How critical is culture to M&A success? A cross-national analysis of acquisition activity.

Master Thesis

M.Sc. Financial Economics (*)

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Final version submitted: June 21, 2018.

* This thesis is submitted in partial fulfillment of the requirements for the degree Master of Science in Economics and Business: Specialization in Financial Economics from Erasmus School of Economics.

Aknowledgements

This master thesis is the final project of the Master of Science in Economics and Business - Specialization in Financial Economics - to graduate from Erasmus School of Economics. For that reason, I would like to thank my supervisor, Dr Maurizio Montone, for the exquisite cooperation and communication throughout the writing process. Furthermore, I would like to thank my family and close friends who contributed with their own way in this thesis becoming a reality. And last but not least, I want to wholeheartedly thank my father, Dimitris, whose never-ending support and motivation have driven my personal, professional and educational development throughout the years.

Abstract

This paper aims to identify how key elements of national culture – beliefs on Trust, Individualism, and Hierarchy – affect cross-border merger and acquisition activity globally, in the time span of 2008-2014. To do so, I follow a similar approach to Ahern, Daminelli & Fracassi (2012). M&A activity is measured in a) number or completed deals between countries, b) deal value, c) stock performance of the acquiring firm and d) deal-level characteristics. First, I find that, in general, more culturally distant countries will engage in less M&A deals than countries that share common values. Second, deals between culturally different countries tend to be substantially cheaper (up to 22.2% less expensive). Third, the bigger cultural disparities are, the less likely it is that the deal will be paid in cash, the target firm less likely to be public and the industry more likely to be the same. Finally, there seems to be no obvious relationship between national culture and short-term stock performance of the acquirer, in contrast to Ahern et al's results, signifying the complexity in identifying M&A determinants and their prediction from today's markets.

Keywords: Culture, M&A, Trust, Individualism, Collectivism, Hierarchy, Egalitarianism, Cross-border

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1. Introduction

Since the beginning of the last century, mergers and acquisitions (M&A) have been one of the most famous and ever-growing types of economic transactions between corporations, while globalization and immense growth of new economies have been pushing corporations to exploit new deal opportunities in cross-border markets, especially if the domestic market is characterized by weak shareholder rights and non-transparent accounting principles (Rossi & Volpin; 2004). Although very extended research has been conducted on M&A transactions, especially in the US market, cross-border M&As gain more and more interest, with nearly a third of global mergers being cross-border in the 21st century (IMAA[2]). The success factor for this type of M&A is comprised of a multitude of different factors, such as geography, currency rates, investor protection, stock price movement and many more (Erel, Liao & Weisbach; 2009). Surprisingly enough, previous studies on cross-border mergers show that the exploitation of such opportunities results in a rather underperformance compared to domestic mergers (Aw & Chatterjee; 2004, Eckbo & Thorburn; 2000). This phenomenon is known as the cross-border effect[3](Moeller & Schlingemann; 2005). Moreover, some countries appear to have more interaction with each other than with others when it comes to economic transactions, foreign direct investments, and trade. (Barthel, Busse & Neumayer; 2009, Froot & Stein, 1991). But what is it that shapes this pattern? And why do firms engage in such cross-border activities if they are proven to underperform compared to domestic ones?

A clear and concise answer would be rather difficult. A complete and successful merger is comprised of many characteristics. Performance measures can be either short-term, such as announcement returns, or long-term, such as return on assets. In this paper I use the first method, which is one of the most commonly used in academic research. Positive excess/cumulated abnormal returns is a key performance indicator, however, it only is a reliable index in the short-term, which translates in days or even a few years after the announcement date of a deal. The ability of the newly created firm to achieve coordination between the employees of the acquirer and the target is another integral part, a feature that is responsible for the long-term M&A success. These synergy gains, however, may be obstructed when the employees of the two different corporations do not share similar cultural values. This can pose as one of the biggest threats to the success of a deal. It is widely proven that culture indeed has a significant impact on economic decisions (Guizo, Sapienza & Zingales; 2006) and leadership (Javidan & House; 2002). However, culture can be viewed from various perspectives such as corporate culture, business culture, etc. In this paper, I focus solely on national culture and its impact on M&A activity between countries on three levels: a) volume, translated in

[2] The Institute of Mergers, Acquisitions and Alliances is a non-profit think tank for M&A globally. Among others, they provide statistics for the time span of 1985-today.

[3] Moeller and Schlingemann define the cross-border effect as the expectation that cross-border M&A will exhibit lower returns than in-border M&A in the absence of market imperfections and homogeneity of acquirers and targets in the capital markets.

number of deals between each country pair, b) deal value, translated in millions of US dollars of capital and stock used for the acquisition and c) acquirer stock price movement, translated in cumulative abnormal returns of the bidders. However, since there are numerous dimensions of cultural values, it is impossible to include them all in the analysis. Therefore, I use three widely used dimensions to measure cultural disparity: a) *Trust versus Distrust* (whether people can be trusted or not), b*) Hierarchy versus Egalitarianism* (whether people should follow orders given by higher authorities) and c) *Individualism versus Collectivism* (whether people would sacrifice personal benefits for the benefit of a bigger group).

The culture-performance relationship has been moderately researched during the last two decades. However, the results are not always in line. Some researchers claim to observe a positive relationship between the two terms and others contradict the first by showing a negative relationship, which is much more prevalent, more on these results are presented in Section 2. While all results are reliable and significant, this contradiction in results has been puzzling researchers for decades as to whether cultural disparity has a positive or negative effect on cross-border mergers and what drives this relationship. I also elaborate on this dispute more extensively in Section 2.

I find that differences in trust have the inverse effect on M&A activity (positive) but combined with differences in Individualism or hierarchy, the effect direction changed to the expected negative relation. As far as the impact on deal value and characteristics, I find that higher differences in national culture will lead to lower acquisition fees and lower probability of cash payment, indicating a risk mitigating strategy from the acquirer's side to give more incentives for post-merger growth. Stock performance cannot be described by any of my cultural value variables indicated by statistical significance absence, confirming the difficulty that markets face to predict and pattern acquisition activity. More details on the results are presented in Section 4. The intuition behind these results is that these cultural values can affect the way people interact with each other, this being the cooperation and coordination of two different companies' employees and the cultural distance that separates them. To put this into perspective, when a trustful person needs to cooperate with a more suspicious person from a different culture, coordination between the two cannot be achieved. Similarly, the same issue arises when an individualist person needs to cooperate with a collectivist, because they do not share the same goals and aspirations (benefits of the group versus personal gains). Finally, people with different opinions on equality and whether authority can dictate who follows orders can create friction in their collaboration.

Differences in these values unarguably have an effect on post-merger coordination, however, it is not clear which angle of these values has the highest impact, either positive or negative. Being trustful can lead to a bigger share of combined merger gains (Ahern, Daminelli & Fracassi; 2012) because of the reciprocal nature of trust, that is; receiving more gains as a reward for being trustful in the first place (Berg, Dickhaud & MacCabe; 1995). Part of the critique on this intuition might be that people can be taken advantage of when they show a lot of trust, leading

them to a smaller share of the combined gains, which surprisingly is confirmed in my results. From a hierarchical point of view, more hierarchical firms are expected to get a bigger share of merger gains due to their beliefs, as acquirers, only one firm should have gains from a merger, the acquiring party. This is in line with my results, showing that indeed bigger hierarchical differences will negatively affect merger gains. Something similar is expected for individualistic firms also. By nature, they are expected to aim for the bigger share of the gains while more collectivist firms would prefer the gains split for the greater good of both firms. Again, this is line with my results, confirming this hypothesis. The reason for this outcome lies in the cultural discrepancies or similarities between countries and hence, the firms that operate in these countries. For instance, some countries promote individual effort as the foundation of success while others believe that teamwork is the key to achieving success, regardless of the way this success is defined. In the same way, some cultures accept the existence of hierarchy and the way it structures a society, while other, more egalitarian cultures, tend to question authority and do not like to follow orders without being convinced first. These are some of the reasons - from a cultural perspective- why firms with cultural differences are less likely to realize post-merger gains.

To approach this matter, I construct a regression model, that not only uses physical geographic distance (Frankel & Romer; 1999) but also takes into account distance from a cultural dimension, based on the three aforementioned aspects of culture; trust, hierarchy and individualism.

Since culture is definitely not the only factor that influences cross-border mergers, a number of controls and fixed effects are used in my analysis to have as consistent and accurate results as possible. These include country-level control variables (GDP, legal origin, economic freedom indices, etc) and country-pair control variables to control for common sociological and economic features between countries, such as common currency, language or religion. More details for the control variables are presented in Section 3. Furthermore, I use year fixed effects and both acquirer and target country fixed effects to control for the impacts of events that are unrelated to the study. Such events include global economic fluctuations that affected trade (such as the European debt crisis) and country level events that also influenced the markets at the time of my analysis such as political elections, etc.

To present my results about the volume of mergers and the deal value size around the world, I use all completed cross-border mergers in my time horizon, from both publicly and privately held firms. To examine the effect of national culture on the stock price performance of a merger, I use Cumulative Abnormal Returns computation (CARs) and thus, I limit my subsample to publicly traded firms. I perform an event study on stock prices following a small interval [-1,1] around the announcement date of each deal. It is a very commonly used event window to record the market's reaction to a merger deal announcement. As robustness checks I exclude all US acquirers and targets and run the same regressions.

The rest of my paper is organized as follows. Section 2 demonstrates the literature review and the theoretical background in order to develop my empirical predictions. Section 3 describes different datasets that I utilize and the methodological approach for my analysis. In Section 4, I present all the different empirical tests and regressions I performed to monitor the effect of cultural values on the different aspects of M&A activity (merger volumes, values and CARs). Section 5 describes the conclusion and robustness checks. Areas of future development are presented in section 6. Sections 7 and 8 include reference to sources used and appendix respectively.

2. Literature review

2.1. Previous research contradicting and results

Surprisingly, relevant studies on this research question claim to report better performance in cross-border deals compared to domestic ones (Morosini, Shane & Singh; 1998, Chakrabart, Gupta-Merkherjee, & Jayaraman; 2009). The rationale behind these results is that the implementation of a transnational (rather than an ethnocentric) approach is what eliminates administrative difficulties in an international firm, from the managers' perspective (Lubatkin, Calori, Very & Veiga; 1998). On the contrary, other studies conclude that contradicting cultures have a negative impact on M&A synergy gains from the acquirer's perspective (Ahern, Daminelli & Fracassi; 2012, Datta & Puia; 1995, Olie; 1990). Teerikangas & Very (2006) shed some light in this confusing dispute by pointing out a few implications. The type of culture measured in research has a major influence on the results (corporate versus national versus hybrid culture). They also conclude that the methodological choices to research the culture-performance relationship oversimplify the complexity of the concept of culture and the dynamic process of M&A. These imperfections combined with poorly defined measures of culture and/or performance can lead to inaccurate and ambiguous results.

In my paper, I try to be as defining yet not complicated as possible, to produce the most accurate results with the resources given. Below I explain the intuition behind the expectations of my analysis in a more detailed manner and how key details can affect the results.

2.2. Definition of Culture

First and foremost, the type of culture analyzed in my paper needs to be defined properly, along with its respective dimensions and the expectations. A generally used definition of

culture is *the customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation* (Guiso, Sapienza & Zingales; 2006). It is of utmost importance to differentiate between different types of culture. Hofstede[4] (1991) stresses the difference between organizational culture and national culture and how different these concepts are. In national culture, a society's variation in beliefs is like a bell curve; individuals share most characteristics that define this society, although there are also extreme values. For research simplicity measures, I assume that individuals in a country are the same (and equal to the average person, based on the responses of this country's residents). According to Weber, Shenkar & Raveh (1996) another major difference between these two measures is that national culture is defined by deep-held values, whereas corporate culture is defined by differences in operational practices between firms. They emphasize that differences in national culture are more likely to pose an impediment in the success of a deal compared to corporate culture because corporate culture is much less rigid in nature. Based on this concept, I expect to find considerable differences in M&A success and synergy gains between countries that have significant cultural differences.

2.3. Why those measures?

Since national culture is a very wide and complex entity to be analyzed and measured, I only include three of the most widely used aspects of culture: trust, individualism and hierarchy. This three-level classification of culture is based on the importance of each value and the extent that they have been used in academic research. Trust (or distrust) is considered one of the most fundamental elements of a societal identity approach. Hierarchy and individualism have been included in most major research papers as one of the fundamental dimensions of culture. They are used in the three-dimension system of Schwartz (1994), in the four-dimension system of Fiske (1991), in the five-dimension system of Hofstede (1980, 2001) and the seven-dimension system of Trompenaars (1993), to name a few.

