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Master Thesis



Global merger waves and cultural distance

The effect of cultural distances on cross-border M&A transactions

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A B S T R A C T

This paper explores the impact of cultural distance on cross-border M&A and finds that the various merger waves have been affected differently. Cultural distance is measured as differences in national cultural values between countries through three dimensions: trust, hierarchy, and individualism. The likelihood, and performance of cross-border transactions are tested using a gravity model. The model makes use of deal- and country-level characteristics on a total sample of 153,021 public & private and 12,659 public-to-public M&A deals in 62 countries for the period 1985-2014 containing three merger waves. The impact of the three cultural distances vary per merger wave, and culturally distant countries have less merger activity and remain consistent in the merger waves. M&A performance is affected similarly, with lower short-term announcement returns for culturally distant countries, whereas long-term performance is not affected by cultural distance and does not change in the merger waves.

Keywords: cultural distance, cross-border, merger waves

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1. Introduction

National cultural values have an impact on many financial decisions in the global financial market. With increasing globalization and emergence of new markets, firms have an opportunity to expand their businesses abroad. When determining their strategy to go abroad, differences in cultural values are associated with frictions in e.g., economic preferences and outcomes (Guiso, Sapienza, & Zingales, 2006), foreign direct investments (Guiso, Sapienza, & Zingales, 2009), the choice of entry mode (Kogut & Singh, 1988), choice of country (Johanson & Vahlne, 1990), double-layered acculturation (Malekzadeh & Nahavandi, 1998), and merger integration costs (Olie, 1990; Weber, Shenkar, & Raveh, 1996; Shimizu, Hitt, Vaidyanath, & Pisano, 2004). With these frictions, cross-border mergers and acquisitions (M&A) and cultural differences between the two countries of the acquiring and target firm is relevant, as people with contradicting cultural values need to cooperate with each other after completion of the deal. If the M&A deal is between two culturally distant countries, the deal can be mismatched and lead to cultural clashes, such as the anecdotal Daimler & Chrysler merger in 1998. Literature, however, is not conclusive on the effect of cultural differences (Stahl & Voigt, 2008), either being negatively (Datta & Puia, 1995; Ahern, Daminelli, & Fracassi, 2015) or positively related to mergers (Morosini, Shane, & Singh, 1998; Chakrabarti, Gupta-Mukherjee, & Jayaraman, 2009). As the cross-border M&A has increased by 4,089% in transaction value, from \$32 billion in 1985 to \$1,326 billion¹ in 2017, in contrast to the total market increase by 926%, increasing from \$347 billion to \$3,559 billion, the influence of cultural differences on cross-border M&A is becoming more important to understand. The increase in (cross-border) M&A activity nowadays is an important strategy to pursue the strategic expansion of a firm. Surprisingly, however, literature is inconclusive of the performance of cross-border mergers M&A, when compared to the announcement return of domestic acquisitions (Aw & Chatterjee, 2004; Datta & Puia, 1995; Eckbo & Thorburn, 2000; Moeller & Schlingemann, 2005), or no differences (Andrade, Mitchell, & Stafford, 2001; Goergen & Renneboog, 2004; Alexandridis, Mavrovitis, & Travlos, 2012). The underperformance compared to domestic transactions has been referred to as the cross-border effect. However, the current literature cannot pinpoint convincing explanations as to why this so-called cross-border effect is present and the influences of the cultural values, giving room to research this phenomenon.

Interestingly, over the years, M&A activity has occurred in waves. The term of a takeover wave reflects the wavelike pattern of the total number and value of takeover deals. This movement in waves shows that the 6th wave (2003-2007) has an all-time high with a transaction value of \$4,960 billion and cross-border transaction value of \$2,283 billion in 2007. Existing literature describes merger waves and relates each wave to different motives, and deal characteristics. The start of a merger wave typically corresponds to economic, political or regulatory changes, and a feature of the 5th wave, which stretched

¹ The values have been extracted from the Institute of Mergers, Acquisitions, and Alliances, or IMAA.

from 1993-2000, was its international nature, with a substantial amount of cross-border M&A, as firms want to participate in a globalizing market. (Martynova & Renneboog, 2008). Mega-deals characterized the 6th merger wave, which lasted from 2003-2007, (Alexandridis, Mavrovitis, & Travlos, 2012), whereas challenging operating conditions and low lending costs distinguish the 7th wave, which started in 2010 and is still present (Alexandridis, Antypas, & Travlos, 2017). Apart from different motives, the market responds differently to merger announcements in waves, where the 5th wave and the 6th wave in the cumulative abnormal returns (CARs) were not significantly different (Alexandridis, Mavrovitis, & Travlos, 2012). The 7th wave, however, had significantly higher returns when compared to the 6th wave (Alexandridis, Antypas, & Travlos, 2017). Since announcement returns, motives and characteristics differ per merger wave, the impact of cultural values also might differ per the merger wave, and possible cultural distances can be used as explaining factors towards cross-border M&A in merger waves.

The paper provides insights on the influence of cultural values on M&A transactions in three ways. First, it will assess the likelihood of merger activity of two countries through M&A transaction values. Second, to evaluate the M&A performance, in both short-term, and long-term of public-to-public M&A transactions. Third, to examine if the three merger waves in the sample, the 5th, the 6th, and the 7th wave, alter the impact and influence of the cultural values on the likelihood, and M&A performance.

The likelihood and M&A performance are tested using a gravity model. Next to the cultural values, the model controls for specific country- and deal-level characteristics known to influence M&A transactions. The likelihood is determined through the country-pair years merger deal value using a Tobit model. The M&A performance is tested using univariate and cross-sectional multivariate analysis on a deal-level. Testing the short-term performance by three-day window CARs (-1,+1) and long-term performance by three-year buy-and-hold-abnormal-returns (BHARs), the cross-sectional analysis provides results towards the impact of cultural values on M&A transactions. The M&A transactions consist of a sample of 153,021 public & private to assess the likelihood and 12,659 public-to-public M&A transactions to assess the M&A performance in 62 countries for the period 1985-2014. Cultural values are defined into three dimensions according to Ahern et al. (2015) and retrieved from results of the World Value Surveys. ‘Trust’ is defined whether people trust each other or not, ‘Hierarchy’ as the belief that people follow instructions even if they disagree, and ‘Individualism’ as the belief that people expect maximizing self-interest rather than the well-being of the society. Trust is a dimension used by Guiso et al. (2006), and Hierarchy and Individualism resemble two dimensions defined by Hofstede (1980). A wide array of studies use the dimensions of Hofstede as cultural dimensions, but the dimensions depend on the answers of employees of a large multinational. The surveys of the World Value Survey (WVS) are answers of the population of a country, using public-opinion surveys on topics related to, e.g., ecology, economy, government & politics, and work. The difference in the observed values is commonly referred to as the cultural distance.

Results find that culturally distant countries will have a lower likelihood of merger transactions with changing impacts in the different merger waves of the three cultural distances. The short-term announcement returns do not differ between cross-border and domestic transactions, while domestic transactions outperform cross-border transactions in the long run in the total sample. The 7th wave CARs however are significantly higher when compared to other merger waves for the full sample by 0.4%. In the cross-sectional analysis, the combined CARs are significantly negative for culturally distant countries with hierarchy as distance. Similar to the likelihood estimations, the impact of the cultural distance dimensions changes per merger wave. In the long-term performance, cultural distance is not significantly impacting the 36-month BHARs indicating no relationship in the long run and remains insignificant when testing the BHARs on the three merger waves.

This paper is an addition to two main topics in existing literature, the cultural value differences between an acquiring and target country, and M&A focusing on merger waves and cross-border M&A. The paper believes to be an extension of the current literature in several ways. First, cultural values on M&A transactions have been tested on a single defined cultural distance (Datta & Puia, 1995; Morosini, Shane & Singh, 1998; Chakrabarti, Gupta-Mukherjee, & Jayaraman, 2009), where only Ahern et al. (2015) use cultural values independently. Second, earlier literature does test for differences in merger wave announcements with a limited focus to US acquiring firms (Andrade, Mitchell & Stafford, 2001; Alexandridis, Mavrovitis, & Travlos, 2012; Alexandridis, Antypas & Travlos, 2017), and does not include cultural values as an explanatory variable. Third, testing the cross-border against domestic transactions primarily focused on a market such as the US, UK, or Europe (e.g., Eckbo & Thorburn, 2000; Aw & Chatterjee, 2004; Georgen & Renneboog, 2004; Moeller & Schlingemann, 2005). Fourth, except for Alexandridis et al. (2017), most papers contain samples up to the financial crisis of 2007, using a large and recent sample, the national culture can be observed over a larger period.

As the cross-border M&A market has increased substantially over the past decades, understanding the changing impact of cultural values in M&A deals is relevant to understand. Results confirm a negative impact towards M&A deals between two distant countries on cultural values and the change of the impact throughout the waves. This paper provides further views on the changing values of cultural distance and can give fruitful insights for the future decisions made by managers who decide to expand in a globalizing world.

The rest of this paper is divided into six sections and is structured as followed: chapter 2 contains a review of the past literature about merger waves, cross-border M&A, and cultural distances. Chapter 3 will present the hypotheses related to the past literature, and chapter 4 describes the data and methodology used to test the hypotheses. In chapter 5 the empirical findings and results on the hypotheses will be discussed, and chapter 6 concludes. Finally, chapter 7 will provide the shortcomings of this paper and recommendations for future research.

2. Theoretical Framework

This chapter will provide an in-depth explanation of the past literature related to M&A, merger waves, cross-border M&A, the performance of M&A transactions and cultural distances. The first paragraph will be focusing on the motives of a M&A transactions, whereas the second paragraph focuses on merger performances in merger waves, cross-border M&A and characteristics on M&A deals. The third section provides further insights into cultural values and distances.

2.1 What drives M&A?

To fully understand the characteristics of M&A transactions, not only should be looked at the performance of a deal, but also the motives why this deal should happen. These motives have been developed throughout the years and described extensively. Two competing theories have been developed throughout the years. The first theory is the neoclassical profit maximization theory, implying that firms will do takeovers if the acquiring shareholders increase in wealth. The second theory relates to the maximizing management utility, where managers will try to maximize their utility, own interest and act not in the interest of their shareholders (Firth, 1980).

From these two points of theory, Berkovitch & Narayanan (1993) mention three takeover motives: synergy, agency, and hubris. The synergy motive refers to the idea that takeovers are from the point of economic gains by merging resources, whereas the agency motive relates to the perspective of increasing the wealth of the acquiring management at the cost of their shareholders. The hubris motive points to management mistakes in the valuation of the target firm, taking part in acquisitions without synergy gains. It concluded, by testing on the correlation between the acquirer and target gains, that in the subsample of positive returns, the synergy motive was the dominating reason, whereas in the total negative gains the dominating motive was related to the agency theory. Hubris is found, albeit in the positive total gain subsample. Other research conducted by Trautwein (1990) presented and described possible merger motives into seven different theories. First, the efficiency theory to realize either financial, operational or managerial synergy gains, and second, the monopoly theory to increase market power. Third, the valuation theory having superior knowledge to the target's value than the stock market, and fourth the empire-building theory where managers maximize their value rather than the shareholders' value. Fifth, the process theory stating that decisions are not made on a rational choices, but on the process governed by various influences, sixth, the raider theory stating that the wealth from the target's stockholder is transferred to the acquiring company, and lastly the disturbance theory referring to the theory that economic disturbances cause merger waves. Other mentioned motives include management incentives, buying certain assets under the replacement cost, the breakup value, diversification, and tax considerations (Mukherjee, Kiymaz, & Kent Baker, 2004). When looking specifically at motives to pursue cross-border deals, the motives could be fueled by either, a way of

entering the market, a value-creating strategy, or dynamically learning the process of a foreign culture (Shimizu, Hitt, Vaidyanath, & Pisano, 2004).

The motive of a merger is a field of study that depicts various rationales but provides no conclusive answer why a merger should happen (Lubatkin, 1983). The success of an M&A transaction is the increased value of the combined firm as long it does not annul value, testing on financial measures, such as profitability in accounting measures or market-based performance, testing share price changes (Lubatkin, 1983; Trautwein, 1990; Bruner, 2002; Mukherjee, Kiymaz, & Kent Baker, 2004).

However, the motive of a merger is not unambiguously answered in recent literature, testing the performance of a merger seems to be a useful measurement whether a merger is a success or failure.

2.2 M&A performance

The way to evaluate a specific M&A deal or M&A activity in a period depends on how it is measured and compared to specific references. Literature is not unambiguously conclusive on how to evaluate this M&A performance. Throughout the years, literature has devoted its attention to the question whether M&A, albeit cross-border or domestic, creates value. Simply stated, answering this question states that combining two firms is more valuable than the sum of the two firms separately. If the value of an investment is conserved or created, it should be regarded as a success, whereas the failure should be considered as value destruction in economic terms (Bruner, 2002). To research the wealth creation through a (cross-border) M&A transaction, first, it needs to be defined how these wealth effects are tested. More simply stated, how can M&A performance be measured.

To say something relevant in testing M&A performance, it rests on the confidence in measures and methods used to extract information. Four approaches are used in past literature to measure M&A performance. The first is an event study where it examines ARs to shareholders in a specified period, and second, accounting studies testing reported financial results before and after the merger. Third, surveys of executives asking executives whether they believe M&A is value creating, and fourth, clinical studies focusing in-depth on a small sample of transactions. Most literature, however, has devoted its attention to event studies and arguably dominated the fields since the 1970s. An advantage of using the event study method is that is a direct and forward-looking measure of wealth creation, limited by requiring assumptions about the stock market (Bruner, 2002). Testing this can be related to the market efficiency theory, whether the capital market acts in either a weak, semi-strong or strong form. The weak form cannot control for factors that might have influenced the deal, and the strong form is not usable as it is not possible to determine how the market would look without the deal. Therefore, testing the M&A performance in a semi-strong form, comparing M&A results with benchmark returns, is most suitable. Benchmarks are imperfect and therefore relate to the semi-strong form (Bruner, 2004). Additionally, Andrade, Mitchell, and Stafford (2001) mention that short-term event windows relate to

the semi-efficient form as the stock price should adjust at the announcement of the deal, reflecting this anticipated value creation of the M&A transaction. On a longer time event window, research assumes the semi-strong form as well and that the market needs time to adjust to justifiably reflect the outcome of the merger, taking roughly 36 to 60 months (Haleblian, Devers, McNamara, Carpenter, & Davison, 2009).

Another way of testing the performance of M&A transactions is by studying accounting-based metrics. In this kind of study, the post-merger performance is tested after completion of the transaction, matching this performance to companies in the same industry and size as the company that pursued an M&A deal and test whether they outperform their peers. Using accounting-based metrics increases the credibility as the statements have been verified. However, this is a backward-looking metric and can get distorted by inflation or deflation (Bruner, 2002). Moreover, Lubatkin (1983) mention several limitations in using these accounting-based measures. They can be restricted as such that measures are distorted by the leverage of the firm when the wealth increase of the common shareholder is determined. Furthermore, it ignores the impact of altering the risk on deviations in return or does not isolate the effect of an M&A transaction on the profitability of a company. Changing the company's profitability takes time to adjust in the financial statements where other market or firm-specific events can have influenced these accounting-based metrics. These factors limit the use of accounting measurements on both the short and long-term performance, directing this paper to a market-based event study.

2.2.1 Merger waves

As already pointed out, mergers and acquisitions do occur in waves. The term 'merger wave' reflects the pattern in both value and amount of deals (Martynova & Renneboog, 2008). The motives can differ per wave, and past literature explains it through two views. First, the behavioral approach, the fact that it uses market timing using overvaluation in the stock market and therefore clusters merger waves (Shleifer & Vishny, 2003), and that a target with no perfect information rather accepts bids from an overvalued acquirer as they overstate the synergies (Rhodes-Kropf & Viswanathan, 2004). The second view is from a neoclassical approach, stating that industry's economic, technological or regulatory environment can lead to shocks and stimulate merger waves (Mitchell & Mulherin, 1996; Andrade, Mitchell, & Stafford, 2001), or that sufficient liquidity in the market this capital liquidity leads to shocks rather than industry shocks and leads to merger waves (Harford, 2005). Adding that M&A is more likely to occur when corporates have excess cash reserves or when the access to external financing is eased, which is most likely when the capital market is growing, takeover activity gets clustered in periods (Harford, 1999).

Different takeover rationales characterize past merger waves. Monopoly mergers occurred in the 1890s, referred to as the 1st merger wave. The 1920s (2nd wave) are known for oligopoly mergers, the 1950s (3rd wave) for conglomerate takeovers, and the 1980s (4th wave) by hostile takeovers (Mitchell & Mulherin, 1996). The 2000s (5th wave) most transactions were mega-deals, and 2003-2007 (6th wave)

showed low financing rates and rich cash balances (Alexandridis, Mavrovitis, & Travlos, 2012). Moreover, the sixth wave showed an increase in cross-border transactions. This wave ended in 2008 due to the financial crisis, and M&A activity declined to levels comparable to 2004, recovering and transaction values are in an upward trend since the recent dip (Hill, Quinn, & Solomon, 2016). This upward trend is arguably the 7th wave (2010-present), which is driven by the challenging operating conditions and low borrowing costs, making M&A attractive to increase the growth prospects of the firm (Alexandridis, Antypas, & Travlos, 2017).

The increase in both total M&A activity as cross-border M&A activity is intensive when looking at the activity from 1985 to 2017. As the globalization has an impact on the cross-border M&A deals, this increase is greater than the total increase of the M&A market. In the number of deals, cross-border M&A has increased 2,833%, from 472 to 13,846, where the total M&A market has increased 1,793%, from 2,675 to 50,626. Looking at deals in transaction value, cross-border M&A has an increase of 4,089%, going from \$32bn to \$1,326bn, compared to an increase of 925%, from \$347 billion to \$3,559 billion. The share of the cross-border M&A market has become increasingly greater throughout the years, with a relative share of 27% in 2017 compared to 8% in 1985.

Figure 1: Indexed M&A activity in number of deals and \$ volume 1985 - 2017

The figure illustrates the M&A activity in both number of deals as value in \$ of the deals, indexed to 1985 as 1.0x. The red dots illustrate the implied increase in cross-border M&A \$ value based to 1985 with \$32bn as base. Data acquired via Institute of Mergers, Acquisitions & Alliances.

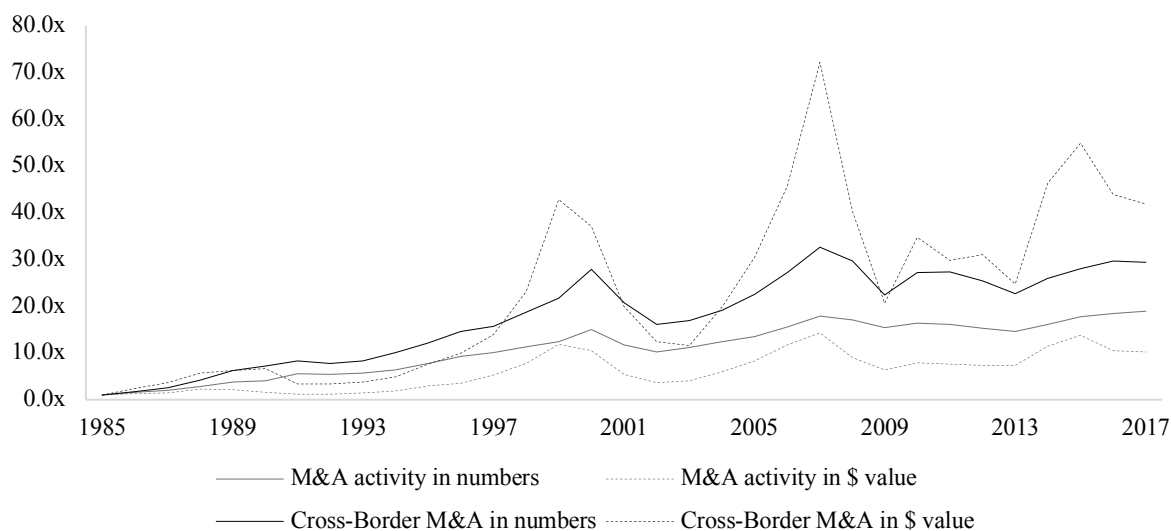


Figure 1 illustrates the M&A activity indexed to 1985 for both dollar value and number of deals from 1985 to 2017. The red dots show the multiplication regarding the dollar value of cross-border M&A before declining due to the dot-com bubble in 2000 and credit crisis in 2008. It shows that this increase has a pattern that differs, and seemingly is related to economic prosperity. Following this trend, this gives reason to assume that cross-border M&A has other characteristics that influence these types of transaction than domestic M&A transactions. If these cross-border transactions fundamentally differ,

looking at performance indicators for these types of deals, it is necessary to identify the factors that influence cross-border deals. Moreover, understanding the motivation of merger waves is one of these factors. These factors are described below, accompanied by possible findings in the wave and the results of some research concerning the wave.

2.2.1.1 Merger waves through the years: the 1890s – present

The first wave: the horizontal merge (the 1890s – ~1904)

This first period of merger waves, which is also called the Great Merger Wave, started in the 1890s coming to an end around 1903-1905 with among others the crash of the equity market and the introduction of the antitrust laws. This period knew massive changes in both technology, economic expansion and innovation in industries, introducing corporations to state legislation and the start of trading on industrial stocks on the New York Stock Exchange (NYSE) (Martynova & Renneboog, 2008; Hill, Quinn, & Solomon, 2016). These were mergers for monopoly, where horizontal mergers were the main reason to gain market power in specific industries ranging from the steel-, rubber-, and textiles-, and hydraulic industry (Stigler, 1950).

The second wave: the Oligopoly mergers (the 1920s – 1929)

The second wave picked up the pace during the 1920s before it came to an abrupt ending due to the great depression in 1929. Mergers now had the intention to form an oligopoly. This change was occurring the most in industries where the monopoly was formed through the first wave. The food industry was the main center of merger activity, creating local oligopolies in primary products and national oligopolies in products such as cheese (Stigler, 1950). Key actions included the enforcement of the earlier and new antitrust laws and the establishment of the Federal Trade Commission in 1914. Most notably was the dissolution of Standard Oil into 34 smaller companies due to the antitrust laws. As these antitrust laws prohibited horizontal mergers, transactions moved to vertical mergers and oligopolies were formed (Hill, Quinn, & Solomon, 2016). The weakness in the Sherman antitrust act was the belief that in the economy oligopolies would be a satisfactory form of industry competition (Stigler, 1950). Where the horizontal merger wave was financed with cash transactions, the oligopoly mergers were dominated by equity payments. This wave was the first wave that has been documented concerning the short-term effects around M&A announcements in the US, finding one month before the announcement average CARs of 15.67% for the target firms and 2.43% for the acquiring firms (Leeth & Borg, 2000).

The third wave: the conglomerate mergers (the 1960s – 1973)

The merger wave took off in the early 1960s and stretched until the oil crisis in 1973 that set the economy in a recession. This third merger wave was the first merger wave that had an impact on Europe and was marked by the emergence of conglomerates and diversification to new product markets

that were not related to their business lines (Martynova & Renneboog, 2008). The return in UK acquisitions between 1969 and 1975 had significant positive abnormal returns (ARs) with 28.1% for the target company and cannot offset the loss by the acquiring company with significant ARs of -6.3% in the short-run for successful transactions. Looking at the long-term return of successful mergers, the AR was insignificantly positive in a one year after the transaction with 0.5% and for the second and third year insignificantly with -0.4% (Firth, 1980). For US deals from 1962-1980, CARs have been found for both target as well as the acquirer, significantly for the target in the month until the announcement date with CARs of 16.7% and in the 12-day (-6,+6) window CARs of 13.74%. For the acquirer in the month before the announcement date, the CARs were an insignificant 1.07% whereas the 12-day window was significant with 3.24%. This gain was not only for common shareholders but also for (non-) convertible preferred stockholders, convertible bondholders of the target company and convertible preferred shareholders of the acquiring firm (Dennis & McConnell, 1986). A study which focused on the US & UK market distinguished the means of payment on the long-term return on a sample from 1955 to 1985. Over time the US cash acquisitions diverted more to equity deals, but not the UK, and cash deals were providing significant higher premiums over equity deals in the US and the UK. The two-year return of all-equity offers was significantly performing worse than all-cash offers for both countries, with -9.4% in the UK while all-cash offers had a 1.7% return. In the US, an insignificant 2.8% two-year return for all-cash deals and a significant -18.4% for all-equity deals was found (Franks, Harris, & Mayer, 1988).

The fourth wave: hostile takeovers and surge of private equity (1981 – 1989)

This merger wave is known for divestitures of the conglomerates, accompanied by the emergence of the ‘junk bond’ (below investment grade bonds) market, and hostile takeovers. Also, leveraged buyout firms, or private equity firms, were making use of this new capital and capital of pooled pension funds to initiate unsolicited hostile cash offers on corporates that were underperforming. Corporates tried to defend themselves through defense mechanisms such as poison pills, golden parachutes and, Pac-Man defenses. This merger wave continued until the takeovers flooded the junk bond market causing it to crash. The last known large junk bond deal was KKR acquiring RJR/Nabisco (Hill, Quinn, & Solomon, 2016). Mitchell and Mulherin (1996) have been looking at the takeover wave and linked this to industry shocks, expectedly or unexpectedly altering the industry structure. They find that takeovers are clustered per industry looking at the takeover activity, as well that the performance of is not different prior to the industry shock. The share price performance in this wave has been studied by among others Franks, Harris & Titman (1991) and found for the US market negative CARs on the bidding company. They varied from -3% for equity bids to 0.83% for cash bids, and significant CARs on the target company, for the entire sample (28.04%), cash bids (33.78%) and equity bids (22.88%). Their findings also included the long-term ARs tested on four different return models (i.e., value-weighted index and equal-weighted index), with no conclusive answer on the abnormal performance

except for the value-weighted index, significantly positive 0.3% monthly ARs. The short-term announcement return with positive announcement returns for the target and negative announcement returns for acquirers has also been found by Andrade, Mitchell & Stafford (2001). Contrary to the insignificant returns on long-term returns found by Franks, Harris & Titman (1991), Loughran & Vijh (1997) found significant ARs of 47.9% in a five-year time window testing 947 M&A transactions from 1970 – 1989.

