	100%	860	4	21.421

Table 4 – Completion Year

# **4.2.2 Large Transactions**

The largest transaction in the sample is the acquisition of British Cadbury by Mondelez International in 2010, with a deal value of US\$ 21.4 billion. Other large transactions are the acquisition of Autonomy Corp by HP in 2011 (US\$ 10.3 billion), the acquisition of Canadian Tim Hortons by Burger King in 2014 (US\$ 12.1 billion), and the acquisition of Swedish Meda by Mylan in 2016 (US\$ 10 billion). The smallest transaction was the acquisition of Transradio SenderSysteme Berlin by Pernix Group in 2010, with a deal value of only US\$ 2.2 million.

# **4.2.3 Home Country of Targets**

The descriptive statistics in table 5 show the distribution of countries that the American buyers acquire targets in. A few countries account for the vast majority of the samples. Canada account for 27% of the deals, while Britain and Australia account for 25% and 8% respectively. This means that three countries cover 60% of the deals in the sample.

Home-country of target company	No. of deals				
Australia	29	Germany	15	Pakistan	1
Austria	2	Hong Kong	3	Peru	1
Belgium	3	India	3	Poland	3
Belize	1	Indonesia	2	Russia	1
Brazil	2	Ireland	4	Singapore	1
Britain	89	Israel	11	South Africa	1
Canada	97	Italy	1	South Korea	2
Chile	4	Japan	7	Sweden	14
China	3	Luxembourg	1	Switzerland	6
Croatia	1	Malaysia	2	Taiwan	7
Denmark	6	Mexico	1	Thailand	1
Egypt	1	Netherlands	7	Turkey	1
Finland	3	New Zealand	2		
France	10	Norway	5		
Total	354				

# Table 5 – Home country of Target Company

# **4.2.4 Method of Payment**

Table 6 shows the method of payment summarized for the 354 deals. All-cash acquisitions account for 79% of the sample, whereas the reminder are mixed (8%) and equity-paid (8%) deals. 5% are undisclosed in the data extract.

# **Table 6 – Method of Payment**

Method of Payment	No. of deals	Percent (%)
Cash	280	79%
Stock	28	8%
Mix	27	8%
Undisclosed	19	5%
Total	354	100%

# **4.2.5 Relative Size of Target**

The relative size of the target is defined as the ratio of target firm sales to acquirer firm sales in the year prior to the acquisition (TASRATIO). Most of the acquisitions involve relatively small target companies. The median relative size of the target firm does not exceed 5% and in 75% of the deals, the relative target

size is below 20%. However, acquisitions of relatively large targets are not rare either: in 25% of our M&A deals, the relative size of the target firm exceeds 20%.

Target sales to acquirer sales ratio	No. of deals	Percent (%)
<3%	140	40%
3-10%	82	23%
10-30%	71	20%
30-50%	28	8%
>50%	33	9%
Total	354	100%

# Table 7 – Target Sales to Acquirer Sales Ratio

# **4.2.6 FTA Distribution**

Table 8 shows that the distribution of M&As in countries with and without an FTA in place is almost evenly distributed. Furthermore, we observe that surprisingly the mean value of acquisitions in countries without an FTA is higher than in those where an FTA is in place.

# **Table 8 – Distribution of FTAs**

FTA between US and home country of target in place?	No. of deals	Percent (%)	Average of Announced Total Value (mil.)
Yes	138	39%	746,23
No	216	61%	932,75
Total	354	100%	860,04

# 4.2.7 Age of FTA

If we look at the "age" of the FTA (for how many years the FTA has been effective on the date of the transaction) we can see that few deals (3%) are carried out in the first 3 years of the existence of the FTA. Most deals with FTA countries are conducted with countries where FTAs have been in place for a longer period of time.

# **4.3 Dependent Variable**

In the literature review, we have presented two general approaches to measuring the performance of M&A deals: outcome studies and event studies. Moreover, we identified the advantages and the

limitations of each method. In our analysis we join the group of studies applying the outcome based method, because the approach is better suited for medium and long-term effects of M&As compared to event studies. The immediate thought is that the effects from an FTA cannot be measured within the first year, which would normally be the sample period in an event study. We are mainly interested in how FTAs and institutional distance impacts long-term performance of cross-border M&As, and not in whether a M&A transaction is perceived as a good thing for the company by the financial markets, which would normally be the objective of event studies. For this reason, we opt for the outcome-based method.

# 4.3.1 Accounting-based Performance Measures

In our analysis, we apply accounting-based figures to measure the post-acquisition operating performance because synergies arising after a transaction have previously been found to take a number of years to realize (Rao-Nicholson et al., 2016). The effect can best be observed by looking at long-term accounting measures such as the return on equity (ROE) or return on assets (ROA) (Thanos & Papadakis, 2012; Hitt et al., 1998; Papadakis & Thanos, 2010). Papadakis and Thanos (2010) find that most studies on M&A performance use accounting-based measures to evaluate performance and conclude that this method is the way forward as long as multiple measures are evaluated in the analysis. They also highlight the emergence of studies developing complicated accounting-based measures adjusted for both industry and size effects. Our method of industry adjustment will be explained in detail later.

Likewise, using several measures in our study gives a more holistic view of the operating performance after a given transaction (Thanos & Papadakis, 2012). Thus, in our study we use three accounting-based performance measures to evaluate the post-acquisition operating performance: Return on equity (ROE) is used for the main parts of the analysis, whereas return on assets (ROA) and profit margin (PM) are used as robustness checks. These measures are widely used by previous studies analyzing post-acquisition performance (Zollo & Meier, 2008; Papadakis & Thanos, 2010; Bertrand & Betschinger, 2012; Liou & Rao-Nicholson, 2017).

#### 4.3.2 The Use of ROE, ROA and PM

In general, three ways of using accounting-based measures are typically employed in previous literature: Accounting ratios, growth measures and operating cash flow (Thanos & Papadakis, 2012). The vast majority of the literature apply financial ratios as these are thought to give the most precise reflection of profitability. Typically, the other two methods are used to evaluate the success of an M&A in terms of

an increase in sales/revenue and are thus not as suited to measure changes in performance as ratios are (Thanos & Papadakis, 2012). We have chosen to use financial ratios for several other reasons. First, our three measures of M&A performance measure actual profitability, realized performance as reported in the financial statements of the firm. Second, when using ratios we eliminate biases from differences in size and ensure comparability across our sample. Finally, one of the most important reasons for engaging in M&As is to exploit potential long-term synergies between the two firms involved. If such synergies exist, these are more likely to be reflected in the long-term accounting performance improvements (Harrison et al., 1991).

Return on Equity (ROE) has been chosen as one of our main measures of performance because it is directly comparable across industries. Furthermore it is unaffected by the accounting method used for depreciation and non-operating activities such as interest and tax expenses (Martynova et al., 2007). ROE describes how effectively an organization is taking advantage of its base of equity, or capital. It can also be considered the return to stakeholders (Meeks & Meeks, 1981). According to Thanos and Papadakis (2012), ROA is the most widely used accounting ratio in the M&A literature. For this reason, we choose to include it as our other main variable. The measure shows how effective an organization is at generating returns from its asset base. Profit margin (PM) is included as a robustness-check due to the simplicity of the measure. This measure can generally be distorted by extra-ordinary items on the income statement, but shows how good the company is at converting revenue into profits (Meeks & Meeks, 1981). Finally, return on invested capital (ROIC) was also considered for the analysis, but has not been included because invested capital is treated differently in the financial statements across industries and countries when firms are involved in M&A (Thanos & Papadakis, 2012).

To calculate ROE and ROA we define our pre-tax cash flow as sales, minus cost of goods sold and general and administrative expenses, plus depreciation (Healy et al., 1992; Sudarsanam, 2003; Liou & Rao-Nicholson, 2017). This measure is equal to the EBITDA of the company. Some studies (Martynova et al., 2007) adjust for changes to working capital in their calculation of the cash flow, but this exercise would be too comprehensive in our study due to the sample size and our calculation of excess performance, where we adjust for the industry. If we were to adjust for changes in working capital we would have to make the adjustment for each firm in the peer group individually, which was not possible due to time constraints. We use the book value of assets and equity as common bases to scale the

operating cash flows, as suggested by Clark and Ofek (1994). Hence, we are able to calculate the returns of the firms that are involved in the M&A deals three years before and after the transaction. In order to calculate pre-acquisition performance, we sum the EBITDA for the acquirer and target firm and divide it by the sum of ASSETS and COMMON EQUITY of target and acquirer firm. We do the same for PM. We repeat this process for all three years prior to the transaction. For the post-acquisition performance, we calculate the returns for the acquiring firm only, because the target has become integrated and will be a part of the acquiring firm's financial statements for the years after the transaction. Thus, we use the following measures for the returns of the combined firm (i) for each year (t):

Return on Equity 
$$(ROE)_{i,t} = \frac{CF_{i,t}}{EQUITY_{i,t}}$$
  
Return on Assets  $(ROA)_{i,t} = \frac{CF_{i,t}}{ASSETS_{i,t}}$   
Profit Margin  $(PM)_{i,t} = \frac{NET INCOME_{i,t}}{REVENUE_{i,t}}$ 

where CF is the pretax cash flow (EBITDA), EQUITY is the common shareholder equity of the combined firm at the end of the year, and ASSETS is all assets of the combined firm at the end of the year. NET INCOME is the revenue less all of a company's expenses, including operating costs, material costs and taxes.

#### 4.3.3 Outliers

Liou and Rao-Nicholson (2017) suggest that before running empirical regressions, the post-acquisition performance data needs to be checked for outliers. These should be excluded from the sample to ensure that the statistical analyses capture the performance of firms that are not affected by extraordinary items on the income sheets in the given year (Barber & Lyon, 1997). We identify no significant outliers in our sample and have thus not excluded any sample points as a result of this. The process is repeated for yearly ROA, PM and ROE data-points for our sample firms for three years before and after the year of the given acquisitions.

#### 4.3.4 Adjusting for Industry Effects

Applying the previously calculated absolute ratios, ROA, ROE and PM as our M&A performance measurement, disregards the issue of industry trends. Harrison et al. (1991) have criticized other M&A studies for blindly applying the absolute ratios, without industry adjustments. To overcome this issue, we join the part of studies that adjust the measure for industry effects by subtracting the average industry performance for each firm (Zollo & Meier, 2008; Cording et al., 2010).

As mentioned previously we have identified the need to make an industry adjustment to the performance measure we are going to apply in our statistical model for each transaction in or sample. Harrison et al. (1991) argue that financial ratios should not be applied to evaluate post-operating performance of M&A transactions without being adjusted for industry effects. It is important to consider the industry effects and evaluate the performance of the M&A independent of industry tendencies. It is important to take out the effect as general excess performance in some industries could distort our statistical analyses to an extent where we are no longer able to explain effects from the M&As, but where we will only see the effects of large upswings or drops in certain industries.

In this paper, we will also make the industry adjustment directly to our performance measure in line with a large part of literature within the field (Barber & Lyon, 1997; Martynova, Oosting, & Renneboog, 2007; Liou & Rao-Nicholson, 2017). What we try to accomplish is to isolate the excess performance originating from the M&A. Our proxy for industry trend is defined as the median return of a sub industry. The sub industry is created using the second level of the Bloomberg Industry Classification Standard (BICS), which includes 154 sub industries. The median operating performance in the sub-industry corresponding to the acquirer industry is subtracted from the performance measures calculated for the combined firm. This process is repeated for each three years prior to and after the transaction. In this way, we get the excess ROE and the excess ROA for the combined firm 3 years before and 3 years after the transaction. We have chosen BICS over GICS (Global Industry Classification Standard) and SIC, since SIC was changed in 2007, which would have considerably distorted our results as we are looking at the period 2000-2017. GICS was not used due to bad data availability for the industry data, especially for the period prior to 2008. Other studies, select a peer group based on size, pre-event performance and industry (Liou & Rao-Nicholson, 2017; Martynova et al., 2007). We feel such an approach is sensitive to significant bias, as you need to do a subjective judgment on where to put the thresholds for each

measure. Furthermore, the studies (Liou & Rao-Nicholson, 2017; Martynova et al., 2007) who have used this approach typically operate with sample sizes much smaller than ours (n<100).

Using our industry-adjustment, we define our industry adjusted return measures ROE, ROA and PM as below:

 $IAROE_i = ROE_{i,t} - medianROE_{ind.peer,t}$ 

 $IAROA_i = ROA_{i,t} - medianROA_{ind,peer,t}$ 

 $IAPM_i = PM_{i,t} - medianPM_{ind.peer,t}$ 

Whenever we use the term ROE, ROA and PM from this point in the paper we refer to the industryadjusted measure shown above.

At this point we have collected excess operating post-performance numbers for each transaction three years prior to and after the acquisition using three different accounting-based measures. It is time to choose which single number should be our measure of pre-transaction-performance and which should be our measure of post-transaction-performance. To do so we have a few last considerations on which of the three years should define the measure prior to and after the transactions. For both our pre and post measure, we choose to use the median of the three years. We do so because we want to deemphasize the first year after the transaction. We wish to do so, because this is typically a year where the cost of integration deteriorates the synergies or excess performance stemming from the acquisition (Martynova et al., 2007). For the same reason we do not want to apply the simple mean of the three years. Some studies use the 2<sup>nd</sup> year specifically as their post-performance measure (Papadakis & Thanos, 2010). However, we observe in our sample that for some industries the combined firm does not deliver a positive excess return before year 3, indicating that, the integration process is longer and more complicated for some industries. This means that our pre excess performance measure is defined as the median of the three years' excess performance prior to the takeover. Similarly, our post excess performance measure is defined as the median of the three years' excess performance after the acquisition.