2.3.1. Trust and Distrust

Morgan, Robert & Hunt (1994) describe trust as an economic lubricant, reducing transaction costs and enabling co-operational spirit. Following Ahern et al (2012) - who also use the same three measures in their model - trust works as a catalyst that makes economic transactions complete, especially when uncertainty is high. This is extremely relevant since transactions and trade between different countries - and thus different cultures - are characterized by uncertainty and in some cases even distrust. As early as 1972, Arrow (1972) succinctly

[4] Geert Hofstede published this particular book with title "Cultures and Organizations : Software of the Mind" in 1991. This book examines the differences in the way strategists think, and offers suggestions on how conflicts between them can be resolved.

concludes that trust is what facilitates trade. This claim is backed up by a very recent study by Carlin, Dorobantu & Viswanathan (2009), who examined the evolution of trust in markets. They concluded that regulations can negatively affect trust formation in a society. However, if the social capital in the market is valuable, trust is the driving value that creates growth. Mergers and acquisitions are unarguably an external growth driver of firms. Linking these intuitions with my paper, trust is the primary force that enables firms to seek growth through M&A with firms from a different cultural environment. My expectation from the analysis is that countries with higher level of trust engage in a higher volume of M&A and cultures that have trust as an embedded value have higher gains from a merger. The opposite applies for big Trust distance.

2.3.2. Individualism and Collectivism

In individualistic cultures, individual effort and success are rewarded without giving a lot of attention to society's overall accomplishments. It is normal - or even expected – that individuals strive to maximize personal gains, without being tied to the well-being of the overall group or its accomplishments. On the other hand, in collectivist cultures, individual goals and accomplishments are firmly tied to the good of the group. Individuals are expected to sacrifice personal gains for the benefit of the group (Brett & Okumura; 1998, Brett; 2000). This cultural measure is the least used in academic research from the three. However, it is gaining more popularity with recent examples of Tabellini (2008) and Gorodnichenko & Roland (2010), who use individualism as the leading cultural norm. In my paper, I expect differences in individualism to have a negative effect on both volume of mergers and merger gains from the acquirer's perspective. The intuition behind this expectation is that a collectivist acquirer will avoid collaboration with an individualistic target or vice versa because the two parties do not share the same goals. Given that acquirers may not know their target's level of collectivism beforehand, post-merger cooperation is difficult, reducing total merger gains for the acquirer and both volume and value of mergers between individualistic and collectivist countries.

2.3.3. Hierarchy and Egalitarianism

Hierarchical cultures are structured in a way in which authority is an important embedded value into people's lives. Just like in a hierarchical organization, which operates by classifying people into different ranks of authority, a hierarchical country strongly believes that higher ranked people are the decision makers and earn the respect of lower-ranked people. It is them who have the authority to give orders and subordinates are obliged to follow them without question or doubt. In return, higher ranked members' obligation is to ensure the safety and prosperity of lower ranked members. This top-down approach of hierarchical organizations is usually accepted also by the lower ranked members. On the contrary, egalitarian organizations

have deeply embedded values of equality. Members may have superiors or subordinates but they are more likely to think of themselves as equal to them (Brett & Okumura; 1998) and decisions are made equally. Furthermore, equally treated members are more encouraged to doubt or challenge decisions made by others and they can even decide not to follow orders if they are not convinced first over the decision, as opposed to hierarchical cultures where decisions are followed directly and without the need of prior convincement.

My expectations are that an increase in the difference in hierarchy will probably result in lower M&A activity in terms of volume, value and merger gains and firms that are significantly different in hierarchical values will realize lower benefits from an acquisition. However, it is not certain whether a high or low hierarchy index outperforms which[5]. The intuition behind these expectations is that post-merger cooperation will not be successful if superiors and subordinates do not share common values. Following Ahern (2009), hierarchical superiors will not be able to understand that egalitarian subordinates will not follow orders without prior justification and - inversely - egalitarian superiors will not be able to gain respect from hierarchical subordinates because of the "inability" to lead. Edge (1984) concluded that - overall - hierarchical organizations realize lower returns on investment than egalitarian ones and the decision-making process is much more difficult and slow. However, when egalitarian organizations sacrifice individual benefits for the group, hierarchical groups earn significantly higher returns. In other words, a combination of an egalitarian and collectivist group will underperform in comparison to a hierarchical group. This rationale is confirmed from the point of M&A activity and deal value but is not confirmed from the perspective of performance. More details are presented in Section 4.

2.4. A few insights on culture and cross-border M&A

The final relationship between national culture and cross-border M&A activity, although undoubtedly strong, it can never be fully defined and standardized. The immense number of factors in the equation makes it difficult to draw a static conclusion, hence the numerous and conflicting research papers mentioned throughout this chapter. However, what is certain is that countries that are familiar with each other in one way or the other will engage in more bilateral deals. Giannetti and Yafeh (2009) proved that interest rates in bank loans are higher when the borrower and lender countries are more culturally distant. Dinc and Erel (2010) also proved that economic nationalism is a measure of domestic bidder protection, where a target government's reaction to an acquisition bid depends on the acquirer's nationality. Giving culture a totally different dimension, Griffin, Li, Yue & Zhao (2009) prove that individualism, among other cultural values, is positively linked to firm risk-taking.

[5] This issue is addressed more extensively as a structural limitation in Section 6.2 as lack of direction in the measures.

Another important factor that might influence the intensity of cross-border M&A activity is foreign ownership. Ferreira, Massa & Matos (2010) proved that foreign institutional ownership increases the probability of a deal being cross-border, especially in countries with weak legal institutions. However, the relationship between legal institutions and the financial sector is very contentious and controversial (Beck & Levine; 2003) with legal institutions shaping the financial system and its development. People would argue that these institutions are regarded as the cultural foundation for each country, thus creating reverse causality problems in this research. To address this critique, a number of papers provide evidence that national culture is a bigger determinant of institutions than vice versa (Gorodnichenko & Roland; 2010, Tabellini; 2008, Licht et al; 2007).

3. Data and Methodology

In this section, I provide a more detailed overview of the data used in this paper as well as the quantitative methodology I follow with the construction of certain measures, the control variables and the reason why I use them and the general approach with my available sources.

3.1. M&A Data and dependent variables

For my analysis on cross-border M&A activity, I retrieved M&A figures from Zephyr Database[6]. My initial sample criteria are the following. I include all completed (that also includes completed assumed or confirmed deals), cross-border mergers and acquisitions (by country) over a seven-year period (1/1/2008-31/12/2014) that are comprised of both listed and unlisted companies, however, the CAR analysis will be performed only on publicly traded firms and only from the acquirer's side since target firms tend to earn positive returns, especially when there is a tender offer or a cash payment for the deal (Huang & Walkling, 1987). To differentiate the sample, I also monitor whether the target is a publicly or privately traded company, based on their ISIN code. In order to have a better-structured sample and control variables, I filter the sample, leaving only those deals that fulfill certain conditions: a) The deal value exceeds the amount of $1 million, including estimates wherever it is not certain. b) The percentage of stake acquired by the bidder is at least 50% or higher, c) The deal types are limited to only mergers and acquisitions, so I leave out any IPOs, institutional buy-outs, capital increases etc. I have placed no restriction on the type of companies involved as counterparts, however, governments as acquirers are excluded from the sample, because it is not possible to include them in the CAR analysis. For all the deals in my final working sample, I monitor the form of

[6] Zephyr is one of the most comprehensive and succinct databases of merger deals and it is frequently used for corporate finance research. It contains daily updated information on mergers, acquisitions, IPOs, private equity and venture capital deals across the globe.

payment used for the deal (abundant cash or shares only), the industry classification code (2-digit NAICS2012 code) for both the acquirer and the target and, finally, the dates of both the announcement and completion of the deal.

After inserting all filters, I end up with 10629 cross-border deals (8234 of which do not contain a US firm as acquirer or target). From these, I use a sample of 5723 deals from publicly traded firms (3933 of which do not contain a US firm, more in Section 6) in my CAR analysis. The reason for that sample reduction is that many of the firms in the original sample are not listed companies or the information for stock prices are not available. Apart from my main analysis, I perform also the same analysis on non-US deals separately as robustness check. The reason behind this is that the US market is extremely large and it may affect the outcome of my research questions. Figure 1 in the Appendix shows the top 5 acquirer and target countries in terms of the number of deals recorded, compared to the rest of the world, in the time span of 2008 – 2014. Figure 2 shows the 20 largest country-pairs in terms of deals from the acquiring countries.

The basic performance measure in my research is *Cumulated Abnormal Returns (CAR)* calculation for acquiring firms in a time interval of 3 days, Day-1 until Day+1 around the announcement date. To do this, I have used the EIKON event study tool. For all acquirer companies, I monitor their unique ISIN code to track down their daily stock price in each of the 3 days in my interval for the realized returns and their expected returns in an estimation window of 100 days before the announcement of the deal. Estimation of acquirer CAR is the following:

- For each deal, I monitor the real returns in each of the three days in the event window, as well as the expected returns in each of the three days. Expected returns are calculated based on the Market Model.

- For each day, I subtract the expected return from the recorded return, thus calculating the abnormal return for each day in every deal and summing them up to calculate CAR, based on the market model.

- I also use an alternative method to compute CAR. I sum all three mean-adjusted returns reported in the EIKON export for the 3-day interval to reach the cumulative abnormal return for all acquirers, in all deals.

As already mentioned in Section 1, I prefer to measure stock market-based performance over accounting based performance since it has been used in research extensively and is considered a reliable approach. There is no “correct” measure of performance (Zollo & Meier, 2008) nor is there a correct event window. Furthermore, Lyon, Barber & Tsai (1999) conclude that long-run abnormal returns can be a treacherous procedure and can lead to misleading results. Therefore, I follow Ahern et al (2012) and use the same short 3-day interval in my paper as well. To have more robust results, I also weigh each bidder CAR with the respective acquirer’s market capitalization at the time of the announcement, based on information from Zephyr.

The second basic dependent variable in my paper is *Deal_value,* translated into millions of 2011 US dollars. I perform the same analysis as with the first dependent variable and try to identify the drivers of value in a merger or acquisition deal.

Finally, variable *#_of_Deals* describes the intensity of M&A activity translated into deals for an acquiring country. The number of deals is recorded by year for every acquiring country. Since richer and more developing countries are more likely to engage in acquisitions, I scale this variable by the acquiring country's real GDP for that specific year.

3.2. Explanatory variables: Empirical Measures of Cultural Values

For the explanatory variable of national cultural values, I use data from two different sources. For the measures of Trust and Individualism, I use World Value Survey (WVS)[7]. Their research was first launched in 1981 and has been carried out in 7 different waves of 1981-1984, 1989-1993, 1994-1998, 1999-2004, 2005-2009, 2010-2014 and 2015-to date. However, the sets of questions used in each wave differ slightly from each other. Since the time horizon of my research is 2008-2014, I use data from the last two completed waves. Each questionnaire contains about 250 questions on various topics such as general beliefs, religion, politics, education, professional development etc. I only focus on two questions that relate to my measures of cultural value and, to maintain consistency, I use the same questions that are present in both questionnaires.

3.2.1. Trust versus Distrust

The question answered that relates directly to trust is the following from WVS:

> "*Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people? (Code one answer):*
>
> *1) Most people can be trusted.*
>
> *2) Need to be very careful. "*

[7] World Value Survey is a network of social scientists, headquartered in Stockholm, Sweden and their objective is to study cultural values in almost 100 countries around the world, representing more than 90% of the world's population. They conduct their research by interviewing more than 400.000 random participants based on the same questionnaire and document the changing of values and the effect of these values on each country's social, political and educational background.

This is a very reliable measure of trust and it has also been used in countless studies in order to measure trust as a cultural value. (Ahern; 2009, La Porta, Lopez-de Silanes, Shleifer & Vishny; 1997, Sapienza, Toldra & Zingales; 2007, and Guizo, Sapienza & Zingales; 2009).

3.2.2. Individualism versus Collectivism

The question that relates as closely as possible to individualism is the following from WVS questionnaire:

> *"How would you place your views on this scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between. (Code one number for each issue):"*

Incomes should be made more equal.									*We need larger income differences as incentives for individual effort.*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*

The more a country's people believe in individual effort and the benefits that come with it, the more individualistic the country is and the less ensured the benefits are for the whole group. This is also a widely-used variable in cultural research conducted by Guiso, Sapienza & Zingales (2003) and Gabaix & Landier (2008).

The merged data from wave 2005-2009 and wave 2010-2014 contain Trust and Individualism information for 80 countries.

3.2.3. Hierarchy versus egalitarianism

For the third explanatory variable of hierarchy, I use a second source. I do not use the relevant question from WVS as it is not available from the 2010-2014 wave onwards, so there is no data to retrieve. Instead, I use the Power Distance Index (PDI), introduced by Hofstede (1980). The data comes from Hofstede (2011) and concerns 66 countries around the world. This index describes the degree of acknowledgement and acceptance of the less powerful or wealthy people of a society that power is distributed unequally throughout this society. The higher the index is, the more likely it is that less fortunate individuals accept the inequalities of wealth and power between people and the more hierarchical a country is considered. On the other hand, a

lower PDI indicates more egalitarian countries, which promote equal treatment for all individuals in the same society.

3.2.4. Explanatory Variable Structure

At this point, I must make an important clarification. The data used to compute the cultural measures refer to individuals from different countries. Since the unit of analysis in my paper is a firm and not an individual, I make the assumption that a firm "acts" as a nation's average individual. For example, a French-headquartered company's staff is of French nationality. To make this assumption realistic, Ahern et al (2012) provide evidence from Boardex Database that the majority (over 85%) of CEOs and board members are nationals of their company's country of residence. Though there is no relevant information available, I make the same assumption about all employees of a company. This assumption is made to ensure that all employees of a company have the same beliefs over trust, individualism and hierarchy.