The fifth wave: the mega-deal mergers (1992 – 2000)

Increasing globalization, deregulation, privatization, and technological innovation accompanied the wave. Moreover, the financial markets and economy were thriving causing the occurrence of mega-deals (i.e., Vodafone & Mannesmann, and Daimler-Benz & Chrysler). This globalization led to an increasing cross-border M&A activity, covering a considerable amount of the total M&A market. Industry related mergers, either horizontal or vertical, and decline of divestitures of companies implied the rise of international expansion into the global market. Moreover, hostile takeovers declined in the US and UK market, where the European market had a sharp increase of hostile takeovers. This merger wave came to an end with the end of the Dotcom bubble in the equity market in 2000 (Martynova & Renneboog, 2008). Martynova & Renneboog (2006) tested the announcement returns in Europe 1993-2001. They reported positive CARs in a 10-day event window, (-5,+5), for the bidder and the acquirer all M&A deals, with 0.79% for the acquirer and 15.83% for the target. Looking at a 120-day event window (-60,+60) the acquiring firms had significant negative CARs of -2.83%. In the three-day event window (-1,+1) ARs the target firms had significant ARs of 15.9%, acquiring firms insignificant negative ARs of -1.0%, and combined significant ARs of 1.4%, from 1990 to 1998 (Andrade, Mitchell, & Stafford, 2001). In the UK, the long-term performance has been significantly positive with 10.19% for cash transactions and significantly negative with -30.80% in a long-term event window of +31 days to +750 days (Sudarsanam & Mahate, 2003).

The sixth wave: globalization and private equity (2003 – late 2007)

After the dotcom-bubble burst causing the equity market to collapse, a short but intense M&A period started. In this wave, the cross-border M&A started to become something to become increasingly important. The globalization of goods and capital markets led corporates to search for competitive advantage beyond its country of origin. This period had high liquidity and low interest causing cash to replace the equity as the method of payment. This high liquidity and low interest also stimulated Private Equity backed transactions. However, in late 2007, the credit became increasingly expensive causing a credit crunch, halting the merger wave and pushing the economy into a global recession (Alexandridis, Mavrovitis, & Travlos, 2012; Hill, Quinn, & Solomon, 2016). Seemingly these acquisitions are not overvalued, acquirers targeting companies with similar valuations and acquire less with equity. The takeovers used have been from US domestic market ranging from 1993 – 2007, containing the 5th and

6th merger wave. Results showed that the CARs have been significantly negative concerning the acquirer for all (sub) periods in the sample and significantly positive for the target. The combined returns have been significantly positive for all periods (Alexandridis, Mavrovitis, & Travlos, 2012). For the European continent in a sample from 2003 to 2011 with acquisitions over €500 million, mergers combined returns have a small but significant negative announcement return of -0.0086% (Auguets, Martinez-Blasco, & Garcia-Blandon, 2017).

The seventh wave? (2010 – Now)

With the global recession taking its toll on the M&A market, transaction volume sank to low levels seen before in 2004 and took a while to recover with an upward trajectory in M&A transaction volume. Specific industries, such as the telecommunications and cable industry seem to consolidate, and the creation of oligopolies and cross-border M&A characterize this wave (Hill, Quinn, & Solomon, 2016). Testing M&A deals between 1990 and 2015, Alexandridis, Antypas and Travlos (2017) found significant CARs of -1.08% for the acquiring firm for the period of 1990 – 2009. In the recent years covering the years 2010 – 2015, the acquirer CARs are significantly positive with 1.05% for all M&A deals, either paid in cash or stock. For these two types of financing, cash payments are significantly positive, whereas the stock financing is insignificantly positive between 2010 and 2015.

2.2.1.2 Comparing merger waves

Merger waves have continuously been compared to other merger waves, each focusing on different waves. The research by Andrade, Mitchell & Stafford (2001) compared the 4th and 5th wave and addressed various issues. The focus of this paper was on industry clustering and the occurrence of waves. In past literature, the announcement CARs were significantly positive for the periods covering the 4th and 5th wave, whereas the target ARs were significantly positive and acquirer insignificantly negative. The ARs were similar when the time window changed, having event windows of -1 days to -20 days, and +1 days until completion day², except for the combined CARs, being insignificantly positive. The difference between equity or cash payment has been mentioned and provided significant combined CARs of 3.6%, where the stock payment led to significantly negative CARs of -1.5% for the acquirer. The occurrence of waves and industry clustering – the 4th merger wave dominated by, e.g., Oil & Gas, Textile and Food, and the 5th merger wave by, e.g., Metal Mining, Media & Telecom, and Real Estate – was found. Industry shocks can be fueled by technological innovations, supply shocks, and deregulation. Also, when the fourth wave was compared to the fifth wave in absolute terms in loss or gain per dollar, the loss in the fifth wave was higher per dollar spent, 12 cents per dollar as opposed to the 1.6 cents spent per dollar in the fourth wave. Looking at what influences the high ARs, is significant positive effects for higher levered companies, and significant positive effects on smaller

² The average completion day was 142 days after the announcement.

companies, found in the 25th percentile of the NYSE companies. The bid premium seems to be of no influence (Moeller, Schlingemann, & Stulz, 2005).

Research on the 5th and 6th wave has compared several characteristics and found these to differ significantly on variables, such as the acquirer/target size, method of payment, and offered premium. When the returns were tested, a significant negative coefficient pointed out that the sixth wave endured greater losses in comparison to the fifth wave for the acquirer. Testing the combined CARs suggested no significant difference in acquisition gains between the two waves. Moreover, the long-term return performance was negative, and the differences between the two tested waves resulted in worse or at best similar acquirer performances in the sixth wave (Alexandridis, Mavrovitis, & Travlos, 2012).

Comparing the 6th wave to the current period, the 7th wave (2010-2015), cross-border transactions as a possible characteristic is taken into account by Alexandridis, Antypas, & Travlos (2017). The globalization and the trend of companies expanding into emerging markets pursuing growth expansion fuels this assumption. Their study, compromising M&A deals between 1990 and 2015, focused on the return of the acquirer and found a significant improvement in the return of 0.45% comparing the recent period to the sixth wave. The payment with equity seemingly is not significantly negative in the announcement return. For public deals, cross-border M&A has a significant effect of 0.67%.

2.2.2 Cross-Border M&A

In the increasing globalizing market, cross-border M&A has been studied, with focus on the US, UK or European market and short-term shareholder wealth effects of domestic and cross-border acquisitions. Eckbo and Thorburn (2000) studied a sample of 1,846 cross-border acquisitions between the US, Canada and domestic acquisitions covering the years between 1964 and 1983. The bidder had to be listed on the NYSE or Toronto Stock Exchange (TSE), whereas the target had to be listed on the TSE. In their sample, they found that cross-border bidders, the US bidders, were not indistinguishable from zero, whereas the domestic bidders showed significant CARs around the announcement date. Goergen & Renneboog (2004) have been looking at the European M&A market in the period 1993 – 2000 at transactions exceeding \$100 million, studying 228 M&A announcements. These CARs were both significant for the target with 9.01% and acquirer with 0.7% on the announcement date (-1,0). The same observations were for the five-day event window of (-2,+2). When cross-border deals are compared with domestic deals, no statistically significant difference in the CARs for the target firm was found, and are both positive with 11.3% and 10.2%. Results in testing the short-term wealth effect for both the target and bidding firms show that domestic M&As trigger higher premiums of approximately 1% for the target, whereas the bidding companies have marginal negative ARs of 0.7%. This positive announcement return is found as well by Danbolt & Maciver (2012) with results showing that the tested 146 UK cross-border transactions outperformed domestic transactions by 1.5%.

However, other literature presents negative announcement returns. Moeller & Schlingemann (2005) tested 383 cross-border M&A transaction and 4,047 domestic transactions to determine the return of US public firms acquiring either domestic or foreign targets. The results showed that cross-border bidders have on average significantly lower ARs of -1%, in both the univariate or cross-sectional analysis, with a significantly positive effect for the relative size and cash payments, and significantly negative effect with restrictive shareholder rights. The cross-border market was studied by Aw and Chatterjee (2004) by comparing the post-bid returns of UK firms acquiring domestic or cross-border targets either from the U.S or Continental Europe from 1990 to 1996 through 156 cross-border transactions. The findings concluded in general negative CARs for cross-border transactions. The CARs decreased when the test period was extended from 6 to 24 months. Independent of the test period, the acquisition of US targets provided significant negative CARs, more negative than domestic acquisitions, where Continental Europe acquisitions produced the worst post-takeover CARs.

Datta & Puia (1995) have approached the performance of ARs from the perspective of the Hofstede cultural distance. This cultural distance consisted of four separate cultural distances. Overall the announcement effect was negative for cross-border acquirers. For a three-day event window the CARs were -0.42% and for longer time windows of 60 days were -2.54%. High cultural distances had a significant negative announcement return of -5.85% for the 60-day window, with the low cultural distance insignificant negative returns. Chakrabarti, Gupta-Mukherjee and Jayaraman (2009) have compared 800 cross-border acquisitions over \$100 million in a period from 1991-2004 on the Hofstede cultural distance in short-term and long-term returns. They find significant positive announcement returns on the three-day event CARs with 0.71%, without finding significant long-term returns. Looking how the Hofstede cultural distance impacted the long-term return is significantly positive, implying that the return increases as the cultural distance increases. Ahern, Daminelli & Fracassi (2015) have tested three-day CARs of cross-border transactions on three cultural distances separately – trust, hierarchy, and individualism – retrieved from World Value Surveys (WVS) rather than the Hofstede cultural distance. They have however not presented the differences in CARs between domestic and cross-border transactions but did find average CARs of 0.2% for the acquirer and 3.6% with combined CARs. They also researched the BHARs, similar to Chakrabarti et al. (2009), but found no relationship of cultural distance to the BHARs and referred to the market efficiency as explanations. Apart from testing M&A performance, Ahern et al. (2015) also tested the likelihood of cross-border M&A and concluded a negative relationship between cultural distance on the amount and volume of M&A deals between country-pairs.

2.2.3 M&A deal characteristics

With an inconclusive relation of cross-border M&A to domestic M&A transactions, it is imperative what impacts these transactions and can determine a cross-border effect. Moreover, as waves seem to be led by motives that change over time, it is essential to understand the factors behind

transactions and to get an understanding how these characteristics either destroy or add wealth. The characteristics are divided as follows. First, deal-level characteristics that can influence M&A deals, both cross-border and domestic transactions and, second, country-level characteristics that influence cross-border deals. Controlling for these characteristics can give a more in-depth understanding what drives cross-border M&A as well what drives the ARs surrounding the announcement date.

2.2.3.1 Deal – level characteristics

Deal and Company Size

The deal-, acquirer-, target-, and relative size is regarded by recent literature to affect the combined announcement returns of transactions. The deal size shows that large deals are acquired at a lower premium than for small acquisitions. However, this lower premium for large deals does destroy wealth for the acquiring company. The acquirer size is positively associated with the announcement returns in deals announced between 1990 and 2007. Another finding was that the increase of the target size is negatively related to acquisition premiums (Alexandridis, Fuller, Terhaar, & Travlos, 2013). Asquith, Bruner & Mullins (1983) found similar findings in their sample of M&A transactions between 1963 and 1979 with a significantly positive effect on the CARs in relationship to the acquirer size, and higher announcement returns on target firms when increasing the relative size. The positive effect of the acquirer size has been significant on the long-term effect according to Duchin & Schmidt (2013) in their sample between 1980 and 2007. On the contrary, Moeller, Schlingemann & Stulz (2004) find a negative relationship to the acquiring size of approximately -2% compared to smaller firms, directing this to the managerial hubris affecting large transactions. This negative relationship to ARs leads to the point that the equally-weighted gains are positive, whereas the absolute dollar loss is \$25.2 million in market capitalization. For the relative size, Fuller, Netter & Stegemoller (2002) found that larger targets compared to the acquirer had a positive relationship for cash-deals and increasingly negative relationship for equity-deals. Moeller & Schlingemann (2005) presented both economical and statistical significance to the bidder gains. The relative deal size in cross-border acquisitions was smaller in comparison to domestic acquisitions, and acquirers were twice the size of the target in market capitalization. Apparent from the literature, the various determinants to size influence the announcement effects on cross-border and domestic transactions.

Method of payment

The dominant way of financing an acquisition has changed throughout the years. The first wave was primarily financed with cash, later waves preferred equity financing as a method of payment, and in the most recent wave, cash paid acquisitions were preferred (Martynova & Renneboog, 2008). The ARs related to the method of payment was influenced since the first merger wave, having higher CARs for targets receiving cash-bids than equity bids and negative returns of acquirers for equity-bids in the second merger wave (Leeth & Borg, 2000). Later waves showed similar results, in short-term (Franks,

Harris, & Titman, 1991; Martynova & Renneboog, 2006) and long-term returns (Franks, Harris, & Mayer, 1988). Contrary to these results, Goergen & Renneboog (2004) find that equity bids outperform cash bids in Europe. This announcement return variation can relate to the overvaluation of equity when transactions are paid with stock whereas cash implies an undervaluation of the stock (Shleifer & Vishny, 2003). Moreover, with equity financed offerings, the market responds similar to new equity offerings in the market, with negative announcement effects (Asquith, Bruner, & Mullins, 1990). If targets have superior information about their value, the acquirer would prefer equity over cash as payment to make the target dependent on the total gains and to reduce possible information asymmetry (Hansen, 1987). In contrast to this assumption, Moeller & Schlingemann (2005) found that cross-border transactions are more frequently financed with cash than equity. This finding relies on the assumption that the target shareholders are less willing to hold foreign shares, requiring cash as the method of payment in cross-border deals.

Attitude

The difference in ARs between friendly and hostile returns is that friendly bids outperform hostile bids by 3% to 5% (Goergen & Renneboog, 2004), and hostile bids outperform friendly bids on the long-term in the UK (Franks, Harris, & Titman, 1991). The paid premium is higher in hostile bids, although it decreases significantly when the target size increases, accompanied by negative ARs for the acquirer (Schwert, 2000). In cross-border transactions, Moeller & Schlingemann (2005) find that domestic receive less hostile offers, but hostile bids only consisted of 1.8% in cross-border transactions and 0.6% of the full sample. In the cross-section analysis, they did not find significant results to the attitude of the deal. The attitude of a deal might not have an impact on determining the difference in cross-border from domestic transactions; it does have an impact on the announcement return.

Industry shocks: Focus versus a Diversification Strategy

As was pointed out by Mitchell & Mulherin (1996) that waves occurred through industry shocks, it is important to understand the strategy for acquisitions, either through a focus or diversification strategy. Finding a motive for acquisition, Morck, Shleifer & Vishny (1990) found that for the bidder three merger motives have consistently lowered and negatively influenced ARs, significantly negative ARs ranging from -1.45% to -2.54%. These motives were related to diversification, the acquisition of rapidly growing companies, or poor performance of the manager prior to the acquisition. They also tested the return difference between the fourth wave and the years preceding and found an 8.1% significantly lower return on diversifying acquisitions in the years 1980-1987 compared to the period 1975-1979. However, the conglomerate wave taking place from the 1960s-1973 showed positive returns in the diversifying acquisitions and negative returns in diversifying acquisitions (Matsusaka, 1993). In a more recent study by Duchin & Schmidt (2013), found a significant negative relationship to announcement returns to the diversification of -6.5% to -8.0%. This diversifying strategy

has shown in past literature that it leads to value destruction on the firm level, found by Berger & Ofek (1995) on an industrial level. They found a discount on the diversifying strategy of 13% to 15%. Similarly, Denis, Denis & Yost (2002), who studied 7,520 firms in 44,288 firm-years from 1984 to 1997, found a discount of 20% on the market value. Further elaborating on the discount, they found a lower discount on globally diversified firms of 18% and an industrial and globally diversified firm of 32%, and this discount stayed stable over the tested periods. Along these findings, acquirer gains may be lower for cross-border transactions, to the degree that cross-border transactions are considered an explicit increase in a company's level of global diversification and a domestic transaction is considered a decrease in diversification (Moeller & Schlingemann, 2005). These findings imply that domestic acquisitions with consolidating motives are considered to be more value increasing than global or industry diversifications, and the latter two trigger more negative price reactions (Moeller & Schlingemann, 2005; Alexandridis, Antypas, & Travlos, 2017). Other research points to the fact that more than one factor is stimulating the difference in cross-border transactions. The research compared cross-border transactions to Continental Europe or the US from the UK, showing lower returns for targets from Europe than US targets, as the geographical diversification in a cross-border M&A deal is equal (Aw & Chatterjee, 2004).

Public & Private status

Whether an announced M&A deal is with a private-, public-, or subsidiary target seemingly affects the announcement effect of the bidder. Private targets are often discounted because of illiquidity, and shares are more likely to be held by a relatively small amount of investors. Therefore, larger bid premiums are needed to obtain the majority of the shares (Moeller, Schlingemann, & Stulz, 2004). Fuller, Netter & Stegemoller (2002) found that the status of the target had an impact on public targets, resulting in significant negative CARs of -1.08%, and private and subsidiary targets receiving significantly positive CARs of 2.11% and 2.9%. These results confirm the findings of Moeller et al. (2004), and additionally, in a cross-sectional analysis on CARs, they found that public acquirers have a larger significant negative effect than private acquirers. Ahern et al. (2015) have controlled for the fraction in their regressions and found a significant negative effect on private mergers and an insignificant positive effect of public mergers in cross-border M&A. Moreover, in the test on dollar volume merger deals between two countries, they found a significant positive effect on the dollar volume. This effect on cross-border transactions might be explained if most targets are public companies.

2.2.3.2 Country – level characteristics

Ghemawat (2001) has identified four dimensions that decide whether to expand to a foreign country. These distances are divided into four categories, aggregated into the 'CAGE distances'. First, cultural distance expressed in language, religion, ethnic or social networks, and second, the administrative

distance measured through government policies or institutional weakness. Third, the geographic distance defined as the lack of common border or physical remoteness, and fourth, economic distance stated as the difference in incomes or different costs of natural, and human resources. The national cultural value differences and CAGE distances between the acquirer and target country should help to understand what drives international mergers. These distances can affect the likelihood of cross-border mergers (Erel, Liao, & Weisbach, 2012).

Gross Domestic Product (GDP), GDP/Capita, Openness

The variables Gross Domestic Product, GDP/Capita, Openness serve as good proxies. These specific factors represent the wealth and financial status of a country. GDP can control for a countries' size and the GDP/Capita and corporate tax rate form a good representation of the financial development of the country (Ahern, Daminelli, & Fracassi, 2015). The size of a local market may have an impact on the mode of entry, such that a larger size might decrease the disturbance effect of new entrants. On the other hand, if the size of the market is large, understanding the market can be more difficult. The size was found to be insignificant to the mode of entry, where the larger GDP/capita showed to be significantly positive to the mode of entry (Zejan, 1990). Previous literature found a significant positive relationship of GDP to M&A activity (di Giovanni, 2005; Choi & Jeon, 2011) and the openness of the target country, measured as the level of foreign trade, had a slightly negative impact on cross-border M&A (Chakrabarti, Gupta-Mukherjee, & Jayaraman, 2009).

Geographic distance

A cross-border transaction is associated with geographical distances among the countries. This distance can impact on investments as it increases the costs related to information and coordination regarding the foreign markets and discourages foreign investments. On the other side, investing in a country with a larger geographical distance encourages firms to invest rather than exporting to the country. Findings show a significant negative relationship to the likelihood of cross-border M&A activity (Bertrand, Mucchielli, & Zitouna, 2007). These were similar for acquiring firms from the US, acquiring geographically proximate targets over distant targets (Ragozzino, 2009). This geographical distance can be expected to decrease in relevance in a world of globalization and digitalization.

Corporate tax rate

Considerable differences in the corporate tax rate between the acquiring and target country have a positive effect on attracting foreign investments. It relates to the possibility of acquirers having higher tax rates than the target country, and can adjust in the combined tax liability (Erel, Liao, & Weisbach, 2012). Bertrand Mucchielli & Zitouna (2007) find that countries with low corporate tax rates are more attractive to pursue M&A deals with, where high tax rates in the target country provide a negative relation to M&A flows (di Giovanni, 2005). This relationship is not found by Manzon, Sharp, & Travlos (1994), who analyzed tax systems in various countries and concluded that for US acquirers, wealth

gains are possible when acquiring high-tax country targets, and earning lower ARs when acquiring low-tax country targets.

Investment Treaties

The acquiring country and target country can have signed agreements that could impact the merger activity for the specific two countries: Bilateral investment treaties (BITs) and Double tax treaties (DTTs). BITs can give assurances surrounding the nationalization of private companies and offer an outline to resolve any disputes among investors (Ahern, Daminelli, & Fracassi, 2015). Bilateral tax agreements have a positive effect on the cross-border M&A flows (di Giovanni, 2005). The DTT is an agreement of the two countries to exempt from double taxation through an exemption, credit or deduction agreement. The most used DTT is the exemption which is a relief on dividend income from foreign countries (Huizinga & Voget, 2009). Huizinga, Voget & Wagner (2012) find that double taxation leads to lower premiums and an insignificant negative impact on the return of the acquirer.

Exchange rate

The behavior of the exchange rate of the acquiring country currency and target country currency can impact the final price. When the exchange rate of the acquiring firm appreciates, the costs of acquiring the foreign target will decrease and increase the price the acquirer is willing to pay. Sonenshine & Reynolds (2014) find that payment of a higher premium is in line with the predicted effect of the exchange rate in appreciation or depreciation. Froot & Stein (1991) researched the period 1973-1988 and found that the change in exchange rate is significant in determining the price paid for a foreign target in a cross-border transaction, as a depreciation of the acquirer's currency can lead to acquisitions of foreign firms. Moreover, Erel et al. (2012) observed the changes in exchange rates and stock returns, and find that strong currencies and high stock returns contribute towards cross-border M&A activity.

Governance

The level of governance structures of a country of the target company can be different in the structure of governance compared to the acquiring company. Past literature addressed the announcement return when looking at the law system. Martynova & Renneboog (2006) found the highest combined announcement returns with the English Common Law followed by the Scandinavian Law and are relatively high in comparison to the French and German legal origin in Europe, and was similar for cross-border transactions. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) found that countries with English Common Law provide stronger legal protection for investors. The shareholder protection is obtained through the regulations and enforcement when financing firms and differ throughout the four legal systems. La Porta et al. (2000) summarize the consequences and potential strategies. They find that firms from a high shareholder protection environment acquiring firms with low shareholder protection create value, and the results of Ellis, Moeller, Schlingemann & Stulz (2017)

provided similar results. This environment of law systems can undervalue firms with low shareholder rights if this level of governance is related to agency and information asymmetry costs (Moeller & Schlingemann, 2005). If the country of the acquiring firm has the same legal system as the target country, it has a significant impact on the dollar volume of mergers and insignificant effect on the combined CARs (Ahern, Daminelli, & Fracassi, 2015). Apart from testing the legal system, the shareholder protection is considered to be a good proxy for country governance. Rossi & Volpin (2004) find that M&A volume for countries with better shareholder protection to be significantly higher. Moreover, they find that better shareholder protection leads to higher paid premiums and lower degree of cash payment. This shareholder protection is a combination of law enforcement and an index of specific rights shareholders hold to oppose management, the ‘Antidirector index’. This index scales the rights of the shareholder on six points to determine the shareholder rights.

Cultural distance

Culture can be defined as “those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation” (Guiso, Sapienza, & Zingales, 2006). National culture can have an impact on the major values in a country, institutions, the legal systems and the allocation of resources (Stulz & Williamson, 2003). This cultural value can be observed on a corporate level and a national level. In most cases, studies have been looking at the acculturation of domestic mergers emphasizing on the similarities and differences in corporate culture. Moreover, the issue of differences in national cultural values is referred to as the ‘double acculturation’ problem and is mostly not addressed. The emergence of national culture is increasingly becoming more important in M&A activity (Malekzadeh & Nahavandi, 1998). Having differences in national culture is not only impacting the selection and negotiation with cross-border firms but also with formulating the future business strategy of the combined firm. The national culture can be characterized by ethnocentrism: judging activities that do not align with the own view of business as abnormal and deviant. This ethnocentrism is apparent in M&A activity, where the manager reflects its assumption and perception to the compatibility of the target national-, and corporate culture (Cartwright, 1998).

Olie (1990) mentioned the impact of culture on cross-border and domestic transactions. These corporate and national cultural differences are often related to merger failures, as they are part of the integration process. This integration process for cross-border M&A, which is depending on national and corporate culture is found similarly by Weber, Shenkar & Raveh (1996). The integration process is presumably with larger difficulties in cross-border deals as the national culture might be deeper embedded than corporate culture (Hofstede, Neijen, Ohavy, & Sanders, 1990). Shimizu et al. (2004) mention that the performance is depending on the integration process and emphasize that cultural differences to a large extent are similar to domestic transactions. It implies that next to the corporate culture the national culture is affecting the performance of M&A deals. Datta & Puia, (1995) acknowledge that this cultural distance on a national level results in lower announcement returns. Ahern et al. (2015) find similar

negative results related to cultural distance. However, Chakrabarti et al. (2009), and Morosini, Shane & Sing (1998) find a positive relationship to culturally distant countries on the national level, reasoning that processes from other cultures provide a competitive advantage for the acquiring firm.

This culture is a factor to be regarded and accounted for in the integration process of two firms, and this integration process results in the performance of an acquisition. If shareholder anticipates this integration complexity on national cultural values, it gives room for speculation that the announcement returns are adjusted for this factor. Arguably so, this national cultural difference might explain the difference in cross-border and domestic M&A CARs partially. Chapter 2.3 will further elaborate on national culture and how the distance between countries may have an impact on cross-border M&A.

All of the characteristics mentioned above are very likely to explain the difference in announcement effect, possibly explaining the difference in cross-border-, domestic M&A, and preferences per wave. The above-mentioned effects per characteristic are expected to show a similar explanation towards M&A activity. Table 1 summarizes these characteristics on the deal-level and country-level and effect on the M&A performance.