# 4.4 Empirical Model

The long-term accounting based performance measure will be our dependent variable in a multivariate analysis where we evaluate the effect of each of our variables on the adjusted performance measures. Hence, we regress our three measures of long-term post-acquisition operating performance on various measures of institutional distance, a dummy variable for FTAs and a number of control variables, using the following Ordinary Least Squared (OLS) regression model:

#### Table 9 – Mathematical regression model

$$\begin{split} ADJPERF_{i}(post) \\ &= \alpha_{0} + \alpha_{1}ADJPERFi(pre) + \alpha_{2}INSTITUTIONALDIST_{i} + a_{3}FTA_{i} \\ &+ a_{4}INSTITUTIONALDISTxFTA_{i} + a_{5}CONTROLS + \varepsilon_{i} \end{split}$$

where ADJ\_PERF<sub>i</sub>(post) is the post-acquisition adjusted operating performance of the combined firm (measured by IAROA<sub>i</sub>, IAROE<sub>i</sub> and IAPM<sub>i</sub>) and ADJ\_PERF<sub>i</sub>(pre) is the pre-acquisition adjusted performance of the combined firm. INSTITUTIONALDIST represents our three individual measures of institutional distance, economic, regulatory and cultural distance. These will be run in the model separately to analyze the effect of FTAs on all three institutional distance measures as presented below.

# **4.5 Independent Variables**

As mentioned in our hypothesis development, we have chosen to split up our measure of institutional distance to be able to make independent conclusions for each of the distance constructs when assessing the effect of FTAs. Berry et al. (2010) have previously found improved model fit and higher explained variance when disaggregating the distance construct. Furthermore, cross-national distance has also been the main explanatory variable for studies investigating choice of entry mode, sequence of market entry, and decisions on whether to enter a market, firm survival and performance (Werner, 2002; Caves, 1996).

There are different ways to define institutional distance in relation to international business research. Pogrebnyakov and Maitland use Scott (1995)'s normative, cognitive and regulatory distance. Others such as Berry et al. (2010) look at cross-national distance and more on how different institutional measures have been used in measuring cross-national distance historically. Previous literature on measures on distance between countries has in general been one-dimensional, static, and has not considered differences across years. Furthermore, these constructs have mostly provided measures for less than a third of the total number of countries in the world (Berry et al., 2010).

We also find that the calculation method used does not take into account the correlations between the underlying variables and differences in the scales used for measurement. Berry et al. (2010) argue that it is important to consider these characteristics when choosing the distance measurements to use in a statistical analysis.

# **4.5.1 Method of Distance Calculation**

There seems to be no uniform way of calculating institutional distance, in previous literature (Berry et al., 2010). However, there are five properties that a good distance measure should fulfill: non-negativity, definiteness, identification, symmetry, and triangle inequality.

Property	Explanation	Euclidean	Mahalanobis
Symmetry	$d_{ij} = d_{ji}$ for all i and j	Yes	Yes
Non-negativity	$d_{ij} \ge 0$ for all i and j	Yes	Yes
Identification	$d_{ij} = 0$ for all i	Yes	Yes
Definiteness	$d_{ij} = 0$ only if $x_i = x_j$	Yes	Yes
Triangle inequality	$d_{ij} \leq d_{ik} + d_{jk}$ for all i, j and k	Yes	Yes
Resistant to correlation	Variables not assumed to be orthogonal to each other	No	Yes
Resistant to variance	Variables not assumed to have equal variance	No	Yes
Scale invariant	Measure not sensitive to scale of variables	No	Yes

Table 10 – Properties of Euclidean and Mahalanobis distance

Sources: Berry et al. (2010)

The most commonly used distance calculation method is the Euclidean method as it fulfills all of the properties specified before. The problem is that the Euclidean method does not take the correlation between the variables into account. The problem is that when two or more variables are highly correlated with each other, they capture some of the same characteristics. Therefore, a distance measure that ignores the correlation would overstate the significance of characteristics because they are double counted. Further, the Euclidean method is sensitive to the scale of measurement and does not take the variance of the variables into account. We identify the Mahalanobis distance as the most decent solution given the methodological flaws identified above. The method was presented by Mahalanobis in 1936 and is based

on the idea than variance and covariance should be taken into account when calculating the distance between two statistical points. The measure is defined as follows:

$$D^2 = (x - m)^T * C^{-1} * (x - m)$$

where

 $D^2 = Mahalanobis distance$ 

x = Vector of data

m = Vector of mean values of independent variables

 $C^{-1}$  = Inverse Covariance matrix of independent variables

T = Indicates that vector should be transposed

Mahalanobis distance meets the same five properties of the Euclidean distance, but as can be seen in the definition above, it also takes into account the variance-covariance matrix of the variables and thus indirectly also the variance of each variable separately. Furthermore, it is scale-invariant in nature (Berry et al., 2010). All in all the method facilitates approaching distance as a construct made of multiple partially overlapping dimensions. The method is the best suitable method for our constructs as the variables that characterize countries tend to be highly correlated. An example of this is GDP per capita and inflation rates. Additionally, the variables have relatively high variances, both cross-sectionally and across time (Pritchett, 1997; United Nations, 2006).

A third reason that the method is preferred is that variables used to measure the different distance constructs are measured in different scales. Again, GDP per capita and inflation can be used as an example, as these are measured using very different scales. The Euclidean method does not allow for such differences in the scale used for measurement (Berry et al., 2010).

# 4.5.4 Regulatory Distance

Our first dimension of institutional data is what Scott (1995) has deemed regulatory distance. The construct is similar to Ghemawat's (2001) administrative distance. As explained previously, the regulatory construct is an attempt to measure and characterize the quality of laws and regulations as well as governance systems within countries (Rossi and Volpin, 2004). Regulatory distance is then the difference in these systems across and between countries.

Several measures exist that try to capture and approximate regulatory distance between countries. The Dow index describes the level of corruption in each country, while the International Country Risk guide shows the differences in general risk levels in countries (Hahn et al., 2009). We identify the need to look beyond such simple and one-dimensional measures and therefore we use the Worldwide Governance Indicators, laid forward by Kaufmann et al. first in 1999. Since then they have been updated frequently and are accessible through the World Bank. The indicators cover 200 countries in the period 1996 to 2016. Kaufmanns governance indicators have been used in previous literature as a construct to approximate institutional distance (Manning & Møller Larsen, 2015). The Worldwide Governance Indicators (WGI) are a research dataset summarizing the views of experts on the quality of governance in a given country. A large number of expert respondents are used from both developed and developing countries, to calculate the indicators. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms (World Bank, 2018).

The WGI measure six dimensions of governance and provide a country-specific score between -2,5 and +2,5 for each dimension (Kaufmann et al., 2010). The six dimensions are voice and accountability, political stability, government effectiveness, regulatory quality, rule of law and control of corruption. These six dimensions are thought to cover and describe the stability of governments, government policies, and the degree to which citizens and the government respect legal and political institutions (Bae & Salomon, 2010). All six dimensions are based on the perceptions of the expert panel used to answer the survey. Voice and accountability reflects the extent to which citizens are able to participate in selecting governments, freedom of expression and free media. Political stability measures the likelihood of political instability or politically motivated violence or terrorism. Government effectiveness reflects the quality of the public and civil services as well as their independence from political pressures. It also involves the quality of policy formulation, implementation and the government's commitment to such policies. Regulatory quality measures the ability of the government to implement policies that private sector development. Rule of law reflects the extent to which agents have confidence in and abide to the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Control of corruption reflects the degree to which power is exercised for private gain within the public sector (Kaufmann et al. 2010).

As mentioned, Kaufmann's indicators provide a score for each dimension for each country and therefore we calculate the regulatory distance as the absolute differences between the six WGI dimension scores for the US and the target country. The differences between the six WGI dimension scores for the US and the target country are then transformed into the Mahalanobis distance, using the Mahalanobis method described earlier.

#### **4.5.5 Cultural Distance**

As presented previously, multiple scholars have highlighted the importance of differences in cultural values and norms. The most widely used construct to measure cultural distance is inarguably the one Hofstede presented in 1980. Hofstede measured five dimensions of cultural distance: power distance, individualism, masculinity, and uncertainty avoidance. In later work, he added indulgence and long-term orientation (Hofstede, 1980). Other scholars have developed similar models for the measurement of cultural distance. An example is the seven cultural dimensions developed by Schwartz (1994).

A main problem that has been identified for these two measures is the fact that they are static in nature. This means that an underlying assumption when you use the measures is that the culture in a country does not change over time. Research has shown that this assumption does not hold in practice and that culture evolves rather quickly over time (Inglehart & Baker, 2000). Therefore, we need to employ a measure of cultural distance that evaluates the distance continuously.

Berry et al. (2010) have developed such a measure and we apply their data on cultural distance as our measure in the analysis. The data is created using public opinion data from four waves of the World Values Survey (Inglehart, 2004). The measures are based on Hofstede's four original constructs; uncertainty avoidance, power distance, individualism and masculinity, which are matched to specific questions in the World Values Survey as to mimic the characteristics that Hofstede identify. This method makes it possible to obtain cultural scores for the target countries in our sample and to capture changes in culture, because it is conducted every third or fourth year. The data for the years in between is interpolated. In this way, Hofstede's static measures are transformed into dynamic measurements over time. Furthermore Berry et al. (2010) report the Mahalanobis distances for all their measures, which are the ones we will use.

#### **4.5.6 Economic Distance**

The economic dimension of distance can be defined as the differences in economic development and macroeconomic characteristics. In this paper, we employ the measures and data collected by Berry et al. (2010), as they are in line with the three indicators identified in the development of our hypotheses, income level, inflation rates and intensity of trade. The scores are based on the differences in GDP per capita (US\$), the GDP deflator (% GDP), and imports and exports of goods and services (% GDP). These indicators are combined into one score, and the difference between the US and the target country is calculated as Mahalanobis distance.

Institutional Distance Dimension	Component variables
Economic Distance	
Income	GDP per capita (2000 US\$)
Inflation	GDP deflator (% GDP)
Exports	Exports of goods and services (% GDP)
Imports	Imports of goods and services (% GDP)
Cultural Distance	
Power Distance	WVS questions on obedience and respect for authority.
Uncertainty Avoidance	WVS questions on trusting people and job security.
Individualism	WVS questions on independence and the role of government in providing
	for its citizens.
Masculinity	WVS questions on the importance of family and work.
Regulatory Distance	
Voice and accountability	WGI questions on participation in selecting governments, freedom of expression, freedom of association, and free media.
Political stability	WGI questions on the likelihood of political instability and politically- motivated violence and terrorism.
Government effectiveness	WGI questions on the quality of public and civil services, the independence from political pressures, the quality of policy formulation and implementation, and the credibility of governments.
Regulatory quality	WGI questions on the governments ability to formulate and implement policies and regulations that promote private sector development.
Rule of law	WGI questions on rules of society, the quality of contract enforcement, property rights, and the likelihood of crime and violence.
Control of corruption	WGI questions on corruption.

# Table 11 – Overview of Institutional Distance Dimensions and measurements proxies

#### 4.5.7 Why we do not use more measures of distance?

As mentioned previously several other measures of institutional distance exist. In general, we believe that our three measures give a good picture on the total institutional distance between two countries, as we argue that these are the most critical. Our choice of measures is also backed by previous literature within the field of study (Ghemawat, 2001; Liou & Rao-Nicholson, 2017).

Others such as Berry et al. (2010) apply more constructs in their analysis of institutional distance, but we have chosen not to include these for the reasons above. Political distance and administrative distance are two measures, which they use, and we argue that these are highly correlated with both economic and regulatory distance as the political dimension covers external trade and the size of the state whereas the administrative covers cultural elements such as language and religion, as well as the structure of the legal system. Another one is Financial distance, which we argue come as a result of economic development and thus has a high correlation with the economic distance measure. Countries with similar economic scores have a high chance of developing similar financial institutions and thus the financial distance is already reflected in the economic distance (Berry et al., 2010).

Berry et al. (2010) also use demographic distance as a measure, but this has been excluded because there exist no literature that finds significant impact of this measure on M&A performance. Differences in knowledge creation have not been used because this measure has mostly been used as an explanatory variable for studies on entry mode and choice of entry (Berry et al., 2010). The last dimension Berry et al. (2010) uses is global connectedness. This construct has not been included for two reasons. First, the data availability has been criticized by previous literature (Berry et al., 2010). Second, the measure is more thought to be an overall measure similar to institutional distance and not a dimension within the total institutional distance that we try to reflect.

# 4.5.8 FTA as Explanatory Variable

The effect of the FTA in our analysis is represented by a dummy variable, which takes the value of one if a Free trade agreement is in place between the home country of the target firm and the US at the time of completion. Information on FTAs including the US is retrieved from the Regional Trade Agreements Information System (RTA-IS) governed by the World Trade Organization (2018).

# **4.6 Control Variables**

In the following section, we present the control variables that we use in our model and argue for why we have chosen to include these. The control variables vary across the deal-level, the firm-level and the sector-level and are chosen to control for as much variance as possible. As we have noted previously M&A performance is an extremely complex variable to explain and we acknowledge that we are not able to remove all disturbing effects via our control variables. This is a problem that has also been addressed by previous literature within the field (Martynova et al., 2007).

Following up on Ghemawat's (2001) idea that institutional distance is a four-dimensional construct we are still to position geographical distance in our model. The construct has been shown to have significant impact on FDI, trade and economic activity between countries in general (Anderson, 1979; Deadorff, 1998). Recent research has also found geographical distance to have a significant impact on the post-transaction-performance of M&A deals (Berry et al., 2010; Ghemawat, 2001). Furthermore, the construct plays a central role in gravity models, used to predict cross-border trade in the international economics literature (Wolf & Weinschrott, 1973; Hamilton & Winters, 1992; Fratianni & Oh, 2009).

The rationalization behind is that the geographical distance increases the costs of communication and transportation and thus we include the variable GEODISTLOG to control for the negative impact geographical distance has on M&A post performance. Several methods exist for measuring this variable. Chen (2004) bases the variable on the physical distance between main cities in each country, whereas Krishna (2003) measures the direct line distance between country-borders. Because of accessibility, we choose to apply the method used by Berry et al. (2010). Their measure is defined as the great circle distance between two countries based on the geographic center of these.