From the three initial databases, I sort the data by country and scale each answer to fall between 0 and 1. Then, for all respective countries, I calculate the average response to each of the two questions regarding Trust and Individualism and merge them with the PDI data where all indices are already scaled. Figure 5 in the Appendix shows a scatter plot of the country-level measures of the three cultural values I use in my analysis along with the average lines per measure. From this scatter plot there it is clear that a large number of countries are clustered on the right of the average Trust line, concluding that these countries are more distrustful. However, the measures of Individualism and Hierarchy are evenly distributed in the sample.

Since my analysis involves cross-border mergers and by extension country pairs, I construct three new variables that measure the cultural distance for each country-pair along each one of the cultural measures. Specifically:

$|\Delta\_Trust|$ = The absolute difference of Trust score among a country pair.

$|\Delta\_Individualism|$ = The absolute difference of Individualism score among a country pair.

$|\Delta\_Hierarchy|$ = The absolute difference of PDI among a country pair.

One might argue that the set of explanatory variables that I use in my model interact with each other, thus leading to endogeneity problems. It has been speculated that raises in individualistic beliefs are associated with the increase of social trust, whereas collectivism has been associated with hierarchical and engulfed social bonds that hinder the formation of trust in a society. I address this issue, by providing evidence from Shin & Park (2014), who examine the

relationship between individualism, collectivism and trust. They conclude that, although collectivism has a positive relationship with trust, however, the same does not apply to individualism. Furthermore, table A shows the correlation between the three cultural measures used in my sample. Again, the p-values show no significant relation between the explanatory variables, which supports the statement that each of the three cultural variables measures something unique and unbiased.

Table A. Correlation Matrix of the explanatory variables. The same matrix was created for individual values of the cultural measures and the same conclusion is made

	|Δ_Trust|	|Δ_Individualism|	|Δ_Hierarchy|
|Δ_Trust|	1		
|Δ_Individualism|	0.0948***	1	
|Δ_Hierarchy|	0.347***	0.130***	1

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

3.3. Control Variables

3.3.1. Legal origin

Chari, Ouimet & Tesar (2010) and Bris & Cabolis (2008) have proven that a nation's legal system significantly affects the acquirers' gains and targets' premiums in cross-border mergers. To control for legal origin, corporate and shareholder protection, I use the same data from La Porta, Lopez-de-Silanes, Shleifer & Vishny (1998), a widely used source when tracking a country's legal origin. La Porta et al have recorded the legal origin of 211 different countries, each belonging to one of the following: English (or Common), French, Scandinavian, German and Socialist Civil Law. They have proven that countries that fall under the English or Common Civil Law have the strongest protection against shareholder expropriation while countries that fall under the French Civil Law have the weakest protection. For each country there is only one legal system recorded, so the initial dataset contains country observations. To avoid the use of abundant binary variables in my basic analysis, I use only one binary variable, *Common_Legal_dummy* with values of 1 if the country-pair has a common legal origin and 0 if they do not. 61% of the deals are between countries with a different legal system and 39% are between countries under the same legal origin.

3.3.2. National wealth

To control for a country's wealth, I use gross domestic product data from PWT[8]. From the available data, I construct the variable *GDP_real* which is the simple average of expenditure-side GDP and output-side GDP. The reason for that measure lies in the differences between the two variables in both value and explanation. While both show real Gross Domestic Product in Purchasing Power Parity rates (PPPs), expenditure-side GDP shows the comparison between relative living standards across countries and time, whereas output-side GDP shows the comparison of production capacity. However, differences in figures are very small. All figures are measured in 2011 US dollars. Other variables used are GDP per capita (*GDP_capita*), constructed by dividing *GDP_real* with the average population of each country during my time frame (2008-2014) and *Wealth_Distance,* calculated like so:

$$Wealth\_Distance = \frac{\text{GDP\_real\_A} - \text{GDP\_real\_T}}{(\text{GDP\_real\_A} + \text{GDP\_real\_T})} \qquad (1)$$

If *(1)* is negative, it shows that a firm from a less developed country acquires a firm, coming from a more developed country. My expectation is that *Wealth_Distance* will have a negative relationship with deal value and/or number of deals, following the intuition that wealthier firms come from financially stronger countries and target small firms from financially weaker countries.

3.3.3. Economic Freedom

Huang & Walking (1987) and Asquith, Bruner & Mullins (1991) demonstrate the importance of tax rates as a form of resistance in acquiring merger gains. In my paper, I take it a step further and control for a country's corporate tax rate as well as its general financial development and corporate freedom. I retrieve my data from Economic Freedom Index[9], a website containing country level information on a variety of qualitative and quantitative measures. The indices used to construct the difference-in-economic-freedom variable are *government integrity, tax burden*, *business freedom*, *labor freedom*, *monetary freedom, trade freedom*, *investment freedom* and *financial freedom*

All the indices used are on a scale from 0 (most repressed countries) to 100 (most free countries). I compute the absolute difference in each of these indices for each country pair and

[8] Penn World Tables is a website/database that holds national accounts data. Available information includes GDP, growth, standard of living, exchange rates, population, productivity, employment and other indices, all provided in the same currency (US dollars) making it an ideal source for research.

[9] Economic Freedom Index contains data and indices that fall under 4 general categories: rule of law, government size, regulatory efficiency and open markets.

the average difference of economic freedom variable as an equally weighted average of the above eight indices.

3.3.4. Religion

Following Barro & McCleary (2003) on the influence of religion on economic outcomes, I control for a country's religion with data from the Association of Religion Data Archives (ARDA)[10]. To further refine this database, for each country I only record the religions with the highest proportion as a percentage of the total population for the year 2011. The variable that describes this measure for each country is *Common_Religion_dummy* with the following values: 1 if the country pair has a commonly practiced religion and 0 if not.

3.3.5. Geographic and linguistic distance

Ragozzino (2009) depicts the importance of geographic distance in the cross-border M&A activity equation. To control for countries' geographical, linguistic or other distances, I use information from CEPII[11]. Two different datasets were used and later merged, one concerning geographical distance measures for each country pair and one concerning linguistic measures. Finally, one other binary variable monitors whether a country pair shares a common currency.

- Bilateral geographic data

The variables utilized from this dataset are mainly referring to geographic distances between country pairs. Two binary variables are used here: *Contiguity_dummy* monitors whether two countries share a physical geographical border and *Colony_dummy* monitors whether the two countries ever had a colonial relationship. Three other variables measure-in km-simple distance from most populated cities (*dist*), distance from capital cities (*distcap*) and population-weighted distance (*distw*) although I only utilize the population-weighted distance as the most accurate.

- Bilateral linguistic data

[10] ARDA database contains information for each country's proportion of different religions based on population. The data concerns the year 2011. Panel data is not yet available for the period of my research, so the middle year of my time span is the best alternative, under the assumption that different religion percentages among a country's population do not significantly change throughout my time horizon.

[11] Centre D'Etudes Prospectives et D'Informations Internationales (CEPII) is a French research center that focuses on international economics and how the world economy develops from different perspectives.

The variables used from this dataset refer exclusively to linguistic data. Two variables measure whether a country pair shares a *common official language* (COL – dummy variable) or a *common spoken language* (CSL – values between 0 and 1).

3.3.6. Trade Openness

For an additional control over the level of foreign trade, I use data from United Nations Conference on Trade and Development (UNCTAD). For each individual country, I record all foreign direct investments (FDI), both inward and outward, for the time span of 2008-2014. These FDIs are measured in both capital flows and stock. I continue to create a variable called *openness*. For each country, I first calculate the average ratio of inward FDI over GDP in the time span of 2008-2014 and then calculate the same for outward FDI over GDP. Openness is the arithmetic sum of these two ratios. It basically shows how prone (or "open") a country is to receiving or sending FDIs. Table B shows the correlation between acquirer GDP and Openness as well as target GDP and Openness since mergers and acquisitions are part of FDIs. Again, no obvious correlation exists between these measures.

Table B. Correlation matrix of GDP and Openness. No significant correlation exists, making these two measures completely independent.

	GDP_real_A	GDP_real_T	Openness_A	Openness_T
GDP_real_A	1			
GDP_real_T	-0.199***	1		
Openness_A	-0.101***	0.0108	1	
Openness_T	-0.124***	-0.197***	0.0881***	1

t statistics in parentheses

$^{*}p < 0.05, ^{**}p < 0.01, ^{***}p < 0.001$

3.3.7 Other Variables

To further investigate the effect of control variables, I introduce a few dummies that might have a significant impact on my results. First and foremost, I create the variable *Payment_cash_dummy*, where 1 equals that the deal was completely paid in cash and 0 otherwise.

Early in 1987, Travlos (1987) concluded that the form of payment plays a tremendous role in the acquirer's gains because of signaling. Berger & Ofek (1995) showed that industry diversification in M&A destroys corporate value while Lee & Lim (2016) conclude that deal success is highly correlated with industry relatedness and strategic acquisitions are also more likely to succeed than deals with financial motive. Therefore, I construct the variable *Common_Industry_dummy*, which monitors whether the two counterparts come from the same industry. My final sample is well balanced, with 60% of the deals being among same-industry firms and 40% from different ones. The most "active" industries (from both acquirer and target side) in my sample are manufacturing, information, mining and financial services.

Ghosh et al (2015) examined the effects of uncertainty surrounding the completion of the deal on acquirers' returns. Following their intuition, I create the variable *SameDate_dummy* which monitors whether each deal was announced and completed on the same day, to eradicate the uncertainty effect from my model. Surprisingly, more than a quarter of the deals in my sample (27%) were completed the same day they were announced.

Furthermore, I also create the variable *Public_Target_dummy* that monitors whether the target firm is a listed company. Faccio, Stolin & McConnell (2004) conclude that bidder gains are bigger when the target firm is privately held versus a listed target. In my sample, only 12% of the deals are completed between two listed firms, while the majority of the deals are listed bidders acquiring unlisted targets.

Before presenting the results, I report a correlation matrix of all utilized variables in the analysis in Figure 3, in the Appendix. The highest positive correlations are observed between dummy variable pair *contiguity – com_currency*, *colony – COL* and *colony - com_legal_origin.* These correlations are expected since neighboring countries often have the same currency or spoken language and countries with colonial relationship often share the same legal background. The highest negative correlations are observed between variable pairs *wealth_distance – GDP_real_T* and *geo_distw – contiguity*. Similar to above intuition, it is expected that the bigger the geographic distance between two countries, the higher the probability of them sharing borders and the lower the target country's GDP, the higher the overall wealth distance between a country pair.

4. Results

In Figure 4 of the Appendix, I present the summary statistics of all the variables used in my regressions. In 4.1 – 4.4 I present the results of the regressions of all regression groups.

4.1. The effect of culture on M&A activity

For the first set of regressions, my dependent variable is M&A activity, translated in number of deals from the acquirer's perspective. The model is as follows:

$$\begin{aligned} GDP\ weighted\ \#\_of\_Deals_A\ = \ & \beta_1 Cultural \text{ differences} + \\ & \beta_2\ Deal\text{–}level\ control\ variables + \\ & \beta_3\ Country\text{–}level\ control\ variables + \\ & Time\ fixed\ effects + \\ & Target\ nation\ fixed\ effects + \\ & Constant + \varepsilon i, \end{aligned}$$

where β_1, β_2, β_3 are groups of coefficients representing the different control variable groups.

Table 1 shows the results of the regressions. First, each culture measure is run as an explanatory variable separately and all together in the fourth column. Surprisingly, there is a positive and significant relationship (2.483) between difference in trust and the number of M&A deals, indicating that a wider difference in trust will lead to a higher activity between two countries, which contradicts my expectations. The opposite applies for individualism, which has a negative and significant (-3.192) relationship with M&A intensity, indicating that higher absolute differences in individualism will lead to lower M&A activity, which is in line with my expectations. Differences in hierarchy appear to have an insignificant effect on M&A activity. The biggest positive impact on M&A activity comes from colony, common_curency, common official language and $\mathrm{GDP_A}$ with coefficients of 11.83, 11.42, 11.68 and 10.18 respectively. This shows that if a country pair has a colonial relationship (in the past), common currency or common official language, they will experience 10 times more acquisitions from the acquirer's perspective. The relationship of $\mathrm{GDP_A}$ also shows that the wealthier a country is, the more acquisitions will its companies will engage in, while $\mathrm{GDP_T}$has no significant effect. The biggest negative impact (-8.332) surprisingly comes from contiguity, which indicates that countries tend to make 8 times more acquisitions in countries that are not in close geographic proximity, which is also confirmed by the negative sign of geographical distance (lnGeo_distw, -2.730). Other surprising and significant negative impacts on M&A activity come from *common_legal_origin* and *common_religion,* which report 5 times fewer acquisitions if there is common ground.