Table 1: M&A determinants

An overview of the mentioned characteristics, split in deal-level characteristics and country-level characteristics, and expected effect on the combined ARs of cross-border transactions.

Deal-level characteristics	Specification	AR +/-	Country-level characteristics	Specification	AR +/-
Deal size		-	GDP		+
Acquirer size		+	GDP/Capita		+
Target Size		-	Openness		-
Method of Payment	Cash	+	Corporate Tax Rate		-
	Equity	-	Bilateral Investment Treaty		+
Attitude (hostile bid)	Hostile	-	Double Tax Treaty		+
	Friendly	+	Exchange rate		+
Industry shock	Focus	+	Law system	English	+
	Diversifying	-		French	-
Status Target	Public	-		German	-
	Private	+		Scandinavian	+
			Shareholder Protection	High	+
			Culturally distant countries		-

Note: the noted exchange rate expectation on the CAR is the appreciation of the acquiring country

2.3 National culture & distance

As aforementioned, culture is a deeply embedded belief that is transmitted impartially unchanged to the next generation (Guiso, Sapienza, & Zingales, 2006). In the context of cross-border M&A, culture can create a distance in the norms and values of the acquirer and target countries (Morosini, Shane, & Singh, 1998). This culture is distinguished into a corporate and national level, that corporate cultural differences are existent in both domestic and cross-border deals (Shimizu, Hitt, Vaidyanath, & Pisano, 2004), extended by the national culture on cross-border deals. National culture as a factor concerning the cross-border effect is regarded as a better explanation (Weber, Shenkar, & Raveh, 1996). Therefore, the focus of this paper focuses on the national level of cultural distance.

The choice of entering a new country is related to the national culture, and the choice of entry can be either through acquisitions, greenfield investment³ or joint venture. Previous studies have provided both theoretical and empirical support towards the relationship between the country of origin and mode of entry. This behavior of choice of entry was related to the ‘psychic distance’ among countries (Kogut & Singh, 1988). The ‘psychic distance’ is a sum of factors that block the transfer of information from and to the market, and is among others related to the difference in languages, business practices, culture and industrial development (Johanson & Vahlne, 1977). This distance is amplified concerning acquisitions as these are a major commitment of the acquiring firm. Johnson & Vahlne (1990) mention that the acquirer only has the intention to move to more culturally distant countries if the culturally nearby countries are already explored and focus on international expansion. Companies are possibly preferring with less culturally distant companies as the similarity is perceived to be better manageable (O’Grady & Lane, 1996).

Looking at the ‘psychic distance’ effect on M&A deals, this cultural definition has varied through different studies. Datta & Puia (1995), and Morosini et al. (1998) defined cultural distance as an average of four variables defined by Hofstede (1980), Stulz & Williamson (2003) tested on religion and language, Chakrabarti et al. (2009) tested on religion, language and the Hofstede distance, and Ahern et al. (2015) tested on language, religion, and three culture distances: Hierarchy, Trust and, Individualism. The national culture dimension points to two cultural grounds: cultural institutions – including language and religion – and cultural value dimensions – defined among others by Hofstede (1980) and Ahern et al. (2015) – and has proven in the mentioned studies to have an impact. Language as a distance is used on the belief that communication is easier among countries sharing the language, and religion is a commonly used proxy for culture (Stulz & Williamson, 2003). The next section will further elaborate on the definition of dimensions, where Hofstede (1980) pioneered in this field, followed by the description of the dimensions used by Ahern et al. (2015) and in this thesis.

³ A greenfield investment is a parent company building operations in a foreign country without having any initial sources in the country.

2.3.1 Cultural dimensions

Hofstede (1980) conceptualized the distance of culture as one of the first. He treated culture as “the collective programming of the mind distinguishing the members of one group or category of people from another”. To use these cultural distances he used an existing data bank of a large multinational (IBM) which collected and matched populations from questionnaires of employees from 40 countries, which was later extended to 70+ countries (Hofstede, 2001). The data contained answers to values and perceptions related to work situations. The first four distances on national culture were defined through four dimensions: power distance, individualism, masculinity and uncertainty avoidance (Hofstede, 1980), later adding long-term normative orientation (Hofstede, 2001) and indulgence. From the indulgence dimension, the data was obtained not from the survey of IBM, but the WVS which contains surveys of 93 countries. The use of the survey of IBM was argued to be surprising, but the matched results were similar except nationality, making the differences in nationality clear (Hofstede, Hofstede, & Minkov, 2010). As noted in an earlier study, the corporate culture might be embedded worldwide, and subsidiaries should be a conservative estimate in differences among the national populations overall (Hofstede, Neijen, Ohavy, & Sanders, 1990). However, in replication of the dimensions through different surveys has confirmed the use of the IBM survey (Hofstede, Hofstede, & Minkov, 2010) and has been used extensively in research such as the bilateral cross-border trust (Guiso, Sapienza, & Zingales, 2009), the choice of entry to new markets (Kogut & Singh, 1988; Hennart & Larimo, 1998), and cross-border mergers (Datta & Puia, 1995; Morosini, Shane, & Singh, 1998).

Instead of using the Hofstede distances, Ahern et al. (2015) used different dimensions. They formulated three dimensions, individualism, hierarchy and trust which are based these on results from the WVS. The WVS is an extension of the European Values Survey which commenced surveying values of the countries’ population with public-opinion survey methods in the early 1980s executed by six European universities. The survey covers countries worldwide and topics related to ecology, economy, family, government & politics, and work. The surveys are collected in rounds, and the latest recorded interval is the sixth wave covering 2010 to 2014, updating the possible change in their personal view. Remarkably, Hofstede states: “If he had to start again now, he would do it from the World Values Survey” (Hofstede, Hofstede, & Minkov, 2010). Two of the three dimensions used by Ahern et al. (2015), hierarchy, delineating members into several vertical ranks of power, and individualism, where individual accomplishments are rewarded disregarding overall society goals, are shared dimensions with Hofstede (1980). Trust, the dependence on someone to fulfill an obligation, is a dimension similar to the research of Guiso et al. (2006).

All in all, it can be concluded that the impact of cultural distance, country-level and deal-level variables on cross-border M&A can be extensive and has received wide attention in past literature. Seemingly, national culture has an impact on the behavior of cross-border M&A and therefore can affect the performance of M&A. The national culture can be related to cultural institutions and cultural

values. Three cultural values three cultural value dimensions, trust, hierarchy, and individualism, are used to determine cultural distances in this paper, resembling the approach by Ahern et al. (2015). The deal- and country-level variables help to control for differences in these characters. The use of these characteristics will try to estimate the effect on the likelihood and performance of cross-border M&A transactions using the formulated hypotheses in chapter 3.

3. Hypotheses Development

As Chapter 2 covered the academic background, it is useful to get a clear distinction what factors influence the likelihood of M&A deals and M&A performance in cross-border transactions. This study will try to understand the mechanism behind cross-border M&A, cultural distance and the differences per merger waves. To understand this possible cross-border effect the cultural values resemble the cultural values of Ahern et al. (2015), trust, hierarchy and, individualism. This cultural distance can be impactful, and the illustrious example of the merger of Daimler-Benz and Chrysler in 1998 is the clear result of a cultural mismatch. In 1998, the deal value of the merger was \$40 billion, and in 2007 Daimler sold the 80.1% stake of Chrysler \$7.4⁴ billion to Cerberus Capital in 2007. This mismatch was fueled by two cultures that clashed on a national and corporate level and prevented realizing the projected synergies as management had to define a global strategy that did not happen. In this period of mega-deals and globalization, the issues in cultural views were substantial obstacles through the process of creating synergies and did not result in the projected outcome: an efficient global car manufacturer. This cultural distance can be present on other cross-border transactions and subsequently lead to less M&A activity, and lower announcement returns between culturally distant countries. Combined CARs will be used to determine the impact of the cultural distances. Therefore, the first two hypothesis are stated as follows:

Hypothesis 1: *The likelihood of mergers of two firms with a higher cultural distance will decrease as the associated cultural distance costs are expected to increase.*

Hypothesis 2: *The combined CARs will yield lower returns for culturally distant countries.*

Previous studies which have focused on the difference in domestic-, and cross-border M&A, the differences in announcement returns of cross-border and domestic transactions are inconclusive. These findings lead to the third hypothesis:

Hypothesis 3: *The announcement return will yield lower in cross-border M&A than domestic M&A, due to a cross-border effect.*

⁴ Data is obtained via Thomson One at the Erasmus University

As the merger waves throughout the years had different motives, the announcement return may be different per wave. Merger waves were characterized by different factors, such as a changing preference in the method of payment, attitude, industry clustering, and globalization. These variations in preferences lead to the following hypotheses:

Hypothesis 4a: *Cultural distances and the defined control variables will have a different impact on the likelihood of mergers in the tested merger waves*

Hypothesis 4b: *Cultural distances and the defined control variable will have a different impact on the CARs in the tested merger waves.*

Hypothesis 5: *The M&A announcement return is not different per documented wave.*

Apart from the cultural distance, governance – the rule of law and shareholder protection – can have a meaningful impact on the M&A Volume and CARs.

Hypothesis 6a: *Acquiring firms from countries with high governance standards will have a higher likelihood of acquisitions than countries with low governance standards.*

Hypothesis 6b: *Acquiring firms from countries with high governance standards will have higher CARs than firms of countries with low governance standards.*

Lastly, it is meaningful to see whether the short-term effects have the same outcome in the long-run. As the mergers are unconditional or completed, the long-term performance will be tested on the BHARs of the acquirer, assuming the shares of the target is delisted and aggregated into the acquiring firm.

Hypothesis 7a: *The long-term performance of cross-border transactions will be lower than domestic transactions*

Hypothesis 7b: *The long-term performance of merging firms from culturally distant countries will be lower.*

All of the mentioned hypotheses will help to get a further understanding of cross-border M&A, the impact of national cultural distances, and merger waves. The research questions are developed as such that it gives the possibility to isolate the different factors affecting M&A activity and give a better understanding of the effect of national culture and other determinants on the performance of M&A announcements, and if they change over time looking at merger waves.

4. Data and Methodology

The chapter will focus on the data and methodology used to answer the earlier mentioned hypotheses in chapter 3. The first part will further elaborate on the dataset including the data sources used and the construction of the dataset. The methodology will focus on the used statistical tests and used regressions.

4.1 Data

The sample used in this research consists of cross-border M&A and domestic M&A transactions which are effective or unconditional between 01/01/1985 and 31/12/2014, the same start date as the sample of Ahern et al. (2015). The initial sample included all mergers and acquisitions from Thomson One with a transaction value over \$1 million where more than 50% of the target is acquired. Other restrictions included that the deal attitude, hostile or friendly, had to be known and excluded any deal where the country location of the acquirer or target was unknown, multi-national or supranational. The status of the firm excluded governmental ownership or government involvement, placing no further restriction on the status whether it is public, private, or a subsidiary. These restrictions resulted in 163,737 observations, including 48,107 cross-border transactions, and contained information related to the transaction, company-level and deal-level, e.g., country of origin, cross-border, attitude, the method of payment, industry classifications, SEDOL, 6-digit CUSIP, public status and target defense. Country-level characteristics have a larger amount of sources: country-year-data for the cultural distances ‘Individualism’, ‘Hierarchy’ and ‘Trust’ is extracted from the WVS. Country-financial data (GDP, GDP/Capita, and openness) is obtained from Penn World Tables 9.0, and currency exchange rates from the country central banks. Transactions with unknown or large exchange rate growth or volatility have been removed from the sample. The country-data for religion and language has been obtained from CIA World Factbook, geographic distance and two countries sharing a border from the Centre D’Etudes Prospectives et D’Informations Internationales (CEPII), the corporate tax rates from the Economic Freedom Index. The Double Taxation Treaties and Bilateral Investment Treaties have been retrieved from United Nations Conference on Trade and Development (UNCTAD), and the governance variables, the rule of law and shareholder protection have been acquired from earlier literature. The used papers used are by La Porta et al. (1998), Djankov, La Porta, Lopez-de-Silanes & Shleifer (2008)⁵, Pistor, Raiser & Gelfer (2000), and Minh & Walker (2008). Due to the data restriction of the cultural distance, currency exchange, and Antidirector index factors, the sample consists of 153,021 observations, of which 41,223 are public and private cross-border transactions from 62 countries. These observations are aggregated into 42,545 country-pair years. This reduction of countries had a minor impact on the number of deals, as they still compromise 93% of all M&A transactions and 86% of cross-border transactions of the initial sample. All public and private transactions are aggregated into panel B.

To further analyze the combined CARs and BHARs, the new restriction is that both the target and acquiring company have to be publicly traded reducing the sample to 21,708 transactions, of which 7,384 are cross-border, and 14,337 are domestic M&A transactions. Apart from the public status, the availability of the SEDOLs of the acquirer and target is required and were not allowed to be the same.

⁵ The paper of Djankov et al. (2008) is a revised paper of La Porta et al. (1998) constituting of three writers of the first paper.

SEDOLS are obtained from Thomson One⁶, and used for DataStream requests of the specific firm. DataStream is used to obtain the deal-level characteristics, consisting of the stock prices, and shares outstanding of the target and acquirer company, and country equity indices, defined as the main stock index of the country using the Mnemonic identifier. The availability of the company data available ultimately reduces the CARs and BHARs observations to 9,202 domestic M&A transactions and 3,457 cross-border M&A transactions. These public-to-public transactions are aggregated into panel C. Table 2 provides an overview of the exclusion steps.

Table 2: Exclusion steps of M&A transactions

The table provides an overview of the initial sample size, and limiting criteria to the M&A transactions extracted from Thomson One. Country-, and deal level factors are explained in 4.1 and the construction of the data is explained in 4.2

Factor	Operator	Description / Code	Observations	Domestic	Cross-Border
<i>Thomson One</i>					
Date effective / unconditional	Between	01/01/1985 to 12/31/2014	701,384		
Percent of shares acquired	Between	50 to 100	498,831		
Deal attitude	Include	Friendly/ Hostile	489,489		
Deal Status	Include	Completed Unconditional	489,489		
Deal value	Above	\$1 million	178,519		
Acquirer Nation	Exclude	Unknown / Multi-National /	174,369		
Target Nation	Exclude	Supranational	174,365		
Target & Acquirer Public Code	Exclude	Government	172,769		
Government Owned Involvement	Equals	No	163,737		
Observations remaining				48,107	115,630
<i>Country-level factors</i>					
World Value Survey	Include	Hierarchy / Individualism / Trust	154,068		
Antidirector Index	Exclude	Unknown	153,021		
Observations remaining				41,223	111,798
<i>Deal-level factors</i>					
Acquirer and Target status	Include	Public	26,603		
SEDOL	Exclude	Not Available / Acquirer & Target same SEDOL	21,708		
Observations remaining				15,768	5,940
Availability in DataStream	Exclude	Unknown			
Available CARs / BHARs			12,659	3,457	9,202

4.2 Data Construction

Several adjustments had to be made to make the variables useable. This section explains the construction of the three cultural distances, how to benchmark the abnormal return, and the definitions of control variables. The deal-level variables have been described in chapter 2.2.3.1, and the country-level variables in chapter 2.2.3.2.

⁶ SEDOLs identifiers starting with a “B” have been added with “UK” to obtain their data from DataStream.

4.2.1 Cultural Distances

The three cultural values are constructed using the questionnaires of the World Value Survey. This survey is conducted on cultural values covering countries worldwide and has been obtained in six waves. The results of the surveys are publicly available, and the sample population of the first five waves represents 97 societies covering 88% of the world population (Ahern, Daminelli, & Fracassi, 2015). The first survey wave was documented in 1981-1984, followed by documentation of 1989-1993, 1994-1998, 1999-2004, 2005-2009, and 2010-2014. The seventh wave is currently documented and expected to be published in 2019 with coverage of 70 to 80 countries worldwide. The respondents are randomly chosen to represent the country across age, sex and, occupation, with a minimum threshold of 1,200 respondents. The survey consisted approximately of 250 questions. As the question set is not stable over each survey wave, the approach has been used by Ahern et al. (2015) to obtain consistency using the 1989-1993 wave as the starting point. The questions in the previous and subsequent waves have been aggregated to find the questions in the other questionnaires, as these have changed per wave. The country's acquirer and target value have been matched to the nearest year available in the survey. Each survey covers roughly 250 questions on topics such as, e.g., perceptions of life, environment, work, politics, religion, and socio-demographics. The three dimension tested are: "Trust versus Distrust", "Hierarchy versus Egalitarianism", and "Individualism versus Collectivism". The three questions that have been used to define the dimension are equal to the questions used by Ahern et al. (2015). All questions are scaled from 0-100 with 50 as midlevel to determine the cultural value of the country.

Trust versus distrust: *"Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?"*

Trust is defined as the confidence that the counterparty will comply with its side of the deal. The country that has scored high on "Trusted" is regarded as a highly trusting culture.

Hierarchy versus Egalitarianism: *"People have different ideas about following instructions at work. Some say that one should follow one's superior's instructions even when one does not fully agree with them. Others say that one should follow one's superior's instruction only when one is convinced that they are right. With which of these two opinions do you agree?"*

1. Should follow instructions

2. Must be convinced first

Egalitarian cultures value the importance and social power of every relatively equal, where hierarchical cultures are vertically ranked concerning power. The respondent country that has scored high on "Should follow instructions" is regarded as a hierarchical culture.

Individualism versus collectivism: “How would you place your views on this scale? 1 means you completely agree with the statement on the left; 10 means you agree with the statement on the right; and if your views fall somewhere in between, you can choose any number in between.”

Incomes should be made more equal

We need larger income differences as incentives for individual effort

Individualistic cultures accept and expect maximizing self-interest rather than the well-being of the society, where collectivistic countries underline group accomplishments over individual aspirations. Countries scoring high on “We need larger income differences as incentives for individual effort” are regarded as individualistic cultures. The score is the value-weighted average of the question answered. Each difference between two countries in cultural value is expressed as the logarithmic function of one plus the absolute cultural difference between the two countries: $\ln(1 + |\Delta \text{'cultural value'}|)$.

4.2.2 Benchmarking Abnormal Return

Determining the performance of the M&A transaction, the event study has been the most popular and most used approach. The approach assumes that the announcement is bringing new information to the market and the expectations are reviewed and reflected in the share price. This difference in the realized return and expected benchmark return equals the abnormal return over the return without a transaction announcement. Commonly used benchmarks are asset pricing models such as the market-model, or the Fama-French Three Factor model (Martynova & Renneboog, 2008). Similar to Moeller & Schlingemann (2005) this thesis will use the market-model.

Short-term abnormal return

The event window has varied over various studies, and for this research two event windows will be used attempting to add robustness to the drawn conclusions of the univariate analysis. The two event window will be three-days (-1,+1), similar to Andrade et al. (2001) and Ahern et al., (2015), and ten-days (-5,+5), similar to Moeller & Schlingemann (2005) and Martynova & Renneboog (2006).

The market model has been developed by Fama, Fisher Jensen & Roll (1969) and event studies used the following formula developed by MacKinlay (1997):

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

Where R_{it} is the return of company i at day t , R_{mt} is the return of market index m at day t , the parameters α_i, β_i determine the market model coefficients to company i , and ε_{it} is the residual return of company i at time t , under the assumption that the expected residual return is zero and variance independent of t , ε_{it} is serially independent and the distribution is independent of R_{mt} .

From this point, the ARs are calculated:

$$AR_{it} = R_{it} - \hat{\alpha}_i + \hat{\beta}_i R_{mt} \quad (2)$$

Where AR_{it} is the abnormal of company i at day t , with R_{it} as the return of company i at day t , R_{mt} is the return of market index m at day t , $\hat{\alpha}_i$ is the intercept and $\hat{\beta}_i$ the slope of the estimated market model. The estimation of the intercept and slope have been through a 199-day estimation window, equal to Moeller & Schlingemann (2005). The estimation period is the starting day $t = -205$ and ends at $t = -6$, the day before the event window $(-5, +5)$ to prevent any overlap. The CARs are estimated for the acquiring and target company as follows:

$$CAR_{t_1, t_2} = \sum_{t=t_1}^{t_2} AR_{it} \quad (3)$$

Where t_1 is the start date of the event window and t_2 the end date of the event window.

For the combined CAR, the acquirer i and target j have to be adjusted to the relative size of the deal:

$$CAR_{ij, t_1, t_2} = a * CAR_{i, t_1, t_2} + t * CAR_{j, t_1, t_2} \quad (4)$$

Where,

a = the acquirer i market value divided by the combined market value of acquirer i and target j

t = the target j market value divided by the combined market value of acquirer i and target j

Some remarks and assumptions need to be addressed. First, as mentioned in chapter 2.2, the market is assumed to be in a semi-strong form. Secondly, the market model has been estimated on a daily base of the country's market index returns and company's returns. MacKinlay (1997) explained that using daily returns has a higher explanatory power than using monthly returns. Lastly, if the market index of a country is not usable, e.g., non-existent, the MSCI index of the specific continent will be used.

Long-term abnormal return

The event window of the long-term AR will be similar to the length of Firth (1980), Franks et al. (1991), Ahern et al. (2015), which is three years, similar to the minimum time for the market to adjust (Haleblian et al. 2009). For testing the long-term performance of M&A transactions, Barber & Lyon (1997) have documented which approaches can be used in event studies to find long-term ARs, using either CARs or BHARs. They argue that for long-term ARs the BHAR approach with a reference portfolios such as a market index is the best way to determine long-term performance. They state that CARs are biased predictors of BHARs which can lead to incorrect inferences. Even if the inference of the CARs is correct, the magnitude does not reflect the value of investment in the sample relative to its appropriate benchmark. The BHAR is calculated as follows:

$$BHAR_{it} = \prod_{t=1}^t [1 + R_{it}] - \prod_{t=1}^t [1 + E(R_{it})] \quad (5)$$

Where, R_{it} is the return of firm i in month t , and $E(R_{it})$ is the month t expected return of firm i .

Some remarks and assumptions need to be mentioned. First, the market model used for the expected return is equivalent to the short-term ARs and has the same estimation window. Secondly, the BHAR might be negatively biased because of three reasons: new listing bias, new firms entering the index; rebalancing bias, the firm-weight adjustment of the market index; and skewness bias which is mostly positive related (Barber & Lyon, 1997). CARs on the other hand, are positively biased. The use of monthly rather than daily returns is the reduction of the magnitude of the rebalancing bias, but still, the three biases exist, and therefore the results should be viewed with caution.

4.2.3 Control variables

4.2.3.1 Country-level characteristics

These characteristics will try to capture most of the CAGE distances defined by Ghemawat (2001).

- (a) *GDP*: logarithm of country's annual GDP of the year in \$ at current national prices obtained from Penn World Table 9.0
- (b) *GDP/Capita*: logarithm of country's GDP divided by the population at current national prices retrieved from Penn World Table 9.0
- (c) *Openness*: logarithm the sum of country's export and import divided by the country's annual GDP of the country at current prices acquired from Penn World Table 9.0
- (d) *Geographic distance*: logarithm of the country's distances between the capitals. Distances have been calculated by CEPII with the great circle formula, using longitudinal and latitudinal coordinates
- (e) *Investment Treaties*: two dummy variables which equal one if the country-pairs either signed a Double Tax Treaty or Bilateral Investment Treaty obtained from the UNCTAD
- (f) *Exchange rate*: recorded are the exchange rate growth and volatility. Exchange rate growth is the one-year growth of the acquirer and targets nation before the announcement. Exchange rate volatility is the 36 months standard deviation before the announcement between the acquirer and target nation. For countries adopting the Euro as the national currency, the determined exchange rate of the European Central Bank has been used to recalculate the old currencies to Euro to not distort the exchange rate of two countries through the length of the sample. Currency rates have been obtained from the country's national /central banks
- (g) *The rule of law*: The rule of law has been collected from different literature mentioned in chapter 4.1, where La Porta et al. (1998) is used as starting point. The four rules of law, English common law; German, French and Scandinavian civil law are related to higher or lower shareholder protection, and a dummy of one is recorded if the acquirer and target country have the same legal system

- (h) *The Antidirector index*: the Antidirector index is an aggregate of six dimensions defining shareholder rights. A dummy equals one if the country has high shareholder rights. If a specific dimension is present, a one is added to the index, and if the index is above three, the shareholder rights are regarded as high, below three are regarded as low shareholder rights. The dimensions have been defined by La Porta et al. (1998) and obtained of the research mentioned in 4.1
- (i) *Public & Private status*: The status of the M&A transaction is related to the ratio between the dollar volume of the country-pair and year. The fractions represent the value of either public or private acquisitions to the total M&A transaction of the country-pair-year, and the status has been recorded by Thomson One

The use of logarithms of GDP, GDP/Capita, Openness, and Geographic distance is due to the use of the gravity model explained in chapter 4.4.2.

4.2.3.2 Deal-level characteristics

- (a) *Deal value*: the transaction value minus fees and costs of the target company recorded by Thomson One
- (b) *Acquirer and Target Size*: the market capitalization of the acquirer and target 30 days before the announcement in millions of US Dollars. The market capitalization is calculated as the share price multiplied by the net shares outstanding obtained from DataStream
- (c) *Acquirer and Target stock*: The stock return is the buy-and-hold return prior the announcement and the stock return volatility is in the run-up to the announcement. The time window of the return and volatility is similar to the estimation dates of the market model, 199 days prior the announcement. Stock prices have been obtained from DataStream
- (d) *Relative size*: the ratio of the target market size to the acquiring size at the day of the announcement
- (e) *Method of payment*: dummy variable equal to one if the majority, 50% or more, is paid in cash. The recorded method of payment is from Thomson One
- (f) *Attitude*: dummy variable equal to one if the attitude of the deal has been classified as friendly by Thomson One
- (g) *Termination fee*: if the acquirer or target have a termination fee, the acquirer or target dummy equals one. The termination fee is observed by Thomson One
- (h) *Industry diversification*: dummy variable equal to zero if the acquirer and target operate in the same industry. The same industry is defined as the same first three digits of the four-digit SIC code are similar for the acquirer and target. The SIC codes are retrieved from Thomson One

4.3 Descriptive statistics

The next five pages present the descriptive statistics of the data used in this research. Table 3 encloses the country-level characteristics of the countries, and table 4 presents the amount of transactions per wave. Table 5 contains the M&A transactions of the 30 largest target nations. Table 6 contains the means, medians and standard deviation of the variables of the public and private transactions used to determine the likelihood of M&A transactions for the domestic and cross-border M&As. Table 7 describes the country-, and deal-level characteristics used for determining the short-, and long-term performance of M&A transactions, both domestic and cross-border transactions. In Table 6 and Table 7, the statistical significance levels of the differences between the domestic and cross-border sample are presented. These significance-levels are shown with the stars.