We include CASH as a dummy variable that takes the value of one when the deal is entirely cash financed and zero otherwise. Linn and Switzer (2001) and Martynova et al. (2007) conclude that acquisitions that are entirely cash financed have improved conditions of obtaining better post-acquisition operating performance than those where equity is included as payment. The greater the confidence that management will be able to realize benefits of an acquisition, the more they will want to pay for stocks in cash. This is because they believe the shares will eventually be worth more after synergies are realized from the merger. Under similar expectations, the target will want to be paid in equity. If paid in equity, the target becomes a partial owner in the acquirer and will be able to realize the benefits of the expected

synergies. Alternatively, the less confident an acquirer is about the firm's relative valuation, the more they will want to share some of the risk of the acquisition with the seller. In such a situation, the acquirer will want to pay in stock. Empirical evidence has also shown that in cash deal underperforming management are more likely to be replaced and this could lead to better performance (Denis and Denis, 1995; Ghosh and Ruland, 1998; Parrino and Harris, 1999). An alternative explanation is that cash-financed acquisitions are likely to be financed with debt (Ghosh and Jain, 2000; Martynova and Renneboog, 2006). Increased debt decreases the availability of corporate funds and as such, takeovers paid with cash are more likely to be influenced by managerial discipline.

SAMEINDUSTRY is a dummy variable with a value of one when target and acquirer are part of the same sub-industry, defined by the four digit BICS code, and a value of zero if they are from different industries. The effect related to whether the acquisition is a consolidation or a diversification deal has been covered widely by previous literature (Denis et al., 2002; Moeller & Schlingemann, 2005; Shleifer & Vishny, 2003; Liou & Rao-Nicholson, 2017). Diversifying M&A deals are expected to be affected by a number of disadvantages. Scharfstein and Stein (2000) point to problems related to rent-seeking behavior by managers, Shin and Stulz (1998) highlight bureaucratic rigidity, while Rajan et al. (2000) argue that bargaining problems will arise within the firm. Such disadvantages are thought to deteriorate the post-acquisition performance, and this has been found in empirical studies (Healy et al., 1992; Heron and Lie, 2002), while others have not been able to find any significant effect of this (Powell and Stark, 2005; Linn and Switzer, 2001; Switzer, 1996; Sharma and Ho, 2002). This means that when the target comes from same industry as the acquirer, we expect performance to be superior, compared to when the target comes from another industry than the acquirer.

TASRATIO<sub>i</sub> is a variable related to the effect of the relative size of the target. We define the ratio as the sales of the target firm divided by the sales of the acquirer. Some argue that acquisitions of relatively large targets have a better chance of obtaining significant synergies and should thus be able to benefit from this (Martynova et al., 2007). On the other hand, they might find it harder to integrate the target company, when the ratio is high. This would lead to a deterioration of performance. Linn and Switzer (2001) find that acquisitions of relatively large targets outperform those of small targets. Clark and Ofek (1994) find that sometimes the operating and financial synergies are outweighed by the difficulties related to the integration of a large firm. Most literature reports significant relation (Powell and Stark,

2005; Moeller and Schlingemann, 2005; Heron and Lie, 2002; Sharma and Ho, 2002; Kruse et al., 2002; Healy et al., 1992).

We also include a variable to account for the absolute acquirer size by using the log of the acquirer's sales (ACQSALESLOG). Empirical research has shown that size of the acquirer firms has a significant effect on post-acquisition performance (Moeller, Schlingemann, & Stulz, 2004; Liou & Rao-Nicholson, 2017). Larger firms can be expected to obtain better post-acquisition performance because of previous experience with M&As, because they are better able to support the integration financially, and because new products are more likely to be well received by the consumers for large companies. The acquirer's sales data was obtained from the Bloomberg database.

# **5. Results**

Our regression analysis commences with a regression model using only the control variables (First column, Table 13 (ROE), Table 14 (ROA) & Table 15(PM)). Our control variables include the majority of the most commonly used variables to explain M&A performance, many of them employed in the traditional M&A research field as mentioned in our literature review. Control variables include the size of the acquirer, whether the transaction was financed by cash or stock, as well as the ratio of target company sales to the sales of the acquirer. In line with previous studies of post-acquisition and postmerger performance (Martynova, 2007; Liou & Rao-Nicholson, 2017), we also include the return prior to the acquisition as a control variable. The pre-excess return is calculated over 3 years prior to the acquisition. Finally, we also incorporate the geographic distance between the acquirer and target country, to control for whether physical distance has an impact on performance. We run our regression on our main dependent variables, post-excess Return on Assets (PEXROA) shown in Table 14 and Return on Equity (PEXROE) shown in Table 13 and as a robustness check, we also run the analysis on post-excess Profit Margin (PEXPM) shown in Table 15. In all of our statistical models, we employ STATAs function for robust standard errors. Robust standard errors or heteroscedasticity-consistent standard errors are a consistent estimator of standard errors in regression models with heteroscedasticity (White, 1980). This method proposed by White (1980) corrects for heteroscedasticity without altering the values of the coefficients. This method may be superior to regular OLS because if heteroscedasticity is present it corrects for it, however, if the data is homoscedastic, the standard errors are equivalent to conventional standard errors estimated by OLS (White, 1980). Taking into account our correlation matrix (Table 12) shows no significant instances of multicollinearity problems amongst our independent variables. We identify no instances of multicollinearity, defined as a pairwise correlation of independent variables above 0.7 (Kennedy, 2003). If multicollinearity is present, this can lead to large variances of parameters of variables that are collinear (Kennedy, 2003).

# **Table 12 - Correlation Matrix**

	FTAAGE	FTA	CULTDIST	REGDIST	ECODIST	GEODIST	SAMEIN	TASRATIO	CASH	PREXPM	PREXROA	PREXROE	PEXPM	PEXROA	PEXICE		
* p < .1, **	4.798	0.377	9.412	2.131	3.329	3.793	0.570	0.252	0.798	0.304	0.069	0.163	-0.02	0.057	0.140	0110	Mean
p < .05, **	-0.0566	-0.0478	0.0451	0.0474	0.0529	0.0514	0.0692	0.0146	0.108**	0.0382	0.254***	0.435	0.213	0.332	-	-	PEXROE
p < .01	0.00617	0.0234	0.0605	0.0387	0.0111	0.0607	0.153	-0.0180	0.162	0.0196	0.831***	0.179***	0.605	1			PEXROA
	-0.0957*	-0.0930	0.0754	-0.0557	0.0268	0.168***	0.0717	-0.120**	0.261	-0.0243	0.439***	0.148***	1				PEXPM
	-0.0474	-0.00084	-0.0353	-0.0130	0.0281	0.0146	0.0702	-0.0608	0.0622	-0.0528	0.257***	1					PREXROE
	-0.00597	0.0357	0.0551	0.0300	-0.00273	0.0347	0.189	-0.0895*	0.119	-0.0810	1						PREXROA
	0.0450	0.0376	-0.0121	0.0407	-0.0225	-0.0600	0.0754	0.921***	-0.135**	1							PREXPM
	-0.161***	-0.135	0.141***	0.0119	0.105*	0.212	-0.172***	-0.240***	1								CASH
	0.0607	0.0423	-0.0178	0.0298	-0.0518	-0.0954*	0.116	1									TASRATIO
	0.0530	0.0664	0.0223	0.117"	0.0345	0.000643	1										SAMEIN
	-0.570***	-0.549***	0.472***	0.166	0.280	1											GEODIST
	-0.179***	-0.210	0.408***	0.391***	1												ECODIST
	0.103*	0.0906*	0.481***	1													REGDIST
	-0.209***	-0.369	1														CULTDIST
	0.846***	1															FTA
	1																FTAAGE

	(1) PEXROE	(2) PEXPOE	(3) PEXROF	(4) PEXROE	(5) PEXROE	(6) PEXROE	(7) PEXROE
PREXROE	0.402***	0.402***	0.403***	0.403***	0.401***	0.403***	0.401***
	(3.29)	(3.29)	(3.29)	(3.30)	(3.27)	(3.29)	(3.26)
CASH	0.0593 (0.77)	0.0584 (0.75)	0.0591 (0.77)	0.0584 (0.75)	0.0546 (0.70)	0.0558 (0.72)	0.0556 (0.71)
ACQSALESLOG	0.0917 <sup>***</sup> (3.28)	0.0909*** (3.27)	0.0911 <sup>***</sup> (3.28)	0.0909*** (3.25)	0.0920*** (3.23)	0.0896 <sup>***</sup> (3.24)	0.0909*** (3.24)
TASRATIO	0.0485 <sup>***</sup> (6.84)	0.0485 <sup>***</sup> (6.85)	0.0480 <sup>***</sup> (6.47)	0.0479*** (6.51)	0.0478 <sup>***</sup> (6.55)	0.0468 <sup>***</sup> (5.82)	0.0474*** (6.22)
SAMEINDUSTRY	0.0577 (1.25)	0.0564 (1.22)	0.0541 (1.17)	0.0573 (1.23)	0.0577 (1.25)	0.0552 (1.20)	0.0574 (1.24)
GEODISTLOG	0.0389 (0.45)	0.0317 (0.36)	0.0319 (0.37)	0.0122 (0.13)	0.0179 (0.23)	0.0139 (0.19)	0.0129 (0.15)
ECODIST		0.00109 (0.55)			0.00127 (0.61)		
REGDIST			0.0169 (0.64)			0.0279 (0.91)	
CULTDIST				0.00163 (0.83)			0.00209 (0.83)
FTA					-0.00240 (-0.05)	0.0980 (0.59)	0.00749 (0.12)
ECODISTxFTA					-0.0115 (-1.12)		
REGDISTxFTA						-0.0566 (-0.84)	
CULTDISTxFTA							-0.00348 (-0.83)
_cons	-0.486	-0.458	-0.491 (-1.52)	-0.396 (-1.15)	-0.401	-0.428 (-1.46)	-0.396
N	354	354	354	353	354	354	353
R <sup>2</sup> F	0.236 22.23	0.237 19.55	0.237 18.82	0.237 20.09	0.238 15.42	0.239 13.86	0.238 15.54

# Table 13 – Main Regression Model for ROE

*t* statistics in parentheses \* p < .1, \*\* p < .05, \*\*\* p < .01
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
DEVEN	PEXROA	PEXROA	PEXROA	PEXROA	PEXROA	PEXROA	PEXROA
PREXROA	0.868	(16.08)	(16.07)	0.869	0.865	0.866	0.868
	(10.98)	(10.98)	(10.97)	(10.90)	(10.90)	(10.99)	(10.80)
CASH	0.0190	0.0196	0.0190	0.0192	0.0197	0.0190	0.0193
	(1.53)	(1.58)	(1.53)	(1.55)	(1.57)	(1.52)	(1.54)
ACQSALESLOG	0.0103*	0.0107**	0.0103*	0.0105*	0.0110**	0.0105*	0.0107**
	(1.95)	(2.02)	(1.94)	(1.96)	(2.03)	(1.96)	(1.99)
TASRATIO	$0.0124^{*}$	0.0123*	0.0123*	0.0125*	0.0125*	0.0124*	0.0126*
11.51(1110	(1.85)	(1.86)	(1.86)	(1.85)	(1.84)	(1.83)	(1.83)
	(1102)	()	(1100)	(1100)	(2101)	(1102)	(1100)
SAMEINDUSTRY	-0.00214	-0.00135	-0.00226	-0.00210	-0.00173	-0.00244	-0.00254
	(-0.29)	(-0.18)	(-0.30)	(-0.28)	(-0.23)	(-0.32)	(-0.34)
CEODISTI OC	0.0122	0.0174	0.0121	0.0100	0.0246	0.0224	0.0250
GEODISTLOG	0.0133	0.0174	0.0131	(1, 12)	0.0246	0.0234	0.0258
	(0.80)	(1.08)	(0.84)	(1.15)	(1.43)	(1.45)	(1.57)
ECODIST		-0.000615			-0.000568		
		(-1.09)			(-0.98)		
REGDIST			0.000602			0.000842	
			(0.15)			(0.20)	
CUI TDIST				-0.000354			-0.000288
COLIDIST				(-0.77)			(-0.58)
				( 0.77)			( 0.50)
FTA					0.00793	0.0248	0.00786
					(0.79)	(0.73)	(0.66)
					0.000000		
ECODISTXFTA					-0.000282		
					(-0.13)		
REGDISTxFTA						-0.00720	
						(-0.50)	
CULTDISTxFTA							0.00000459
							(0.00)
cons	-0.108*	-0 123**	-0.108*	-0.127*	-0.154**	-0 152**	-0 157**
_0013	(-1.81)	(-1.98)	(-1.81)	(-1.96)	(-2.32)	(-2.39)	(-2.16)
N	354	354	354	353	354	354	353
$R^2$	0.691	0.692	0.691	0.692	0.693	0.692	0.692
F	53.32	45.74	45.61	46.35	35.80	36.52	36.81

# Table 14 – Main Regression Model for ROA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	PEXPM	PEXPM	PEXPM	PEXPM	PEXPM	PEXPM	PEXPM
PREXPM	0.0249	0.0251	0.0253	0.0247	0.0252	0.0249	0.0248
	(1.56)	(1.56)	(1.62)	(1.55)	(1.55)	(1.59)	(1.54)
CASH	0.110 <sup>**</sup>	0.111 <sup>**</sup>	0.110 <sup>**</sup>	0.112 <sup>**</sup>	0.110 <sup>**</sup>	0.106 <sup>**</sup>	0.110 <sup>**</sup>
	(2.42)	(2.44)	(2.45)	(2.44)	(2.39)	(2.40)	(2.36)
ACQSALESLOG	0.0522**	0.0542**	0.0535**	0.0527**	0.0545 <sup>**</sup>	0.0530**	0.0527**
	(2.32)	(2.38)	(2.37)	(2.33)	(2.39)	(2.37)	(2.33)
TASRATIO	-0.103 <sup>*</sup>	-0.104*	-0.104*	-0.102*	-0.105*	-0.103*	-0.103
	(-1.67)	(-1.68)	(-1.71)	(-1.65)	(-1.66)	(-1.69)	(-1.64)
SAMEINDUSTRY	0.0802***	0.0824 <sup>***</sup>	0.0877 <sup>***</sup>	0.0809***	0.0829***	0.0875 <sup>***</sup>	0.0808 <sup>***</sup>
	(2.67)	(2.73)	(2.85)	(2.68)	(2.74)	(2.85)	(2.64)
GEODISTLOG	0.0965 <sup>*</sup>	0.113 <sup>*</sup>	0.112*	$0.106^{*}$	0.108 <sup>**</sup>	0.144 <sup>**</sup>	0.108 <sup>**</sup>
	(1.74)	(1.93)	(1.90)	(1.78)	(2.12)	(2.23)	(1.97)
ECODIST		-0.00252*** (-2.75)			-0.00244** (-2.53)		
REGDIST			-0.0354** (-2.08)			-0.0243* (-1.85)	
CULTDIST				-0.000712 (-0.58)			-0.000498 (-0.35)
FTA					-0.000659 (-0.02)	0.203 (1.34)	0.00507 (0.12)
ECODISTxFTA					-0.00409 (-0.55)		
REGDISTxFTA						-0.0850 (-1.25)	
CULTDISTxFTA							-0.00147 (-0.55)
_cons	-0.689**	-0.753***	-0.683***	-0.723**	-0.731***	-0.826***	-0.731***
	(-2.58)	(-2.69)	(-2.60)	(-2.58)	(-2.91)	(-2.79)	(-2.92)
$N R^2$	343	343	343	342	343	343	342
	0.152	0.155	0.162	0.152	0.156	0.170	0.152
F	2.697	2.419	2.392	2.330	1.958	2.013	2.267