Table 1. Cultural Distance and Cross-Border Merger Activity

The dependent variable is the Acquirer's GDP- weighted number of acquisitions in a span from 2008 to 2014. All regressions are OLS. Main explanatory variables are natural logarithm of absolute difference in Trust (1st column),

Individualism (2nd column) and Hierarchy (3rd column). All three variables are shown in the 4th column. All variables are defined in the appendix. Inclusion of fixed effects (FE) is indicated at the end. Standard errors are robust. Significance at 10%, 5%, and 1%, indicated by *, **, and *** with p−values in parentheses.

	GDP weighted # of Deals			
VARIABLES	(1)	(2)	(3)	(4)
ln(Δ_Trust)	2.483***			3.084***
	(0.423)			(0.420)
ln(Δ_Individualism)		-3.192***		-3.699***
		(0.428)		(0.448)
ln(Δ_Hierarchy)			0.738	0.205
			(0.455)	(0.431)
Payment_cash	0.304	-0.156	0.630	0.866
	(0.677)	(0.678)	(0.985)	(0.966)
SameDate	0.707	0.718	1.015	1.043
	(0.696)	(0.703)	(0.880)	(0.842)
Public_Target	-2.257***	-2.576***	-3.270***	-2.869***
	(0.778)	(0.780)	(0.980)	(1.011)
Common_Industry	-1.578***	-1.427**	-1.424*	-1.717**
	(0.602)	(0.598)	(0.758)	(0.730)
Contiguity	-3.149**	-5.742***	-8.113***	-8.332***
	(1.340)	(1.374)	(2.132)	(2.033)
Colony	8.145***	9.621***	13.15***	11.83***
	(1.003)	(0.983)	(1.130)	(1.129)
Common_Currency	6.110**	10.65***	11.06***	11.42***
	(2.379)	(2.408)	(2.814)	(2.668)
Common_Legal	-5.225***	-6.211***	-7.877***	-5.827***
	(1.357)	(1.333)	(1.565)	(1.550)
Common_religion	-6.025***	-4.774***	-5.160***	-5.254***
	(0.868)	(0.864)	(1.193)	(1.167)
COL	11.81***	10.95***	12.54***	11.68***
	(1.129)	(1.154)	(1.491)	(1.433)
ln(Geo_distw)	-3.426***	-3.093***	-3.468***	-2.730***
	(0.500)	(0.498)	(0.565)	(0.557)
ln(DGP_real_A)	10.36***	10.15***	9.288***	10.18***
	(0.497)	(0.499)	(0.559)	(0.539)
ln(GDP_real_T)	0.0332	-0.301	-0.675**	-0.480
	(0.242)	(0.249)	(0.282)	(0.293)
ln(Openness_A)	2.058***	2.579***	1.762***	1.841***
	(0.484)	(0.472)	(0.524)	(0.507)
ln(Openness_T)	0.187	-0.355	0.284	-1.091**
	(0.420)	(0.436)	(0.495)	(0.467)
Countryid	-0.00552***	-0.00395***	-0.00367**	-0.00181
	(0.00118)	(0.00114)	(0.00153)	(0.00149)
year	7.113***	6.874***	6.935***	6.061***

	(0.257)	(0.244)	(0.291)	(0.296)
Constant	-14,381***	-13,911***	-14,003***	-12,281***
	(513.4)	(486.9)	(580.9)	(591.4)
Observations	3,167	3,167	2,317	2,317
Year FE	Yes	Yes	Yes	Yes
A/T country FE	Yes	Yes	Yes	Yes
R-squared	0.664	0.665	0.641	0.665

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

For the next set of regressions, the same regression model is used but I also include three interaction terms, to monitor whether joint cultural distance will amplify or reduce the effect on M&A activity. Table 2 shows the results of these regressions. The results remain fairly unchanged but there are a few very interesting finds. In regression (1), while Trust difference shows a major positive effect and Individualism shows no significant effect on M&A activity, *Trust x Individualism* report a positive and significant joint effect of 2.201. This shows that a bigger difference in Individualism significantly lowers the effect of Trust. Difference in Hierarchy is non-significant. Furthermore, in regression (3), the interaction term *Trust x Hierarchy* significantly changes the landscape. Difference in Trust now has a negative effect on M&A activity, along with the other two cultural measures. This means that a high Trust difference combined with a high difference in Hierarchy, significantly lower the intensity of transactions (almost 5 times less). Regression (2) shows no different results compared to the first set of regressions in Table 1, while the interaction term Individualism x Hierarchy is statistically insignificant. In all regressions, control variable coefficients remained fairly unchanged.

Table 2. Cultural Distance and Cross-Border Merger Activity

The dependent variable is the Acquirer's GDP- weighted number of acquisitions in a span from 2008 to 2014. All regressions are OLS. Main explanatory variables are natural logarithm of absolute difference in Trust, Individualism and Hierarchy. Interaction terms are added to each model, Trust x Individualism (1), Hierarchy x Individualism (2) and Trust x Hierarchy (3). All variables are defined in the appendix. Inclusion of fixed effects (FE) is indicated at the end. Standard errors are robust. Significance at 10%, 5%, and 1%, indicated by *, **, and *** with p−values in parentheses.

	GDP weighted # of Deals		
VARIABLES	(1)	(2)	(3)
ln(Δ_Trust)	9.512***	3.061***	-7.316***
	(1.798)	(0.419)	(1.317)
ln(Δ_Individualism)	1.238	-3.030***	-2.802***
	(1.277)	(1.147)	(0.453)
ln(Δ_Hierarchy)	-0.628	1.075	-9.299***
	(0.444)	(1.479)	(1.126)

Payment_cash	0.950	1.126	1.219
	(0.956)	(0.962)	(0.951)
SameDate	1.219	1.124	1.298
	(0.823)	(0.837)	(0.811)
Public_Target	-2.718***	-2.540**	-2.382**
	(0.984)	(0.998)	(0.984)
Common_Industry	-1.746**	-1.744**	-1.491**
	(0.719)	(0.726)	(0.709)
Contiguity	-8.207***	-8.393***	-6.266***
	(2.055)	(2.061)	(2.091)
Colony	12.56***	11.98***	12.16***
	(1.160)	(1.164)	(1.152)
Common_Currency	10.81***	11.79***	9.851***
	(2.649)	(2.658)	(2.674)
Common_Legal	-5.525***	-5.341***	-2.758*
	(1.543)	(1.532)	(1.580)
Common_religion	-4.935***	-5.180***	-5.560***
	(1.156)	(1.158)	(1.134)
COL	9.119***	10.87***	8.419***
	(1.438)	(1.438)	(1.437)
ln(Geo_distw)	-2.758***	-2.805***	-3.033***
	(0.559)	(0.559)	(0.555)
ln(DGP_real_A)	10.49***	10.12***	10.68***
	(0.557)	(0.533)	(0.524)
ln(GDP_real_T)	1.024**	1.404***	1.866***
	(0.447)	(0.428)	(0.420)
ln(Openness_A)	1.997***	1.421***	1.760***
	(0.533)	(0.519)	(0.499)
ln(Openness_T)	-1.262***	-1.216***	-1.857***
	(0.453)	(0.461)	(0.439)
countryid	-0.00151	-0.00149	-6.90e-05
	(0.00148)	(0.00149)	(0.00146)
year	5.936***	5.935***	5.910***
	(0.296)	(0.297)	(0.298)
Trust x Individualism	2.201***		
	(0.586)		
Hierarchy x Individualism		0.356	
		(0.469)	
Hierarchy x Trust			-4.784***
			(0.582)
Constant	-12,017***	-12,021***	-12,006***
	(592.4)	(593.1)	(595.9)
Observations	2,317	2,317	2,317
Year FE	Yes	Yes	Yes
A/T country FE	Yes	Yes	Yes

R-squared	0.676	0.670	0.688

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Finally, for the impact of culture on M&A deals, a final OLS regression is performed, this time including a group of economic freedom indices to check whether taxation, trade freedom and monetary policies will change the direction of those deals. Table 3 depicts these results. With the inclusion of these indices as controls in the model, the coefficient signs do not change, however, the cultural measures' impact is slightly weakened while Hierarchy's coefficient becomes also statistically significant and negative (-1.004). Almost all economic freedom indices show a positive but small impact on the number of M&A deals between countries, except for labor freedom and financial freedom. This shows that easy access to labor and financial services increase the number of deals signed by two countries.

Table 3. Cultural Distance and Cross-Border Merger Activity

The dependent variable is the Acquirer's GDP- weighted number of acquisitions in a span from 2008 to 2014. Main explanatory variables are natural logarithm of absolute difference in Trust, Individualism and Hierarchy. Added control variables include government integrity, taxation and business, trade, financial, monetary, labor, investment freedom. All variables are defined in the appendix. Inclusion of fixed effects (FE) is indicated at the end. Standard errors are robust. Significance at 10%, 5%, and 1%, indicated by *, **, and *** with p−values in parentheses.

VARIABLES	GDP weighted # of Deals
ln(Δ_Trust)	2.709***
	(0.405)
ln(Δ_Individualism)	-2.974***
	(0.439)
ln(Δ_Hierarchy)	-1.004**
	(0.504)
Payment_cash	0.414
	(0.936)
SameDate	0.809
	(0.812)
Public_Target	-2.769***
	(1.020)
Common_Industry	-1.942***
	(0.702)
Contiguity	-1.640
	(2.228)
Colony	13.43***
	(1.406)
Common_Currency	11.31***
	(2.722)

Common_Legal	-8.325***
	(1.710)
Common_religion	-5.944***
	(1.182)
COL	9.835***
	(1.470)
ln(Geo_distw)	-2.017***
	(0.608)
ln(DGP_real_A)	11.27***
	(0.504)
ln(GDP_real_T)	0.107
	(0.320)
ln(Openness_A)	2.451***
	(0.525)
ln(Openness_T)	-0.396
	(0.467)
Δ_gov_integrity	0.0861*
	(0.0501)
Δ_tax_burden	0.114**
	(0.0566)
Δ_business_freedom	-0.00125
	(0.0513)
Δ_labor_freedom	-0.320***
	(0.0361)
Δ_monetary_freedom	0.357***
	(0.0822)
Δ_trade_freedom	0.0799
	(0.0833)
Δ_investment_freedom	0.159***
	(0.0510)
Δ_financial_freedom	-0.147***
	(0.0503)
countryid	-0.00141
	(0.00169)
year	6.659***
	(0.314)
Constant	-13,508***
	(628.2)
Observations	2,316
Year FE	Yes
A/T country FE	Yes
R-squared	0.690

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

4.2. The effect of culture on Deal Value

The second dependent variable used in my paper is Deal Value. It basically is the value of the deal paid by the acquirer for the acquisition. The regression model used is the same as in 4.1. :

$$\ln(DealValue)\ A, \ = \ \beta_1 Cultural \text{ differences} + \beta_2\ Deal{-}level\ control\ variables + \beta_3\ Country{-}level\ control\ variables + Time\ fixed\ effects + Target\ nation\ fixed\ effects + Constant + \varepsilon i,$$

Table 4 depicts the results of the first group of regressions. All results remain consistent and statistically/economically significant in all regressions, without any change in variable coefficient signs. Regression (4) shows the model including all the cultural values variables. Coefficients of Δ_Trust and Δ_Hierarchy are -0.0812 and -0.183 respectively. This means that 1% unit increase in Trust difference will lead to an 8.12% decrease in the value of the deal while the same increase in Hierarchy difference will lead to a significant 18% decrease in deal value. Differences in Individualism are negligible and statistically insignificant. The highest positive impact on the Deal Value from control variables comes from *public_target*, *cash_payment* and *colony* with coefficients of 1.338, 0.494 and 0.397 respectively. This means that if the target company is publicly traded, deal value increases significantly (133%) while if the deal is paid exclusively with cash, deal value similarly increases by almost 49.4%. Finally, the presence of a former colonial relationship increases the deal value by 39.7%. On the other hand, the strongest negative impact on deal value is observed by *COL* and *same_date.* If two firms come from countries with common officially spoken languages, the cost of the deal decreases significantly for the acquirer (around 69.4%). Similarly, if the deal is completed the same day it is announced, the acquirer is expected to pay 108.7% less, which is economically insignificant.

Table 4. Cultural Distance and Deal Value.