Table 3 Country-level characteristics

Table 3 describes the country-level variables of the countries with cross-border transactions between 01/01/1985 and 31/12/2014, and have been aggregated into 1,805 country-years from 62 countries. Transactions have been collected from Thomson One and the variables used are described in 4.2.3.1. Values are in percentages, unless otherwise stated.

Country level variables	Mean	Median	σ
<i>Panel A</i>			
Trust	0.300	0.269	0.156
Hierarchy	0.590	0.590	0.098
Individualism	0.345	0.342	0.118
Muslim	0.127	0.000	0.333
Orthodox	0.097	0.000	0.296
Protestant	0.209	0.000	0.407
Roman Catholic	0.469	0.000	0.499
English Common Law	0.192	0.000	0.394
French Civil Law	0.417	0.000	0.493
German Civil Law	0.312	0.000	0.463
Scandinavian Civil Law	0.079	0.000	0.270
Antidirector index High	0.485	0.000	0.500
Antidirector index Low	0.515	1.000	0.500
ln (GDP) (\$m)	18.731	18.832	1.809
ln (1 + GDP/Capita) (\$m)	0.016	0.009	0.017
Corporate Tax Rate	0.228	0.220	0.071
ln (1+ Openness)	0.545	0.495	0.254

Table 4 Transactions per merger wave

Table 4 provides an overview of the M&A transaction per wave. Begin and end year of the waves have been described in 2.2.1.1. The sample size of Panel B and Panel C is the amount of transactions, and for Panel B the country-pair years are denoted in brackets. Panel B contains all M&A transactions, where Panel C contains all public-to-public transactions.

Sample size	Total	Cross-border	Domestic
<i>Panel B</i>			
1985-2014	153,021 (42,525)	41,223 (42,525)	111,798 (1,805)
Wave 5 (1993-2000)	48,622 (11,664)	11,935 (11,664)	36,687 (496)
Wave 6 (2003-2007)	34,337 (7,290)	9,945 (7,290)	24,392 (310)
Wave 7 (2010-2014)	30,380 (7,290)	8,619 (7,290)	21,761 (310)
<i>Panel C</i>			
1985-2014	12,659	3,457	9,202
Wave 5 (1993-2000)	3,026	833	2,181
Wave 6 (2003-2007)	3,581	996	2,585
Wave 7 (2010-2014)	2,890	781	2,109

Table 5 Number of M&A transactions in the 30 largest target countries

The table provides the M&A transactions between the acquiring nations listed in the rows and target nations listed on the columns between 1985 and 2014. The number in the column corresponds to the country in the row. The values of the totals in the column and rows include all mergers of the nation with the 62 countries in the sample. Transactions have been obtained from Thomson One. With the described restrictions, the total sample for Panel B consisted of 153,021 transactions. The column % Foreign is the percentage of foreign acquirers

	Target Nation																														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
1. United States	57,587	2,002	1,521	464	135	185	480	587	165	176	179	83	161	227	39	64	89	109	63	46	75	103	143	156	40	82	101	33	62	57	65,444
2. United Kingdom	2,502	19,617	236	353	29	46	557	559	240	212	194	22	45	362	101	39	108	37	44	46	82	227	93	21	47	119	21	37	13	18	26,265
3. Canada	2,151	239	7,192	139	3	38	64	56	23	12	22	7	56	26	25	4	12	6	21	17	6	12	19	101	6	11	39	10	39	2	10,455
4. Australia	413	200	79	6,101	10	31	16	40	18	13	7	9	17	15	32	39	6	9	227	6	4	5	5	5	7	12	6	2	23	10	7,430
5. Japan	504	103	18	51	5,281	30	21	35	15	16	9	29	15	17	9	28	2	17	4	7	7	1	11	1	2	15	2	1	1	19	6,310
6. China	65	8	19	24	14	3,888	7	14	2	7	3	3	0	6	1	18	2	1	4	0	4	1	2	1	0	0	1	0	2	9	4,113
7. France	308	225	38	20	6	21	2,003	106	92	90	27	16	37	43	4	9	14	20	3	8	12	5	25	7	17	50	11	6	6	3	3,303
8. Germany	297	226	19	32	10	14	119	1,094	56	47	51	9	16	56	8	11	19	22	1	15	25	5	48	5	39	19	2	3	3	5	2,379
9. Spain	82	54	3	6	3	5	47	28	1,663	43	5	4	62	9	3	1	2	5	0	6	1	1	5	25	10	6	40	2	28	0	2,242
10. Italy	87	66	10	6	2	11	74	49	56	1,604	6	0	15	24	8	3	4	6	0	0	3	5	22	4	10	9	11	8	5	0	2,170
11. Sweden	169	136	21	16	0	6	47	75	22	21	1,289	7	5	33	7	4	114	4	1	111	105	6	20	5	12	12	6	16	4	4	2,343
12. South Korea	71	9	6	6	19	45	2	8	1	2	0	1,741	0	2	2	5	2	7	1	0	1	0	1	1	4	1	1	2	0	8	1,974
13. Brazil	23	2	7	4	0	1	4	1	3	2	0	0	1,123	2	0	0	2	0	0	0	0	0	1	4	0	1	25	0	4	0	1,224
14. Netherlands	224	168	25	26	8	12	89	84	66	36	39	12	10	535	2	6	11	9	6	14	21	7	16	11	13	48	2	18	3	1	1,611
15. South Africa	37	79	9	53	0	1	4	5	0	4	1	2	5	5	1,122	2	0	2	3	1	2	0	2	0	1	1	2	1	1	0	1,366
16. Singapore	73	44	6	112	32	126	6	10	3	1	5	15	3	6	5	818	3	22	20	2	3	0	7	2	0	4	0	0	0	12	1,427
17. Norway	57	55	13	11	1	0	13	20	16	2	113	2	8	5	1	6	634	2	2	20	50	5	6	0	5	4	0	2	4	0	1,070
18. India	160	67	13	17	1	5	18	18	7	9	2	2	6	7	8	22	2	741	0	4	3	4	8	2	1	4	2	1	4	0	1,162
19. New Zealand	26	16	6	114	0	2	0	2	0	2	0	0	0	3	0	0	0	0	530	0	0	0	2	1	0	0	0	1	3	0	710
20. Finland	62	32	7	6	0	5	14	39	2	9	73	1	3	15	1	2	28	3	1	518	16	0	6	1	4	6	0	7	1	1	891
21. Denmark	48	57	8	8	1	5	15	23	7	8	62	1	4	17	1	5	26	4	1	11	352	2	7	2	11	3	0	1	0	1	708
22. Ireland	184	362	12	13	3	5	13	27	7	6	11	1	4	41	2	3	3	2	0	4	6	382	2	3	4	8	1	1	0	0	1,121
23. Switzerland	211	73	31	27	3	5	52	65	23	24	20	7	12	16	7	2	10	7	1	10	8	4	221	2	3	7	3	5	1	0	888
24. Mexico	44	1	4	1	0	0	0	1	8	0	0	0	17	0	0	0	2	0	0	0	0	0	0	320	0	1	6	0	5	0	418
25. Poland	1	1	2	0	0	1	0	10	4	1	3	0	0	2	0	0	0	0	0	0	1	1	2	0	418	0	0	4	0	0	497
26. Belgium	62	51	5	7	1	4	91	28	12	11	3	6	3	38	2	2	2	4	0	4	3	4	7	0	4	258	2	1	0	0	644
27. Argentina	7	0	2	0	0	2	0	0	2	0	0	0	16	1	0	0	0	0	0	0	0	0	0	3	0	0	336	0	5	0	378
28. Russia	19	14	6	0	1	1	1	4	1	5	1	0	0	5	1	1	1	2	0	2	0	0	0	0	2	2	2	451	0	0	550
29. Chile	7	0	2	0	0	0	0	0	2	0	0	0	25	1	0	0	0	0	0	0	1	0	0	2	0	1	18	0	289	0	356
30. Taiwan	55	6	2	2	8	41	1	5	0	1	1	4	1	3	0	12	0	2	0	1	1	0	1	2	0	0	0	0	0	318	470
Total	65,631	24,005	9,345	7,634	5,577	4,553	3,810	3,088	2,581	2,416	2,146	1,984	1,693	1,553	1,403	1,119	1,114	1,048	934	864	808	788	701	695	695	693	653	634	518	468	153,021
% Foreign	12.3%	18.3%	23.0%	20.1%	5.3%	14.6%	47.4%	64.6%	35.6%	33.6%	39.9%	12.2%	33.7%	65.6%	20.0%	26.9%	43.1%	29.3%	43.3%	40.0%	56.4%	51.5%	68.5%	54.0%	39.9%	62.8%	48.5%	28.9%	44.2%	32.1%	21.2%

Table 6 Panel B, Public and Private M&A

The table provides an overview of the means, medians and standard deviations of the 153,021 public and private M&A transactions aggregated in 42,545 country-pair years. The 42,545 country-pair years include the 1,805 domestic M&A country-years. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. The country-level control variables have been described in 4.2.3.1. The country-years have been divided into cross-border and domestic years. The means have been compared using independent sample t-tests. To determine if the variances are equal, two-sample variance tests are used. The difference is presented in column (7) with the stars denoting the statistical significance on a *10%, **5% and ***1% level.

	Cross-Border			Domestic			Difference	
	Mean (1)	Median (2)	σ (3)	Mean (4)	Median (5)	σ (6)	(7) = (1)-(2)	t-statistic (8)
<i>Panel B</i>								
$\ln(1 + \text{M\&A Value}_{ijt})$	1.036	0.000	2.204	3.029	1.618	3.412	-3.25***	-38.36
$\ln(1 + \text{M\&A Count}_{ijt})$	0.310	0.000	0.753	1.890	1.386	1.876	-1.44***	-33.29
$\ln(1 + \Delta \text{ Trust})$	0.155	0.138	0.113					
$\ln(1 + \Delta \text{ Hierarchy})$	0.119	0.101	0.091					
$\ln(1 + \Delta \text{ Individualism})$	0.088	0.076	0.066					
$\ln(1 + \Delta \text{ Corporate Tax Rate})$	0.071	0.058	0.056					
$\ln(\text{Acquirer nation GDP})$	19.677	19.649	1.601	18.731	18.832	1.809	.95***	21.84
$\ln(\text{Target nation GDP})$	19.347	19.390	1.689					
$\ln(\text{Acquirer openness})$	0.537	0.475	0.276	0.545	0.495	0.254	-.01	-1.25
$\ln(\text{Target openness})$	0.522	0.468	0.257					
$\ln(\text{Acquirer GDP / Capita})$	0.024	0.022	0.019	0.016	0.009	0.017	.01***	18.97
$\ln(\text{Target GDP / Capita})$	0.019	0.014	0.018					
Same Religion	0.401	0.000	0.490					
Same Language	0.101	0.000	0.301					
$\ln(\text{Geographic Distance})$	7.848	8.522	1.999					
Share Border	0.074	0.000	0.261					
Exchange Rate volatility	0.001	0.000	0.006					
Exchange Rate Growth	0.000	0.000	0.047					
Double Tax Treaty	0.731	1.000	0.444					
Bilateral Investment Treaty	0.405	0.000	0.491					
Same Legal System	0.346	0.000	0.476					
Acquirer Antidirector Index High	0.502	1.000	0.500	0.485	0.000	0.500	.02	1.41
Target Antidirector Index High	0.481	0.000	0.500					
M&A Private Fraction	0.037	0.000	0.188	0.099	0.000	0.298	-.06***	-8.74
M&A Public Fraction	0.037	0.000	0.189	0.100	0.000	0.300	-.06***	-8.85
N (observations)		42,525			1,805			

Table 7 Panel C, Public-to-public M&A transactions

The table provides an overview of the means, medians and standard deviations of the 11,368 public-to-public M&A transactions on a deal-level, of which 3,150 are cross-border and 8,218 are domestic. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. The country-level control variables have been described in 4.2.3.1, deal-level variables have been described in 4.2.3.2. The transactions have been divided into cross-border and domestic deals. The means have been compared using independent sample t-tests. To determine if the variances are equal, two-sample variance tests are used. The difference is presented in column (7) with the stars denoting the statistical significance on a *10%, **5% and ***1% level.

	Cross-Border			Domestic			Difference	
	Mean (1)	Median (2)	σ (3)	Mean (4)	Median (5)	σ (6)	(7) = (1)-(2)	t-statistic (8)
<i>Panel C</i>								
$\ln(1+ \Delta \text{ Trust})$	0.117	0.084	0.097					
$\ln(1+ \Delta \text{ Hierarchy})$	0.158	0.148	0.101					
$\ln(1+ \Delta \text{ Individualism})$	0.064	0.051	0.052					
<i>Deal level variables</i>								
Transaction value (\$m)	815.327	130.000	4,462.255	746.833	91.000	3,441.301	68.49	0.78
Relative Size	1.402	0.165	32.730	1.121	0.256	7.363	0.28	0.48
Acquirer market value (\$m)	19,288.168	4,223.512	43,754.863	15,202.789	1,690.689	55,376.025	4,085.38***	4.12
Majority Cash	0.490	0.000	0.500	0.439	0.000	0.496	0.05***	4.93
Tender offer	0.151	0.000	0.358	0.109	0.000	0.311	0.04***	4.91
Attitude	0.993	1.000	0.083	0.996	1.000	0.066	0.00	-1.57
Same industry	0.685	1.000	0.465	0.684	1.000	0.465	0.00	0.03
Acquirer Termination Fee	0.037	0.000	0.188	0.062	0.000	0.241	-0.03***	-5.89
Target Termination Fee	0.141	0.000	0.348	0.224	0.000	0.417	-0.08***	-10.71
Target Defense	0.013	0.000	0.115	0.026	0.000	0.159	-0.01***	0.00
Acquirer Past return	0.176	0.087	0.885	0.164	0.074	0.651	0.01	0.69
Acquirer Past Volatility	0.024	0.021	0.017	0.027	0.022	0.018	0.00***	-5.95
Target Past Return	0.111	0.055	0.919	0.082	0.026	0.675	0.03	1.60
Target Past Volatility	0.031	0.025	0.022	0.034	0.026	0.029	0.00***	-5.82

Table 7 (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Country-level variables</i>								
ln(Acquirer Country GDP)	21.377	21.305	1.432	22.175	22.712	1.303	-0.80***	-27.23
ln(Target Country GDP)	21.291	21.199	1.487					
ln (Acquirer Country openness)	0.454	0.432	0.239	0.317	0.248	0.167	0.14***	29.47
ln (Target Country openness)	0.439	0.430	0.220					
ln (Acquirer country GDP/Capita)	0.036	0.037	0.014	0.036	0.037	0.012	0.00	0.53
ln (Target country GDP/Capita)	0.034	0.036	0.016					
ln (1+ Δ Corporate Tax Rate)	0.104	0.103	0.063					
Same Religion	0.327	0.000	0.469					
Same Language	0.317	0.000	0.465					
ln(Geographic Distance)	8.031	8.651	1.274					
Share Border	0.219	0.000	0.414					
Exchange rate volatility	0.006	0.005	0.006					
Exchange rate growth	0.003	0.000	0.095					
Double Tax Treaty	0.923	1.000	0.267					
Bilateral investment treaty	0.077	0.000	0.266					
Same Legal System	0.440	0.000	0.496					
Acquirer Antidirector Index High	0.430	0.000	0.495	0.375	0.000	0.484	0.05***	5.34
Target Antidirector Index High	0.433	0.000	0.496	0.376	0.000	0.484	0.06***	5.65
M&A private fraction	0.279	0.188	0.287	0.299	0.280	0.149	-0.02***	-3.77
M&A Public fraction	0.720	0.812	0.287	0.700	0.719	0.149	0.02***	3.66
N (observations)		3,150			8,218			

Table 3 provides an overview of the country characteristics for the 1,805 country-years. It presents the cultural values, religion, governance and financial metrics for the country. The average cultural distance shows that the level of trust is 0.300, indicating to be careful in trusting people. Hierarchy with 0.590 implies that people should be following the instructions and individualism with 0.345 states that on average countries believe that income should be made more equal. The main religion is Roman Catholicism with 47%, followed by Protestantism with 21%, and Islam and Orthodox religions compromise 13% and 10% of the country years. Looking at the governance measurements, the French Civil Law is the most observed law system, followed by the German Civil Law, English Common Law and Scandinavian Civil Law and the Antidirector index proposed by La Porta et al. (1998) is on average almost equally high or low. Table 4 presents an overview of the used waves in deal-levels and country-pair-levels in brackets for Panel B, and on the deal-level in Panel C. In Panel B, the country-pair-years are equal for the 6th and 7th wave due to the same length with equal years and have a relatively similar amount of deals. Wave 5 is three years longer and therefore has a larger set of deals and country-pair-years. However, for Panel C the amount of public-to-public deals is about equal for cross-border and domestic deals throughout all three waves in the sample. Table 5 provides an overview of the top 30 countries with the domestic and cross-border deals. The percentages of the row 'Foreign %' indicates the percentage over the sample set of the 62 countries in the sample. The top 5 countries compromise a large set of the sample compromising 73% of all M&A transactions, but only 40% of the cross-border deals involves a target from the top 5 countries, indicating that cross-border deals are more dispersed throughout the sample countries.

Table 6 shows the means, medians and standard deviations for the country-level variables used in the regressions for all M&A transactions in the sample size. The table is divided into cross-border deals and domestic deals, and the difference in the in the means has been tested using t-tests. For determining whether to use unequal variance t-tests, a two-sample variance test has been used. The t-tests used were with unequal variances, except for the Antidirector index, finding equal variances. The difference in cross-border deals in both M&A Value and M&A Count of deals was significantly negative for cross-border deals, where the GDP and GDP/Capita was significantly larger for the country of the acquiring firm in comparison to cross-border acquisitions. The fraction of private and public transactions is significantly lower for cross-border deals. It must be noted that the observations of the Public/Private fractions, M&A Value and M&A Count, must be interpreted carefully since the values are biased. The values are zero if no M&A deal is observed in the specific country-pair-year and the domestic sample-years are severely smaller compared to the cross-border country-pair-years.

Table 7 provides an overview of the descriptive statistics on the cross-border and domestic transactions on deal-level variables and country-level variables of public-to-public transactions. The deal- and country-level variables are tested similarly as in table 6 using t-tests to observe the difference between cross-border and domestic deals. For the deal-level variables, the deal size is not significantly larger for

cross-border deals. The acquirers' market value is significantly larger in cross-border deals than domestic deals. This difference is possible as larger firms are looking for cross-border deals to pursue their company growth. The method of payment is significantly higher with a majority of cash in cross-border transactions and have significantly more tender-offers, similar to the results of Moeller & Schlingemann (2005). For country-level variables in public-to-public deals, the GDP of the acquiring country is significantly lower in cross-border deals and have a significantly higher openness. Concerning the Antidirector Index, the average country target-firm has on average significantly more shareholder protection than in domestic deals. On average, in cross-border deals, the overall M&A transactions of the target country are significantly more often public transactions.

For the cross-border characteristics, the findings in panel B in table 6 and panel C in table 7 are dissimilar. Findings show that the average largest distance in absolute terms is trust in panel B and hierarchy in panel C. In panel B, the trust distance is on average 0.155 compared to 0.117 in panel C, hierarchy 0.119 to 0.158, and individualism 0.088 to 0.069. For panel B, shared religion is found in 40.1% in the country-pairs, same language in 10.1%, a shared border for 7.4% and an average geographical distance of 2,560km. This compares to the 32.7%, 31.7%, 21.9% and 3,074km. It can be seen that in public-to-public deals of panel C several characteristics are dissimilar to Panel B: on average they more often share the same language and share a border. Government related variables such as DTTs and BITs, as they were making the agreement, and the rule of law and shareholder protection, several differences can be observed. In panel C, 92.3% of the country-pairs frequently have signed DTTs, but have a low average of BITs with 7.7%, where the sample of panel B 73.1% country-pairs have signed DTTs and 40.5% BITs. The average sharing of the legal system is higher in panel C but have on average lower shareholder protection.

4.4 Methodology

This section further elaborates on the methodology behind the tests used to answer the hypotheses. Section 4.4.1 explains the univariate analysis used to determine the difference in domestic and cross-border effects. Section 4.4.2 focusses on the regression based on the research of Ahern et al. (2015), used for the cross-sectional analysis. The cross-sectional analysis is used twofold, first to determine the likelihood of M&A transactions and second to test the M&A performance. Both will test the effect of the country- and deal-level factors on M&A transactions.

4.4.1 Univariate analysis

Before taking a deeper look at the cross-sectional analysis, some hypotheses can be answered by performing a univariate analysis. The univariate analysis uses similar tests to the univariate statistical tests in section 4.3. This univariate analysis will be on the CARs for the short-term

performance and BHARs for the long-term performance of the M&A transactions to test the difference between the means of cross-border and domestic transactions. Furthermore, the differences in the merger waves will be tested for either the full sample, cross-border or domestic transactions. The defined periods are the full sample, 1985-2014, the 5th wave, 1993-2000, the 6th wave, 2003-2007, and the 7th wave, 2010-2014. The CARs are tested through two time windows: (-1,+1) and (-5,+5). The BHARs, are recorded in the wave chosen on the announcement date. The difference in these means can be tested either using the t-test with equal or unequal variances. If the variances differ significantly by testing with a two-sample variance test, a t-test with unequal variances is used.

4.4.2 Cross-sectional analysis

For the cross-sectional analysis, this thesis makes use of a ‘gravity’ model. This gravity model is a commonly used model for trade goods. It explains the trade flows of two countries by masses such as the GDPs and several distances. Larger versions can include variables such as cultural affinities and trade bloc dummies. The model has similar explanatory power for asset trades, such as M&A deals, as goods trades (Portes & Rey, 2005). Furthermore, by linearizing the gravity model using logarithms and fixed effects in the regression, it can control for country heterogeneity (Westerlund & Wilhemsson, 2011). The gravity model is used for determining the M&A dollar flow of a country-pair by using a Tobit regression, and for the testing the M&A performance by using an OLS regression. The regressions will be used for the full sample, the 5th wave, 1993-2000, the 6th wave, 2003-2007, and 7th wave, 2010-2014.

For the determination of the M&A dollar flows can be written as follows:

$$\ln(1 + \$ \text{ of } M\&A_{ij,t}) = \alpha + \beta_1 \ln(\text{Cultural distance}_{ij}) + \beta_2 \ln(\text{Geographic Distance}) + \beta_3 CP_{ij} + \beta_4 CPY_{ij} + \beta_5 \text{Merger wave} + \beta_6 \text{countryFE} + \beta_7 \text{year FE} + \varepsilon_{ij,t} \quad (6)$$

Where,

$1 + \$ \text{ of } M\&A_{ij,t}$	=	US Dollar volume of country i to country j in year t
$\text{Cultural distance}_{ij}$	=	dimension of the cultural distance of country i to country j
$\text{Geographic distance}_{ij}$	=	distance in km from country-capital i to country-capital j
CP_{ij}	=	country-pair control variables
CPY_{ij}	=	country-pair year control variables
Merger wave	=	dummy variables for wave 5 (1993-2000), wave 6 (2003-2007), and wave 7 (2010-2014)
country FE	=	country fixed effects
year FE	=	year fixed effects

The Tobit regression model was formulated by James Tobin (Tobin, 1958). It was suggested as a solution to the problem of data censoring under certain conditions. The model can be used when the dependent variable is truncated at a certain level. Under the assumption that mergers occur when the combined net benefit is positive, and when the combined net benefit is negative, no merger activity is observed and results in a zero as an observation. By adding one to the M&A dollar volume, a logarithmic function denotes no merger activity as zero. Therefore the truncation of the dependent variable in the Tobit regression is zero as the lower level. Furthermore, an OLS model regression will be used to estimate the effect of the large use of dummy variables in the Tobit regression, as it could affect the estimates (Greene, 2004). The regressions contain three dummies for the three used merger waves to estimate an effect of the specific merger wave. Each regression is performed with country-, and year fixed effects. The use of fixed effects is to avoid endogeneity and prevent false assumptions of the observations. On the country-level, the fixed effects should capture anything that does not change over time, such as religion, language, takeover regulations investor protection and legal origin. By adding both acquirer and target country-level fixed effects, it corrects the directional differences. The fixed effects do not capture cultural and geographical distances. Year-fixed effects are included to control for various circumstances throughout the years. It should capture to a certain level macroeconomic shocks, such currency crises, mispricing or changes in market valuations.