## Table 15 – Main Regression Model for PM

	(1) PEXRO E	(2) PEXROE	(3) PEXROE	(4) PEXROE	(5) PEXROE	(6) PEXROE	(7) PEXROE
PREXROE	0.402*** (3.29)	0.402*** (3.29)	0.403*** (3.28)	0.406*** (3.36)	0.402*** (3.28)	0.403*** (3.29)	0.407*** (3.37)
CASH	0.0593 (0.77)	0.0585 (0.75)	0.0587 (0.76)	0.0558 (0.72)	0.0521 (0.64)	0.0559 (0.72)	0.0566 (0.71)
ACQSALESLOG	0.0917**	0.0905***	0.0911***	0.0900****	0.0913***	0.0894***	0.0896***
	(3.28)	(3.27)	(3.28)	(3.27)	(3.26)	(3.23)	(3.25)
TASRATIO	0.0485**	0.0484***	0.0479***	0.0467***	0.0475****	0.0468***	0.0466***
	(6.84)	(6.74)	(6.49)	(6.15)	(6.42)	(5.86)	(6.07)
SAMEINDUSTRY	0.0577 (1.25)	0.0563 (1.21)	0.0539 (1.17)	0.0566 (1.22)	0.0547 (1.19)	0.0552 (1.19)	0.0579 (1.26)
GEODISTLOG	0.0389 (0.45)	0.0356 (0.42)	0.0354 (0.41)	-0.0136 (-0.14)	-0.00796 (-0.10)	0.0147 (0.20)	-0.0289 (-0.31)
ECODISTLOG		0.00625 (0.42)			0.0167 (0.67)		
REGDISTLOG			0.0352 (0.73)			0.0559 (1.04)	
CULTDISTLOG				0.0276 (1.32)			0.0235 (0.78)
FTA					-0.0246 (-0.57)	0.0755 (0.46)	-0.0273 (-0.27)
ECODISTLOGxFTA					-0.0342 (-1.01)		
REGDISTLOGxFTA						-0.139 (-0.75)	
CULTDISTLOGxFTA							0.00899 (0.18)
_cons	-0.486 (-1.51)	-0.470 (-1.48)	-0.492 (-1.52)	-0.327 (-0.94)	-0.300 (-0.99)	-0.407 (-1.40)	-0.255 (-0.72)
N R <sup>2</sup> F	354 0.236 22.23	354 0.237 19.09	354 0.237 19.03	353 0.239 19.94	354 0.238 16.14	354 0.239 14.00	353 0.239 15.37

# Table 16 – Regression Model with Log Distances for ROE

	(1) PEXRO	(2) PEXROA	(3) PEXROA	(4) PEXROA	(5) PEXROA	(6) PEXROA	(7) PEXROA
PREXROA	0.868 <sup>***</sup> (16.98)	0.867*** (17.10)	0.868 <sup>***</sup> (16.97)	0.869*** (16.94)	0.867*** (16.97)	0.866 <sup>***</sup> (17.01)	0.869*** (16.73)
CASH	0.0190 (1.53)	0.0194 (1.58)	0.0190 (1.53)	0.0194 (1.57)	0.0197 (1.56)	0.0190 (1.52)	0.0196 (1.56)
ACQSALESLOG	0.0103* (1.95)	0.0109 <sup>**</sup> (2.04)	0.0103* (1.94)	0.0105** (1.97)	0.0109** (2.03)	0.0104 <sup>*</sup> (1.95)	0.0106 <sup>**</sup> (1.99)
TASRATIO	0.0124 <sup>*</sup> (1.85)	0.0124 <sup>*</sup> (1.83)	0.0123* (1.86)	0.0126 <sup>*</sup> (1.86)	0.0125 <sup>*</sup> (1.82)	0.0124 <sup>*</sup> (1.83)	0.0127 <sup>*</sup> (1.83)
SAMEINDUSTRY	-0.00214 (-0.29)	-0.00140 (-0.19)	-0.00234 (-0.31)	-0.00211 (-0.29)	-0.00172 (-0.23)	-0.00239 (-0.31)	-0.00245 (-0.32)
GEODISTLOG	0.0133 (0.86)	0.0150 (0.98)	0.0131 (0.85)	0.0201 (1.16)	0.0207 (1.16)	0.0243 (1.49)	0.0248 (1.26)
ECODISTLOG		-0.00316 (-1.16)			-0.00288 (-0.73)		
REGDISTLOG			0.00200 (0.25)			0.00209 (0.25)	
CULTDISTLOG				-0.00353 (-0.83)			-0.00337 (-0.69)
FTA					0.00546 (0.60)	0.0290 (0.93)	0.00383 (0.23)
ECODISTLOGxFTA					0.00114 (0.17)		
REGDISTLOGxFTA						-0.0260 (-0.69)	
CULTDISTLOGxFTA							0.00219 (0.24)
_cons	-0.108* (-1.81)	-0.116 <sup>*</sup> (-1.95)	-0.108 <sup>*</sup> (-1.81)	-0.128** (-1.97)	-0.140** (-2.01)	-0.154** (-2.43)	-0.149** (-1.99)
N	354	354	354	353	354	354	353
$R^2$	0.691	0.692	0.691	0.692	0.692	0.693	0.692
Г	33.32	40.75	43.04	40.89	37.03	30.83	37.30

Table 17 – Regression Model with Log Distances for ROA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PREXPM	0.0249	0.0249	0.0253	0.0245	0.0252	0.0248	<u>PEXPM</u> 0.0245
	(1.56)	(1.57)	(1.61)	(1.55)	(1.55)	(1.59)	(1.54)
CASH	0.110 <sup>**</sup> (2.42)	0.111 <sup>**</sup> (2.43)	0.111 <sup>**</sup> (2.46)	0.113 <sup>**</sup> (2.47)	0.109** (2.36)	0.107 <sup>**</sup> (2.42)	0.112 <sup>**</sup> (2.40)
ACQSALESLOG	0.0522** (2.32)	0.0540 <sup>**</sup> (2.36)	0.0535** (2.36)	0.0533** (2.37)	0.0540** (2.35)	0.0531** (2.39)	0.0532** (2.38)
TASRATIO	-0.103* (-1.67)	-0.103* (-1.67)	-0.104* (-1.71)	-0.101 (-1.65)	-0.105* (-1.66)	-0.102* (-1.69)	-0.101 (-1.63)
SAMEINDUSTRY	0.0802*** (2.67)	0.0821*** (2.70)	0.0872*** (2.83)	0.0811*** (2.70)	0.0830*** (2.70)	0.0874 <sup>***</sup> (2.84)	0.0811*** (2.63)
GEODISTLOG	0.0965* (1.74)	$0.101^{*}$ (1.81)	0.104 <sup>*</sup> (1.83)	0.122 <sup>**</sup> (2.01)	0.0759 (1.54)	0.149** (2.24)	0.121 <sup>**</sup> (2.01)
ECODISTLOG		-0.00996 (-1.24)			-0.00891 (-0.82)		
REGDISTLOG			-0.0658** (-2.05)			-0.0483* (-1.87)	
CULTDISTLOG				-0.0139 (-1.12)			-0.0114 (-0.83)
FTA					-0.0212 (-0.67)	0.222 (1.56)	0.00931 (0.16)
ECODISTLOGxFTA					-0.00958 (-0.53)		
REGDISTLOGxFTA						-0.260 (-1.43)	
CULTDISTLOGxFTA							-0.0123 (-0.43)
_cons	-0.689** (-2.58)	-0.713*** (-2.62)	-0.683*** (-2.59)	-0.767*** (-2.74)	-0.608** (-2.55)	-0.868*** (-2.81)	-0.764*** (-2.91)
N P <sup>2</sup>	343	343	343	342	343	343	342
κ- F	0.152 2.697	0.154 2.327	2.392	0.153 2.422	0.154 1.937	2.023	2.105

Table 18 – Regression Model with Log Distances for PM

 $\overline{t \text{ statistics in parentheses}}^{*} p < .1, ** p < .05, *** p < .01$ 

	(1)	(2)	(3)
	PEXROE	PEXROE	PEXROE
PREXROE	0.402***	0.403***	0.402***
	(3.29)	(3.29)	(3.27)
CASH	0.0593	0.0581	0.0551
	(0.77)	(0.75)	(0.70)
ACQSALESLOG	0.0917***	0.0899***	0.0893***
	(3.28)	(3.19)	(3.16)
TASRATIO	0.0485***	0.0485***	0.0479***
	(6.84)	(6.86)	(6.53)
SAMEINDUSTRY	0.0577	0.0538	0.0536
	(1.25)	(1.14)	(1.14)
GEODISTLOG	0.0389	0.0228	0.0146
	(0.45)	(0.26)	(0.18)
REGULATORY		-0.0280	-0.0384
		(-0.82)	(-0.98)
FTA			-0.106
			(-1.09)
REGULATORYxFTA			0.0600
			(0.87)
cons	-0.486	-0.377	-0.320
	(-1.51)	(-1.12)	(-0.99)
N	35/	354	354
$R^2$	0.236	0.237	0.238
F	22.23	19.31	14.88

## Table 19 – Regression Model with Absolute WGI-Scores for ROE

	(1)	(2)	(3)
	PEXROA	PEXROA	PEXROA
PREXROA	0.868***	0.867***	0.866***
	(16.98)	(16.84)	(16.76)
CASH	0.0190	0.0191	0.0194
	(1.53)	(1.54)	(1.54)
ACQSALESLOG	0.0103*	0.0104**	$0.0107^{**}$
	(1.95)	(1.98)	(2.01)
TASRATIO	$0.0124^{*}$	0.0123*	$0.0125^{*}$
	(1.85)	(1.86)	(1.83)
SAMEINDUSTRY	-0.00214	-0.00183	-0.00219
	(-0.29)	(-0.24)	(-0.29)
GEODISTLOG	0.0133	0.0144	0.0227
	(0.86)	(0.88)	(1.30)
REGULATORY		0.00192	0.00205
		(0.33)	(0.32)
FTA			0.00931
			(0.45)
REGULATORYxFTA			-0.000615
			(-0.04)
_cons	-0.108*	-0.115*	-0.151**
	(-1.81)	(-1.71)	(-2.15)
Ν	354	354	354
$R^2$	0.691	0.691	0.692
F	53.32	45.54	36.84

# Table 20 – Regression Model with Absolute WGI-Scores for ROA

 $\overline{t \text{ statistics in parentheses}}_{p < .1, **} p < .05, *** p < .01$ 

	(1)	(2)	(3)
	PEXPM	PEXPM	PEXPM
PREXPM	0.0249	0.0245	0.0246
	(1.56)	(1.53)	(1.52)
CASH	0.110**	0.112**	0.112**
	(2.42)	(2.46)	(2.41)
ACQSALESLOG	0.0522**	0.0551**	0.0550**
	(2.32)	(2.41)	(2.40)
TASRATIO	-0.103*	-0.102	-0.102
	(-1.67)	(-1.65)	(-1.63)
SAMEINDUSTRY	0.0802***	0.0858***	0.0861***
	(2.67)	(2.82)	(2.80)
GEODISTLOG	$0.0965^{*}$	0.122**	0.118**
	(1.74)	(2.05)	(2.29)
REGULATORY		0.0427**	0.0429**
		(2.40)	(2.02)
FTA			-0.00143
			(-0.03)
REGULATORYxFTA			-0.00131
			(-0.03)
_cons	-0.689**	-0.859***	-0.844***
	(-2.58)	(-2.88)	(-3.18)
N	343	343	343
$R^2$	0.152	0.156	0.156
F	2.697	2.518	2.229

## Table 21 – Regression Model with Absolute WGI-Scores for PM

 $\overline{t \text{ statistics in parentheses}}^{*} p < .1, ** p < .05, *** p < .01$ 

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	PEXROE	PEXROE	PEXROE	PEXROE	PEXROE	PEXROE	PEXROE
PREXROE	0.402***	0.402 <sup>***</sup>	0.403 <sup>***</sup>	0.403***	0.401 <sup>***</sup>	0.402 <sup>***</sup>	0.402 <sup>***</sup>
	(3.29)	(3.29)	(3.29)	(3.30)	(3.28)	(3.27)	(3.28)
CASH	0.0593	0.0584	0.0591	0.0584	0.0555	0.0576	0.0558
	(0.77)	(0.75)	(0.77)	(0.75)	(0.71)	(0.74)	(0.71)
ACQSALESLOG	0.0917 <sup>***</sup>	0.0909***	0.0911 <sup>***</sup>	0.0909***	0.0916 <sup>***</sup>	0.0903***	0.0908***
	(3.28)	(3.27)	(3.28)	(3.25)	(3.25)	(3.25)	(3.24)
TASRATIO	0.0485***	0.0485 <sup>***</sup>	0.0480 <sup>***</sup>	0.0479***	0.0481 <sup>***</sup>	0.0474 <sup>***</sup>	0.0474 <sup>***</sup>
	(6.84)	(6.85)	(6.47)	(6.51)	(6.66)	(6.05)	(6.26)
SAMEINDUSTRY	0.0577	0.0564	0.0541	0.0573	0.0554	0.0550	0.0560
	(1.25)	(1.22)	(1.17)	(1.23)	(1.20)	(1.18)	(1.20)
GEODISTLOG	0.0389	0.0317	0.0319	0.0122	0.0428	0.0309	0.0377
	(0.45)	(0.36)	(0.37)	(0.13)	(0.48)	(0.36)	(0.36)
ECODIST		0.00109 (0.55)			0.00120 (0.59)		
REGDIST			0.0169 (0.64)			0.0233 (0.80)	
CULTDIST				0.00163 (0.83)			0.00226 (1.04)
FTAAGE					0.00105 (0.23)	0.00452 (0.39)	0.00204 (0.35)
ECODISTxFTAAGE					-0.000905 (-0.81)		
REGDISTxFTAAGE						-0.00234 (-0.62)	
xCULTDISTxFTAA GE							-0.000243
_cons	-0.486 (-1.51)	-0.458 (-1.42)	-0.491 (-1.52)	-0.396	-0.499 (-1.40)	-0.494 (-1.41)	-0.497 (-1.18)
$egin{array}{c} N \ R^2 \ F \end{array}$	354	354	354	353	354	354	353
	0.236	0.237	0.237	0.237	0.237	0.238	0.238
	22.23	19.55	18.82	20.09	15.90	14.50	16.24