The dependent variable is the natural logarithm of Deal Value. All regressions are OLS. Main explanatory variables are natural logarithm of absolute difference in Trust (1st column), Individualism (2nd column) and Hierarchy (3rd column). All three variables are shown in the 4th column. All variables are defined in the appendix. Inclusion of fixed effects (FE) is indicated at the end. Standard errors are robust. Significance at 10%, 5%, and 1%, indicated by *, **, and *** with p−values in parentheses.

	ln(DealValue)			
VARIABLES	(1)	(2)	(3)	(4)
ln(Δ_Trust)	-0.118***			-0.0812**

	(0.0347)			(0.0378)
ln(Δ_Individualism)		0.00619		-0.00390
		(0.0446)		(0.0501)
ln(Δ_Hierarchy)			-0.198***	-0.183***
			(0.0417)	(0.0423)
Payment_cash	0.693***	0.708***	0.508***	0.494***
	(0.0813)	(0.0813)	(0.104)	(0.104)
SameDate	-1.087***	-1.084***	-1.087***	-1.087***
	(0.0642)	(0.0641)	(0.0758)	(0.0759)
Public_Target	1.396***	1.415***	1.347***	1.338***
	(0.107)	(0.107)	(0.131)	(0.130)
Common_Industry	0.242***	0.233***	0.252***	0.258***
	(0.0654)	(0.0657)	(0.0768)	(0.0767)
Contiguity	0.207	0.271*	0.130	0.142
	(0.141)	(0.143)	(0.212)	(0.212)
Colony	0.407***	0.342***	0.362***	0.397***
	(0.0982)	(0.0964)	(0.111)	(0.112)
Common_Currency	0.323	0.197	0.379	0.418
	(0.231)	(0.230)	(0.263)	(0.266)
Common_Legal	-0.123	-0.0640	-0.0396	-0.0723
	(0.136)	(0.136)	(0.153)	(0.154)
Common_religion	-0.183*	-0.206**	-0.241**	-0.228*
	(0.0946)	(0.0947)	(0.118)	(0.119)
COL	-0.361***	-0.348***	-0.701***	-0.692***
	(0.124)	(0.125)	(0.149)	(0.149)
ln(Geo_distw)	0.0728	0.0741	0.151***	0.141**
	(0.0491)	(0.0494)	(0.0550)	(0.0552)
ln(DGP_real_A)	0.174***	0.193***	0.200***	0.190***
	(0.0474)	(0.0476)	(0.0504)	(0.0509)
ln(GDP_real_T)	0.101***	0.111***	0.106***	0.104***
	(0.0283)	(0.0285)	(0.0341)	(0.0340)
ln(Openness_A)	0.0643	0.0537	0.110**	0.115**
	(0.0543)	(0.0552)	(0.0551)	(0.0549)
ln(Openness_T)	0.185***	0.173***	0.145***	0.155***
	(0.0475)	(0.0486)	(0.0540)	(0.0558)
countryid	-0.000312	-0.000390*	-0.000632***	-0.000549**
	(0.000211)	(0.000210)	(0.000228)	(0.000231)
year	-0.362**	-0.432***	-0.703***	-0.580***
	(0.164)	(0.162)	(0.203)	(0.214)
Constant	725.0**	866.1***	1,410***	1,162***
	(328.5)	(325.9)	(407.7)	(429.2)
Observations	3,167	3,167	2,317	2,317
Year FE	Yes	Yes	Yes	Yes
A/T country FE	Yes	Yes	Yes	Yes
R-squared	0.208	0.205	0.203	0.205

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

To further investigate the relationship between cultural disparity and M&A deal value, I use the same regression model including the same cultural interaction terms as in 4.1, to check whether and how a joint movement in cultural differences will affect the results of Table 4. Table 5 depicts these results. Surprisingly, Trust alone is no longer statistically significant, which indicates that interaction terms do in fact improve the overall model. In regression (1), a joint increase of 1% in Trust and Hierarchy differences will result in a higher by 11.5% cost for the acquirer, which is in line with my paper's predictions. In regression (2), coefficients of both Individualism and Hierarchy differences are negative and significant and so is their joint interaction term. However, a joint increase of those two measures will result in a weaker coefficient of -0.222. This indicates that differences in Hierarchy and Individualism have a bigger impact individually than jointly, -0.844 and -0.493 respectively. In regression (3) Trust, Individualism and their joint interaction term are statistically insignificant, while Hierarchy difference has a coefficient of -0.187, fairly similar to the previous models. Coefficient signs and impact of control variables have not changed significantly.

Table 5. Cultural Distance and M&A Deal Value

The dependent variable is the Acquirer's GDP- weighted number of acquisitions in a span from 2008 to 2014. All regressions are OLS. Main explanatory variables are natural logarithm of absolute difference in Trust, Individualism and Hierarchy. Interaction terms are added to each model, Trust x Individualism, Hierarchy x Individualism and Trust x Hierarchy. All variables are defined in the appendix. Inclusion of fixed effects (FE) is indicated at the end. Standard errors are robust. Significance at 10%, 5%, and 1%, indicated by *, **, and *** with p−values in parentheses.

	ln(DealValue)		
VARIABLES	(1)	(2)	(3)
ln(Δ_Trust)	0.165	-0.0447	-0.0291
	(0.110)	(0.0393)	(0.123)
ln(Δ_Individualism)	-0.0262	-0.493***	0.0375
	(0.0513)	(0.122)	(0.108)
ln(Δ_Hierarchy)	0.0434	-0.844***	-0.187***
	(0.103)	(0.154)	(0.0445)
(Trust x Hierarchy)	0.115**		
	(0.0471)		
(Individualism x Hierarchy)		-0.222***	
		(0.0487)	
(Individualism x Trust)			0.0178
			(0.0421)
Public_Target	1.328***	1.298***	1.336***
	(0.130)	(0.130)	(0.131)
Common_Industry	0.251***	0.254***	0.258***
	(0.0767)	(0.0762)	(0.0767)

Contiguity	0.0888	0.0704	0.146
	(0.212)	(0.212)	(0.212)
Colony	0.400***	0.482***	0.397***
	(0.112)	(0.112)	(0.112)
Common_Currency	0.457*	0.419	0.408
	(0.267)	(0.264)	(0.267)
Common_Legal	-0.126	0.0186	-0.0818
	(0.157)	(0.155)	(0.155)
Common_religion	-0.220*	-0.159	-0.228*
	(0.120)	(0.119)	(0.119)
COL	-0.633***	-0.745***	-0.698***
	(0.153)	(0.151)	(0.153)
ln(Geo_distw)	0.143***	0.134**	0.143***
	(0.0552)	(0.0551)	(0.0553)
ln(DGP_real_A)	0.178***	0.187***	0.193***
	(0.0513)	(0.0509)	(0.0519)
ln(GDP_real_T)	0.0805*	0.0902*	0.0866*
	(0.0488)	(0.0487)	(0.0501)
ln(Openness_A)	0.107*	0.0970*	0.124**
	(0.0559)	(0.0555)	(0.0580)
ln(Openness_T)	0.171***	0.182***	0.155***
	(0.0568)	(0.0565)	(0.0558)
countryid	-0.000497**	-0.000540**	-0.000571**
	(0.000233)	(0.000232)	(0.000236)
year	-0.471**	-0.523**	-0.603***
	(0.220)	(0.213)	(0.220)
Constant	943.4**	1,048**	1,208***
	(442.3)	(428.6)	(442.2)
Observations	2,317	2,317	2,317
Year FE	Yes	Yes	Yes
A/T country FE	Yes	Yes	Yes
R-squared	0.207	0.214	0.205

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Finally, I use the same model and include all the economic freedom indices. The results are shown in Table 6. Differences in Trust and individualism are insignificant whereas Hierarchy coefficient is negative and significant (-0.133), indicating that a 1% increase of Hierarchy disparity will result in a 13% lower deal value. Contrary to the regression results in Table 3, all statistically significant economic freedom indices have a negative impact on deal value, with the highest being *monetary_freedom*. This means that a target country that has low currency stability and reliability will lower the amount paid by the acquirer by around 4.12%. Other control variables have the same impact and direction.

Table 6. Cultural Distance and M&A Deal Value.

The dependent variable is the Acquirer's GDP- weighted number of acquisitions in a span from 2008 to 2014. Main explanatory variables are natural logarithm of absolute difference in Trust, Individualism and Hierarchy. Added control variables include government integrity, taxation and business, trade, financial, monetary, labor, investment freedom. All variables are defined in the appendix. Inclusion of fixed effects (FE) is indicated at the end. Standard errors are robust. Significance at 10%, 5%, and 1%, indicated by *, **, and *** with p−values in parentheses.

	ln(DealValue)			
VARIABLES	(1)	(2)	(3)	(4)
ln(Δ_Trust)	-0.0550			-0.0508
	(0.0350)			(0.0373)
ln(Δ_Individualism)		0.0641		0.0436
		(0.0458)		(0.0517)
ln(Δ_Hierarchy)			-0.138**	-0.133**
			(0.0554)	(0.0554)
Payment_cash	0.719***	0.728***	0.535***	0.530***
	(0.0820)	(0.0818)	(0.104)	(0.104)
SameDate	-1.085***	-1.085***	-1.093***	-1.094***
	(0.0641)	(0.0641)	(0.0758)	(0.0758)
Public_Target	1.340***	1.344***	1.246***	1.240***
	(0.105)	(0.105)	(0.129)	(0.129)
Common_Industry	0.257***	0.254***	0.271***	0.275***
	(0.0650)	(0.0651)	(0.0761)	(0.0760)
Contiguity	-0.0708	-0.0199	-0.119	-0.107
	(0.144)	(0.147)	(0.228)	(0.229)
Colony	0.300**	0.254**	0.251*	0.296**
	(0.118)	(0.114)	(0.140)	(0.143)
Common_Currency	0.214	0.125	0.112	0.116
	(0.242)	(0.242)	(0.287)	(0.289)
Common_Legal	-0.290**	-0.284**	-0.251	-0.293*
	(0.143)	(0.145)	(0.164)	(0.168)
Common_religion	-0.0978	-0.114	-0.114	-0.112
	(0.0960)	(0.0963)	(0.122)	(0.122)
COL	-0.263**	-0.245*	-0.504***	-0.496***
	(0.129)	(0.130)	(0.156)	(0.157)
ln(Geo_distw)	0.0674	0.0660	0.104*	0.0927
	(0.0517)	(0.0518)	(0.0605)	(0.0603)
ln(DGP_real_A)	0.204***	0.215***	0.232***	0.222***
	(0.0493)	(0.0488)	(0.0550)	(0.0554)
ln(GDP_real_T)	0.157***	0.164***	0.122**	0.120**
	(0.0407)	(0.0407)	(0.0515)	(0.0512)
ln(Openness_A)	0.0832	0.0801	0.121*	0.125**
	(0.0585)	(0.0588)	(0.0630)	(0.0631)
ln(Openness_T)	0.128***	0.135***	0.0860	0.105*
	(0.0467)	(0.0474)	(0.0527)	(0.0547)
Δ_gov_integrity	-0.000213	-0.000232	-0.000602	0.000164
	(0.00369)	(0.00370)	(0.00510)	(0.00512)

Δ_tax_burden	0.00142	0.00228	0.00197	0.00167
	(0.00488)	(0.00485)	(0.00631)	(0.00631)
Δ_business_freedom	-0.0230***	-0.0244***	-0.0219***	-0.0217***
	(0.00491)	(0.00487)	(0.00600)	(0.00602)
Δ_labor_freedom	-0.00732**	-0.00852***	-0.00971***	-0.0104***
	(0.00318)	(0.00329)	(0.00369)	(0.00376)
Δ_monetary_freedom	-0.0201**	-0.0189**	-0.0419***	-0.0412***
	(0.00825)	(0.00826)	(0.0103)	(0.0104)
Δ_trade_freedom	0.00577	0.00519	0.00910	0.00885
	(0.00669)	(0.00670)	(0.00841)	(0.00837)
Δ_investment_freedom	-0.00619	-0.00596	-0.00786	-0.00841*
	(0.00395)	(0.00396)	(0.00479)	(0.00479)
Δ_financial_freedom	0.00541	0.00490	0.00533	0.00589
	(0.00428)	(0.00430)	(0.00526)	(0.00525)
countryid	0.000489***	0.000485***	0.000248	0.000234
	(0.000143)	(0.000143)	(0.000179)	(0.000179)
year	-0.0378	-0.0369	-0.0506	-0.0382
	(0.0289)	(0.0290)	(0.0331)	(0.0346)
Constant	74.57	72.93	99.70	75.00
	(58.01)	(58.22)	(66.46)	(69.34)
Observations	3,166	3,166	2,316	2,316
Year FE	Yes	Yes	Yes	Yes
A/T country FE	Yes	Yes	Yes	Yes
R-squared	0.230	0.230	0.232	0.233

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

4.3. The effect of culture on stock performance

The third dependent variable used in my paper is Cumulative Abnormal Returns. The regression model used is the same as before:

$$CAR_A = \beta_1 Cultural \text{ differences} + \beta_2\ Deal\text{–}level\ control\ variables + \beta_3\ Country\text{–}level\ control\ variables + Time\ fixed\ effects + Target\ nation\ fixed\ effects + Constant + \varepsilon i,$$

Undoubtedly, these are the most surprising results between Cumulative Abnormal Returns and my cultural measures. There seems to be no correlation between the dependent variable and

the explanatory variables or control variables. Table 7 represents these results. Coefficient estimates of my variable set are statistically non significant and I, therefore, cannot make robust conclusions. Regression (1)'s dependent variable is bidder CAR using the market model for CAR calculation. At this point, I take a slightly different approach and use a different method of calculating bidder CAR. Regression (2)'s dependent variable is again bidder CAR, but this time it is calculated by accumulation of the EIKON mean adjusted returns of each bidder in the 3-day interval surrounding the announcement of the deal. Once again, results are still insignificant while R-squared has increased negligibly. Finally, in regression (3), I weigh each CAR with the bidder's market capitalization at the time of the deal announcement to remove any size effect that there is in the sample. R-squared has doubled (from 0.9% to 1.8%) but is still very low to make any reliable conclusions and insignificance persists.