Assuming that the effects of the price reaction are larger for the three-day window (-1,+1), the event window will be $CAR_{-1,+1}$, unless mentioned otherwise. For the short-term performance testing, the regression in the OLS model is as follows:

$$CAR_{ij,t} = \alpha + \beta_1 \ln(Cultural\ distance_{ij}) + \beta_2 \ln(Geographic\ Distance) + \beta_3 CP_{ij} + \beta_4 CPY_{ij} + \beta_5 Merger\ wave + \beta_6 countryFE + \beta_7 year\ FE + \varepsilon_{ij,t} \quad (7)$$

Where,

$CAR_{ij,t}$ = the combined CAR of acquiring firm i and target firm j at announcement t

The time window of the long-term estimation is 36 months, implying $BHAR_{0,+36}$ unless otherwise stated. For the long-term performance testing, the OLS regression is as follows:

$$BHAR_{ij,t} = \alpha + \beta_1 \ln(Cultural\ distance_{ij}) + \beta_2 \ln(Geographic\ Distance) + \beta_3 CP_{ij} + \beta_4 CPY_{ij} + \beta_5 countryFE + \beta_6 year\ FE + \varepsilon_{ij,t} \quad (7)$$

Where,

$BHAR_{ij,t}$ = the BHAR of acquirer i and target j in the period t

Several tests will be conducted to make the results more robust. Multiple regression analyses rely on assumptions such as the normal distribution of independent variables and uncorrelated error terms. Therefore, testing for multicollinearity and heteroscedasticity is important. Multicollinearity occurs

when two or more independent variables are strongly correlated and reduce the reliability of the used model. A method to detect multicollinearity is looking at the correlation between the two variables and use a limit of 0.8 or 0.9 (Farrar & Glauber, 1967). For this paper, a cutoff of 0.8 will be used. The other assumption of OLS is the homoscedasticity of the error terms. Homoscedasticity assumes a constant variance in the error terms. The heteroscedasticity may occur when larger transactions have larger variances than small transactions. The adjustment for heteroscedasticity is performed by Stata making the standard errors robust using the White heteroscedasticity method. This adjustment does not remove the heteroscedasticity but corrects and adjusts the standard errors to be consistent.

5. Results

This section will summarize the results found through the different research methods. The results covered in chapter 5.1 will present the findings to the likelihood of M&A deals over the full sample and separated in merger waves, chapter 5.2 will present the univariate and cross-sectional analysis of the CARs and BHARs over the full sample and separate merger waves. Chapter 5.3 will provide answers to the hypothesis stated in chapter 3 and therefore possibly can answer the impact of cultural distance on M&A transactions and the implications of these findings. As the results output including all control variables is extensive, the full regression outputs can be found in the appendix tables. The tables being in the text contain the cultural distances, trust, hierarchy and individualism, and governance mechanisms, sharing the same religion and the Antidirector index used for answering the hypotheses.

Before taking a deeper look into the results directing to possible answers of the hypothesis, the multicollinearity and heteroscedasticity will be addressed. In appendix 1 and appendix 2 the correlation matrices for the cultural distances and the control variables used in the regressions can be found. Appendix 1 shows the correlation matrices for the panel B Tobit and OLS regressions and appendix 2 displays the correlation matrices for the panel C OLS regressions. All correlation matrices show that the assumption of deleting correlations exceeding 0.8 is not needed. Additionally, all regressions suffered from heteroscedasticity, and the estimates have been made robust using the Huber/White/sandwich estimator in Stata using the robust function as an option in the performed regressions. These robust standard errors are still heteroscedastic but correct them accordingly to make them consistent and less biased. This option eases the assumption that the errors of the variables are distributed identically.

5.1 Likelihood of M&A transactions

This section focuses on the likelihood of M&A transactions for public and private transactions and the influence of cultural distances. Table 8 provides the estimates of the cultural distances and governance mechanism of panel B, controlling for the country-level variables described in 4.2.3.1. The estimates of all variables can be found in appendix 3. On the full sample of panel B containing 42,525 country-pair-years, seven regressions have been used to determine the effect of the cultural distances and merger waves on the likelihood of M&A transactions. Models 1 to 5 consists of Tobit regression estimates, where models 1 to 3 are testing the effect of each cultural distance separately, and model 4 includes all three. Model 5 includes the effect of all three cultural distances and dummy variables of the used merger waves. Model 6 and 7 are OLS estimations of the Tobit estimation models 4 and 5 to estimate the effect of a large number of dummies. All models control for country-level variables, year fixed effects, and country fixed effects. Looking at the cultural values in the Tobit regressions, larger absolute distances in trust (-1.538) and individualism (-1.204) are significantly negative related to cross-border merger activity at the 1% level and insignificant positive relationship with hierarchy (0.42), where the OLS estimates provide significant negative signs in merger activity for trust (-0.892) and hierarchy (-0.934). Higher values in the Tobit regressions is due to the truncation of the dependent value at zero. The Tobit regression significances of the three cultural distances are in line with the results of Ahern et al. (2015), where for the OLS estimates their distance in individualism has a significant negative relationship to the likelihood of M&A value across country-pairs, as opposed to the insignificant negative relationship found in this sample. The dummy variables of wave 5 (5.036) and wave 6 (4.178) are significant for models 5 and 7 at the 1% level, indicating a higher likelihood of mergers in these waves. In the governance control variables, sharing the same legal system has a positive effect on merger activity, and acquiring countries scoring high on the Antidirector index indicating high shareholder protection have significant positive merger likelihood. All regression findings which are in Appendix 3, country-pair distances captured through control variables are having the expected direction with significant positive effects for country-pairs having the same religion, same language, or sharing a border; and negative significant merger activity with a greater geographical distance. In the Tobit models, significantly positive effects are found for larger countries measured in GDP, higher country openness, a larger absolute difference in corporate tax rates, country-pairs with high public or private merger activity, DTTs or higher exchange rate volatility. For the latter, as the sample contains zeros when no merger activity was observed, the high volatility observations should be viewed with caution. Country-level variables with negative effects on merger activity are countries with signed BITs and countries with a larger GDP/capita. These findings of the control variables were similar in the OLS estimates, except for an insignificant sign on openness, the acquirers' high Antidirector index being insignificantly negative, and GDP/capita being positively significant for the acquiring country and insignificant for the target country.

Similar to the regressions in table 8, the regressions have been used for the 5th (1993-2000) merger wave, 6th (2003-2007) merger wave and 7th (2010-2014) merger wave separately and results are shown in table 9. All estimates can be found in Appendix 4. Models 1-5 provide findings for the fifth wave, 6-10 for the sixth wave and 11-15 for the seventh wave. These regressions are similar to the regressions in table 8 controlling for country characteristics, and fixed effects, except the aggregated merger values, cover the years of the merger wave only. The measurements used for the hypothesis testing, the three cultural distances and governance standards substantially differ when comparing the waves. Tobit regressions over the full sample, findings include that trust and individualism are significantly negatively related to merger activity, with an insignificantly positive relationship to merger activity. Results in table 9 provide findings for the Tobit regressions that the impact of the distance measured in trust is negative and significant for the 5th and 6th wave and becomes insignificant in the 7th wave, where hierarchy is positive but insignificant in the 5th and 6th wave and has a significant impact in the 7th wave. Individualism is significant and negative in the 6th and 7th wave, and insignificant in the fifth wave. Findings in the OLS regressions provide only significant and negative results in the trust dimension with decreasing impact (-1.167 in the 5th wave and -0.447 in the 7th wave). Hierarchy shows negative and significant findings at the 1% level in the 5th wave and only significant findings at the 10% level in the 7th wave. Individualism has an insignificant impact on all three merger waves. With different findings per wave, these changes in the three cultural distance indicate that each wave is fueled by different motives and the cultural distances have a different impact in the likelihood of M&A transactions between two countries looking at the M&A value. From the governance perspective, the same legal system has a significant and positive impact on the M&A value, where the acquiring country scoring high on Antidirector Index is significant in the 5th and 7th wave. It is insignificant in the 6th wave, and for the target country significantly positive in the 5th wave, insignificant in the 6th wave and is significantly negative in the 7th wave. For the OLS regressions, the acquiring country's Antidirector index remains significantly positive throughout the waves, and the target countries are only significantly negative in the 6th wave where the 5th wave is insignificantly negative and slightly positive but insignificant in the 7th wave. Similar to the cultural distance, shareholder protection of the acquiring and target country has a different impact on the merger activity captured in the aggregated M&A value per merger wave.

Table 8 Panel B regressions, Public and Private M&A

The dependent variable is the natural logarithm of the total M&A dollar value of country i to target country j aggregated into a panel from 1985 to 2014. The columns 1–5 are Tobit regressions of the model described in chapter 4.4.2. Columns 6 and 7 are OLS regressions following the same model in columns 1–5. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. Regressions with all control variables can be found in appendix 3. The country-level control variables have been described in 4.2.3.1. The stars denoting the statistical significance on a *10%, **5% and ***1% level.

Model	ln(1+ M&A Value)						
	Tobit (1)	Tobit (2)	Tobit (3)	Tobit (4)	Tobit (5)	OLS (6)	OLS (7)
ln(1 + Δ Trust)	-1.538*** (-5.078)			-1.504*** (-4.957)	-1.504*** (-4.957)	-0.892*** (-10.1)	-0.892*** (-10.1)
ln(1 + Δ Hierarchy)		0.463 (1.183)		0.420 (1.071)	0.420 (1.071)	-0.934*** (-8.873)	-0.934*** (-8.873)
ln(1 + Δ Individualism)			-1.305*** (-2.644)	-1.204** (-2.442)	-1.204** (-2.442)	-0.081 (-.693)	-0.081 (-.693)
Wave 5 (1993-2000)					5.036*** (21.876)		1.030*** (14.085)
Wave 6 (2003-2007)					4.178*** (24.057)		1.207*** (11.656)
Wave 7 (2010-2014)					-0.062 (-.327)		-0.010 (-.096)
Same Legal System	0.875*** (12.546)	0.921*** (13.317)	0.931*** (13.458)	0.883*** (12.64)	0.883*** (12.64)	0.306*** (16.404)	0.306*** (16.404)
Acquirer Antidirector Index High	5.131*** (4.221)	5.206*** (4.241)	5.206*** (4.272)	5.124*** (4.208)	5.124*** (4.208)	-0.210 (-.819)	-0.210 (-.819)
Target Antidirector Index High	0.915 (1.441)	0.759 (1.193)	0.783 (1.232)	0.978 (1.531)	0.978 (1.531)	-0.203 (-1.16)	-0.203 (-1.16)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-31,224	-31,237	-31,234	-31,220	-31,220		
Adjusted R ²						0.588	0.590
Observations	42,525	42,525	42,525	42,525	42,525	42,525	42,525

Table 9 Panel B merger waves regressions, Public and Private M&A

The dependent variable is the natural logarithm of the total M&A dollar value of country i to target country j in divided in three panels: Wave 5 from 1993 to 2000, Wave 6 from 2003-2007, and Wave 7 from 2010-2014. The columns 1–4, 5–9, and 11–14 are Tobit regressions of the model described in chapter 4.4.2. Columns 6, 7 are OLS regressions following the same model in columns 1–4. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. Regressions with all control variables can be found in appendix 4. The country-level control variables have been described in 4.2.3.1. The stars denote the statistical significance on a *10%, **5% and ***1% level.

Model	ln(1+ M&A Value)														
	Wave 5					Wave 6					Wave 7				
	Tobit (1)	Tobit (2)	Tobit (3)	Tobit (4)	OLS (5)	Tobit (6)	Tobit (7)	Tobit (8)	Tobit (9)	OLS (10)	Tobit (11)	Tobit (12)	Tobit (13)	Tobit (14)	OLS (15)
ln(1 + Δ Trust)	-2.10*** (-13.449)			-2.099*** (-13.124)	-1.167*** (-6.549)	-2.895*** (-4.294)			-2.811*** (-4.128)	-1.569*** (-6.349)	-0.212 (-1.627)			-0.166 (-1.263)	-0.447** (-2.311)
ln(1 + Δ Hierarchy)		0.129 (.674)		0.213 (1.086)	-1.330*** (-6.414)		0.625 (.687)		0.177 (.195)	-0.546 (-1.582)		1.386*** (8.726)		1.478*** (9.185)	-5.28* (-1.74)
ln(1 + Δ Individualism)			-0.429 (-1.519)	-0.165 (-.575)	0.259 (1.078)			-3.464*** (-2.868)	-3.256*** (-2.705)	0.016 (.042)			-2.256*** (-8.816)	-2.415*** (-9.308)	-.165 (-.513)
Same Legal System	0.992*** (28.841)	1.056*** (30.669)	1.059*** (30.737)	0.993*** (28.804)	0.312*** (9.32)	0.857*** (5.705)	0.934*** (6.207)	0.973*** (6.463)	0.894*** (5.927)	0.437*** (7.872)	0.932*** (32.285)	0.935*** (32.439)	0.950*** (32.939)	0.941*** (32.634)	0.305*** (7.027)
Acquirer Antidirector Index High	3.984*** (106.227)	4.165*** (111.812)	4.156*** (111.496)	3.985*** (105.717)	5.411*** (6.076)	3.690 (.985)	3.902 (1.032)	3.858 (1.02)	3.653 (.969)	4.544*** (3.092)	21.912*** (581.472)	22.102*** (587.882)	21.904*** (584.135)	22.018*** (580.88)	3.038* (1.812)
Target Antidirector Index High	1.322*** (33.658)	1.010*** (25.782)	1.003*** (25.637)	1.330*** (33.651)	-0.276 (-1.136)	0.244 (.094)	0.188 (.072)	0.255 (.097)	0.338 (.129)	-1.096** (-2.303)	-18.207*** (-486.723)	-18.280*** (-488.87)	-18.034*** (-482.691)	-18.021*** (-481.629)	0.005 (.016)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-7,838	-7,838	-7,844	-7,844		-7,380	-7,384	-7,393	-7,389		-5,731	-5,709	-5,707	-5,706	
Adjusted R ²					0.590					0.576					0.723
Observations	11,664	11,664	11,664	11,664	11,664	7,290	7,290	7,290	7,290	7,290	7,290	7,290	7,290	7,290	7,290

5.2 M&A Performance

To determine the possible effect of cross-border transactions in the short-term and long-term returns, univariate and cross-sectional analyses have been used to test the performance of cross-border transactions. The univariate analysis is presented in chapter 5.2.1, and the impact of the cultural distances controlling for country-, and deal-level variables in a cross-sectional analysis in chapter 5.2.2.

Figure 2 Short-term performance panel C

The figures present plots of the average cumulative abnormal returns (CARs) for the longest tested event window of 11 days (-5,+5) for the total, cross-border and domestic public-to-public transactions. The amount of transactions per wave can be found in table 4. Figure (1) shows the CARs development of the full sample from 1985-2014, where (2) shows the average CARs in the 5th wave, (3) of the 6th wave and (4) the 7th wave. The transactions are extracted from Thomson One and stock prices from DataStream. The methodology of calculating the CARs can be found in chapter 4.4.2

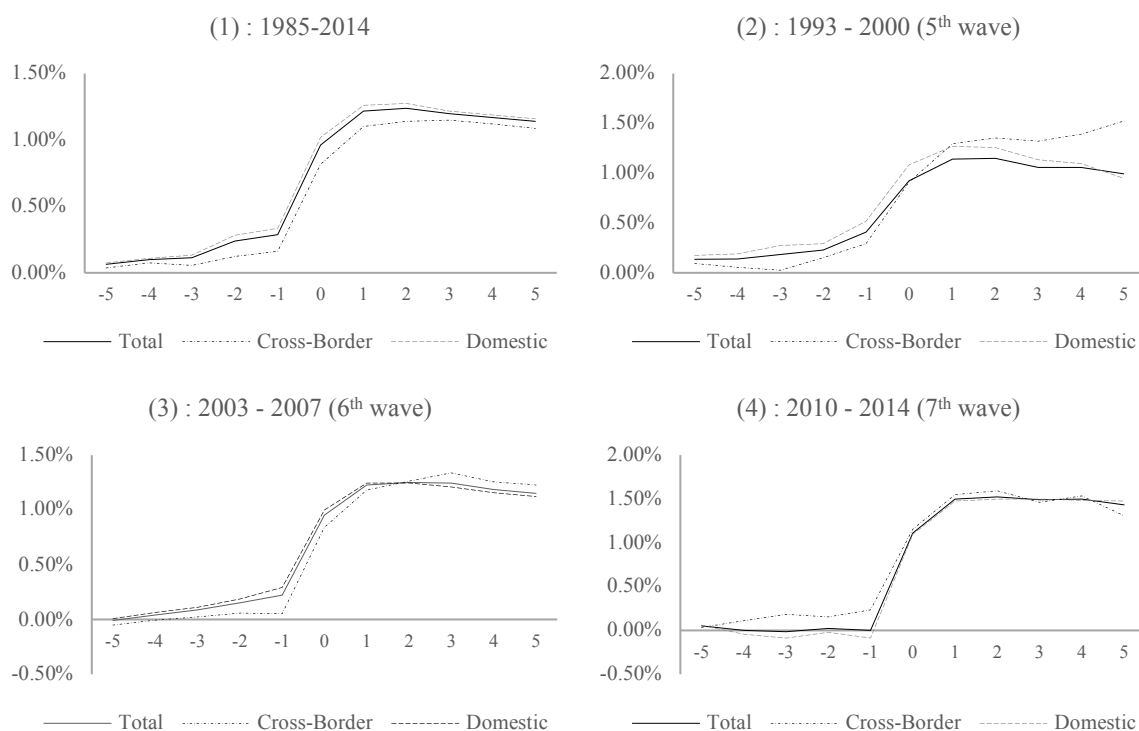
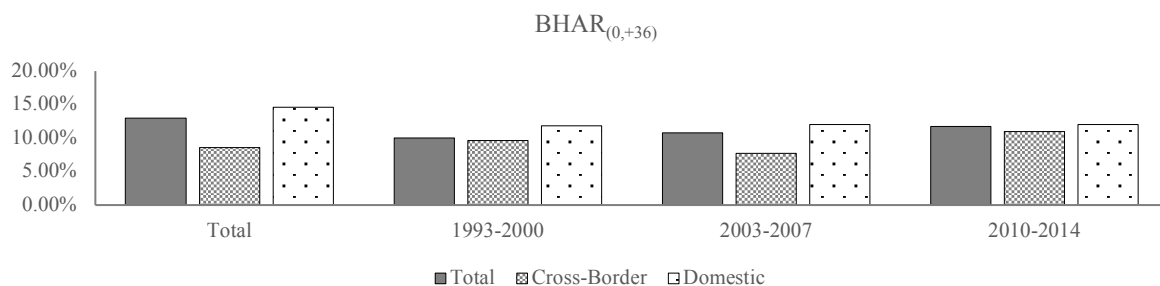


Figure 3 Long-term performance panel C

The figure presents columns of the average buy-and-hold abnormal returns (BHARs) of the 36 months after the transactions for the total, cross-border and domestic transactions. The amount of transactions per wave can be found in table 4. The columns are divided into the full sample (1985-2014) of transactions and into the tested waves. 1993-2000 is the 5th wave, 2003-2007 the 6th wave, and 2010-2014 the 7th wave. The transactions are extracted from Thomson One and stock prices from DataStream. The methodology of calculating the BHARs can be found in chapter 4.4.2.



5.2.1 Univariate Analysis

This section will focus on the differences in return between cross-border and domestic transactions, as the differences in return in merger waves. Figure 2 presents the combined CARs of the cross-border, domestic and all M&A public-to-public transactions over the 10-day event window (-5,+5), for the full sample, and the three merger waves in the sample. Using the combined CARs is to determine the effect of the cultural distance in the cross-sectional analysis between a country-pair. The four figures show that the price reaction is strongest in the three-day event (-1,+1) period around the merger announcement, which makes the three-day event window most suitable for the cross-sectional analysis. In the full-, and subset-samples the ARs remain positive after the announcement date, with average 10-day CARs ranging between 1% and 1.5%. Visually, cross-border and domestic transactions do not differ in the CARs development, indicating no difference in the announcement return, except for the fifth wave, where domestic transactions have higher ARs at the end of the 10-day period.

Figure 3 presents the 36-month BHARs of the cross-border, domestic and all M&A public-to-public transactions of the full sample and the three merger waves. In the sample and each subset, the BHARs are on average positive for the total, cross-border and domestic transactions, implying that the firms with acquisitions outperformed the specific benchmark index. The return is ranging between 10% and 15%, and seemingly, domestic transactions outperform cross-border transactions which is most visible in the full sample.

To statistically verify the findings in figure 2 and 3, table 10 provides the results of the univariate analysis on the CARs in a three-day (-1,+1), 10-day (-5,+5) event window, and BHARs for the 36 months after the transaction. Unpaired t-tests with unequal variances were used for finding differences in cross-border and domestic returns and differences in merger wave returns. In total, 39 t-tests have been used to find these differences and contribute to the findings the visual interpretation of the short-, and long-term performance. All transactions of panel C had an average combined $CAR_{-1,+1}$ of 0.97%, cross-border deals 0.98% and domestic deals. The announcement returns were higher for the 7th wave with 1.32% of all transactions, 1.26% for cross-border transactions, and 1.34% for domestic transactions, with no significant difference between cross-border and domestic deals. All t-tests testing for the difference in cross-border and domestic deals were insignificant, but the waves CARs were significantly higher with 0.4% for the full sample and domestic deals in the 7th wave. These results indicate that the behavior of the markets is differently to merger announcements in the latest and ongoing wave. In the 10-day event window, the combined $CAR_{-5,+5}$ is 1.14% for the total sample, 1.09% in cross-border transactions, and 1.16% for domestic transactions, with no statistical difference in the latter two. However, in the 5th wave, there are statistically significant higher CARs of 0.6% higher CARs for cross-border deals at the 10% level. In the long-term performance, the average 36-month BHAR is positive for each tested subsample, with a 12.99% over the total sample. The t-test over the full sample indicates that cross-border transactions perform significantly worse than domestic

transactions by 6%. In the subsamples, the same behavior of the BHARs is found but is insignificant for all merger waves. Comparing the merger waves, the M&A transactions in the 7th wave perform better in the long-term window but are insignificant.

In summary, the univariate analysis indicates that in the short-term performance, no significant difference between cross-border and domestic transactions is observed, but that the 7th wave outperforms the other waves in the $CAR_{(-1,+1)}$ for domestic and all M&A transactions. The long-term performance of cross-border M&A transactions is significantly worse in full sample.

Table 10 Univariate Analysis Panel C

The table provides an overview of the cumulative announcement returns (CARs) for the 3-day event window $(-1,+1)$ and 10-day event window $(-5,+5)$ around the announcement date, and the 36-month $(0,+36)$ buy-and-hold returns (BHARs) for the long-term performance. The returns are estimated for the full sample, cross-border and domestic transactions for the all years (1985-2014), 5th wave (1993-2000), 6th wave (2003-2007), and 7th wave (2010-2014). The transactions are obtained from Thomson One, and stock prices from DataStream. The methodology of calculating the CARs and BHARs can be found in chapter 4.4.2. Unpaired t-tests with unequal variances are used between cross-border and domestic deals presented horizontally, and between the three waves presented vertically. The stars denote the statistical significance on a *10%, **5% and ***1% level.

	Full Sample	Cross-Border	Domestic	Difference	
	(1)	(2)	(3)	(4) = (2)-(3)	t-statistic (5)
<i>CAR_(-1,+1)</i>					
Total sample	0.010 n=12,659	0.010 n=3,457	0.010 n=9,202	0.0	0.05
1993-2000 (a)	0.009 n=3,026	0.010 n=833	0.008 n=2,182	0.002	0.82
2003-2007 (b)	0.010 n=3,581	0.010 n=996	0.009 n=2,585	0.001	0.43
2010-2014 (c)	0.013 n=2,890	0.013 n=781	0.013 n=2,109	-0.001	-0.36
(a)-(b)	-0.001	0.0	-0.001		
t-statistic	-0.36	0.08	-0.58		
(a)-(c)	-0.004***	-0.002	-0.005***		
t-statistic	-2.73	-0.81	-2.80		
(b)-(c)	-0.004***	-0.002	-0.004***		
t-statistic	-2.73	-1.00	-2.58		
<i>CAR_(-5,+5)</i>					
Total sample	0.011 n=12,659	0.011 n=3,457	0.012 n=9,202	-0.001	-0.37
1993-2000 (a)	0.010 n=3,026	0.014 n=833	0.008 n=2,182	0.006*	1.65
2003-2007 (b)	0.010 n=3,581	0.011 n=996	0.010 n=2,585	0.001	0.45
2010-2014 (c)	0.013 n=2,890	0.012 n=781	0.013 n=2,109	-0.002	-0.41
(a)-(b)	0.0	0.003	-0.002		
t-statistic	-0.18	0.78	-0.66		
(a)-(c)	-0.003	0.002	-0.005*		
t-statistic	-1.33	0.51	-1.89		
(b)-(c)	-0.003	-0.001	-0.003		
t-statistic	-1.29	-0.17	-1.41		
<i>BHAR_(0,+36)</i>					
Total sample	0.130 n=12,659	0.086 n=3,457	0.146 n=9,202	-0.060*	-1.81
1993-2000 (a)	0.100 n=3,026	0.089 n=833	0.104 n=2,182	-0.015	-0.17
2003-2007 (b)	0.106 n=2,890	0.071 n=996	0.106 n=2,585	-0.036	-0.75
2010-2014 (c)	0.097 n=3,581	0.100 n=781	0.109 n=2,109	-0.009	-0.11
(a)-(b)	-0.006	0.018	-0.002		
t-statistic	0.08	0.21	-0.05		
(a)-(c)	0.003	-0.011	-0.005		
t-statistic	-0.11	-0.10	-0.07		
(b)-(c)	0.009	-0.029	-0.002		
t-statistic	-0.18	-0.44	-0.03		

5.2.2 Cross-sectional Analysis

The following two sections will focus on the cross-sectional analysis of the impact of the cultural distances and governance mechanisms, and the impact of merger waves on the significance of the cultural distances and governance mechanisms. Chapter 5.2.2.1 will focus on the short-term performance, where 5.2.2.2 will explain the results on the long-term performance.