## Table 22 – Regression Model for ROE with FTAAGE instead of FTA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
DD EVID O I	PEXROA	PEXROA	PEXROA	PEXROA	PEXROA	PEXROA	PEXROA
PREXROA	0.868	0.867	0.868	0.869	0.865	0.868	0.869
	(10.98)	(10.98)	(10.97)	(10.90)	(17.07)	(17.08)	(17.07)
CASH	0.0190	0.0196	0.0190	0.0192	0.0198	0.0196	0.0197
	(1.53)	(1.58)	(1.53)	(1.55)	(1.59)	(1.58)	(1.58)
ACQSALESLOG	0.0103*	0.0107**	0.0103*	$0.0105^{*}$	0.0111**	0.0106**	0.0109**
	(1.95)	(2.02)	(1.94)	(1.96)	(2.07)	(1.99)	(2.01)
TASPATIO	0.0124*	0.0123*	0.0123*	0.0125*	0.0124*	0.0125*	0.0127*
IASKAIIO	(1.85)	(1.86)	(1.86)	(1.85)	(1.82)	(1.82)	(1.81)
	(1100)	(1100)	(1100)	(1100)	(1102)	(1102)	(1101)
SAMEINDUSTRY	-0.00214	-0.00135	-0.00226	-0.00210	-0.00200	-0.00238	-0.00275
	(-0.29)	(-0.18)	(-0.30)	(-0.28)	(-0.27)	(-0.31)	(-0.37)
CEODICE OC	0.0100	0.0174	0.0121	0.0100	0.022.4*	0.020.4*	0.0270*
GEODISTLOG	0.0133	0.01/4	0.0131	(1, 12)	0.0326	(1.78)	(1.78)
	(0.80)	(1.08)	(0.84)	(1.13)	(1.89)	(1.78)	(1.78)
ECODIST		-0.000615			-0.000569		
		(-1.09)			(-1.01)		
REGDIST			0.000602			-0.000203	
			(0.15)			(-0.05)	
CUI TDIST				0.000354			0.000367
COLIDIST				(-0.77)			(-0.76)
				()			(
FTAAGE					0.00103	0.00158	0.00110
					(1.09)	(0.68)	(0.96)
					0.000107		
ECODISTXFTAAGE					-0.000127		
					(-0.48)		
REGDISTxFTAAGE						-0.000298	
						(-0.34)	
CULTDISTxFTAAG							-0.0000179
E							(0.28)
							(-0.28)
cons	-0.108*	-0.123**	$-0.108^{*}$	-0.127*	-0.187***	-0.174***	-0.201**
	(-1.81)	(-1.98)	(-1.81)	(-1.96)	(-2.68)	(-2.62)	(-2.43)
Ν	354	354	354	353	354	354	353
$R^2$	0.691	0.692	0.691	0.692	0.694	0.693	0.693
F	53.32	45.74	45.61	46.35	35.87	35.88	36.43

## Table 23 – Regression Model for ROA with FTAAGE instead of FTA

	(1)	(2)	(3)	(4) DEVDM	(5)	(6)	(7)
PREXPM	0.0249	0.0251	0.0253	0.0247	0.0251	0.0251	0.0247
	(1.56)	(1.56)	(1.62)	(1.55)	(1.56)	(1.62)	(1.55)
CASH	0.110 <sup>**</sup> (2.42)	0.111 <sup>**</sup> (2.44)	0.110 <sup>**</sup> (2.45)	0.112 <sup>**</sup> (2.44)	0.110 <sup>**</sup> (2.40)	0.110 <sup>**</sup> (2.44)	0.111 <sup>**</sup> (2.41)
ACQSALESLOG	0.0522** (2.32)	0.0542** (2.38)	0.0535** (2.37)	0.0527** (2.33)	0.0547** (2.37)	0.0536** (2.36)	0.0527** (2.31)
TASRATIO	-0.103* (-1.67)	-0.104* (-1.68)	-0.104* (-1.71)	-0.102* (-1.65)	-0.104* (-1.67)	-0.103* (-1.71)	-0.102* (-1.65)
SAMEINDUSTRY	0.0802*** (2.67)	0.0824 <sup>***</sup> (2.73)	0.0877 <sup>***</sup> (2.85)	0.0809*** (2.68)	0.0813*** (2.73)	0.0880 <sup>****</sup> (2.87)	0.0797 <sup>***</sup> (2.68)
GEODISTLOG	0.0965* (1.74)	0.113 <sup>*</sup> (1.93)	0.112 <sup>*</sup> (1.90)	$0.106^{*}$ (1.78)	0.131* (1.93)	0.165 <sup>*</sup> (1.92)	0.134 <sup>*</sup> (1.82)
ECODIST		-0.00252*** (-2.75)			-0.00242*** (-2.69)		
REGDIST			-0.0354** (-2.08)			-0.0320** (-2.03)	
CULTDIST				-0.000712 (-0.58)			-0.000462 (-0.35)
FTAAGE					0.00140 (0.50)	0.00948 (1.14)	0.00191 (0.58)
ECODISTxFTAAGE					-0.000587 (-0.76)		
REGDISTxFTAAGE						-0.00318 (-1.11)	
CULTDISTxFTAAG							-0.000119
Е							(-0.78)
_cons	-0.689** (-2.58)	-0.753*** (-2.69)	-0.683*** (-2.60)	-0.723** (-2.58)	-0.822** (-2.48)	-0.901** (-2.33)	-0.833** (-2.38)
N P <sup>2</sup>	343	343	343	342	343	343	342
<i>к</i> - F	2.697	0.155 2.419	2.392	0.152 2.330	0.156 1.973	2.007	2.006

Table 24 – Regression Model for PM with FTAAGE instead of FTA

	(1)	(2)	(2)	(4)	(5)	$(\mathcal{L})$	(7)
	(I) POEARS	(2) POEABS	(S) POEABS	POEABS	DOE ABS	(0) POEABS	(/) POEABS
СЛЕН	0.104	0.103	0.104	0.105	0.0051	0.101	0.0080
CASII	(1.38)	(1.36)	(1.38)	(1.37)	(1.25)	(1 34)	(1.27)
	(1.50)	(1.50)	(1.50)	(1.57)	(1.25)	(1.54)	(1.27)
ACOSALESLOG	$0.118^{***}$	$0.118^{***}$	$0.118^{***}$	0.120***	0.119***	$0.117^{***}$	0.119***
,	(4.22)	(4.19)	(4.21)	(4.17)	(4.18)	(4.13)	(4.14)
TASRATIO	$0.0515^{***}$	$0.0514^{***}$	$0.0516^{***}$	$0.0522^{***}$	$0.0505^{***}$	$0.0509^{***}$	$0.0517^{***}$
	(5.53)	(5.50)	(5.52)	(5.50)	(5.27)	(5.15)	(5.28)
SAMEINDUCTOV	0.0274	0.0270	0.0280	0.0260	0.0268	0.0280	0.0266
SAMEINDUSIKI	(0.0374)	(0.78)	(0.80)	(0.75)	(0.78)	(0.81)	(0.76)
	(0.79)	(0.78)	(0.80)	(0.73)	(0.78)	(0.81)	(0.70)
GEODISTLOG	0.0163	0.0108	0.0178	0.0400	-0.00948	-0.0113	0.0354
	(0.15)	(0.10)	(0.16)	(0.35)	(-0.10)	(-0.12)	(0.35)
ECODIST		0.000724			0.000995		
		(0.39)			(0.51)		
DECDIST			0.00276			0.00426	
REGDIST			-0.00576			(0.15)	
			(-0.14)			(0.15)	
CULTDIST				-0.00170			-0.000975
				(-0.51)			(-0.25)
FTA					-0.00238	0.0264	0.00205
					(-0.04)	(0.13)	(0.02)
ECODICT-ETA					0.0200*		
ECODISTAFTA					-0.0200		
					(-1.07)		
REGDISTxFTA						-0.0282	
						(-0.37)	
CULTDISTxFTA							-0.00529
							(-0.96)
cons	-0.331	-0.308	-0 329	-0.412	-0.224	-0.217	-0 388
_00115	(-0.80)	(-0.76)	(-0.79)	(-0.97)	(-0.64)	(-0.61)	(-1.02)
N	354	354	354	353	354	354	353
$R^2$	0.223	0.223	0.223	0.223	0.226	0.224	0.225
F							

## Table 25 – Alternative Regression Model for ROE – Absolute ROE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ROAABS						
CASH	0.0590***	0.0597***	0.0590***	0.0602***	0.0600***	0.0594***	0.0602***
	(3.95)	(3.99)	(3.95)	(4.05)	(3.99)	(3.91)	(4.01)
ACQSALESLOG	0.0371***	0.0376***	0.0371***	0.0375***	0.0375***	0.0372***	0.0374***
	(4.39)	(4.43)	(4.39)	(4.38)	(4.39)	(4.37)	(4.36)
TASPATIO	0.00020***	0.00942***	0.00037***	0.00954***	0.00943***	0.00942***	0.00052***
TASKATIO	(3.19)	(3.22)	(3.22)	(3.26)	(3.21)	(3.23)	(3.26)
	(3.17)	(3.22)	(3.22)	(3.20)	(3.21)	(3.23)	(3.20)
SAMEINDUSTRY	0.00638	0.00678	0.00674	0.00690	0.00694	0.00662	0.00706
	(0.66)	(0.70)	(0.69)	(0.71)	(0.71)	(0.68)	(0.72)
GEODISTLOG	-0.00804	-0.00201	-0.00713	0.000296	-0.00548	-0.00954	-0.00364
	(-0.40)	(-0.10)	(-0.36)	(0.01)	(-0.26)	(-0.45)	(-0.16)
ECODIST		0.000701			0.000838		
LCODIST		-0.000791			-0.000838		
		(-1.04)			(-1.08)		
REGDIST			-0.00219			-0.00300	
			(-0.44)			(-0.56)	
			× /				
CULTDIST				-0.000666			-0.000713
				(-1.08)			(-1.04)
FTA					-0.00524	-0.0158	-0.00508
					(-0.44)	(-0.44)	(-0.31)
FCODISTVETA					0.000949		
LCODISTALIA					(0.33)		
					(0.55)		
REGDISTxFTA						0.00639	
						(0.45)	
CULTDISTxFTA							0.000105
							(0.07)
	0.0628	0.0000	0.0620	0.0026	0.0720	0.0522	0.0756
_cons	-0.0638	-0.0880	-0.0630	-0.0926	-0.0730	-0.0522	-0.0756
N	35/	35/	354	353	35/	354	353
$R^2$	0.318	0.321	0.319	0.321	0.322	0.319	0.322
F							

Table 26 – Alternative Regression Model for ROA – Absolute ROA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
C A GH	PMABS	PMABS	PMABS	PMABS	PMABS	PMABS	PMABS
CASH	(0.18)	0.0328	0.0227	(0.0326)	0.0396	0.00566	0.0338
	(0.18)	(0.23)	(0.17)	(0.24)	(0.29)	(0.04)	(0.23)
ACQSALESLOG	$0.493^{*}$	$0.499^{**}$	0.493*	$0.499^{*}$	$0.496^{*}$	$0.489^{*}$	$0.498^*$
	(1.96)	(1.97)	(1.96)	(1.96)	(1.96)	(1.96)	(1.96)
TASPATIO	0.142	0.145	0.147	0.147	0.145	0.144	0.147
TASKATIO	(1 37)	(1.38)	(1.37)	(1.37)	(1.38)	(1.36)	(1.37)
	(1.57)	(1.56)	(1.57)	(1.57)	(1.50)	(1.50)	(1.57)
SAMEINDUSTRY	-0.0241	-0.0192	-0.00744	-0.0291	-0.0168	-0.00279	-0.0275
	(-0.36)	(-0.29)	(-0.11)	(-0.41)	(-0.26)	(-0.04)	(-0.39)
GEODISTI OG	0.271	0 344	0.312	0 392	0 303	0 392	0.354
GLODISTLOG	(1.22)	(1.40)	(1.33)	(1.42)	(1.28)	(1.45)	(1.25)
ECODIST		-0.00963**			-0.0104**		
		(-2.01)			(-2.03)		
REGDIST			-0.102*			-0.0696	
			(-1.87)			(-1.54)	
CULTDIST				-0.00881			-0.00935*
				(-1.60)			(-1.07)
FTA					-0.0739	0.580	-0.0493
					(-0.73)	(1.24)	(-0.40)
					0.0210		
ECODISTXFTA					0.0218		
					(0.80)		
REGDISTxFTA						-0.241	
						(-1.25)	
CUI TDIST. ET A							0.00164
CULIDISTAFIA							(0.20)
							(0.20)
_cons	-2.841*	-3.136*	-2.801*	-3.257*	$-2.955^{*}$	-3.161*	-3.095*
	(-1.89)	(-1.93)	(-1.88)	(-1.89)	(-1.86)	(-1.88)	(-1.78)
$\frac{N}{R^2}$	354 0.197	354	354	353	354	354	353
F			.200				