Compared to Ahern et al (2012), who have found significant results based on a similar model, there are a few very important differences that need to be noted. First, the index used for stock performance in my paper is MSCI World Index while Ahern et al (2012) use the individual country indices for CAR computation. MSCI World Index is comprised of med-high market cap firms and represents only 23 developed markets. Despite these limitations, my sample's majority of deals are performed in one of these 23 markets, meaning that it is unlikely that the index used in my research is inaccurate. The same applies for market capitalization since I have placed a lower limit to deal value (1 million US dollars). This means that this deal value limit can be achieved mainly by mid-high market cap firms. Furthermore, Ahern et all compute merger gains in terms of total CAR (bidder and target) while I only monitor the bidder's side, supporting the intuition that merger gains usually accrue to the target's side (Andrade, Mitchell & Stafford; 2001)

Very, Metais, Lo & Hourquet (2012) researched the predictability of M&A activity and its determinants. They came to the very enlighting conclusion that M&A can only be practically and accurately predicted on a national level. The level of knowledge on M&A is still very little and modern research often falls short on the predictability of M&A. This might be one of the reasons why my results are not consistent with previous research since cumulative abnormal returns is a very delicate, firm-level characteristic.

Table 7. Culture and stock performance.

Regression (1) reports impact on market-model calculated CARs. Regression (2) reports impact on EIKON mean-adjusted CARs. Regression (3) reports impact on market capitalization weighted CARs. All variables are defined in the Appendix. Inclusion of fixed effects (FE) is indicated at the end. Standard errors are robust. Significance at 10%, 5%, and 1%, indicated by *, **, and *** with p−values in parentheses.

VARIABLES	(1) CAR (mm)	(2) CAR(EIKON)	(3) w_CAR
LnDealValue	0.00174	0.00279	-0.000295
	(0.0129)	(0.00292)	(0.000198)
Payment_cash_dummy	-0.118*	-0.152	0.00259
	(0.0616)	(0.161)	(0.00357)

SameDate_dummy	-0.0271	-0.0446	-0.00275
	(0.0538)	(0.0465)	(0.00237)
Public_Target_dummy	-0.0203	-0.0213	-0.000243
	(0.0729)	(0.0211)	(0.000271)
Common_Industry_dummy	-0.0553	-0.0835	0.00192
	(0.0481)	(0.0844)	(0.00174)
COL	0.0602	0.126	0.000603
	(0.0801)	(0.126)	(0.000847)
Contiguity_dummy	-0.0580	-0.0369	-0.00173
	(0.100)	(0.0399)	(0.00247)
Colony_dummy	-0.166**	-0.232	0.00219
	(0.0719)	(0.230)	(0.00235)
LnGeo_distw	0.0183	0.0190	-0.000216
	(0.0343)	(0.0191)	(0.000607)
Common_Currency_dummy	0.0319	0.0546	0.00178
	(0.140)	(0.0602)	(0.00113)
ln(Δ_Trust)	0.0178	0.0173	-0.000211
	(0.0213)	(0.0162)	(0.000413)
ln(Δ_Individualism)	0.00975	0.0177	-7.70e-05
	(0.0262)	(0.0179)	(0.000626)
ln(Δ_Hierarchy)	-0.0256	-0.0300	-0.000592
	(0.0254)	(0.0283)	(0.000507)
Common_Legal_dummy	0.0869	0.0624	-0.000913
	(0.0786)	(0.0651)	(0.000798)
Common_religion_dummy	0.0130	-0.00416	-0.000746
	(0.0678)	(0.00915)	(0.000470)
LnDGP_real_A	0.0277	0.0243	-0.00155
	(0.0264)	(0.0262)	(0.00233)
LnGDP_real_T	0.00517	0.00420	-0.00100
	(0.0183)	(0.00648)	(0.000693)
LnOpenness_A	-0.0235	-0.0293	-0.000441
	(0.0307)	(0.0286)	(0.000720)
Lnopenness_T	0.0139	0.0212	9.54e-05
	(0.0325)	(0.0218)	(0.000304)
Year	0.00374	0.00664	-0.000288
	(0.00442)	(0.00702)	(0.000573)
Countryid	7.88e-05	7.54e-05	-2.38e-06
	(8.32e-05)	(8.28e-05)	(6.13e-06)
Constant	-0.579	-13.79	0.615
	(0.456)	(14.56)	(1.190)
Observations	2,560	1,897	1,149
Year FE	Yes	Yes	Yes
A/T Country FE	Yes	Yes	Yes
R-squared	0.007	0.009	0.018

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

4.4. The effect of culture on deal structure characteristics

The model used is this regression group is the following:

$$\text{*Dependent\_dummy\_variable*} = \beta_1 Cultural \text{ differences} + \beta_2\ Deal\text{–}level\ control\ variables + \beta_3\ Country\text{–}level\ control\ variables + Time\ fixed\ effects + Target\ nation\ fixed\ effects + Constant + \varepsilon i,$$

where, dependent variables are *payment_cash*, *public_target*, *same_date* and *common_industry*.

In Table 8 I present coefficient estimates for 4 different logit regressions. In column (1), the dependent variable is the form of payment of the deal in the form of a dummy variable where 1 means that the deal is paid exclusively by cash and zero otherwise. In column (2), the dependent variable is a dummy variable that monitors whether the target firm is a publicly traded firm. In column (3), the dependent variable is a dummy variable I constructed that monitors whether an M&A was announced and completed the same day. Finally, in column (4) the dependent variable is a constructed dummy variable that monitors whether the acquisition is performed between firms that belong to the same industry. I examine whether and how these variables can be affected by cultural disparities. Year-, bidder country- and target country fixed effects are used, as well as robust standard errors. A few interesting finds in all 4 regressions in this group are that *geographic_distance* and half of the economic freedom indices no longer play a significant role in the model while M&A activity (*w_#ofDeals*) has a statistically significant (but negligible) impact on my dependent variables.

4.4.1. Culture and form of payment

I find that as the difference in Trust stretches out, the less likely it is that the deal will be financed with cash. This rather interesting result shows that stock payment works as an incentive for the target firm to collaborate towards common gains, despite the cultural differences. Furthermore, if the deal is completed in the same day and the counterpart firms belong to the same industry, the deal is most likely to be paid by cash rather than stock. On the contrary, a common legal environment and a higher GDP from the acquirer's side will result in the payment of the deal through stock or a mix of stock and cash. This also supports the

intuition that same legal environments regulate the M&A procedure in the same way and under similar laws, an indication of indirect trustfulness. Individualism and Hierarchy have so significant impact on the form of payment.

4.4.2. Culture and public target firms

In the case of public targets, Hierarchy plays the most significant role. An increase in hierarchy disparities will result in a target that is less likely to be listed. This indicates that the higher the distance in this cultural measure, the safer the approach for the bidder with investing in a private firm. The biggest positive impacts on the likelihood of acquisition of a public firm come from legal origin, religion and industry, where similarities in these measures increase the probability of the target being publicly traded, however, the case is not the same with *common_official_language*. This probability also increases as the value of the deal rises (i.e. public acquisitions are characterized by higher fees from the bidder's side). On the contrary, wealth distance and target country GDP have the biggest negative impact on the dependent variable, which confirms the fact that firms originating from wealthier countries will tend to acquire private firms in less wealthy countries. Furthermore, the smaller the gap is between GDP, the higher the likelihood of acquisition of a public firm, which is also confirmed by *tax_burden's* positive coefficient (i.e. private firms strive to minimize the tax bite, hence the relation with my dependent variable).

4.4.3. Culture and date of completion

The results and direction of coefficient estimates are identical when the dependent variable is *same_date.* The main difference with the model in 4.4.2 is that deal value has a negative impact, meaning that a very expensive deal will not be likely to be completed the same day it is announced, which might be explained by the technical procedures and regulations associated with complex acquisitions. Furthermore, if the deal is paid exclusively with cash, the probability of the deal being completed on the same day increases dramatically, the inverse relationship of which has also been confirmed in 4.4.1. Finally, *common official language* and *contiguity* report a strong negative estimate, indicating that similarities in these measures will not speed up the procedures for the deal but rather extend them. Similarly, the same applies to a wider gap in country wealth.

4.4.4. Culture and Industry relatedness

This logit regression, despite the smallest R-squared in the regression group, it shows the highest significance of the cultural measures in the model. An increase in Trust or Hierarchy distance will result in a higher probability of the deal being between firms of the same industry. This indicates that acquirer firms tend to compensate big cultural differences with little diversification of their portfolios, which once again is in line with the fact that high industry diversification destroys value and is therefore avoided by corporations.

Table 8. National Culture and Deal Structure

The dependent variable in column 1 is a dummy variable equal to 1 if the merger payment is all cash and 0 otherwise, in column 2 a dummy variable whether a target is a publicly traded firm, column 3 a dummy variable for same date completion and announcement and column (4) is a dummy variable that monitors same-industry deals. Cross-sectional fixed-effects logit regression coefficients and robust p−values. All other variables are defined in the appendix. Inclusion of fixed effects are indicated at the end. Significance at 10%, 5%, and 1%, indicated by *, ** and ***.

VARIABLES	(1) Payment_cash	(2) Public_Target	(3) SameDate	(4) Com_Industry
ln(Δ_Trust)	-0.149**	-0.0385	-0.0720	0.0791**
	(0.0596)	(0.0588)	(0.0465)	(0.0403)
ln(Δ_Individualism)	-0.0496	0.0154	0.0120	0.0600
	(0.0647)	(0.0749)	(0.0577)	(0.0497)
ln(Δ_Hierarchy)	0.0578	-0.143*	-0.215***	0.141***
	(0.0758)	(0.0812)	(0.0642)	(0.0534)
ln(DealValue)	0.118***	0.384***	-0.399***	0.0716***
	(0.0335)	(0.0334)	(0.0279)	(0.0226)
Common_Industry	0.254**	0.338**	-0.143	
	(0.109)	(0.140)	(0.0946)	
SameDate	0.677***	-0.863***		-0.128
	(0.132)	(0.191)		(0.0942)
Contiguity	-0.362	-0.388	-0.533**	-0.352**
	(0.248)	(0.258)	(0.227)	(0.171)
Colony	-0.0388	0.726***	0.377**	-0.350**
	(0.199)	(0.226)	(0.183)	(0.151)
COL	0.303*	-0.595***	-0.486***	0.142
	(0.170)	(0.205)	(0.146)	(0.126)
ln(Geo_distw)	-0.140*	-0.0924	-0.0467	-0.122**
	(0.0793)	(0.0905)	(0.0679)	(0.0590)
Common_Legal	-0.523***	0.520**	0.224	-0.0462
	(0.181)	(0.204)	(0.185)	(0.143)
Common_religion	-0.0189	0.435**	0.482***	0.197
	(0.162)	(0.172)	(0.136)	(0.120)

Wealth_Distance	-1.258	-3.133*	-1.852**	0.687
	(0.798)	(1.641)	(0.851)	(0.696)
w_#ofdeals	0.00792***	-0.0130***	0.00347	-0.00154
	(0.00267)	(0.00298)	(0.00221)	(0.00192)
Δ_gov_integrity	-0.0114*	0.00774	0.00409	-0.00641
	(0.00635)	(0.00755)	(0.00598)	(0.00501)
Δ_tax_burden	0.00229	0.0184*	0.00729	-0.0128**
	(0.00778)	(0.00973)	(0.00675)	(0.00591)
Δ_business_freedom	0.00547	0.00647	0.0212***	0.00493
	(0.00750)	(0.00807)	(0.00647)	(0.00574)
Δ_labor_freedom	0.00466	-0.0111*	-0.00270	-0.00652*
	(0.00495)	(0.00578)	(0.00443)	(0.00380)
Δ_monetary_freedom	0.0283**	-0.0281*	-0.0660***	0.0160
	(0.0140)	(0.0158)	(0.0127)	(0.0101)
Δ_trade_freedom	0.00528	0.0125	-0.0115	-0.00148
	(0.0122)	(0.0146)	(0.0110)	(0.00838)
Δ_investment_freedom	0.00686	-0.0131*	-0.0217***	0.00403
	(0.00650)	(0.00732)	(0.00562)	(0.00454)
Δ_financial_freedom	-0.00696	-0.00427	0.00656	-0.00767*
	(0.00597)	(0.00706)	(0.00515)	(0.00439)
ln(GDP_real_A)	-0.794***	0.0873	0.491***	-0.0362
	(0.203)	(0.184)	(0.161)	(0.107)
ln(GDP_real_T)	0.0586	-0.220**	-0.116*	0.197***
	(0.0683)	(0.0931)	(0.0621)	(0.0513)
year	-0.225***	-0.100**	0.0977***	0.0984***
	(0.0399)	(0.0400)	(0.0319)	(0.0264)
countryid	0.000668***	0.000195	0.000630***	0.000186
	(0.000220)	(0.000266)	(0.000195)	(0.000165)
Payment_cash		0.174	0.822***	0.239**
		(0.185)	(0.140)	(0.111)
Constant	461.0***	198.4**	-202.4***	-197.7***
	(79.91)	(80.22)	(63.67)	(52.88)
Year/Country FE	Yes	Yes	Yes	Yes
Pseudo R2	0.1119	0.1938	0.1431	0.0386
Observations	3,055	3,055	3,055	3,055

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5. Conclusion and robustness checks

5.1. Exclusion of US firms as robustness check

Observing both the expected and unexpected results of the regression models in Section 4, I run the same analysis over the same sample, this time excluding all US companies from both the acquirers' and targets' side, ending up with nearly a third of the original sample (1248 deals). Since American firms constitute such a large portion of global M&A activity, excluding them from the sample will eventually show the real impact of cultural disparities on the dependent variables in my research and potentially provide with consistency over the results already presented in Section 4.