5.2.2.1 Short-term performance

With only statistically significant differences in the announcement returns of cross-border and domestic transactions in the 5th wave, and the 7th wave outperforming the 5th and 6th wave, the impact of the cultural distance and governance mechanisms in cross-border transactions can still be tested. Table 11 presents the findings of the cross-sectional analysis with the 3-day $CAR_{-1,+1}$ as the dependent variable, testing the cultural distances, governance mechanisms while controlling for country-level and deal-level variables. The estimates of all variables can be found in Appendix 5, where table 11 depicts the cultural distances, sharing the rule of law, Antidirector Index, and several deal-level control variables. On the full sample of the 3,457 public-to-public transactions, four regressions (models 1-4) have been used to estimate the effect of the cultural distance. One regression (model 5) contains the 9,202 domestic public-to-public transactions to estimate the impact of the shareholder protection and the deal-level variables to find possible differences with cross-border transactions. All models control for country-level variables, deal-level variables, year fixed effects and country fixed effects. The impact of the cultural distances is different from the results of the Panel B regressions. Findings show that the absolute distance on hierarchy is significant and negative with 2.3% lower announcement returns, where trust and individualism are insignificantly positive. If the acquiring company is from a country having high shareholder protection, it produces a higher $CAR_{-1,+1}$ of 0.12% in the full model on a 10% significance level. On the deal-level characteristics in cross-border M&A, larger transaction values and larger acquirer or target are negative and significant on the $CAR_{-1,+1}$ and were similar for domestic M&A transaction, except for the transaction value, where an insignificant positive effect on the CARs was found. In other deal level characteristics, similar findings were found for the cross-border and domestic transactions, with more positive announcement returns where the method of payment consists of a majority in cash-instruments by 0.7%, if the acquiring and target firm is operating in the same industry by 0.5% for cross-border transactions and 0.2% in domestic transactions. If the attitude of the deal is hostile, the $CAR_{-1,+1}$ is significantly different from friendly deals, where friendly deals are 2.7% lower. This effect is not present in cross-border transactions, where a friendly attitude is insignificantly positive. The attitude is surprisingly negative, but the hostile transactions consist of only 38 transactions in the sample. In relation to previous findings, these findings were consistent with the findings on the deal size and acquiring firm size of Alexandridis et al. (2013), and target size by Moeller, Schlingemann & Stulz (2004), the method of payment by Franks, Harris & Titman (1991), and Martynova & Renneboog (2006), and for acquisitions in the same industry by Morck, Schleifer & Vishny (1990) and

Duchin & Schmidt (2013). The findings of the other control variables in appendix 5 are similar to the findings on the merger volume of panel B in table 8 but are insignificant. On the deal-level, termination fees are significantly positive for the target firm and significantly negative for the acquirer at the 1% level for cross-border transactions and significant at the 10% level for domestic level, but insignificant for the acquirer. Domestic transactions are significantly negative at the 1% level when the target or acquirer have higher past stock returns in the run-up to the transactions.

The findings in table 12 provide results of the cultural distances, governance mechanisms and several deal-level characteristics of the subsamples on the 5th, 6th and 7th merger wave. All estimates can be found in Appendix 6. Models 1-5 provide findings for the fifth wave, 6-10 for the sixth wave and 11-15 for the seventh wave. Models 5, 10, and 15 are domestic transactions to estimate the impact of the shareholder protection and deal-level characteristics. These regressions are set up similar to the regressions in table 9 controlling for country-level, and deal-level characteristics and fixed effects. The measurements used for the hypothesis testing, the three cultural distances, governance mechanisms, and several deal-level variables differ when comparing the waves on the impact of these variables. On the cultural distances, the impact in the 5th is insignificant on all three cultural distances, being indistinguishably negative for trust and hierarchy and positive for individualism, remaining insignificant in the 6th wave and have a significant impact on the 7th wave for absolute culturally distant countries. Larger country distances on trust decrease announcement returns by 4.9% on a 10% significance level, and culturally distant countries on hierarchy decrease announcement returns by 5.5% on the 5% significance level. The shareholder protection expressed as the Antidirector index is in comparison to the full sample not significant, and is only significant but negative rather than positive for the domestic transactions in the 7th wave. Deal-level variables lose its significance over time, where the transaction-, acquirer- and target market value being significantly negative related to the $CAR_{-1,+1}$ on the 1% level for the 5th wave and is insignificant in the successive waves. The method of payment remains positive and significant in the 5th wave and 6th wave and is insignificant in the 7th wave, where the attitude has a significantly negative impact in the 7th wave on cross-border transactions, and mergers in the same industry only remain significantly positive in the 6th wave. A hostile attitude in the 7th wave results in higher announcement returns than friendly bids, with no statistical significance in the 5th and 6th wave, and similar findings were found for the relative size, with a significant negative relationship. It seems that each wave has as assumed other characteristics which are important to the behavior of the announcement return of M&A transactions, and in the appendix, the other control variables have varying significance and direction of the impact on the $CAR_{-1,+1}$. These include the impact of a positive return in the same language in the 5th wave, a negative impact of the exchange rate growth in the 6th wave, and a negative impact of the termination fees in the 5th wave.

Table 11 Panel C regressions, Public-to-public M&A, CARs

The dependent variable is the 3-day event (-1,+1) combined CAR of the public-to-public M&A transactions from 1985-2014. Columns 1–4 include cross-border transactions, and column 5 domestic transactions. The transactions have been retrieved from Thomson One, the stock prices for estimating the CARs from DataStream. The methodology can be found in chapter 4.2.2. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. Regressions with all control variables can be found in appendix 5. The country-level control variables have been described in 4.2.3.1, and deal-level variables in 4.2.3.2. The stars denoting the statistical significance on a *10%, **5% and ***1% level.

Model	CAR _{-1,+1}				
	Cross-Border (1)	Cross-Border (2)	Cross-Border (3)	Cross-Border (4)	Domestic (5)
$\ln(1 + \Delta \text{ Trust})$	0.0 (.032)			-0.002 (-.122)	
$\ln(1 + \Delta \text{ Hierarchy})$		-0.023* (-1.811)		-0.023* (-1.807)	
$\ln(1 + \Delta \text{ Individualism})$			0.013 (.611)	0.014 (.657)	
Same Legal System	0.001 (.506)	0.002 (.735)	0.001 (.471)	0.001 (.557)	
Acquirer Antidirector Index High	0.111 (1.631)	0.117* (1.799)	0.111 (1.685)	0.117* (1.738)	0.053*** (4.158)
Target Antidirector Index High	0.015 (.649)	0.012 (.497)	0.015 (.634)	0.012 (.542)	
<i>Deal level characteristics</i>					
Transaction Value	0.0** (-2.469)	0.0** (-2.496)	0.007 (.773)	0.0** (-2.505)	0.0 (.272)
Acquirer Market Value	0.0*** (-3.958)	0.0*** (-3.959)	0.0*** (-3.95)	0.0*** (-3.952)	0.0*** (-4.025)
Target Market Value	0.0* (-1.838)	0.0* (-1.889)	0.0* (-1.831)	0.0* (-1.874)	0.0*** (-3.552)
Relative Size	0.0** (2.324)	0.0** (2.237)	0.0** (2.303)	0.0** (2.254)	0.0 (1.395)
Majority Cash	0.007*** (3.361)	0.007*** (3.39)	0.007*** (3.36)	0.007*** (3.379)	0.007*** (4.619)
Attitude	0.005 (.375)	0.005 (.372)	0.006 (.381)	0.005 (.38)	-0.027** (-2.157)
Same Industry	0.004*** (2.934)	0.005*** (2.954)	0.004*** (2.916)	0.005*** (2.975)	0.002* (1.955)
Control variables	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
R ²	0.050	0.063	0.052	0.053	0.031
Observations	3,457	3,457	3,457	3,457	9,202

Table 12 Panel C merger waves regressions, Public-to-public M&A, CARs per merger wave

The dependent variable is the 3-day event (-1,+1) combined CAR of the public-to-public M&A transactions for three merger waves. The 5th merger waves contains the years 1993-2000, the 6th merger wave the years 2003-2007, and the 7th merger wave the years 2010-2014. Columns 1–4, 6–9, 11–14 include cross-border deal, and column 5, 10, 15 only domestic deals. The transactions have been retrieved from Thomson One, the stock prices for estimating the CARs from DataStream. The methodology can be found in chapter 4.2.2. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. Regressions with all control variables can be found in appendix 6. The country-level control variables have been described in 4.2.3.1, and deal-level control variables in 4.2.3.2. The stars denote the statistical significance on a *10%, **5% and ***1% level.

Model	CAR _{-1,+1}														
	Wave 5					Wave 6					Wave 7				
	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
$\ln(1 + \Delta \text{ Trust})$	-0.010 (-.442)			-0.013 (-.611)		-0.017 (-.852)			-0.012 (-.578)		-0.049* (-2.489)			-0.055* (-2.597)	
$\ln(1 + \Delta \text{ Hierarchy})$		-0.020 (-1.371)		-0.019 (-1.182)			0.037 (1.322)		0.035 (1.198)			-0.055** (-4.553)		-0.069*** (-8.309)	
$\ln(1 + \Delta \text{ Individualism})$			0.064 (.734)	0.065 (.769)				0.029 (.877)	0.031 (.932)				0.029 (.701)	0.050 (1.099)	
Same Legal System	-0.006 (-1.26)	-0.006 (-1.082)	-0.006 (-1.092)	-0.007 (-1.442)		0.001 (.409)	0.002 (.957)	0.001 (.323)	0.0 (-.16)		0.001 (.196)	0.006 (.769)	0.004 (.547)	0.003 (.329)	
Acquirer Antidirector Index High	0.133 (.718)	0.127 (.668)	0.112 (.607)	0.119 (.67)	0.001 (.028)	0.025 (.63)	0.028 (.674)	0.025 (.572)	0.034 (.804)	-0.004 (-.13)	-0.239 (-.561)	-0.162 (-.365)	-0.209 (-.46)	-0.166 (-.379)	-0.039* (-2.595)
Target Antidirector Index High	0.093 (.946)	0.101 (1.074)	0.095 (.983)	0.094 (.97)		0.075 (.794)	0.072 (.773)	0.079 (.804)	0.080 (.81)		-0.144 (-.628)	-0.107 (-.46)	-0.119 (-.521)	-0.137 (-.595)	
Transaction Value	0.0* (-1.99)	0.0* (-2.17)	0.0** (-2.628)	0.0** (-2.535)	0.0** (-2.512)	0.0 (-1.12)	0.0 (-1.153)	0.0 (-1.167)	0.0 (-1.116)	0.0 (-1.279)	0.0 (-.185)	0.0 (-.256)	0.0 (-.229)	0.0 (-.252)	0.0 (2.086)
Acquirer Market Value	0.0*** (-4.738)	0.0*** (-4.881)	0.0*** (-5.206)	0.0*** (-5.034)	0.0*** (-10.81)	0.0 (-1.952)	0.0 (-2.017)	0.0 (-1.913)	0.0 (-1.967)	0.0 (-1.77)	0.0* (-2.139)	0.0 (-1.916)	0.0 (-2.011)	0.0 (-2.014)	0.0*** (-4.837)
Target Market Value	0.0*** (-6.93)	0.0*** (-6.694)	0.0*** (-7.62)	0.0*** (-7.363)	0.0 (-.263)	0.0 (-.304)	0.0 (-.272)	0.0 (-.27)	0.0 (-.261)	0.0 (-.674)	0.0 (.129)	0.0 (.16)	0.0 (.199)	0.0 (.107)	0.0** (-3.881)
Relative Size	0.0 (1.117)	0.0 (1.088)	0.0 (1.118)	0.0 (1.082)	0.0** (3.152)	0.001 (.568)	0.001 (.537)	0.001 (.573)	0.001 (.536)	0.0 (.348)	-0.001* (-2.181)	-0.001* (-2.168)	-0.001* (-2.231)	-0.001* (-2.231)	0.0 (-1.349)
Majority Cash	0.016*** (9.484)	0.016*** (9.506)	0.016*** (9.201)	0.016*** (9.563)	0.010** (2.888)	0.009** (2.853)	0.008* (2.706)	0.009** (2.814)	0.008* (2.707)	0.004** (3.107)	-0.001 (-.377)	0.0 (-.118)	-0.001 (-.247)	-0.001 (-.32)	0.006* (2.275)
Attitude	-0.006 (-.288)	-0.007 (-.297)	-0.007 (-.311)	-0.007 (-.326)	-0.040 (-1.869)	0.011 (.41)	0.011 (.407)	0.012 (.427)	0.012 (.441)	-0.031 (-1.327)	-0.074*** (-6.44)	-0.073*** (-6.353)	-0.074*** (-6.491)	-0.073*** (-6.269)	-0.007 (-.599)
Same Industry	0.002 (1.456)	0.002 (1.388)	0.002 (1.331)	0.002 (1.298)	0.003 (1.516)	0.007** (3.898)	0.007** (3.602)	0.007** (3.774)	0.007** (3.478)	0.003 (1.63)	0.007 (1.092)	0.007 (1.062)	0.006 (1.08)	0.007 (1.1)	0.004 (1.225)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.133	0.133	0.135	0.136	0.044	0.127	0.129	0.127	0.129	0.051	0.146	0.142	0.139	0.150	0.094
Observations	833	833	833	833	2,181	996	996	996	996	2,585	781	781	781	781	2,109

5.2.2.1 Long-term performance

Instead of testing on the short-term performance using the CAR-1,+1, for the long term, the BHAR_{0,+36} is used, and Table 13 presents the results of the full sample, and table 14 of the sample separated into the merger waves. For table 13, Appendix 7 provides the full results and appendix 8 for the subsets of the merger waves. The use of the regression is similar, but now it uses the BHARs as the dependent variable. The findings of the full sample provide no statistical significance in the cultural distance, but Individualism is not too insignificant with a p-value of 0.12. Seemingly, the impact of cultural distance is not significant in the long-term performance, similar to the findings of Ahern et al. (2015). The shareholder protection of the target country is significantly negative in the BHARs. The acquirers' market value and the relative size of the deal have a minor impact on the long-term performance. The findings of the deal-level characteristics are consistent in domestic transactions, and also, acquisitions in the same industry have significantly outperformed diversifying acquisitions for domestic acquisitions, but are insignificant for cross-border transactions. Moreover, the results show that the method of payment and attitude are insignificant in determining the long-term return. The control variables which can be found in appendix 7 have the same direction as in the M&A value regressions but are insignificant.

The findings of the tested merger waves in table 14 provide similar results in the merger wave as in the full sample on the impact of cultural distance, being insignificant in each wave and therefore has no distinguishable impact on the BHAR_{0,+36} of the cross-border long-term performance. Although insignificant, the cultural distance measured in trust changes from a positive to a negative impact in the 6th wave and becomes positive in t 7th wave. Hierarchy is changing from a negative impact to an insignificantly positive effect on the cross-border transactions, where individualism remains positive over the three merger waves. Looking at the governance mechanisms, high shareholder protection in the target results in a significant negative impact on the BHAR_{0,+36} in the 5th wave, becoming insignificant in the 6th wave and becomes insignificantly positive in the 7th wave. The impact of shareholder protection in domestic protection is significantly positive in the 6th wave and remains significant in the 7th wave. These changes indicate a different behavior on the BHAR_{0,+36} per wave, and show to reassess the control variables per merger wave. The relative size of the deal is significantly positive in the 6th wave as opposed to the 5th wave where a significant negative relationship was found. Similar to the findings in the full sample, the method of payment and attitude are insignificant for the specific waves, where the impact of the same industry is insignificantly positive for each merger wave and significant for domestic mergers in the 6th wave. The impact of the control variables which are presented in Appendix 8, provides that several of the control-variables have a varying impact on the BHAR_{0,+36}. The significant control variables are in the 5th wave, with negative impacts of larger past returns of the acquirer, and positive impacts of larger target nations. In the 6th wave, the openness and GDP/Capita, and exchange rate growth have a negative impact. In the 7th wave, negative impacts are

due to larger absolute differences in corporate tax rate and target volatility, and more positive BHARs for larger countries measured by GDP. It seems that the impact of the cultural distance is not significantly affecting the long-term return, but that similar to the short-term performance, change over time. These findings are similar for several control variables highlighted by the difference in significant control variables per merger wave.

Table 13 Panel C regressions, Public-to-public M&A, BHARs

The dependent variable is the 36 month BHAR of the public-to-public M&A transactions from 1985-2014. Columns 1–4 include cross-border transactions, and column 5 domestic transactions. The transactions have been retrieved from Thomson One, the stock prices for estimating the BHARs from DataStream. The methodology can be found in chapter 4.2.2. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. Regressions with all control variables can be found in appendix 7. The country-level control variables have been described in 4.2.3.1, and deal-level variables in 4.2.3.2. The stars denoting the statistical significance on a *10%, **5% and ***1% level.

Model	BHAR _{0,+36}				
	Cross-Border (1)	Cross-Border (2)	Cross-Border (3)	Cross-Border (4)	Domestic (5)
$\ln(1 + \Delta \text{ Trust})$	0.248 (.805)			0.242 (.839)	
$\ln(1 + \Delta \text{ Hierarchy})$		0.350 (.881)		0.325 (.875)	
$\ln(1 + \Delta \text{ Individualism})$			1.974 (1.568)	1.945 (1.566)	
Same Legal System	-0.022 (-.186)	-0.043 (-.392)	-0.062 (-.623)	-0.053 (-.474)	
Acquirer Antidirector Index High	0.002 (.001)	-0.186 (-.079)	-0.046 (-.02)	-0.053 (-.022)	-0.287 (-.462)
Target Antidirector Index High	-2.420*** (-2.802)	-2.334** (-2.716)	-2.318** (-2.699)	-2.315** (-2.715)	
<i>Deal level characteristics</i>					
Transaction Value	0.0 (.208)	0.0 (.173)	-0.370 (-1.489)	0.0 (.108)	0.0* (-2.034)
Acquirer Market Value	0.0*** (-3.704)	0.0*** (-3.728)	0.0*** (-3.681)	0.0*** (-3.673)	0.0*** (-3.359)
Target Market Value	0.0 (.786)	0.0 (.794)	0.0 (.8)	0.0 (.797)	0.0 (-.713)
Relative Size	0.0* (-1.929)	0.0* (-1.891)	0.0* (-1.944)	0.0* (-1.876)	0.0* (-1.811)
Majority Cash	-0.005 (-.108)	-0.006 (-.127)	-0.011 (-.242)	-0.012 (-.252)	0.012 (.367)
Attitude	-0.106 (-.555)	-0.105 (-.548)	-0.090 (-.452)	-0.090 (-.45)	0.062 (.664)
Same Industry	0.106 (1.596)	0.103 (1.584)	0.107 (1.61)	0.107 (1.591)	0.075* (1.716)
Control variables	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
R ²	0.050	0.063	0.052	0.053	0.031
Observations	3,457	3,457	3,457	3,457	9,202

Table 14 Panel C merger waves regressions, Public-to-public M&A, BHARs per merger wave

The dependent variable is the 36 months BHAR of the public-to-public M&A transactions for three merger waves. The 5th merger waves contains the years 1993-2000, the 6th merger wave the years 2003-2007, and the 7th merger wave the years 2010-2014. Columns 1–4, 6–9, 11–14 include cross-border deal, and column 5, 10, 15 only domestic deals. The transactions have been retrieved from Thomson One, the stock prices for estimating the BHARs from DataStream. The methodology can be found in chapter 4.2.2. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. Regressions with all control variables can be found in appendix 8. The country-level control variables have been described in 4.2.3.1, and deal-level control variables in 4.2.3.2. The stars denote the statistical significance on a *10%, **5% and ***1% level.

Model	BHAR _{0,+36}														
	Wave 5					Wave 6					Wave 7				
	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
$\ln(1 + \Delta \text{ Trust})$	1.562 (.886)			1.194 (.842)		-0.450 (-1.315)			-0.448 (-1.15)		0.301 (.336)			0.662 (.609)	
$\ln(1 + \Delta \text{ Hierarchy})$		-0.155 (-.142)		0.023 (.02)			0.046 (.064)		-0.032 (-.043)			1.877 (1.846)		1.273 (1.441)	
$\ln(1 + \Delta \text{ Individualism})$			8.097 (1.121)	7.904 (1.123)				0.560 (.685)	0.545 (.617)				6.926 (1.487)	6.477 (1.363)	
Same Legal System	0.833 (1.017)	0.730 (.99)	0.694 (1.012)	0.773 (1.031)		-0.012 (-.064)	0.016 (.092)	-0.009 (-.054)	-0.036 (-.203)		-0.332 (-.914)	-0.399 (-.978)	-0.398 (-.955)	-0.390 (-.983)	
Acquirer Antidirector Index High	4.008 (.735)	4.869 (.895)	2.983 (.444)	2.368 (.341)	-0.807 (-1.129)	0.533 (.312)	0.435 (.236)	0.520 (.275)	0.618 (.318)	3.451*** (5.112)	-12.703 (-1.364)	-14.641 (-1.458)	-11.404 (-1.068)	-12.388 (-1.108)	3.539* (2.445)
Target Antidirector Index High	-4.244** (-2.425)	-4.814** (-2.96)	-5.017** (-2.38)	-4.555* (-2.234)		-3.228 (-1.503)	-3.209 (-1.516)	-3.099 (-1.572)	-3.120 (-1.574)		1.074 (.326)	0.541 (.191)	0.494 (.158)	0.627 (.176)	
Transaction Value	0.0 (.364)	0.0 (.292)	0.0 (-.072)	0.0 (.014)	0.0** (-2.412)	0.0 (.867)	0.0 (.826)	0.0 (.828)	0.0 (.89)	0.0 (1.271)	0.0 (-1.087)	0.0 (-1.087)	0.0 (-1.153)	0.0 (-1.158)	0.0 (-1.701)
Acquirer Market Value	0.0 (-1.226)	0.0 (-1.257)	0.0 (-1.185)	0.0 (-1.165)	0.0 (-1.092)	0.0** (-3.436)	0.0** (-3.457)	0.0** (-3.385)	0.0** (-3.475)	0.0 (.173)	0.0 (-1.37)	0.0 (-2.53)	0.0 (-.08)	0.0 (-.091)	0.0** (-3.678)
Target Market Value	0.0 (.489)	0.0 (.508)	0.0 (.486)	0.0 (.488)	0.0 (.003)	0.0 (2.012)	0.0 (2.036)	0.0 (2.011)	0.0 (1.925)	0.0 (1.264)	0.0 (1.441)	0.0 (1.617)	0.0 (1.516)	0.0 (1.606)	0.0 (-1.03)
Relative Size	0.0 (-1.495)	0.0 (-1.648)	0.0 (-1.77)	0.0* (-1.902)	-0.002 (-.552)	0.033* (2.275)	0.033* (2.36)	0.034* (2.236)	0.034* (2.401)	0.0 (.246)	0.004 (.337)	0.004 (.323)	0.003 (.202)	0.002 (.195)	0.0 (-1.724)
Majority Cash	-0.128 (-.72)	-0.123 (-.724)	-0.129 (-.707)	-0.134 (-.721)	-0.065 (-1.333)	-0.016 (-.188)	-0.017 (-.215)	-0.017 (-.214)	-0.016 (-.191)	-0.034 (-.661)	0.048 (.917)	0.038 (.698)	0.029 (.505)	0.030 (.503)	0.064 (.589)
Attitude	-0.382 (-.958)	-0.389 (-.979)	-0.470 (-1.13)	-0.463 (-1.127)	0.139 (1.212)	0.182 (1.023)	0.175 (.912)	0.189 (.944)	0.197 (1.01)	-0.232 (-.873)	-0.215 (-.712)	-0.248 (-.814)	-0.190 (-.631)	-0.209 (-.686)	0.225 (.68)
Same Industry	0.228 (1.124)	0.211 (1.153)	0.207 (1.108)	0.220 (1.087)	0.086 (1.162)	0.016 (.139)	0.018 (.151)	0.020 (.168)	0.018 (.156)	0.178** (3.4)	0.170 (1.813)	0.160 (1.754)	0.172 (1.94)	0.163 (1.844)	-0.110 (-1.246)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.133	0.133	0.135	0.136	0.044	0.127	0.129	0.127	0.129	0.051	0.146	0.142	0.139	0.150	0.094
Observations	833	833	833	833	2,181	996	996	996	996	2,585	781	781	781	781	2,109

5.3 Hypotheses Testing

This section reflects on the results and implications of the stated hypotheses formulated in chapter 3. The results covered in chapter 5.1 can answer the hypothesis stated on the likelihood of mergers, expressed through the total value in M&A transactions of the country-pair year, which are hypothesis 1, 4a and 6a. The results confirmed that culturally distant countries in terms of trust and individualism are significantly having less M&A volume in the full sample, covering the years 1985-2014. The cultural distances impact was also changing in the tested merger waves, with negative signs for trust in the 5th wave, trust and individualism in the 6th wave, and individualism in the 7th wave. Surprisingly, the absolute distance of hierarchy is positively related to merger volume in the 7th wave, indicating that larger distant countries regarding hierarchy have a higher M&A activity and managers believe in enabling more synergy gains. Therefore, hypothesis 1 *“the likelihood of mergers of two firms with a higher cultural distance will decrease as the associated cultural distance costs are expected to increase”* can be confirmed for two of the three cultural distances and hypothesis 4a *“cultural distances and the defined control variables will have a different impact on the likelihood of mergers in the tested merger waves”* can be confirmed for the cultural distance aspect. This changing behavior in culturally distant countries implies that criteria on merger transactions are changing over time, but the impact of most control variables remains significant and similar in each wave, not confirming the second part of the hypothesis. The most notable difference was the change in the Antidirector index of the target country, moving from significantly positive effects in the 5th wave to significant negative effects in the 7th wave. However, the effect of the Antidirector index of the acquiring country has remained significantly positive in the full sample and the 5th and 7th merger wave, and therefore gives the possibility to confirm hypothesis 6a *“acquiring firms from countries with high governance standards will have a higher likelihood of acquisitions than countries from low governance standards”*.