## Table 27 – Alternative Regression Model for PM – Absolute PM

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ROEBINARY	ROEBINARY	ROEBINARY	ROEBINARY	ROEBINARY	ROEBINARY	ROEBINARY
PREXROE	1.191	1.192	1.189	1.151	1.156	1.178	1.064
	(1.00)	(1.01)	(1.01)	(1.01)	(1.00)	(0.99)	(0.96)
CASH	1.151***	1.161***	1.153***	1.164 <sup>***</sup>	1.139***	1.159***	1.123***
	(3.64)	(3.66)	(3.64)	(3.69)	(3.57)	(3.65)	(3.54)
ACQSALESLOG	0.652***	0.660***	0.657***	0.656 <sup>***</sup>	0.677 <sup>***</sup>	0.660 <sup>***</sup>	0.669***
	(3.52)	(3.52)	(3.51)	(3.58)	(3.60)	(3.48)	(3.68)
TASRATIO	0.250 <sup>***</sup>	0.250***	0.255 <sup>***</sup>	0.245 <sup>***</sup>	0.250 <sup>***</sup>	0.260 <sup>***</sup>	0.240 <sup>***</sup>
	(2.70)	(2.72)	(2.72)	(2.68)	(2.67)	(2.68)	(2.66)
SAMEINDUSTRY	0.0637	0.0716	0.0789	0.0869	0.0707	0.0763	0.0717
	(0.23)	(0.26)	(0.28)	(0.31)	(0.25)	(0.27)	(0.25)
GEODISTLOG	0.414	0.481	0.435	0.165	0.653	0.547	0.591
	(0.84)	(0.95)	(0.88)	(0.30)	(0.99)	(0.82)	(0.80)
ECODIST		-0.0108 (-0.59)			-0.00773 (-0.38)		
REGDIST			-0.0716 (-0.43)			-0.0902 (-0.48)	
CULTDIST				0.0124 (0.72)			0.0261 (1.29)
FTA					0.266 (0.67)	0.00334 (0.00)	0.561 (1.13)
ECODISTxFTA					-0.117 (-1.17)		
REGDISTxFTA						0.0470 (0.11)	
CULTDISTxFTA							-0.0619 (-1.45)
_cons	-3.974**	-4.231**	-3.930**	-3.164	-4.965*	-4.367	-4.975*
	(-2.06)	(-2.14)	(-2.05)	(-1.50)	(-1.87)	(-1.63)	(-1.72)
$\frac{N}{R^2}$	354	354	354	353	354	354	353

## Table 28 – Alternative Logistic Regression Model for ROE

	(1) ROABINARY	(2) ROABINARY	(3) ROABINARY	(4) ROABINARY	(5) ROABINARY	(6) ROABINARY	(7) ROABINARY
ROABINARY PREXROA	17.30***	17.32***	17.31***	17.28***	17.41***	17.27***	17.23***
	(6.72)	(6.72)	(6.72)	(6.72)	(6.59)	(6.60)	(6.63)
CASH	$0.705^{*}$ (1.81)	0.721 <sup>*</sup> (1.84)	0.701* (1.80)	0.745* (1.90)	0.739 <sup>*</sup> (1.87)	$0.706^{*}$ (1.82)	0.744 <sup>*</sup> (1.90)
ACQSALESLOG	-0.232 (-1.43)	-0.228 (-1.40)	-0.234 (-1.44)	-0.229 (-1.41)	-0.229 (-1.39)	-0.226 (-1.39)	-0.218 (-1.34)
TASRATIO	0.564 (1.12)	0.553 (1.07)	0.552 (1.12)	0.585 (1.20)	0.595 (1.19)	0.591 (1.24)	0.619 (1.31)
SAMEINDUSTRY	-0.338 (-1.22)	-0.322 (-1.16)	-0.365 (-1.26)	-0.317 (-1.14)	-0.351 (-1.24)	-0.380 (-1.30)	-0.344 (-1.21)
GEODISTLOG	1.112** (2.17)	1.226** (2.31)	1.067** (2.08)	1.227** (2.16)	1.580** (2.29)	1.464** (2.14)	1.667** (2.05)
ECODIST		-0.0139 (-0.89)			-0.0139 (-0.90)		
REGDIST			0.114 (0.72)			0.102 (0.62)	
CULTDIST				-0.0101 (-0.57)			-0.00659 (-0.34)
FTA					0.260 (0.62)	0.588 (0.50)	0.446 (0.82)
ECODISTxFTA					0.0541 (0.48)		
REGDISTxFTA						-0.115 (-0.23)	
CULTDISTxFTA							-0.0145 (-0.31)
_cons	-3.768 <sup>**</sup> (-2.06)	-4.178 <sup>**</sup> (-2.20)	-3.816** (-2.07)	-4.163** (-2.01)	-5.646** (-2.12)	-5.447** (-2.07)	-6.027* (-1.90)
$\frac{N}{R^2}$	354	354	354	353	354	354	353

## Table 29 – Alternative Logistic Regression Model for ROA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	PMBINARY						
PMBINARY	0.234 <sup>**</sup>	0.237 <sup>**</sup>	0.230 <sup>**</sup>	0.230**	0.239 <sup>**</sup>	0.228 <sup>**</sup>	0.231 <sup>**</sup>
PREXPM	(2.19)	(2.20)	(2.30)	(2.17)	(2.22)	(2.27)	(2.19)
CASH	-0.159	-0.148	-0.142	-0.136	-0.166	-0.133	-0.150
	(-0.47)	(-0.44)	(-0.43)	(-0.41)	(-0.49)	(-0.40)	(-0.45)
ACQSALESLOG	-0.00308	0.0205	0.0198	0.00294	0.0210	0.0275	0.000559
	(-0.02)	(0.15)	(0.14)	(0.02)	(0.15)	(0.19)	(0.00)
TASRATIO	-1.751**	-1.770**	-1.664**	-1.713**	-1.794**	-1.632**	-1.730**
	(-2.43)	(-2.43)	(-2.45)	(-2.40)	(-2.46)	(-2.41)	(-2.42)
SAMEINDUSTRY	0.343	0.377 <sup>*</sup>	0.420*	0.355	0.383 <sup>*</sup>	0.415 <sup>*</sup>	0.355
	(1.52)	(1.67)	(1.83)	(1.57)	(1.69)	(1.80)	(1.56)
GEODISTLOG	0.134	0.335	0.295	0.169	0.274	0.402	0.178
	(0.31)	(0.75)	(0.67)	(0.34)	(0.53)	(0.76)	(0.31)
ECODIST		-0.0323* (-1.84)			-0.0313* (-1.80)		
REGDIST			-0.360** (-2.49)			-0.382** (-2.38)	
CULTDIST				-0.00452 (-0.32)			-0.00261 (-0.17)
FTA					-0.0223 (-0.07)	-0.00943 (-0.01)	0.0330 (0.09)
ECODISTxFTA					-0.0381 (-0.43)		
REGDISTxFTA						0.0578 (0.16)	
CULTDISTxFTA							-0.0133 (-0.41)
_cons	-0.453	-1.214	-0.449	-0.589	-0.944	-0.889	-0.604
	(-0.27)	(-0.71)	(-0.27)	(-0.32)	(-0.46)	(-0.43)	(-0.27)
N R <sup>2</sup> F	343	343	343	342	343	343	342

Table 30 – Alternative Logistic Regression Model for PM

#### **5.1 Control Variables**

The results of our regression using only the control variables are as follows. Past performance, measured on ROA, ROE and Profit Margin (PM), is positively related to future performance, as expected. Furthermore, this is in line with the findings of Liou & Rao-Nicholson (2017). For ROA, past performance is highly significant (p>0.01), and from the correlation matrix shown in table 12 we can see that past ROA is correlated with a coefficient of 0.83. For ROE, past performance is also highly significant (p>0.01), however with a lower correlation coefficient than is the case with ROA. Our next control variable, CASH, also behaves consistently across all dependent variables. We find positive relationships between CASH and ROA (Table 14), ROE (Table 13) and PM (Table 15), however only statistically significant in the model with PM as the dependent variable. This partially confirms previous studies (Linn & Switzer, 2001; Martynova et al. 2007) showing that M&A transactions financed with cash, fare better than transactions financed with stock. This is because acquiring firms with access to plenty of cash, are able to obtain more favorable terms from banks to loan the cash, or they can finance the transaction from their own cash reserves. Either way, such firms end up paying relatively less for their acquisitions, as they are not reliant on expensive capital raises through the issuance of equity for example, in order to finance their transactions. Over the long term, cash financed transactions should perform better, as fewer interests costs are charged to the acquirer, thus increasing profit margins. The next control variable employed across all our performance measurements is the size of the acquirer firm (ACQSALESLOG). Here we find a statistically significant and positive relationship between the size of the acquirer firm and ROA (Table 14), ROE (Table 13) and PM (Table 15). This is in line with results found in previous studies on this matter, notably Simerly and Li (2000), who also use an outcome approach and ROA as a dependent variable. Aside, from past performance, the method of payment and the size of the acquirer, we also use the ratio of target firm sales to the acquirer firm sales, to gauge the size of the target in relation to the acquiring firm. Our regression analysis gives us a somewhat surprising result for ROA (Table 14) and ROE (Table 13). We see that the TASRATIO has a statistically significant positive impact on the performance of M&A measured by ROA and ROE, whereas it has a statistically significant negative impact on PM (Table 15). We were expecting to find a negative impact of TASRATIO on performance, as a larger acquisition target relative to the acquirer, should be more complicated to integrate properly, and as such be more costly, consequently depressing returns. In fact, the positive impact of the TASRATIO on ROA and ROE could indicate a measurement problem, relating

to the way we have calculated ROA and ROE. We will elaborate on this issue later on in our presentation of the results. Finally, we also look at industry relatedness (SAMEINDUSTRY) and whether this has an effect on performance. We find that industry relatedness does not have a statistically significant impact on ROA (Table 14) or ROE (Table 13). However, we do find a statistically significant positive relationship between industry relatedness and PM (Table 15), indicating that acquiring firms investing in target firms from the same industry are able to benefit from previous experience in that industry when they integrate the target firm, thus leading to fewer integration costs and increased profitability. Finally, we control for the geographic distance (GEODISTLOG) between the US and the country of the target firm. Across ROA (Table 14), ROE (Table 13) and PM (Table 15), we find a surprising result, that geographic distance increases performance. The positive relationship is only statistically significant for PM nonetheless; it is a somewhat surprising result, as it goes against the ideas behind the gravity model and Johanson & Vahlne's (1977) internationalization process model. Both models convey the notion that physical distance between two countries should have a negative impact on trade and performance. Interestingly, some researchers employing the same method of measuring geographic distance as us (Liou & Rao-Nicholson, 2017), find similar results. Liou & Rao-Nicholson (2017) suggest that a part of the answer might lie in the fact that the acquirer country, which in our case is the US, is located far away from most countries in the world, because the distance is measured from the point exactly in the middle of the US. Another explanation could be taken from Ghemawat (2007) who argues that geographical distance can at times be the source of competitive advantage, because it gives a firm arbitrage opportunities. For example, a US firm acquiring a company in India could profit from the geographic distance by taking advantage of the time difference between the two locations. When the US employees go home, the Indian employees can continue to work, thus increasing the productivity and reducing operational downtime of the combined firm.

#### **5.2 Economic Distance and M&A Performance**

The results for the regression including economic distance are reported in column 2 and 5 of Table 13 (ROE), Table 14 (ROA) and Table 15 (PM). Our regression analysis indicates some support for Hypothesis 1: Economic distance between acquirer and target country negatively affects the performance of cross-border M&As. Even though our results do not indicate a statistically significant effect of

economic distance on post-deal performance when measured with ROA or ROE, we do find a statistically significant negative effect of economic distance on M&A performance when looking at Profit Margin.

As explained earlier, it can be argued that the relationship between distance and performance is not strictly linear, but perhaps rather logistic, meaning that initially as distance increases performance is affected negatively, but that as distance increases more and more, the additional negative effect on performance starts to diminish. We therefore run the regression analysis again for all distance variables, with the main difference that the distance variables have been log-transformed. The results change slightly, in that economic distance does not any longer have a significant negative effect on performance as measured by PM (Table 18). For the other two dependent variables, ROE (Table 16) and ROA (Table 17) there is no change in the results. On the ROA and ROE dependent variables, none of the log-transformed distance variables has a statistically significant effect.

#### **5.3 Regulatory Distance and M&A Performance**

In column 3 and 6 of table 13 (ROE), table 14 (ROA) and table 15 (PM) we display the results of our regression analysis looking at regulatory distance and its impact on post-deal performance. Similar to economic distance, we do not find a significant effect on post-deal performance when measured with ROA and ROE. Table 15, shows a statistically significant negative relationship between regulatory distance and PM. This lends some support for our Hypothesis 2: Regulatory distance between acquirer and target country negatively affects the performance of cross-border M&As.

Similar to what we did with economic distance, we also log-transformed the regulatory distance variable. After doing so, the regulatory distance still exerts a negative influence on M&A performance when measured with PM (Table 18), that is statistically significant (p<0.05). In terms of explanatory power, the R-squared statistic for the log transformed regulatory distance variable decreases slightly to 0.161, compared to an R-squared statistic of 0.162 of the standard regulatory distance variable. The loss in explanatory power is miniscule, making it hard to say whether the log-transformed distance variable provides a better approximation.

Instead of calculating the distance between the Kaufmann indicators of country pairs, it is also possible to employ the absolute values of the Kaufmann indicators, to evaluate the effect of regulatory quality on the dependent variable. Even though such a variable is not exactly able to tell us the effect of regulatory

distance on the dependent variables, it allows us to talk about how differences in regulatory quality as measured by the Kaufmann Index affect the dependent variables. We run such an analysis in Table 19 (ROE), Table 20 (ROA) and Table 21 (PM), and the results show that regulatory quality as measured by the Kaufmann Index positively affects M&A performance, if evaluated against PM (Table 21). The result is statistically significant at the p<0.05 level. If we look at ROA we do find a positive effect of regulatory quality on ROA (Table 20), however, it is not statistically significant. With ROE, we also do not find a statistically significant effect of regulatory quality (Table 19).