For the dependent variable weighted_#of Deals, there are no surprises in the regression model. The direction of impact remains unchanged throughout the entire variable set and R-squared is slightly reduced (from 60 to 52%). However, coefficient impact is reduced about 50% in all explanatory and control variables. This shows that US observations amplify the effect on M&A activity globally due to the high participation of the US market in acquisitions.

For the dependent variable ln_DealValue, the impact is even less intense compared to the original sample. R-squared drops from 20 to 14.5%, combined with complete loss of significance for the explanatory variable set. Interestingly, this shows that there is no strong relationship between cultural differences and deal value outside the US market, indicating that US firm participation in the global M&A market plays a significant role in shaping the cultural relationship map and the amount of fees paid for an acquisition. Furthermore, differences in the significance of the explanatory variables in Section 4, indicates that there is higher sensitivity in the payment amount when US firms are included.

5.2. Conclusion

For the relationship between culture and M&A activity translated in number of deals, I interestingly find that there is a clear positive relationship between trust and M&A activity, while higher differences in hierarchy and individualism result in lower activity. However, using interaction terms, there is a twist in coefficient signs. A simultaneous percentage increase in Trust and Hierarchy will result in a significant reduction in acquisition activity, which shows that trustful and egalitarian countries will engage in more deals. On the other hand, the same simultaneous increase in Trust and Individualism will surprisingly increase the activity, indicating that differences in trust substantially affect the result regardless of the individuality scale of the target company. Individualism-Hierarchy interaction term is statistically

insignificant, therefore I cannot draw safe conclusions. Adding the economic freedom indices does not change the impact or significance.

Regarding culture and deal value, results are different. I find a negative and significant (except for individualism) relationship, so that high differences in all cultural values will result in smaller deal values. This indicates that firms that engage in M&A with culturally distant firms are not willing to pay higher fees, possibly in fear of post-merger failure and- to offset the costs- they target more affordable targets to increase their synergy. Once again, interaction terms slightly swift the direction of impact, especially in the case of a simultaneous increase of trust and hierarchy, leading to a positive coefficient. This shows that higher trust and individualism differences result in more expensive deals, offsetting the cultural distance between two firms. Adding economic freedom indices does not affect explanatory variable coefficients but there is significance loss in the model.

Cultural disparities have the expected impact on deal characteristics. Bigger trust differences will result in higher probability of stock payment of the deal (as incentive for post-merger company growth) and a higher probability of same industry firm engagement. Bigger hierarchy differences will result in a lower probability of the deal being completed on the same date (most probably due to complicated firm structure of both parties) and a higher probability of same industry engagement, again confirming the fact that cultural disparities are not substantial when both counterparts originate from the same industry. Interestingly, individualism reports non-significant coefficients, therefore I cannot draw reliable conclusions.

Perhaps the most intriguing results are observed in the culture-stock performance relationship. There is no significance in the results whatsoever, even after recalculating cumulative abnormal returns with a different formula. Value-weighting CARs with the acquirer's market capitalization at the time of the announcement of the acquisition did not improve the results. These extraordinary findings, in combination with the fact that older relevant research has confirmed a relationship (both negative and positive) between cultural disparities and stock performance, corroborate the elusive nature of the determinants of acquisition performance. Culture might presumably be less important in the latest merger waves as it was in the previous decades, just as the incentives for M&A have changed in the same timeline (conglomerate vs vertical/horizontal integration). What can be said with certainty is that although cultural distance plays a significant role in shaping the global acquisition map, there are still ample research possibilities for the market to capture the intricate concept of M&A activity.

6. Limitations and Areas of Development

6.1. Missing variables

A number of control variables have been excluded from this paper due to unavailability of data in Zephyr Database concerning M&A and other databases. One such variable according to Huizinga & Voget (2009) is the presence of signed double taxation treaties between countries. Barthel, Busse and Neumayer (2009) have demonstrated that Foreign Direct Investment (FDI) is larger between countries if they have signed a double taxation treaty. Given that mergers and acquisitions are a form of FDI, monitoring the signed treaties of all the countries in my sample would improve the accuracy of my results.

Similarly, another variable not present in this paper is the presence of termination provisions in a target firm. Boone & Mulherin (2006) discovered that terminations fees do not hinder the bidding process but, on the contrary, they culminate the takeover process and increase competition. Officer (2003) also provides evidence that termination fees are more common when there is information asymmetry between two companies, which -in my paper- is partially reflected by the difference in culture between two parties, which makes this measure important to include in future literature.

Finally, the aggressiveness of the takeover plays a key role in the takeover process. Schwert (2002) examined the distinguishability of hostile and friendly takeovers on economic performance terms. He concludes that when a merger is considered hostile, it receives more publicity and that results in higher premiums for the target and lower merger gains for the bidder.

6.2. Structural limitations

Furthermore, a number of structural limitations that may affect this paper's results need to be unarguably mentioned. As seen in Section 3, starting with an initial database of 10629 deals and performing a CAR analysis on just half of them (5723) - and even less if I used exclusively listed firms (677)- clearly shows that using only public firms significantly lowers the sample and thus the possibility of the results being credible and accurate. This can lead to the conclusion that the results of this paper cannot be interpreted across all international deals. Research has shown that acquirer CARs can vary significantly if the acquirer or target is a public firm and vice versa (Faccio, Stolin & McConnell; 2004). However, it is equally difficult to measure the financial performance of private firms, making this a big obstacle for past and future literature.

When performing research in cultural discrepancies between countries, a very common and intricate limitation is that these discrepancies are measured as the distance in a certain cultural aspect between two parties, but this distance does not show us the direction of the difference. In other words, the cultural variables are not directional. For example, you may find that two sets of countries have the same absolute difference in hierarchy, but all those countries might be placed differently on the hierarchy scale. And this placement on the scale is not reflected in the variable. Shenkar (2001) points

out several hidden assumptions in cultural measure constructs of past literature and identifies the above non-directional issue as cultural symmetric distance effect.

Finally, an interesting observation in my sample is the high skewness in the distribution of CAR observations. Although not strictly a limitation, it indicates a large firm effect. To define this more clearly, acquirer CARs are very unevenly distributed around 0, with severe positive skewness, meaning that the majority of deals in my sample realize high positive CARs on average, especially for larger and more wealthy firms. Since there is a minimum threshold in the deal value (of 1 million), it subsequently means that my sample is comprised mainly of medium- and high-sized firms.

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8. Appendix

Figure 1. Five Largest Cross-Border Merger Markets. Largest cross-border acquirers and target nations are determined by the number of cross-border mergers in 2006-2014 where the acquirer/target firm was located in a particular country. (2006-2014 because some deals have been announced in 2006 but completed in 2008). Notice that China isn't present in the top 5 bidding game, but is by far the largest target country by completed deals.

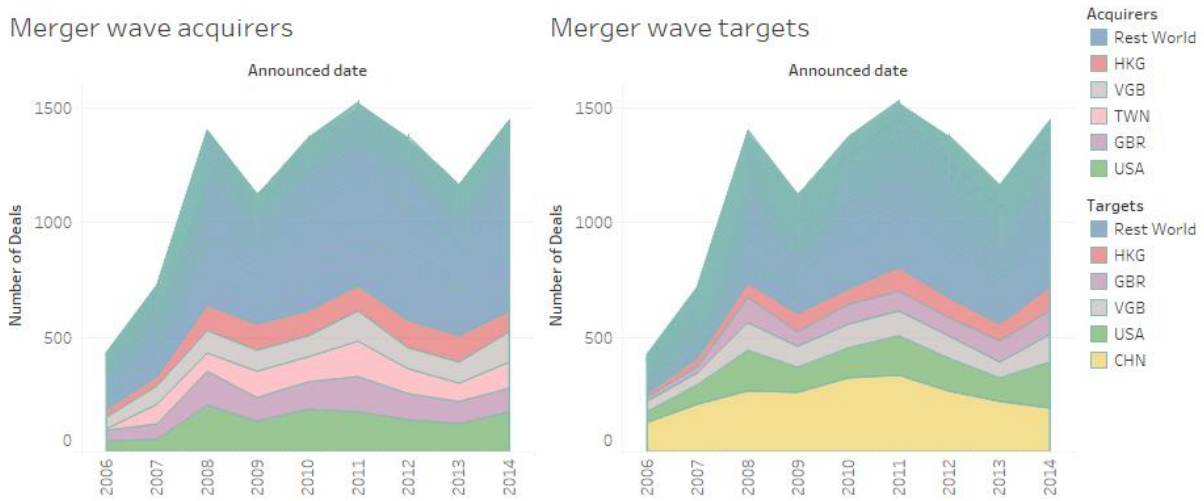


Figure 2: Number of Mergers in the 20 Largest Target Nations, 2006-2014. Data is from Zephyr Database. Acquiring nations are listed on the row variables and target nations on the columns. The countries are rank ordered by the number of target firms in each country. Only mergers where more than 50% of the target shares are owned by the acquirer after the merger are included.

		TARGET NATION																				
		USA	GBR	TWN	CAN	AUS	CYM	JPN	SGP	CHN	BMU	KOR	FRA	CHE	DEU	IRL	NLD	SWE	ISR	MYS	HKG	Total
ACQUIRER NATION	USA		163	4	151	34	8	11	9	47	3	7	41	19	55	12	28	22	29	1	14	658
	GBR	219		3	29	45	3	2	6	12	2	4	23	14	39	13	26	14	2	4	4	464
	TWN	26	1		1	1	37	6	10	251	10	1		1	1		12			4	39	401
	CAN	233	40			23	2			3	4	3	4	6	5	2	5	3	2		4	339
	AUS	48	36	1	24		2	1	19	4		3	3		2	2	1	2		9	13	170
	CYM	14	4	7	3	1		2	6	97		2		3			1			2	27	169
	JPN	38	16	1	1	12	2		19	35	2	5	4	3	1	2	2	2		10	10	165
	SGP	4	5	2	1	9	2	1		78	2	1		1					1	37	21	165
	CHN	14	2		2	5		3	3		1		1		3		4				110	148
	BMU	21	10	2	3	8	10		8	39			1	1	3		1			9	21	137
	KOR	17	2			6	1	7	7	21			1		4	1				5	13	85
	FRA	30	10		5	2	1							4	9		11	3			2	77
	CHE	31	1		2		2	1	1	2			4		21		3	2			2	72
	DEU	16	10		1	1			3	1			6	8			8	3	2			59
	IRL	25	17		7	2	1					1	2	1	1			1	1			59
	NLD	30	4		2	2			1	1			4	2	11	1		1				59
	SWE	23	11		3		1		1	2		1	3	1	3	1	7					57
	ISR	33	7		1			1		1					2		1					46
	MYS	1	3	1		2	2		21	3	1										6	40
	HKG	1	1		2		4		1	27						1				2		39
	Total	824	343	21	238	153	78	35	115	624	25	28	97	64	160	35	110	53	37	83	286	3409

Figure 3. Correlation matrix of all variables used in regressions in my paper. Apart from minor expected associations, there is no significant correlation between any variables, indicating uniqueness of each.