On the short-, and long-term M&A performance, the results are not as unanimous as in testing the likelihood of M&A transactions. With the results of the univariate analysis, hypotheses 3, 5 and 7a, can be answered, where the cross-sectional analysis can shed light on the remaining hypotheses. The univariate analysis gave further insights on the differences between cross-border transactions and differences between merger waves testing the combined CARs and BHAR. As opposed to the earlier findings, these results provide no statistical difference between the cross-border and domestic transaction in the three-day-, and 10-day event window for the full period and three merger waves. Only a significant positive difference was found for the fifth merger wave in the CAR_{-5,+5} for cross-border transactions and therefore it is not possible to confirm hypothesis 3 *“the announcement return will yield lower in cross-border M&A than domestic M&A, due to a cross-border effect”* as no cross-border effect is observed throughout the sample. Looking at the merger waves, the announcement returns for the 7th wave were consistently higher and were statistically significant in the full sample and domestic transactions in the CAR_{-1,+1}. For cross-border transactions, no significant difference was found, which

only gives partial confirmation of hypothesis 5 “*the M&A announcement return is not different per documented wave*” and holds for cross-border transactions and can be rejected for the overall sample and domestic transactions. This finding must be interpreted with caution for the full sample as the significance is including the insignificant cross-border differences. Furthermore, the univariate analysis provided found that over the total sample, domestic transactions outperformed cross-border transactions, but this difference was not significant but negative for the subsamples and provided no significant difference when testing the merger waves. These results give the possibility to confirm hypothesis 7a, “*the long-term performance of cross-border transactions will be lower than domestic transaction*”, for the full sample but not for the subsamples.

The results of the cross-sectional analysis provided answers on the remaining hypotheses, 2, 4b, 6b and 7b. The first observation of the cross-sectional $CAR_{1,+1}$ is the insignificant impact of the cultural distances trust and hierarchy, which were significant for the likelihood estimates, and the distance in hierarchy is significantly negative. These findings would indicate that larger culturally distant countries would be not affected in the same way in announcement returns when compared to the likelihood of culturally distant countries. These findings give however the opportunity to confirm hypothesis 2 partially “*the combined CARs will yield lower returns for culturally distant countries*” on the absolute distance of hierarchy. For the governance mechanism, acquiring firms from countries with higher shareholder protection produce higher announcement returns, confirming hypothesis 6b “*acquiring firms from countries with high governance standards will have higher CARs than firms of countries from low governance standards*” in the full sample. The change in the significance of the cultural distances and governance mechanism confirms the change of behavior in cross-border transactions on the announcement returns, with a significantly negative effect in the 7th wave for trust and hierarchy. Moreover, the change in significant control variables gives the opportunity to confirm hypothesis 4b “*cultural distances and the defined control variable will have a different impact on the CARs in the tested merger waves*”. The results of the cross-sectional analysis did not provide a significant effect of the cultural distances or governance mechanisms but did change the significance for various control variables. No significant impact of the cultural distances was found on the $BHAR_{0,+36}$ and therefore hypothesis 7b “*the long-term performance of merging firms from culturally distant countries will be lower*” cannot be confirmed.

With the answering of the stated hypotheses, the impact of cultural distance and governance mechanisms can have an impact on the choosing the country for M&As and the behavior of the market on this announcement. The results give the opportunity to argue that cultural distances defined as trust hierarchy and individualism have an impact on the likelihood and short-term performance. Moreover, the shareholder protection in the acquiring country is having a positive impact, where other country- and deal-level variables have a differing impact on the likelihood and announcement of M&A transactions.

6. Conclusion

To conclude this paper, the scope was to examine the impact of cultural distances, defined as trust, hierarchy, and individualism, on M&A transactions in the period 1985 - 2014 and three merger waves. These consisted of transaction among 62 countries worldwide not limiting this research to a specific region. The research focused on three aspects in this scope. First, to assess the likelihood of mergers between two countries through all public and private M&A transactions expressed in dollar value. Second, to evaluate the short-term, and long-term performance of public-to-public M&A transactions. Third, to examine if the three merger waves, the 5th wave from 1993-2000, the 6th wave from 2003-2007, and 7th wave from 2010-2014 have a different impact on either the likelihood, M&A performance, the cultural distances, and governance. The latter merger wave is believed to be ongoing after 2014 and is still present to date of this paper.

In the sample of all M&A transactions aggregated into 42,525 country-pair years, the results show that the larger cultural distances defined as trust and individualism lead to a lower M&A activity expressed in dollars, and acquiring countries with high shareholder protection have a higher M&A activity while controlling for country-level variables. The effect of the cultural distances over time has changed with different impacts of the three cultural distances on the merger activity. Results indicate that the cultural distance between the countries has a changing impact over the selected time periods and preferences for merger activity change over time. The indication of the positive effect of hierarchy in the 7th wave associates that the acquisitions are believed to enable synergy gains rather than costs. These findings, however, give the assurance to say that culturally distant countries have less merger activity than culturally close countries, and higher shareholder protection in the acquiring country leads to higher merger activity.

Apart from the findings on merger activity, the paper presents evidence that on the short-term performance cross-border transactions do not react differently in the announcement return. This finding was consistent in the 3-day and 10-day event window. The announcement returns did show significantly higher announcement returns in the 7th wave for all transactions and domestic transactions, confirming that merger waves trigger different reactions to merger announcements in the tested merger waves. In the long-term performance, cross-border transactions are outperformed by domestic transactions, but only in the overall sample, with no differences in the merger waves. With the firms outperforming the market in the long-run it can be said that the mergers are not value destructive, reasoning that the completed mergers are successful.

Merger announcements between culturally distant countries imply that short-term performance of merger announcements for countries with larger distances in hierarchy are significantly negative for cross-border mergers. Merger announcements between culturally distant countries are even more evident with two significant negative cultural distances, trust, and hierarchy in the 7th wave. The

negative relation to culturally distant countries is in line with the choice of mergers from the firm and the market behavior. Moreover, on the merger announcements, the impact of governance mechanisms is not significant for the announcement return and indicates that this is incorporated only in the decision making of the merger rather than the behavior of the market. In conclusion, the long-term performance is not affected by cultural distances or governance mechanisms indicating that this outperformance of the market is consistent with the market efficiency.

This paper is an addition to two topics in the existing literature, the cultural values focusing on differences between the acquiring and target country, and more specifically the impact on M&A looking at merger waves and cross-border M&A. The findings on the likelihood of mergers are consistent with Rossi & Volpin (2004) on the shareholder protection and Ahern et al. (2015) on the cultural distance. For the latter, findings are similar for the short-, and long-term performance on the cultural distances. This paper tries to give new insight in the cross-sectional variance on M&A transactions and emphasizes the importance of cultural distances, which were associated with the choice of entry mode (Kogut & Singh, 1988) choice of country (Johanson & Vahlne, 1990), double-layered acculturation (Malekzadeh & Nahavandi, 1998), merger integration costs (Olie, 1990; Weber, Shenkar, & Raveh, 1996; Shimizu et al. 2004). In contrast to the findings in this thesis, Chakrabarti et al. (2009), and Morosini et al. (1998) find a positive relationship to cultural distance. Studies related to M&A performance on the short-term performance, the findings in this paper are consistent with Andrade et al. (2001) on the positive CARs of cross-border transactions and additional findings of insignificant differences between domestic and cross-border transactions by Goergen & Renneboog (2004), and Alexandridis et al. (2012), whilst contradicting the findings by Datta & Puia (1995) and Aw & Chatterjee (2004) on announcement returns; and Moeller & Schlingemann (2005) and Danbolt & Maciver (2012) on significant difference in cross-border transactions. Findings are consistent on the merger waves, concluding similarly to Alexandridis et al. (2017) for higher CARs in the 7th wave, and positive CARs for each merger wave with differing significance of control variables and to certain extent insignificant differences in CARs in specific merger waves (Alexandridis, Mavrovitis, & Travlos, 2012). Long-term performance is consistent with Franks et al. (1988) and Chakrabarti et al. (2009), but not on the impact of cultural distance, and inconsistent with Firth (1980). Lastly, the paper was not restricted due to the use of 62 countries worldwide rather than a specific country (e.g. (Moeller & Schlingemann, 2005)) or continental Europe (Goergen & Renneboog, 2004).

Concluding this research, culturally distant countries are less likely to engage in M&A transactions, and larger cultural distances have on the short-term performance a negative impact with no significant impact in the long-term performance. Merger waves do play a role in determining cross-border M&A transactions as they are fueled by various motives and the changing behavior of the stock market around the announcement date.

7. Study Limitations & Recommendations

This section will focus on the limitations of the research and mentions several shortcomings. While planning this research carefully, several limitations are bound to this paper and will be discussed, but also recommendations for future research will be addressed to extend the scope of this research.

The first limitation of this paper is addressed to the cultural values, as this is a framework which can be set up differently. This is proven by the first definition by Hofstede which does not resemble fully the distances used in this paper. Ahern et al. (2015) also mention other literature defining cultural distance in different dimensions but ultimately define these three dimensions as there is a close resemblance to their definitions. By looking at different defined cultural distances, the validation of these results can confirm an impact of cultural distance. Additionally, aggregating cultural distances rather than the impact separated can increase the validation of the paper, as the paper tests for the three distances separately and in one model. Moreover, cultural distance in this paper has been defined as the national culture distances among countries, ignoring the corporate culture and the effect on M&A transactions. Combining the two cultures can increase the understanding of M&A activity. In this paper, the absolute cultural distance has been used for the country-pair assuming that the direction of the transaction in relation to culture distance is equal for both transactions. The effect, however, can be more intensive, e.g., countries acquiring firms from highly distrusting countries, as opposed to highly distrusting countries acquiring firms in a trusting country and makes it an interesting subject as an extension to cultural distance treated equally. Within this restriction, acquisitions of developed economies to emerging economies are treated similarly as the other way around and give room to research the flow of the transactions in this view as well. The final limitation on the cultural distances is that firms which are already settled in the specific cross-border country, and thus are already globally diversified, are treated equally to first cross-border transactions. This treatment gives the assumption that the firm has to acculturate again to the new country, while it possibly already dynamically learned the process of a foreign culture and did not need to adjust in the new acquisition.

Another limitation is about the performance testing in this paper. As mentioned earlier, Bruner (2002) addresses the possibility of four methods to present findings. Another quantitative study would be the use of accounting measurements. However as being said that these can be distorted through factors such as leverage and influences which might not be affected through an acquisition, the usage of these metrics on the long-run performance might present other findings related to the cultural distance. Moreover, on the accounting measurements, the control variables have been focusing on country-level and deal-level variables to assess cross-border M&A, accounting measurements as control variables could be an addition to the control variables in continuing studies. While making use of event studies, the market is assumed to be behaving efficiently. If this assumption does not hold and the cultural distance effect is not adjusted correctly in the stock price, the results become biased in the short-term, and long-term, and these become more difficult to interpret. However, in the short-run, this approach is deemed possible.

Additionally, in the event study, a market model approach has been used for the benchmark towards an index. It assumes for the long run that the global diversifying strategy does have the same risk profile as prior to the cross-border transaction. Other studies have used next to the market model other models, such as the Fama-French three-factor model, CAPM-model, Market-adjusted model, or returns-across-time-and-securities (RATS) model, benchmarking to several models may impact the results as benchmarks suffer from measurement or statistical problems (Barber & Lyon, 1997; Martynova & Renneboog, 2008). Additionally to the use of testing, the usage of public-to-public transactions limits the size usable transactions for M&A performance. It is relevant to test the performance of the acquiring or target firm in the short-run. When looking at the acquiring firm, additionally the acquisition of private targets and subsequent behavior in the market can be observed, where the target firm can provide similar observations when being acquired by a private firm. These possibilities increase the sample size and give additional insights into the impact of cultural distance. Other opportunities to research announcement returns, is not using the announcement returns of completed deals only but also the announced and uncompleted transaction announcements, with possibly different behavior towards culturally distant acquisitions.

Finally, the sample was limited to two full merger waves within the sample and an arguably 7th wave. By using an even larger sample set, it gives room to research older merger waves to more recent waves more extensively and confirm the different behavior of cultural distance through time or present new findings and insights of behavior. With a new survey version being released in 2019 by the WVS, new insights can be provided for new and existing country's preferences, and possibly might increase the available countries for the three cultural dimensions less limiting the restriction of the available countries.

However, the results of this paper are pointing towards the significant impact of culture, and it leaves ample room for future research to investigate the full impact of the difficult to define dimensions.

8. References

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9. Appendix

Appendix 1 Correlation Matrices Panel B

The appendix provides the correlation coefficients of the three cultural distances trust, hierarchy, individualism and the country-level characteristics used in the regressions of Panel B

	Coefficients of correlation		
	1	2	3
1. $\ln(1+ \Delta \text{ Trust})$	1.0000		
2. $\ln(1+ \Delta \text{ Hierarchy})$	0.1777	1.0000	
3. $\ln(1+ \Delta \text{ Individualism})$	0.0861	0.0159	1.0000

(continued)	Coefficients of correlation																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. $\ln(1 + \Delta \text{corporate tax})$	1.000																		
2. $\ln(\text{Acquirer nation GDP})$	0.122	1.000																	
3. $\ln(\text{Target nation GDP})$	0.092	0.073	1.000																
4. $\ln(\text{Acquirer openness})$	0.017	-0.436	0.081	1.000															
5. $\ln(\text{Target openness})$	-0.040	0.097	-0.370	0.083	1.000														
6. $\ln(\text{Acquirer GDP} / \text{Capita})$	0.084	0.247	0.118	0.362	0.163	1.000													
7. $\ln(\text{Target GDP} / \text{Capita})$	0.045	0.113	0.405	0.111	0.302	0.216	1.000												
8. Same Religion	-0.072	-0.105	-0.080	0.036	0.042	0.000	0.021	1.000											
9. Same Language	-0.149	-0.081	-0.052	-0.062	-0.051	-0.105	-0.043	0.299	1.000										
10. $\ln(\text{Geographic Distance})$	0.279	0.201	0.161	-0.092	-0.150	0.032	-0.029	-0.363	-0.519	1.000									
11. Share Border	-0.010	-0.064	-0.030	0.007	0.033	-0.042	0.018	0.219	0.091	-0.211	1.000								
12. Exchange Rate volatility	0.010	0.096	0.134	-0.028	-0.014	0.051	0.084	-0.017	-0.001	0.047	0.009	1.000							
13. Exchange Rate Growth	-0.013	-0.015	0.013	-0.014	0.023	-0.036	0.043	-0.008	0.000	-0.004	0.006	0.051	1.000						
14. Double Tax Treaty	0.070	0.112	0.108	0.025	0.077	0.159	0.175	-0.041	-0.257	0.170	0.074	0.057	0.000	1.000					
15. Bilateral Investment Treaty	-0.059	-0.022	-0.173	0.012	0.003	-0.112	-0.288	-0.086	-0.148	0.129	-0.022	-0.014	-0.010	0.054	1.000				
16. Same Legal System	-0.152	-0.084	-0.121	-0.011	-0.004	-0.130	-0.121	0.280	0.456	-0.313	0.199	-0.015	0.004	-0.170	-0.015	1.000			
17. Antidirector Index High	-0.046	-0.123	0.006	-0.037	0.000	-0.028	0.008	-0.164	0.005	0.114	-0.086	0.039	0.010	-0.067	-0.084	-0.137	1.000		
18. M&A Private Fraction	0.010	0.171	0.148	0.045	0.040	0.180	0.163	0.055	0.056	-0.084	0.056	0.132	-0.018	0.019	-0.046	0.031	-0.196	1.000	
19. M&A Public Fraction	-0.022	0.142	0.111	0.031	0.036	0.175	0.162	0.012	0.078	-0.048	-0.012	0.207	-0.004	-0.005	-0.058	0.035	0.039	0.379	1.000

Appendix 2 Correlation Matrices Panel C

The appendix provides the correlation coefficients of the three cultural distances trust, hierarchy, individualism and the country-level characteristics used in the regressions of Panel C

	Coefficients of correlation		
	1	2	3
1. $\ln(1+ \Delta \text{Trust})$	1.0000		
2. $\ln(1+ \Delta \text{Hierarchy})$	0.0073	1.0000	
3. $\ln(1+ \Delta \text{Individualism})$	0.2014	0.0682	1.0000

	Coefficients of correlation																																	
(continued)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
1. ln (Acquirer nation GDP)	1.000																																	
2. ln (Target nation GDP)	-0.104	1.000																																
3. ln (Acquirer openness)	-0.748	0.137	1.000																															
4. ln (Target openness)	0.150	-0.677	-0.074	1.000																														
5. ln (Acquirer GDP / Capita)	0.202	0.048	0.118	0.128	1.000																													
6. ln (Target GDP / Capita)	0.033	0.315	0.099	0.069	0.299	1.000																												
7. Same Religion	-0.244	-0.260	0.150	0.144	-0.007	-0.016	1.000																											
8. Same Language	0.198	0.178	-0.199	-0.176	0.051	0.126	-0.137	1.000																										
9. ln(Geographic Distance)	0.138	0.098	-0.176	-0.201	-0.071	-0.098	-0.195	-0.152	1.000																									
10. Share Border	0.036	0.044	-0.012	0.024	0.044	0.093	0.023	0.406	-0.712	1.000																								
11. Exchange Rate volatility	-0.021	0.005	-0.084	-0.076	-0.127	-0.031	-0.083	-0.056	0.248	-0.163	1.000																							
12. Exchange Rate Growth	0.022	-0.001	-0.031	0.026	-0.081	0.041	-0.024	0.013	0.017	-0.009	0.010	1.000																						
13. Double Tax Treaty	0.076	0.166	-0.057	-0.113	0.064	0.114	-0.053	0.180	-0.062	0.108	-0.048	0.002	1.000																					
14. Bilateral Investment Treaty	-0.122	-0.239	0.124	0.109	-0.135	-0.344	0.030	-0.155	0.097	-0.132	0.204	-0.034	-0.109	1.000																				
15. Same Legal System	0.043	0.020	-0.083	-0.075	-0.042	0.052	0.038	0.767	-0.209	0.406	-0.095	0.008	0.025	-0.096	1.000																			
16. Acquirer Antidirector Index High	-0.432	0.147	0.175	-0.118	-0.099	0.083	-0.003	0.118	0.041	-0.038	0.129	-0.044	-0.065	0.049	0.149	1.000																		
17. Target Antidirector Index High	0.199	-0.501	-0.164	0.214	0.084	-0.074	0.051	0.191	0.043	-0.019	0.109	0.024	-0.104	0.023	0.231	-0.088	1.000																	
18. M&A Private Fraction	0.148	0.136	-0.089	-0.071	0.106	0.066	-0.023	0.096	-0.033	0.025	-0.074	0.008	0.049	-0.096	0.068	0.019	-0.095	1.000																
19. M&A Public Fraction	-0.149	-0.139	0.091	0.073	-0.104	-0.067	0.025	-0.094	0.029	-0.022	0.073	-0.012	-0.050	0.094	-0.066	-0.022	0.097	-0.996	1.000															
20. Transaction Value	-0.010	0.057	0.012	-0.031	-0.007	0.025	0.022	-0.014	-0.021	-0.023	-0.003	-0.013	0.029	-0.021	-0.023	-0.006	-0.037	-0.090	0.090	1.000														
21. Acquirer Market Value	0.117	-0.022	-0.034	0.000	0.097	-0.001	0.039	-0.060	0.073	-0.065	0.027	0.037	-0.016	0.051	-0.055	-0.168	0.037	-0.052	0.052	0.144	1.000													
22. Acquirer Past Return	-0.011	0.031	-0.011	-0.028	-0.044	0.011	-0.019	0.052	-0.001	0.029	0.019	0.046	0.024	-0.014	0.032	0.014	0.001	0.035	-0.035	0.008	-0.011	1.000												
23. Acquirer Past Volatility	0.029	-0.058	-0.033	-0.004	-0.023	-0.060	0.003	0.067	0.027	0.027	0.046	-0.005	0.000	0.010	0.042	0.063	0.077	0.008	-0.007	-0.038	-0.139	0.154	1.000											
24. Target Market Value	0.012	0.002	-0.011	0.011	-0.011	-0.040	-0.005	-0.018	0.027	-0.027	0.008	-0.018	-0.042	0.062	-0.006	-0.017	0.000	-0.042	0.043	0.050	0.066	0.002	-0.023	1.000										
25. Target Past Return	0.031	-0.006	-0.020	0.005	0.016	-0.047	-0.008	-0.023	0.038	-0.024	0.028	-0.009	0.022	0.042	-0.035	-0.002	0.007	0.040	-0.041	0.027	0.037	0.166	0.013	0.011	1.000									
26. Target Past Volatility	-0.044	0.072	0.056	-0.064	-0.025	0.018	-0.040	0.048	0.034	0.027	0.037	0.030	-0.023	0.030	0.048	0.065	0.037	-0.003	0.004	-0.048	-0.043	-0.004	0.332	-0.077	0.022	1.000								
27. Relative Size	-0.013	-0.006	0.000	-0.022	-0.025	-0.027	0.021	-0.011	0.015	-0.008	0.021	-0.005	0.006	-0.006	0.020	-0.011	0.020	0.026	-0.025	0.004	0.008	-0.006	-0.002	-0.007	-0.011	0.041	1.000							
28. Majority Cash	0.051	0.156	0.022	-0.019	0.079	0.177	-0.067	0.039	0.018	-0.039	0.028	0.017	0.042	-0.036	-0.016	0.004	-0.024	0.006	-0.007	0.015	0.049	-0.033	-0.086	-0.006	-0.008	-0.012	0.018	1.000						
29. Attitude	-0.005	0.020	0.014	-0.005	0.018	0.010	-0.015	-0.008	0.003	0.008	0.005	-0.028	-0.024	0.010	0.005	0.019	-0.034	0.014	-0.014	-0.064	-0.001	0.014	0.015	0.009	-0.001	0.018	0.000	-0.055	1.000					
30. Acquirer Termination Fee	-0.010	0.133	0.030	-0.077	0.003	0.104	-0.068	0.073	0.037	0.011	0.006	0.037	0.038	-0.037	0.054	0.035	-0.049	-0.040	0.040	0.117	-0.019	0.020	0.018	-0.023	0.023	0.023	0.000	0.011	-0.024	1.000				
31. Target Termination Fee	-0.022	0.321	0.051	-0.212	0.018	0.181	-0.145	0.149	0.034	0.056	0.029	0.044	0.094	-0.096	0.070	0.038	-0.105	-0.048	0.047	0.115	-0.012	0.004	-0.010	-0.057	0.015	0.100	0.004	0.189	-0.010	0.409	1.000			
32. Same Industry	0.010	-0.002	-0.031	0.015	0.071	0.022	-0.010	0.034	-0.007	0.011	-0.029	-0.017	0.005	0.002	0.017	0.000	0.006	-0.040	0.039	0.062	-0.048	0.000	0.034	0.002	-0.001	0.037	0.017	0.027	-0.024	0.056	0.087	1.000		

Appendix 3 Panel B regressions, Public and Private M&A

The dependent variable is the natural logarithm of the total M&A dollar value of country i to target country j aggregated into a panel from 1985 to 2014. The columns 1–5 are Tobit regressions of the model described in chapter 4.4.2. Columns 6 and 7 are OLS regressions following the same model in columns 1–5. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, hierarchy as the belief that people follow instructions even if they disagree, and individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The country-level control variables have been described in 4.2.3.1. The stars denoting the statistical significance on a *10%, **5% and ***1% level.

Model	ln(1+ M&A Value)						
	Tobit (1)	Tobit (2)	Tobit (3)	Tobit (4)	Tobit (5)	OLS (6)	OLS (7)
ln(1 + Δ Trust)	-1.538*** (-5.078)			-1.504*** (-4.957)	-1.504*** (-4.957)	-0.892*** (-10.1)	-0.892*** (-10.1)
ln(1 + Δ Hierarchy)		0.463 (1.183)		0.420 (1.071)	0.420 (1.071)	-0.934*** (-8.873)	-0.934*** (-8.873)
ln(1 + Δ Individualism)			-1.305*** (-2.644)	-1.204** (-2.442)	-1.204** (-2.442)	-0.081 (-.693)	-0.081 (-.693)
Wave 5 (1993-2000)			0.000	0.000	5.036*** (21.876)	0.000	1.030*** (14.085)
Wave 6 (2003-2007)					4.178*** (24.057)		1.207*** (11.656)
Wave 7 (2010-2014)					-0.062 (-.327)		-0.010 (-.096)
ln(1 + Δ Corporate Tax Rate)	1.284** (2.141)	1.272** (2.113)	1.311** (2.179)	1.345** (2.237)	1.345** (2.237)	-0.006 (-.028)	-0.006 (-.028)
ln (Acquirer nation GDP)	2.336*** (12.536)	2.355*** (12.649)	2.338*** (12.549)	2.323*** (12.455)	2.323*** (12.455)	0.118*** (4.096)	0.118*** (4.096)
ln (Target nation GDP)	1.634*** (14.709)	1.631*** (14.666)	1.620*** (14.56)	1.626*** (14.621)	1.626*** (14.621)	0.211*** (9.461)	0.211*** (9.461)
ln (Acquirer openness)	3.824*** (6.485)	3.810*** (6.459)	3.873*** (6.557)	3.907*** (6.61)	3.907*** (6.61)	-0.124 (-1.04)	-0.124 (-1.04)
ln (Target openness)	2.282*** (4.372)	2.288*** (4.379)	2.329*** (4.455)	2.344*** (4.478)	2.344*** (4.478)	0.049 (.462)	0.049 (.462)
ln (Acquirer GDP / Capita)	-25.30*** (-5.339)	-26.301*** (-5.563)	-25.935*** (-5.488)	-24.829*** (-5.228)	-24.829*** (-5.228)	2.729*** (2.703)	2.729*** (2.703)
ln (Target GDP / Capita)	-32.861*** (-7.457)	-33.459*** (-7.609)	-32.983*** (-7.505)	-32.401*** (-7.354)	-32.401*** (-7.354)	1.653 (1.538)	1.653 (1.538)
Same Religion	0.326*** (4.81)	0.364*** (5.384)	0.355*** (5.27)	0.327*** (4.808)	0.327*** (4.808)	0.054** (2.566)	0.054** (2.566)
Same Language	0.890*** (7.38)	0.938*** (7.624)	0.882*** (7.265)	0.876*** (7.086)	0.876*** (7.086)	0.585*** (13.237)	0.585*** (13.237)
ln(Geographic Distance)	-1.094*** (-55.505)	-1.114*** (-55.828)	-1.10*** (-55.466)	-1.091*** (-53.361)	-1.091*** (-53.361)	-0.427*** (-53.595)	-0.427*** (-53.595)
Share Border	0.441*** (4.674)	0.466*** (4.909)	0.469*** (4.949)	0.442*** (4.678)	0.442*** (4.678)	0.305*** (8.294)	0.305*** (8.294)
Exchange Rate volatility	302.784*** (21.372)	303.706*** (21.413)	303.681*** (21.424)	302.969*** (21.357)	302.969*** (21.357)	93.876*** (23.564)	93.876*** (23.564)
Exchange Rate Growth	-0.206 (-.445)	-0.194 (-.419)	-0.204 (-.441)	-0.209 (-.452)	-0.209 (-.452)	-0.150 (-.566)	-0.150 (-.566)
Double Tax Treaty	0.525*** (5.31)	0.487*** (4.939)	0.482*** (4.905)	0.534*** (5.376)	0.534*** (5.376)	-0.228*** (-10.743)	-0.228*** (-10.743)
Bilateral Investment Treaty	-1.105*** (-12.569)	-1.132*** (-12.827)	-1.120*** (-12.725)	-1.099*** (-12.47)	-1.099*** (-12.47)	-0.10*** (-5.07)	-0.10*** (-5.07)

(continued)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Same Legal System	0.875*** (12.546)	0.921*** (13.317)	0.931*** (13.458)	0.883*** (12.64)	0.883*** (12.64)	0.306*** (16.404)	0.306*** (16.404)
Acquirer Antidirector Index High	5.131*** (4.221)	5.206*** (4.241)	5.206*** (4.272)	5.124*** (4.208)	5.124*** (4.208)	-0.210 (-.819)	-0.210 (-.819)
Target Antidirector Index High	0.915 (1.441)	0.759 (1.193)	0.783 (1.232)	0.978 (1.531)	0.978 (1.531)	-0.203 (-1.16)	-0.203 (-1.16)
M&A Private Fraction	3.959*** (36.233)	3.960*** (36.209)	3.958*** (36.184)	3.956*** (36.178)	3.956*** (36.178)	2.070*** 35.240	2.070*** 35.240
M&A Public Fraction	3.157*** (26.086)	3.176*** (26.268)	3.182*** (26.338)	3.159*** (26.084)	3.159*** (26.085)	1.575*** 26.298	1.575*** 26.298
Constant	-79.626*** (-19.295)	-79.944*** (-19.353)	-79.551*** (-19.254)	-79.394*** (-19.223)	-79.333*** (-19.433)	-5.854*** (-8.233)	-5.847*** (-9.225)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-31,224	-31,237	-31,234	-31,220	-31,220		
Adjusted R ²						0.588	0.590
Observations	42,525	42,525	42,525	42,525	42,525	42,525	42,525

Appendix 4 Panel B merger waves regressions, Public and Private M&A

The dependent variable is the natural logarithm of the total M&A dollar value of country i to target country j in divided in three panels: Wave 5 from 1993 to 2000, Wave 6 from 2003-2007, and Wave 7 from 2010-2014. The columns 1–4, 5–9, and 11–14 are Tobit regressions of the model described in chapter 4.4.2. Columns 6, 7 are OLS regressions following the same model in columns 1–4. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, hierarchy as the belief that people follow instructions even if they disagree, and individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The country-level control variables have been described in 4.2.3.1. The stars denote the statistical significance on a *10%, **5% and ***1% level.