#### **5.4 Cultural Distance and M&A Performance**

We find that for cultural distance, there is no statistically significant effect on performance on any of our three dependent variables, ROA, ROE or PM. As such, we find no support for our hypothesis 3: Cultural distance between the acquirer country and the target country negatively affects the cross-border M&A performance. The results are displayed in column 4 and 7, in tables 13 (ROE), 14 (ROA) and 15 (PM). There might be several explanations for why we do not find a statistically significant effect of cultural distance on either of our performance measures. The first explanation has to do with the type of data we have used to measure cultural distance. We have used distance calculations by Berry et al. (2010), which are based upon the World Value Survey. Even though the World Value Survey overcomes some of the limitations of other cultural distance measurements, such as Hofstede's (1980), the data collected by the survey only covers the years 2000 to 2011. The missing 6 years we have had to extrapolate based on previous years, obviously leaves our analysis prone to error on this point.

Similar to what we did with economic and regulatory distance, we also log-transformed the cultural distance variable. We do not find any significant effect of cultural distance on either ROE (Table 16), ROA (Table 17) or PM (Table 18).

#### 5.5 M&A Performance, FTAs and Institutional Distance

The last part of our regression analysis consists of testing hypothesis 4a, 4b and 4c. In other words, we are testing how FTA's affect the performance of M&As and whether the existence of an FTA between the acquirer country and the target decreases the negative impact of institutional distance. We test the latter by the use of interaction terms between each distance measure and the FTA dummy variable. The results of our regressions are displayed in columns 5, 6 and 7 in table 13(ROE), table 14 (ROA) and table 15 (PM). We are not able to prove any statistically significant effect of FTAs on M&A performance,

across all three measures of M&A performance. In other words, we do not find support for our hypothesis 4a, 4b and 4c, and as such, the immediate result is that the existence of FTAs do not affect M&A performance nor do they have a mitigating effect on the negative influence of institutional distance on M&A performance.

#### 5.3.1 Analysis with Non-Linearly Transformed Distance Variables

As shown earlier with the hypotheses 1, 2 and 3, it might be a good idea to use non-linear transformation on the institutional distance variables. We ran the same analysis for the interaction terms between FTA and economic, regulatory and cultural distance. The results from running the regression model with the log transformed distance variables did not change any of the findings from the original model. The results do not indicate any significant effect of FTAs on the different institutional distance measures, and as such of FTAs on performance (See columns 5,6 and 7 in Table 16, Table 17 and Table 18).

#### 5.3.2 Analysis using FTAAGE

A part of the explanation as to why there is no effect of FTAs on institutional distance might lie in the process by which FTAs moderate economic, regulatory and cultural distance. The isomorphic processes as described earlier are not necessarily captured by measuring the FTA as a dummy variable. As an alternative proxy for the effect of FTAs, we use the number of years for which a specific FTA has been in effect. The idea is, that the more years a FTA has been in effect for, the less institutional distance exists, because the FTA has had time to reduce the institutional distance between the country pair through the isomorphic process. Our results show a consistently positive coefficient for FTAAGE (Table 22, Table 23 and Table 24), indicating that the longer an FTA has been in force between acquirer and target country at the time of the deal, the more positive the performance of the M&A will be. Unfortunately, the coefficients are not statistically significant.

#### **5.4 Alternative Model Specifications - Absolute Performance Measures**

In our original model, we employ an industry adjusted performance measure, for both ROA, ROE and PM. Instead of using the industry adjusted ROA, ROE and PM, another way to test the influence of institutional distance and FTAs on M&A performance, would be to use the absolute values of ROA, ROE and PM for our sample. We did this and adjusted for the industry return by using an industry fixed effects approach in our regression model (Table 25 (ROE), Table 26 (ROA) and Table 27 (PM)). The results were qualitatively similar to those using the industry adjusted return, shown earlier. We are able to

partially confirm hypothesis 1 and 2, i.e. that economic distance and regulatory distance negatively affect M&A performance if measured by PM (Table 27). We find a negative effect of all distance variables on ROA (Table 26) and ROE (Table 25) also, however not statistically significant. In terms of FTA, we do not find a statistically significance of FTAs or the interaction term between FTA and the distance measures, which means we are not able to find support for hypotheses 4a, 4b and 4c.

#### 5.5 Alternative Model Specifications - Logistic Model

We have seen in several studies regarding institutional distance, that some researchers such as Berry et al. (2010), Pogrebnyakov & Maitland (2011) and Manning & Møller Larsen (2015) employ a logistic model to study the impact of institutional distance on their dependent variables. To compare the findings we have with our original model, we have chosen to run our analysis using a logistic model as well. This means, that the dependent variable must be transformed from a continuous into a dichotomous variable. In our case, this means that we have assigned all deals with a positive post-deal excess performance above the industry median, the value of 1. All the other with a negative post-deal excess performance below the industry median, are assigned a value of 0. As such, the logistic model is different from our original model, as it doesn't predict the excess performance of the M&A deal. Instead, it predicts the likelihood that an M&A deal will generate excess performance above the industry level. The results of our analysis are as follows. We are able to partially confirm our hypotheses 1 and 2, as we find a statistically significant relationship between economic (p<0.05) and regulatory distance (p<0.05) and the likelihood that an M&A will generate above industry post-deal returns when measured with PM (Table 30). We do not find any support for hypotheses 3 and 4a, 4b and 4c.

#### **5.6 Limitations**

### 5.6.1 Analysis of Sample and Data Quality

In general, the empirical results we get are affected by the sample we have chosen. Therefore, before we discuss our results on a theoretical basis, it is important to understand whether our sample constitutes a good sample of the true population, in order to assess the credibility of our empirical results.

In order to calculate the ROA and ROE of the companies in our dataset, we had to find data on EBITDA for all of the companies. In addition to that, we also needed figures on Assets, Sales, Common Equity, and finally the Profit Margin. As explained earlier, we used the Bloomberg Professional database to

accomplish this task. The problem with doing so is that Bloomberg has very limited data on private companies, which made us limit our sample to include only few private acquirers and private targets. The problem was that even though a lot of data was available for private firms, we were never able to get the full data for each of our dependent variables. Consequently, this narrowed down our sample considerably. Furthermore, we needed to calculate the median PM, ROA and ROE for the industry, in order to adjust for industry performance. Again, the industry performance could only be calculated based on mostly publicly listed companies, potentially misstating industry returns, and consequently also potentially misstating the industry adjusted ROA, ROE and PM's. As such, our sample of 354 firms might not represent the true population of typical US American firms conducting cross-border M&As and their true industry adjusted performance.

Just as we were limited by the lack of data or poor quality of data in terms of the dependent variables, we experienced the same problem with the independent variables, especially the ones measuring institutional distance. Naturally, this limited our sample considerably, as we were forced to choose deals where we were able to find a measure for the target country on each institutional distance dimension. Whereas economic distance could be calculated on all target countries, we had to exclude deals from several countries because they either lacked measurements for the regulatory distance in the Kaufmann world governance indicators (WGI) dataset or for the cultural distance in the World Value Survey (WVS) dataset.

Furthermore, the regulatory and cultural values measurements from the WGI and WVS datasets are subjects to errors themselves, based on the way these have been measured. Some researchers, such as Hurtienne & Kaufmann (2011), have criticized The World Value Survey due to its underlying "eurocentristic" assumptions, and its implicit request for the rest of the world to follow the Western example in order to develop. This is problematic from a research perspective, because it fuels the idea of one culture that is superior to all others. Moreover, the WVS is a questionnaire of 250 questions that is administered in a face-to-face interview and Hurtienne & Kaufmann (2011) criticize it because it contains complicated wordings, which might not be translated correctly when the surveys are administered to low-income or middle-income countries. In other words, there might be biases and errors in the underlying WVS dataset on which the cultural distance has been calculated. As a result, the true cultural distance between the US and the target country in question may be misrepresented. The same goes for the WGI

dataset, upon which we have calculated regulatory distance between the US and the target country. Even though the WGI dataset has been employed extensively in both the institutional distance literature but also by international organizations and governmental bodies (Kaufmann et al., 2007), critics have argued that it suffers from methodological problems (Arndt and Oman, 2006; Knack, 2006; Kurtz and Shrank, 2006; Thomas, 2006). Such problems include seemingly large variations in the data across time, which by some have been attributed to the fact that newer editions of the WGI are just corrections of past errors. Further, critics (Arndt and Oman, 2006; Knack, 2006; Kurtz and Shrank, 2006; Thomas, 2006) argue that the WGI lacks construct validity, in that it purports to measure one thing, but ends up measuring something else. In addition, critics argue that WGI suffers from sample bias, lack of transparency and high likelihood of correlation of errors among the sources used in the sample.

Even though the underlying datasets inevitably suffer some methodical and empirical limitations, this would be true for most other secondary qualitative survey data. Nevertheless, it is important to keep the limitations of the underlying measures in mind, as one interprets the results we have found with respect to regulatory and cultural distance. The most problematic part is that we cannot with certainty say how the limitations of the underlying dataset affects our own empirical results.

Finally, our sample also contains some biases, such as selection bias. There are selection biases hidden in several of the decisions we have taken regarding our sample. For one, we have our decision of looking at cross-border M&A of US acquirers only. This constitutes a non-random sample of the global population of firms, because we have actively chosen not to look at acquirers from other countries. As such, our empirical results are only valid for US acquirers, and not necessarily for acquirers globally. Furthermore, we choose to exclude non-successful M&A deals, because we are only interested in measuring how institutional distance has an impact on the performance. However, by looking only at completed or successful deals, we must face the reality that acquirers in doing so already have overcome a large part of the issue of institutional distance. In other words, some of the negative effect of institutional distance might have occurred at the previous stage, in the deal completion stage, reducing the strength of the effect we try to measure on M&A performance.

Lastly, the period from which we collect data, 2000 to 2017, is a period marked by two larger periods of financial turmoil. For one, the dotcom-bubble in the early 2000's and secondly, the financial crisis of 2008. In such periods of time, the amount of M&A activity may be severely distorted, and the strategic

rationales behind M&As might deviate from periods of stability. We are not able to quantify the impact of these distortions in our data, and their subsequent impact on our empirical results.

#### **5.6.2** Analysis of employed Performance Measurements and Timeframes

If we start with the results for our hypotheses 1 and 2, we do not find a statistically significant negative impact of economic and regulatory distance on industry-adjusted ROA and industry-adjusted ROE. The lack of significance might be a result of our method of calculating ROA and ROE. We calculated said variables as EBITDA/Assets for ROA and EBITDA/Common Equity for ROE. This may leave the calculated measures of ROA and ROA unaffected by many of the costs created by institutional distance. A lot of the costs created by institutional distance are typically charged below the EBITDA, as extraordinary or one-off items, leaving the possibility open that some of the firm's EBITDAs are entirely unaffected because of a merger (Assuming that acquirer and target firm have the same EBITDA margin ex ante). This would then explain why we do not find a statistically significant effect of our institutional distance measures on ROA and ROE, when measuring ROA as EBITDA/Assets and ROE as EBITDA/Common Equity. At the beginning of our data collection process, we arrived upon the conclusion that EBITDA was the most correct way of measuring return across industries, because it was not distorted by differing tax rates and depreciation rates. At that point, we did not consider the fact that this might limit our ability to see any effect of the mergers in terms of returns.

In order to prove whether our presumption of EBITDA as the culprit for the lack of significance of the effect of economic and regulatory distance on ROA and ROE, one would have to recalculate ROA and ROE using other return characteristics, such as net income. However, due to time constraints, we did not have the possibility to recalculate ROA and ROE for all firms and the respective industries included in our sample, so we could properly adjust the firm level ROA and ROE for industry effects.

Aside from this technical explanation, there might be reason to believe that the performance of crossborder M&As led by US acquirers will exceed that of other acquirers from other countries, and that they are simply more experienced, because of access to better M&A specific resources. These include access to better consultancies, banks and legal advisors, which help them navigate the pitfalls created by regulatory and economic distance better. Thus, cross-border M&A performance by US acquirers could be less negatively affected by economic and regulatory distance, than others. In general, the outcome method applied in our study to measure M&A performance, has its flaws, as mentioned in our literature review. We will outline a few of the key critique points we believe are inherent in the outcome approach, and how we believe it has affected our empirical results. The first critique point concerns the size of the target firms in our sample. There are relatively few mergers & acquisitions where the target company a significant size relative to the acquirer, measured in terms of sales or assets. From our data collection process, we saw that a majority of the M&A deals were with small target firms (Table 7). From a purely logical viewpoint, this would imply that the smaller the target in terms of the size of the acquirer, the less likely it is to affect the overall performance of the new combined firm post M&A. In so far our sample includes a sizeable amount of firms with a TASRATIO below 50% (Table 7), one may argue that this reduces the validity of our results, because the M&As are too small to properly impact the overall performance of the combined firm, post-M&A. As such, there is a risk, that our performance measures, ROA, ROE and PM, do not quite capture the true performance attributable to the actual M&A.

Another critique point comes from the choice of timeframe for the measurement of performance. Given that we look at each M&A by observing the median of accounting measures over a period of 3 years after the M&A has been completed, it is difficult to know whether this allows us to truly capture the change in performance as a result of the M&A. This leads to the question of when the effects of an M&A are truly tangible and measurable. If we had looked only at the first year after the M&A, our empirical results would likely have shown a larger negative effect of institutional distance, as M&As typically underperform the first year, as this is the year were many of the integration costs are incurred and expensed. However, doing so would have ignored the positive longer-term performance effects of synergies derived from the M&A. On the contrary, one could also argue that we should have used a longer-term horizon than 3 years, such as 5 years. This would have allowed us to capture even more of those M&As where synergies take longer time to materialize into actual quantifiable performance improvements. Conversely, it would have made our performance results more susceptible to variance coming from entirely different events not related to the M&A in question, consequently distorting our results.

The way we adjust our performance measurements for the industry effects, may also be critiqued. First, there is the issue of choice of peer group. We chose to compare each company in our dataset against its sub-industry, using the 2nd level Bloomberg Industry Classification Standard (BICS) industry group. It

might be argued that this is a too unspecific or broad approximation of its peers. The problem in taking the broad subindustry median is that research shows that both target and acquirer companies usually perform significantly better than their "normal" industry peers (Martynova et al., 2007). As such, simply comparing the deal companies to the simple industry median, even though it is at a fairly detailed industry level, we might run the risk of grossly overstating the true industry adjusted performance of the firms. Arguably, a better way of adjusting for industry performance would be to handpick a specific peer group, which is deemed highly similar to the acquirer and target companies in question. Given the size of our sample (n=354) this would have been an extremely time consuming task, which is why we due to the time limits refrained from doing so.