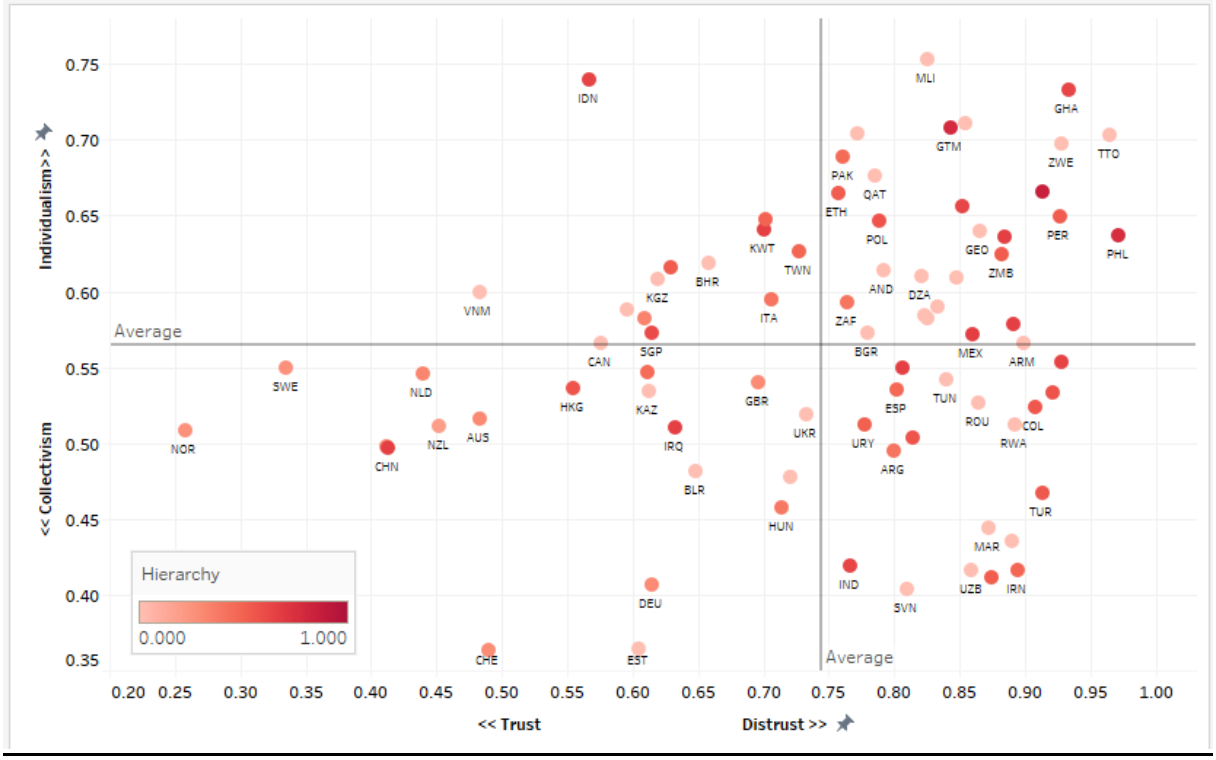
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1) DealValue	1																					
(2) Payment_cash	-0.01	1																				
(3) SameDate	-0.093	0.118	1																			
(4) Public_Target	0.117	0.055	-0.139	1																		
(5) Com_Ind	0.06	0.047	-0.006	0.027	1																	
(6) COL	-0.071	-0.101	0.04	-0.015	-0.035	1																
(7) Contiguity	-0.025	-0.054	-0.035	0.014	-0.018	0.011	1															
(8) Colony	-0.042	-0.103	0.01	0.039	-0.056	0.521	-0.049	1														
(9) Geo_distw	-0.043	-0.058	-0.038	-0.038	-0.02	0.318	-0.374	0.475	1													
(10) Com_Cur	0.089	-0.029	-0.005	0.093	-0.006	-0.216	0.494	-0.139	-0.301	1												
(11) Δ_Trust	0.006	-0.072	-0.007	-0.059	0.02	-0.142	-0.016	-0.132	0.05	0.117	1											
(12) Δ_Individ	0.049	0.046	0.014	0.058	0.022	-0.174	0.043	-0.143	-0.177	0.142	-0.035	1										
(13) Δ_Hierarchy	0.027	0.035	-0.064	0.022	0.031	-0.221	-0.096	-0.142	0.101	0.072	0.261	0.125	1									
(14) Com_Legor	-0.021	-0.169	-0.09	0.078	-0.056	0.48	0.348	0.494	0.171	0.181	-0.145	-0.144	-0.066	1								
(15) Com_rel	-0.033	-0.017	0.051	0.041	0.032	0.19	0.271	-0.004	-0.164	-0.008	0.027	0.01	-0.301	0.02	1							
(16) GDP_real_A	0.003	0.126	-0.098	0.01	0.033	-0.21	-0.183	-0.04	0.111	-0.115	-0.133	-0.053	0.137	-0.237	-0.198	1						
(17) GDP_real_T	-0.054	0.142	0.082	-0.122	0.058	0.125	-0.175	-0.128	-0.071	-0.123	0.044	0.097	-0.018	-0.315	0.203	-0.068	1					
(18) Wealth_Dist	-0.031	-0.166	-0.033	-0.052	-0.015	0.117	0.204	0.046	-0.064	-0.014	0.021	-0.135	-0.07	0.288	0.093	-0.135	-0.413	1				
(19) Openness_A	-0.042	-0.061	0.151	-0.085	-0.026	0.382	0.097	-0.058	-0.045	0.069	0.048	0.04	-0.082	0.122	0.171	-0.362	0.334	0.051	1			
(20) Openness_T	-0.023	-0.045	-0.027	-0.022	-0.091	0.141	0.046	0.083	0.149	-0.055	-0.104	-0.174	0.03	0.238	-0.057	0.018	-0.314	0.313	-0.122	1		
(21) CAR	0.008	0.022	-0.012	8E-04	0.05	-0.018	-0.027	-0.035	0.015	-0.017	0.052	-0.028	-0.005	0.002	-0.036	0.001	-0.013	0.011	0.015	-0.008	1	
(22) w_#ofdeals	-0.048	-0.044	0.101	-0.153	-0.038	0.041	-0.243	0.218	0.156	-0.17	-0.007	-0.182	-0.071	-0.069	-0.164	0.183	-0.091	0.084	-0.03	-0.025	0.009	1

Figure 4. Summary statistics table with means, standard deviation, minimum, maximum and the number of observations for each variable. Observations are all at the country-, country pair- and deal-level. All variables are defined in the appendix.

Variable	Obs	Mean	Std. Dev.	Min	Max
DealValue	5,723	249.0755	1716.099	1	66702.91
Geo_distw	5,704	6460.968	5037.227	160.9283	19516.56
Δ_Trust	3,968	0.159004	0.1123148	0.000125	0.663712
Δ_Individualism	3,968	0.066674	0.0528394	0.000196	0.333413
Δ_Hierarchy	3,143	0.135961	0.1123683	0	0.5976
GDP_real_A	5,715	4006101	5876181	830.9055	1.71E+07
GDP_real_T	5,637	5173969	6678311	345.5262	1.67E+07
GDP_capita_A	5,715	41756.55	12829.17	1222.235	161981.1
GDP_capita_T	5,637	34554.54	16531.24	734.0865	129414.9
Wealth_Distance	5,629	-0.66277	0.6263362	-0.99955	0.982257
Δ_gov_integrity	4,679	21.43764	16.56147	0	73.9
Δ_tax_burden	4,679	12.16183	8.401842	0.1	56.9
Δ_business	4,679	13.96685	13.89526	0	64.1
Δ_labor	4,679	21.47275	12.84331	0.1	67.5
Δ_monetary	4,679	6.492669	5.22995	0	75.2
Δ_trade	4,679	7.202629	8.377	0	53.4

Δ_investment	4,679	21.41376	17.32096	0	90
Δ_financia	4,679	17.5935	14.18216	0	70
Openness_A	4,917	0.836182	5.643504	-0.51927	69.29284
Openness_T	5,277	8.927364	28.21719	-0.51927	144.5494
CAR	4,649	0.013399	0.8486404	-0.87056	57.5888
#_ofDeals	5,723	407.2296	294.8252	1	805
Payment_cash	5,723	0.792766	0.40536	0	1
SameDate	5,723	0.270313	0.4441602	0	1
Public_Target	5,723	0.118295	0.3229849	0	1
Common_Industry	5,723	0.599161	0.4901112	0	1
COL	5,501	0.49282	0.4999939	0	1
CSL	5,501	0.524439	0.3744791	0	1
Contiguity	5,707	0.155598	0.3625059	0	1
Colony_dummy	5,707	0.155248	0.3621726	0	1
Common_Currency	5,723	0.050848	0.2197053	0	1
Common_Legal	5,723	0.38354	0.4862905	0	1
Common_religion	5,723	0.207933	0.405864	0	1

Figure 5. Cultural Values Across Nations. Each circle represents a country's relative scores from three questions on the World Value Survey. Positioning along the horizontal axis indicates the country's degree of Trust vs Distrust Positioning along the vertical axis indicates the country's degree of individualism vs. collectivism. The coloration of each circle indicates the country's degree of Hierarchy. A lighter color indicates a more trusting country, a darker color indicates more distrust of others. Country abbreviations follow the three-digit ISO codes.



Variable Definitions

#_ofDeals: variable that monitors the amount of deals completed by an acquiring country in each year of the 2008-2014 time span. The variable weighted by the acquiring country's GDP for the respective year. (Source: Author's calculations)

Average_Δ_EconFreedom: Constructed variable that shows the overall absolute difference in economic freedom between the two firms' host countries. It is calculated as the simple average of the 8 economic freedom index differences of each country pair (Source: Authors' calculations).

business_freedom: The ease with which enterprises are established and run in each country, without a lot of government interference (0 – 100 scale, Source: Economic Freedom Index).

CAR: Cumulative abnormal return in the three days surrounding the merger announcement of the acquirer and target firm. Cumulative abnormal returns are calculated as the sum of the firm's realized returns minus expected returns, calculated based on a 100-day estimation window before the announcement of the deal based on the market model and EIKON mean adjusted returns. Index used is EIKON MSCI World index over the three day timeline. (Source: Authors' calculations).

COL: Common Official Language. Dummy variable equal to 1 if the firms' host countries share an official language and 0 otherwise (Source: CEPII).

Colony_dummy: Dummy variable equal to 1 if the two firms' host countries had a colonial relationship in the past (Source: CEPII).

Common_Currency_dummy: Dummy variable equal to 1 if the firms' host countries have the same currency (year of reference is 2011) and 0 otherwise (Source: CEPII).

Common_Industry_dummy: Dummy variable equal to 1 if the acquirer and target operate in the same industry and 0 otherwise (Source: Zephyr).

Common_Legal_dummy: Dummy variable equal to 1 if the two firms' host countries share the same legal origin and 0 otherwise (Source: La Porta, Schleifer & Visnhy; 1998).

Common_religion_dummy: Dummy variable equal to 1 if the two firms' host countries practice the same religion in the majority of their population and 0 otherwise (Source: Association of Religion Data Archives)

Contiguity_dummy: Dummy variable equal to 1 if the two firms' host countries share a natural geographical border and 0 otherwise (Source: CEPII).

countryid: Number identifier of every country-pair used in the analyses. It is constructed to be used as acquirer and target country fixed effects. (Source: Author's calculations)

DealValue: The value of the merger or acquisition in millions of 2011 US dollars (Source: Zephyr).

Final_stake(%): Percentage of target ownership after the completion of the deal (Source: Zephyr).

financial_freedom: the level of accessibility and efficiency of a country's financial environment in terms of banking systems, availability of credit and diversification of savings (0 – 100 scale, Source: Economic Freedom Index).

GDP_capita_A : GDP per capita of the acquirer's country. Calculated by dividing GDP_real_A by the country's 2011 population (Source: Authors' calculations).

GDP_capita_T : GDP per capita of the acquirer's country. Calculated by dividing GDP_real_A by the country's 2011 population (Source: Authors' calculations).

GDP_real_A: Real Gross Domestic Product of the acquirer's country in millions of US Dollars. It is a constructed variable, as the simple average between output and expenditure GDP (Source: Penn World Tables).

GDP_real_T: Real Gross Domestic Product of the target's country in millions of US Dollars. It is a constructed variable, as the simple average between output and expenditure GDP (Source: Penn World Tables).

Geo_distw: Variable that measures the weighted distance (in km) between major cities of the firms' host countries. The weight is based on the cities' population (Source: CEPII).

gov_integrity: Government integrity index. It is a very good proxy for a country's corruption (0 – 100 scale, Source: Economic Freedom Index)

Hierarchy: Power Distance Index (scaled from 0 to 1) of a country's extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally (Source: World Value Survey).

Individualism: Average answer (scaled from 0 to 1) of a country's opinion on the following question: *"Incomes should be more equal or We need larger income differences as incentives for individual effort"* (Source: World Value Survey).

investment_freedom: The level of transparency in the investment market and the support of all investments that promote innovation, regardless of size or value (0 – 100 scale, Source: Economic Freedom Index).

labor_freedom: The ease of finding employment opportunities, both from the individuals' and employers' perspective (0 – 100 scale, Source: Economic Freedom Index).

monetary_freedom: A country's ability to maintain a stable and reliable currency unit to drive long-term growth (0 – 100 scale, Source: Economic Freedom Index).

Openness: calculated variable equal to the average of total inflows over GDP plus total outflows over GDP in the respective year. Inflows and outflows are both capital flows and stocks, measured in the same unit as GDP. (Source: Authors' calculations)

Payment_cash_dummy: Dummy variable equal to 1 if the deal was paid exclusively in cash and 0 otherwise (Source: Zephyr).

Public_Target_dummy: Dummy variable equal to 1 if the target firm is publicly traded company and 0 if it is privately held (Source: Zephyr).

SameDate_dummy: Dummy variable equal to 1 if the deal was completed the same day that it was announced and 0 otherwise (Source: Author's calculations).

tax_burden: The level of each country's corporate tax rate (0 – 100 scale, Source: Economic Freedom Index).

trade_freedom: The amount of restrictions that a state places to its sellers and buyers regarding international transactions such as tariffs, export taxes, etc (0 – 100 scale, Source: Economic Freedom Index).

Trust: Average answer (scaled from 0 to 1) of a country's opinion on the following question: *"Generally speaking, would you say that (1) Most people can be trusted (2) Need to be very careful"* (Source: World Value Survey).

Year: The year that control variables are monitored in. Also used as year fixed effects variable. (Multiple sources)