In conclusion, we see that our study of M&A performance suffers from similar problems and limitations as other outcome studies of M&A performance. The problem with this is that it is difficult to establish a true sense of agreement in the research community on the topic of M&A performance, as scholars seem to get differing results, depending on whether they apply the outcome based method or the event study method. Unfortunately, due to time constraints, it was not possible for us to conduct the same analysis on our sample using an event study approach. However, it would have been interesting to find out how and if our empirical results would have differed, if we had conducted our study using an event study approach. Arguably, M&As are some of the most complex strategic decisions a firm can make, and there might be a thousand variables affecting the subsequent M&A performance. It is important to realize, that deals are not always carried out to obtain better returns for shareholders or because of synergies. The motives for M&A may be of entirely different nature, such as empire building by CEOs or nepotism. Such motives do not always result in performance improvements, and it might be necessary to account for such factors by employing them as control variables. However, it is often hard to unveil and correctly identify such latent variables. Therefore, it will always be a highly complex task to evaluate the concrete effect of any variable on M&A performance. The same holds true for the task of trying to identify the true variables that affect M&A performance. This still remains a key priority in M&A research, as both King et al. (2004) and Thanos and Papadakis (2012) advocate, there is a need to consider and evaluate other criteria than the ones M&A research has historically considered. Our paper has tried to shed some light on possible new or additional variables that may affect M&A performance, such as three different types of institutional distance, and the role of FTAs.

# **6.** Discussion

Whereas we dedicated the last part of our analysis of our empirical results to analyze and discuss the technical limitations of our study and their implications, we will in the following shift our focus towards how our empirical results contribute to the existing institutional distance literature and how this enhances the understanding of the performance of cross-border M&As. Furthermore, we contribute to the multilevel view of institutional distance, by considering how our empirical results regarding FTAs may add to it. Finally, we will address directions for future research as well as implications for managers and policymakers.

### **6.1 Economic Distance**

Our results showed that economic distance has a significant negative impact on the industry-adjusted profit margin of cross-border M&As. This suggests that economic distance between countries, measured by amongst other things differences in GDP per capita, does create a tangible financial cost for firms conducting cross-border M&A, thus supporting our arguments surrounding our hypothesis 1. There are many mechanisms by which economic distance might create costs, and most likely, there are differing effects of economic distance on the profitability for each industry, as argued by Ghemawat (2001). However, our results indicate that for most industries economic distance seems to have a significant negative impact on the profitability of M&As. Our findings regarding economic distance confirm and lend empirical support to previous researchers who have tested economic distance, such as Berry et al. (2010) and Liou and Rao-Nicholson (2017). Both found similar results to our study, that economic distance had a negative impact on their respective dependent variables. Furthermore, it validates the empirical usefulness of the economic distance construct developed by Berry et al. (2010).

Given more time, it would be interesting to investigate whether economic distance has differing impacts on the profitability of M&As across industries, to test Ghemawat's (2001) argument that economic distance may have a differing impact across industries.

### **6.2 Regulatory Distance**

Our results showed that regulatory distance has a significant negative impact on the industry-adjusted profit margin of cross-border M&As. This suggests that regulatory distance between countries, measured by the differences in WGI-indicator scores, does create a tangible financial cost for firms conducting

cross-border M&A, thus supporting our arguments surrounding our hypothesis 2. Our findings regarding regulatory distance confirm and lend empirical support to previous researchers who have tested the impact of regulatory distance, such as Berry et al. (2010), Manning & Møller Larsen (2015) and Liou and Rao-Nicholson (2017). All of them found similar results to our study, that regulatory distance had a negative impact on their respective dependent variables. Furthermore, it validates the empirical usefulness of using the WGI-indicators as proxies for regulatory distance, an approach followed by Manning & Møller Larsen (2015). Our results highlight that regulatory distance should not be underestimated by managers of firms considering conducting cross-border M&A, and that regulatory distance should be taken into consideration by future research into cross-border M&A.

#### **6.3 Cultural Distance**

Our results showed that cultural distance has no significant impact on the industry adjusted ROA, ROE or profit margin of cross-border M&As. This suggests that cultural distance between countries, measured by the differences in scores in the WVS-survey, does not create a tangible financial cost for firms conducting cross-border M&A, thus disproving our arguments surrounding our hypothesis 3. Our findings regarding cultural distance are in line with those of Markides & Ittner (1994) and Liou and Rao-Nicholson (2017), who find that cultural distance does not have an impact on acquisition performance and cross-border M&A performance. However, several studies find a significant negative effect of cultural distance on M&A performance, either direct or indirect. Examples include Datta & Puia (1995), Rottig (2009) and Ahammad & Glaister (2011). In the following, we will address this apparent inconsistency in empirical results.

The apparent insignificance of cultural distance, as indicated by our results, is somewhat surprising, as cultural distance has historically been thought to be one of the main institutional distance factors to influence M&As and other decisions of MNEs, as highlighted in our literature review. Our results could indicate that cultural distance seems to matter less, at least in the context of cross-border M&As. One might argue that in the age of social media and increasing digital connectedness, cultural values are disseminated more quickly across countries, and that culture has started to transcend borders, making it hard to measure on a national level, as done so by our study. This goes back to some of the earlier critiques of cultural distance, that it is a complex phenomenon and that the assumption of culture being nation-dependent is too simplistic. Perhaps, culture should be looked at from a multi-level institutional

perspective, seen as either operating beyond borders (supra-national) or perhaps at an industry level. We leave this topic for future research to address. Contrariwise, economic distance and regulatory distance are more suitable for measurements at the national level, because the underlying institutions are highly specific to a country. As such, this might provide the explanation for why we do find significant negative impacts of regulatory and economic distance, while we do not find these impacts for cultural distance. Our results open up for a discussion around if institutional distance researchers interested in cross-border M&A profitability, should focus more on formal distance variables. At least our results indicate a tendency towards that formal distance, in terms of economic and regulatory distance, seems to explain more of the variance in the profitability of cross-border M&As, than informal distance.

Even though the argument that culture transcends borders, and is therefore not possible to measure on a national level, appears to have its merits, and we have to discuss the proxy we have chosen to measure cultural distance with. Given that we employ Berry et al.'s (2010) construct of cultural distance, who find a significant negative impact of cultural distance on their dependent variable, it seems surprising that we are not able to find a similar effect. This might be related to the fact that we have had to extrapolate the data for the cultural distance for about a third of our sample period (2010 - 2017). Given more time, it would have been interesting to investigate different proxies of cultural distance, in order to evaluate whether this would lead to different results.

### 6.4 The moderating effect of FTAs on Institutional Distance

With our thesis, we tried to address a previously uncharted territory; the relationship between FTAs and institutional distance and cross-border M&As. In doing so, we hoped to be able to contribute to the multilevel view of institutional distance, a view proposed by several researchers as mentioned in our literature review. Unfortunately, the empirical results, testing our hypothesis 4a, 4b and 4c turned out statistically insignificant. In other words, we were not able to find empirical support for our claim that FTAs help reduce institutional distance, both economic, regulatory and cultural, and as such, contribute to reduce the negative impact of institutional distance on cross-border M&A performance.

The immediate reaction of future research to our empirical results might be to discard the issue of FTAs entirely, and not to waste more time researching the influence of FTAs on institutional distance. However, we argue that this would be jumping to conclusions. Instead, we propose a possible explanation for the insignificance of our empirical results regarding FTAs and institutional distance. We argue that

there might be a possibility that the mechanisms identified in the development of our hypotheses 4a and 4b and 4c are too complex to materialize in the short time frame of our study sample. Our arguments are supported by researchers in the international economics literature, who have critiqued static models of the impact of FTAs to only take into account short-term gains (Plummer et al., 2010). Instead, the mechanisms by which FTAs influence the level, quality and effectiveness of both economic and regulatory institutions, should be measured using a different methodological approach that is able to take into account the long-term dynamic effect of FTAs.

Furthermore, there might be a difference between the ability of FTAs to influence institutional distance, depending on whether the target country in question, is a developed or developing nation. It seems reasonable to argue that FTAs may have a larger opportunity to impact the level, quality and effectiveness of regulatory and economic institutions in less developed countries, than in already developed countries. In fact, researchers from the field of international economics support these notions, stating that FTAs for example increase the wealth of signatory members and the structural quality of regulatory institutions (Plummer et al., 2010). However, they also note that this effect typically is only seen for developing or emerging market countries, whereas similar effects are not to the same extent visible for developed nations.

With these two considerations in mind, our empirical results can be interpreted in a new light. Our empirical results indicate that for cross-border M&As into developed countries, the existence of an FTA does not mitigate the negative effect of institutional distance. This gives rise to a new research question: Do FTAs improve the level, quality and effectiveness of economic and regulatory institutions in developing countries? Applied to the context of cross-border M&A, this becomes: Do FTAs reduce institutional distance between developed and developing countries, thus improving the performance of cross-border M&As into developing countries? We leave it up to future research to examine these questions in further detail.

We encourage future research to think about ways to address the complexity and potential long-term dynamic effects of FTAs, in order to better understand how and if FTAs are able to influence the level, quality and effectiveness of regulatory and economic institutions. If our thesis can contribute with one thing to this matter, it is that the approach we have employed appears to be too simplistic to capture such a complex phenomenon as FTAs. We hope that scholars interested in this matter can learn from our

mistakes, in the quest of elucidating the relationship between FTAs and institutional distance. Even with lack of empirical proof, we contribute to the multilevel approach to institutional distance, by introducing FTAs as a new variable. We argue that solely focusing on national level differences in institutions might inhibit a proper understanding of the complex environment faced by MNEs conducting cross-border M&As. Given the rise in the amount of FTAs, and the discussion around if institutional distance still matters, we believe it is highly relevant for research, managers and policymakers to understand how FTAs may impact institutional distance, and the consequent implications for cross-border M&A performance.

#### 6.5 Implications for Managers and Policymakers

The results of our study have important implications for both managers and policymakers. Even though we find only partial empirical support for our hypotheses that economic and regulatory distance decrease the performance of cross-border M&As, we argue that it would be unwise of managers of US firms to ignore the issue of economic distance and regulatory distance completely. Our empirical results show that regulatory and economic distance do have a statistically significant negative impact on the profitability of an M&A. As such, managers conducting M&A into countries that are suffering from poor regulatory and economic institutions, and therefore exhibit a high regulatory and economic distance to the US, should not underestimate the consequences this may have for the profitability of their firm. It would be advisable for such firms, to invest sufficient time into understanding the institutional context of the country, before deciding to complete the deal. Moreover, though we do not find empirical support for our claim that national cultural distance negatively affects M&A performance, we still urge managers to be careful not to underestimate the consequences of cultural distance. Especially in today's environment with social media, failure to comply with traditional norms, beliefs and values in other countries or internally can easily spur public outrage and damage the reputation of a firm for good, consequently hurting financial performance. Further, our empirical results show that FTAs do not have a moderating impact on the negative effect of institutional distance on M&A performance, at least in the short and medium term. For managers, this means that the existence of an FTA with the country they are contemplating to invest in, will at least in the short or medium term not reduce the impact of regulatory or economic distance. However, managers who are particularly focused on the long-term, may expect regulatory and economic distance to be reduced over time, as a result of the FTA. This statement should be treated with caution, as this is not something we are able to prove with our current empirical model and results, and therefore remains a field of interest for future research.

Even though our results do not indicate empirical support for our argument that FTAs may have longterm dynamic positive effects on the quality of both regulatory and economic institutions, we believe that this area warrants further research. We base this mainly on the realization that the methods employed by ourselves in this paper are not fit for testing the long-term implications of FTAs. However, as long as this research is ongoing, we encourage policymakers to not neglect the fact that there could be dynamic effects of FTAs, which are not quantifiable using traditional methods such as the ones employed by ourselves in this study. The reason we believe this is important, is the immense structural benefit these FTAs can have on developing countries, as shown by anecdotal evidence of the evolution of Southern European countries from the 1980s until today (Plummer et al., 2010). We believe both US lawmakers and lawmakers from other developed nations should be open towards negotiating FTAs with developing countries, as this can have immense positive consequences for these, and contribute to political stability, which eventually will lead to economic growth and prosperity for the countries. In the end, this will also have positive spillovers on countries such as the US and Western Europe, as there will be less geopolitical risk for US and Western firms when investing abroad.

# 7. Conclusion

The aim of our paper has been to shed light on variables from outside the field of M&A research that may impact and explain cross-border M&A performance. We have done so by employing the concepts of institutional distance to the realm of M&A performance. Whereas, previous M&A research did take into account some variables like cultural distance, only few researchers have investigated the impact of other institutional distance variables on cross-border M&A performance. Our paper contributes to the understanding of cross-border M&A performance, by investigating how institutional distance variables such as economic distance, regulatory distance and cultural distance affect cross-border M&A performance. We develop specific hypotheses for the impact of each institutional distance variable on M&A performance, and argue that economic distance, regulatory distance and cultural distance and cultural distance negatively impact cross-border M&A performance. Using an OLS regression model, we find partial empirical support for our hypotheses regarding economic distance and regulatory distance and no empirical support for our hypothesis regarding cultural distance. Our results highlight the importance of considering differences in formal institutions, specifically economic and regulatory, when conducting cross-border M&A. This suggests to managers of firms conducting cross-border M&A that distance still matters.

Moreover, our paper contributes to the multi-level understanding of institutional distance, by introducing FTAs as a new variable of interest. We do so, because previous research suggests that solely focusing on national level differences in institutions might inhibit a proper understanding of the complex environment faced by MNEs conducting cross-border M&As. Specifically, we develop hypotheses stating that FTAs are able to mitigate the negative effect of economic, regulatory and even cultural distance on cross-border M&A performance, because they help reduce institutional distance between countries over time. We do not find empirical support for these hypotheses. We conclude that the statistical models employed by us are too simplistic to be able to capture such a complex phenomenon. Despite the lack of empirical evidence with regards to the ability of FTAs in reducing institutional distance, we suggest that researchers should be careful to discard FTAs because of this. We argue that there is theoretical evidence from the field of international economics, pointing to long-term dynamic effects of FTAs, enabling them to reduce institutional distance. We encourage future research to empirically test these claims, as they have

important ramifications for both managers, policymakers and researchers in the field of institutional distance.
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