Model	ln(1+ M&A Value)														
	Wave 5					Wave 6					Wave 7				
	Tobit (1)	Tobit (2)	Tobit (3)	Tobit (4)	OLS (5)	Tobit (6)	Tobit (7)	Tobit (8)	Tobit (9)	OLS (10)	Tobit (11)	Tobit (12)	Tobit (13)	Tobit (14)	OLS (15)
ln(1 + Δ Trust)	-2.10*** (-13.449)			-2.099*** (-13.124)	-1.167*** (-6.549)	-2.895*** (-4.294)			-2.811*** (-4.128)	-1.569*** (-6.349)	-0.212 (-1.627)	0.000 (.)		-0.166 (-1.263)	-0.447** (-2.311)
ln(1 + Δ Hierarchy)		0.129 (.674)		0.213 (1.086)	-1.330*** (-6.414)		0.625 (.687)		0.177 (.195)	-0.546 (-1.582)		1.386*** (8.726)		1.478*** (9.185)	-0.528* (-1.74)
ln(1 + Δ Individualism)			-0.429 (-1.519)	-0.165 (-.575)	0.259 (1.078)			-3.464*** (-2.868)	-3.256*** (-2.705)	0.016 (.042)			-2.256*** (-8.816)	-2.415*** (-9.308)	-0.165 (-.513)
ln(1 + Δ Corporate Tax Rate)	0.172 (.578)	0.255 (.851)	0.289 (.961)	0.188 (.616)	-0.359 (-.952)	-0.078 (-.058)	-0.209 (-.154)	-0.123 (-.09)	0.024 (.018)	-0.029 (-.051)	1.602*** (6.117)	1.633*** (6.241)	1.607*** (6.144)	1.682*** (6.332)	0.107 (.244)
ln (Acquirer nation GDP)	1.920*** (933.104)	1.980*** (960.32)	1.975*** (957.362)	1.921*** (923.553)	-0.446*** (-3.519)	1.841* (1.661)	1.946* (1.753)	1.882* (1.691)	1.786 (1.608)	-0.427 (-1.466)	1.144*** (662.493)	1.169*** (677.653)	1.126*** (652.876)	1.155*** (663.387)	0.342 (.842)
ln (Target nation GDP)	1.913*** (907.681)	1.901*** (900.245)	1.887*** (893.43)	1.912*** (897.616)	-0.207** (-2.34)	1.545** (2.002)	1.599** (2.065)	1.549** (1.998)	1.495* (1.935)	-0.194 (-.715)	0.456*** (260.721)	0.452*** (258.782)	0.496*** (283.891)	0.504*** (286.159)	0.122 (.346)
ln (Acquirer openness)	2.697*** (44.065)	2.759*** (45.211)	2.751*** (44.96)	2.709*** (44.01)	-0.488 (-1.17)	9.585*** (3.039)	9.688*** (3.072)	9.865*** (3.121)	9.769*** (3.088)	0.612 (.622)	-0.434*** (-9.604)	-0.386*** (-8.538)	-0.490*** (-10.828)	-0.473*** (-10.394)	0.338 (.338)
ln (Target openness)	0.517*** (7.713)	0.574*** (8.577)	0.561*** (8.365)	0.506*** (7.523)	-0.097 (-.268)	-3.768 (-1.396)	-3.925 (-1.447)	-3.895 (-1.435)	-3.747 (-1.387)	-1.944** (-2.227)	-0.252*** (-5.142)	-0.294*** (-6.005)	-0.114** (-2.329)	-0.105** (-2.133)	0.278 (.33)
ln (Acquirer GDP / Capita)	-122.978*** (-89.167)	-121.168*** (-87.856)	-121.130*** (-87.921)	-123.084*** (-88.469)	22.823** (2.386)	-16.060 (-.712)	-18.864 (-.837)	-17.905 (-.793)	-15.368 (-.68)	5.733 (.773)	-26.911*** (-42.339)	-26.716*** (-42.323)	-26.771*** (-42.39)	-26.904*** (-42.037)	-9.669 (-.825)
ln (Target GDP / Capita)	6.207*** (3.97)	7.236*** (4.615)	7.419*** (4.741)	5.893*** (3.742)	41.174*** (3.808)	-9.898 (-.396)	-10.967 (-.439)	-8.638 (-.345)	-7.696 (-.308)	1.968 (.226)	20.975*** (29.783)	20.574*** (29.172)	20.476*** (29.066)	20.029*** (28.312)	-0.201 (-.017)
Same Religion	0.285*** (8.586)	0.335*** (10.076)	0.333*** (10.024)	0.286*** (8.615)	0.037 (.979)	0.458*** (2.97)	0.533*** (3.466)	0.512*** (3.345)	0.448*** (2.887)	0.142** (2.457)	0.445*** (15.384)	0.464*** (16.011)	0.433*** (14.966)	0.450*** (15.526)	0.103** (2.271)

(continued)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Same Language	0.947*** (24.097)	1.023*** (26.217)	1.009*** (25.89)	0.955*** (24.111)	0.674*** (7.799)	0.533** (2.09)	0.606** (2.297)	0.444* (1.712)	0.414 (1.559)	0.521*** (4.565)	0.444*** (13.24)	0.480*** (14.387)	0.359*** (10.632)	0.392*** (11.547)	0.517*** (5.216)
ln(Geographic Distance)	-1.188*** (-238.514)	-1.208*** (-241.368)	-1.203*** (-240.531)	-1.190*** (-232.489)	-0.451*** (-31.52)	-1.256*** (-28.476)	-1.290*** (-29.294)	-1.260*** (-28.5)	-1.237*** (-27.171)	-0.588*** (-31.674)	-0.704*** (-164.282)	-0.725*** (-168.968)	-0.694*** (-162.35)	-0.710*** (-162.259)	-0.420*** (-26.193)
Share Border	0.455*** (13.511)	0.519*** (15.398)	0.518*** (15.371)	0.452*** (13.418)	0.373*** (5.619)	0.720*** (3.375)	0.748*** (3.476)	0.791*** (3.649)	0.758*** (3.529)	0.520*** (5.299)	-0.186*** (-6.488)	-0.185*** (-6.447)	-0.177*** (-6.118)	-0.173*** (-6.002)	0.020 (.263)
Exchange Rate volatility	342.117*** (103.105)	343.517*** (102.755)	343.462*** (102.988)	342.185*** (101.836)	133.469*** (9.525)	354.471*** (13.243)	355.938*** (13.296)	356.745*** (13.337)	355.474*** (13.306)	94.373*** (18.709)	153.015*** (82.252)	153.556*** (82.766)	153.103*** (82.7)	153.701*** (82.876)	57.717*** (8.448)
Exchange Rate Growth	-3.319*** (-27.033)	-3.325*** (-26.839)	-3.320*** (-26.808)	-3.313*** (-26.965)	-1.376*** (-2.781)	1.739 (1.545)	1.804 (1.61)	1.799 (1.613)	1.723 (1.54)	1.563** (2.361)	-0.632*** (-10.388)	-0.607*** (-9.959)	-0.665*** (-10.962)	-0.641*** (-10.541)	-0.421 (-7.27)
Double Tax Treaty	0.744*** (19.344)	0.675*** (17.614)	0.678*** (17.556)	0.751*** (19.156)	-0.230*** (-5.799)	0.571*** (2.795)	0.472** (2.31)	0.455** (2.233)	0.563*** (2.739)	-0.194*** (-3.258)	0.262*** (7.919)	0.279*** (8.48)	0.248*** (7.522)	0.271*** (8.11)	-0.157*** (-3.352)
Bilateral Investment Treaty	-1.284*** (-34.36)	-1.307*** (-34.992)	-1.301*** (-34.335)	-1.284*** (-33.674)	-0.122*** (-3.368)	-1.358*** (-7.292)	-1.423*** (-7.598)	-1.397*** (-7.503)	-1.339*** (-7.191)	-0.244*** (-4.461)	-0.638*** (-20.265)	-0.654*** (-20.967)	-0.630*** (-20.059)	-0.640*** (-20.037)	-0.046 (-1.023)
Same Legal System	0.992*** (28.841)	1.056*** (30.669)	1.059*** (30.737)	0.993*** (28.804)	0.312*** (9.32)	0.857*** (5.705)	0.934*** (6.207)	0.973*** (6.463)	0.894*** (5.927)	0.437*** (7.872)	0.932*** (32.285)	0.935*** (32.439)	0.950*** (32.939)	0.941*** (32.634)	0.305*** (7.027)
Acquirer Antidirector Index High	3.984*** (106.227)	4.165*** (111.812)	4.156*** (111.496)	3.985*** (105.717)	5.411*** (6.076)	3.690 (.985)	3.902 (1.032)	3.858 (1.02)	3.653 (.969)	4.544*** (3.092)	21.912*** (581.472)	22.102*** (587.882)	21.904*** (584.135)	22.018*** (580.88)	3.038* (1.812)
Target Antidirector Index High	1.322*** (33.658)	1.010*** (25.782)	1.003*** (25.637)	1.330*** (33.651)	-0.276 (-1.136)	0.244 (.094)	0.188 (.072)	0.255 (.097)	0.338 (.129)	-1.096** (-2.303)	-18.207*** (-486.723)	-18.280*** (-488.87)	-18.034*** (-482.691)	-18.021*** (-481.629)	0.005 (.016)
M&A Private Fraction	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	19.056*** (538.426)	19.115*** (540.963)	19.102*** (537.924)	19.161*** (539.621)	2.474*** (34.146)
M&A Public Fraction	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	19.361*** (517.567)	19.354*** (517.584)	19.356*** (518.077)	19.360*** (517.416)	2.065*** (26.739)
Constant	-68.818*** (-1,660.667)	-69.769*** (-1,682.351)	-69.435*** (-1,672.26)	-68.814*** (-1,644.249)	10.407*** (3.923)	-64.902** (-2.503)	-67.803*** (-2.601)	-65.951** (-2.526)	-63.218** (-2.434)	11.222* (1.653)	-44.863*** (-1,238.77)	-45.361*** (-1,254.403)	-45.355*** (-1,253.99)	-46.141*** (-1,265.105)	-7.512 (-.797)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-7,838	-7,838	-7,844	-7,844		-7,380	-7,384	-7,393	-7,389		-5,731	-5,709	-5,707	-5,706	
Adjusted R ²					0.590					0.576					0.723
Observations	11,664	11,664	11,664	11,664	11,664	7,290	7,290	7,290	7,290	7,290	7,290	7,290	7,290	7,290	7,290

Appendix 5 Panel C regressions, Public-to-public M&A

The dependent variable is the 3-day event combined CAR of the public-to-public M&A transactions from 1985-2014. Columns 1–4 include cross-border transactions, and column 5 domestic transactions. The transactions have been retrieved from Thomson One, the stock prices for estimating the CARs from DataStream. The methodology can be found in chapter 4.2.2. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. The country-level control variables have been described in 4.2.3.1, and deal-level variables in 4.2.3.2. The stars denoting the statistical significance on a *10%, **5% and ***1% level.

Model	CAR _{-1,+1}				
	Cross-Border (1)	Cross-Border (2)	Cross-Border (3)	Cross-Border (4)	Domestic (5)
$\ln(1 + \Delta \text{ Trust})$	0.0 (.032)			-0.002 (-.122)	
$\ln(1 + \Delta \text{ Hierarchy})$		-0.023* (-1.811)		-0.023* (-1.807)	
$\ln(1 + \Delta \text{ Individualism})$			0.013 (.611)	0.014 (.657)	
<i>Country-level characteristics</i>					
$\ln(1 + \Delta \text{ Corporate Tax Rate})$	-0.013 (-.737)	-0.016 (-.895)	-0.013 (-.699)	-0.015 (-.872)	
$\ln(\text{Acquirer nation GDP})$	0.002 (.322)	0.002 (.228)	0.002 (.318)	0.002 (.221)	-0.009 (-1.569)
$\ln(\text{Target nation GDP})$	0.003 (.424)	0.002 (.37)	0.003 (.462)	0.003 (.42)	
$\ln(\text{Acquirer openness})$	-0.072 (-1.512)	-0.072 (-1.508)	-0.074 (-1.575)	-0.074 (-1.576)	-0.054** (-2.389)
$\ln(\text{Target openness})$	-0.057** (-2.4)	-0.057** (-2.401)	-0.058** (-2.414)	-0.058** (-2.384)	
$\ln(\text{Acquirer GDP} / \text{Capita})$	-0.310 (-1.598)	-0.298 (-1.541)	-0.310 (-1.604)	-0.295 (-1.514)	0.024 (.111)
$\ln(\text{Target GDP} / \text{Capita})$	-0.235 (-.936)	-0.238 (-.99)	-0.247 (-1.015)	-0.249 (-.994)	
Same Religion	-0.002 (-.7)	-0.002 (-.731)	-0.002 (-.707)	-0.002 (-.747)	
Same Language	0.006 (1.196)	0.003 (.729)	0.006 (1.232)	0.003 (.806)	
$\ln(\text{Geographic Distance})$	0.001 (.666)	0.002 (1.092)	0.001 (.65)	0.002 (1.074)	
Share Border	0.004 (1.524)	0.004 (1.433)	0.004 (1.492)	0.004 (1.435)	
Exchange Rate volatility	0.194 (.408)	0.197 (.43)	0.192 (.413)	0.192 (.41)	
Exchange Rate Growth	-0.008 (-.595)	-0.007 (-.568)	-0.008 (-.593)	-0.007 (-.57)	
Double Tax Treaty	0.0 (.069)	-0.001 (-.174)	0.0 (.083)	-0.001 (-.142)	
Bilateral Investment Treaty	-0.002 (-.366)	-0.002 (-.337)	-0.002 (-.384)	-0.002 (-.363)	
Same Legal System	0.001 (.506)	0.002 (.735)	0.001 (.471)	0.001 (.557)	

(continued)	(1)	(2)	(3)	(4)	(5)
Acquirer Antidirector Index High	0.111 (1.631)	0.117* (1.799)	0.111 (1.685)	0.117* (1.738)	0.053*** (4.158)
Target Antidirector Index High	0.015 (.649)	0.012 (.497)	0.015 (.634)	0.012 (.542)	
M&A Private Fraction	0.005 (.549)	0.003 (.401)	0.0** (-2.504)	0.002 (.274)	-0.005 (-.148)
M&A Public Fraction	0.008 (.926)	0.006 (.747)	0.004 (.431)	0.005 (.591)	-0.002 (-.062)
<i>Deal level characteristics</i>					
Transaction Value	0.0** (-2.469)	0.0** (-2.496)	0.007 (.773)	0.0** (-2.505)	0.0 (.272)
Acquirer Market Value	0.0*** (-3.958)	0.0*** (-3.959)	0.0*** (-3.95)	0.0*** (-3.952)	0.0*** (-4.025)
Acquirer Past Return	-0.002 (-.838)	-0.002 (-.84)	-0.002 (-.839)	-0.002 (-.84)	-0.006*** (-3.397)
Acquirer Past Volatility	-0.144 (-.815)	-0.144 (-.809)	-0.144 (-.815)	-0.144 (-.81)	0.134** (2.496)
Target Market Value	0.0* (-1.838)	0.0* (-1.889)	0.0* (-1.831)	0.0* (-1.874)	0.0*** (-3.552)
Target Past Return	-0.001 (-.287)	0.0 (-.266)	0.0 (-.282)	0.0 (-.259)	-0.003** (-2.357)
Target Past Volatility	0.0 (-0.227)	0.0 (-.187)	0.0 (-.252)	0.0 (-.211)	-0.093** (-2.696)
Relative Size	0.0** (2.324)	0.0** (2.237)	0.0** (2.303)	0.0** (2.254)	0.0 (1.395)
Majority Cash	0.007*** (3.361)	0.007*** (3.39)	0.007*** (3.36)	0.007*** (3.379)	0.007*** (4.619)
Attitude	0.005 (.375)	0.005 (.372)	0.006 (.381)	0.005 (.38)	-0.027** (-2.157)
Acquirer Termination Fee	-0.013* (-1.995)	-0.013* (-1.97)	-0.013* (-1.961)	-0.013* (-1.944)	0.003 (.621)
Target Termination Fee	0.011*** (2.8)	0.011*** (2.835)	0.011*** (2.822)	0.011*** (2.812)	0.009*** (4.982)
Same Industry	0.004*** (2.934)	0.005*** (2.954)	0.004*** (2.916)	0.005*** (2.975)	0.002* (1.955)
Constant	-0.155 (-.766)	-0.143 (-.717)	-0.160 (-.783)	-0.147 (-.713)	0.185 (1.657)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
R ²	0.050	0.063	0.052	0.053	0.031
Observations	3,457	3,457	3,457	3,457	9,202

Appendix 6 Panel C merger waves regressions, Public-to-public M&A

The dependent variable is the 3-day event (-1,+1) combined CAR of the public-to-public M&A transactions for three merger waves. The 5th merger waves contains the years 1993-2000, the 6th merger wave the years 2003-2007, and the 7th merger wave the years 2010-2014. Columns 1–4, 6–9, 11–14 include cross-border deals only, and column 5, 10, 15 only domestic deals. The transactions have been retrieved from Thomson One, the stock prices for estimating the CARs from DataStream. The methodology can be found in chapter 4.2.2. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. Regressions with all control variables can be found in appendix 6. The country-level control variables have been described in 4.2.3.1, and deal-level control variables in 4.2.3.2. The stars denote the statistical significance on a *10%, **5% and ***1% level.

Model	CAR _{-1,+1}														
	Wave 5					Wave 6					Wave 7				
	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
$\ln(1 + \Delta \text{ Trust})$	-0.010 (-.442)			-0.013 (-.611)		-0.006 (-.248)			.001 (.065)		-0.049* (-2.489)			-0.055* (-2.597)	
$\ln(1 + \Delta \text{ Hierarchy})$		-0.020 (-1.371)		-0.019 (-1.182)			.049** (2.798)		.051** (3.201)			-0.055** (-4.553)		-0.069*** (-8.309)	
$\ln(1 + \Delta \text{ Individualism})$			0.064 (.734)	0.065 (.769)				.016 (.723)	.02 (.901)				0.029 (.701)	0.050 (1.099)	
<i>Country-level</i>															
$\ln(1 + \Delta \text{ Corporate Tax Rate})$	-0.012 (-.191)	-0.014 (-.221)	-0.008 (-.119)	-0.011 (-.159)		-0.045* (-2.156)	-0.042 (-2.081)	-0.043 (-2.089)	-0.041 (-2.006)		-0.008 (-.324)	-0.012 (-.532)	-0.007 (-.28)	-0.016 (-.699)	
$\ln(\text{Acquirer nation GDP})$	0.085 (.783)	0.082 (.743)	0.069 (.641)	0.074 (.72)	0.009 (.343)	0.008 (.503)	0.008 (.495)	0.008 (.461)	0.012 (.701)	0.032* (2.163)	0.086 (.677)	0.072 (.541)	0.080 (.594)	0.072 (.555)	-0.024 (-1.092)
$\ln(\text{Target nation GDP})$	-0.023 (-.563)	-0.025 (-.588)	-0.019 (-.427)	-0.019 (-.442)		0.011 (.476)	0.009 (.425)	0.012 (.526)	0.012 (.51)		0.074 (.772)	0.055 (.561)	0.059 (.613)	0.073 (.756)	
$\ln(\text{Acquirer openness})$	-0.007 (-.059)	-0.008 (-.062)	-0.016 (-.119)	-0.019 (-.148)	0.071 (.628)	-0.084 (-.749)	-0.087 (-.771)	-0.086 (-.77)	-0.088 (-.764)	-0.072 (-.688)	0.114 (.639)	0.089 (.435)	0.095 (.507)	0.114 (.612)	-0.016 (-.106)
$\ln(\text{Target openness})$	-0.557** (-2.563)	-0.562** (-2.651)	-0.594** (-2.514)	-0.579** (-2.407)		0.054 (.485)	0.055 (.491)	0.054 (.479)	0.059 (.522)		0.020 (.22)	0.002 (.023)	-0.002 (-.021)	0.034 (.374)	
$\ln(\text{Acquirer GDP / Capita})$	-1.635 (-3.15)	-1.556 (-2.91)	-0.946 (-1.84)	-1.185 (-2.39)	-0.097 (-.155)	-1.619 (-2.089)	-1.640* (-2.381)	-1.560 (-2.081)	-1.697* (-2.462)	-0.997 (-1.804)	-2.052 (-8.37)	-1.774 (-7.21)	-1.876 (-7.13)	-1.729 (-7.02)	0.447 (.908)
$\ln(\text{Target GDP / Capita})$	-0.925 (-4.52)	-0.912 (-4.52)	-1.254 (-5.54)	-1.162 (-5.12)		-0.606 (-6.78)	-0.518 (-5.56)	-0.623 (-6.81)	-0.618 (-6.48)		-1.523 (-8.88)	-1.147 (-6.99)	-1.270 (-7.84)	-1.415 (-8.37)	

(continued)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Same Religion	0.003 (.862)	0.003 (.882)	0.003 (.677)	0.003 (.712)		-0.004 (-.887)	-0.004 (-.9)	-0.004 (-.772)	-0.004 (-.804)		-0.006 (-1.007)	-0.008 (-1.405)	-0.007 (-1.224)	-0.007 (-1.222)	
Same Language	0.034*** (3.709)	0.032** (3.152)	0.035** (3.195)	0.034** (3.145)		-0.001 (-.105)	0.003 (.738)	0.0 (.064)	0.005 (1.562)		-0.003 (-.236)	-0.010 (-.841)	-0.003 (-.254)	-0.009 (-.624)	
ln(Geographic Distance)	0.0 (-.201)	0.0 (.039)	-0.001 (-.304)	0.0 (-.084)		0.002 (.728)	0.001 (.158)	0.002 (.713)	0.001 (.246)		-0.003 (-1.092)	-0.001 (-.41)	-0.004 (-1.215)	-0.001 (-.285)	
Share Border	-0.006 (-.748)	-0.006 (-.633)	-0.006 (-.604)	-0.006 (-.761)		0.011 (2.008)	0.011 (1.982)	0.011 (1.852)	0.011 (1.903)		0.002 (.312)	0.0 (-.046)	0.002 (.264)	0.0 (-.024)	
Exchange Rate volatility	0.344 (.501)	0.416 (.557)	0.642 (.965)	0.580 (.887)		0.710 (.876)	0.742 (.885)	0.676 (1.054)	0.597 (.806)		-0.297 (-.388)	-0.251 (-.392)	-0.269 (-.4)	-0.185 (-.266)	
Exchange Rate Growth	-0.016 (-.658)	-0.016 (-.655)	-0.017 (-.676)	-0.017 (-.646)		-0.045* (-2.315)	-0.045* (-2.455)	-0.045* (-2.4)	-0.045* (-2.4)		-0.017 (-1.278)	-0.013 (-.914)	-0.014 (-1.038)	-0.014 (-1.089)	
Double Tax Treaty	0.011 (.842)	0.009 (.662)	0.008 (.557)	0.008 (.532)		0.005 (.775)	0.006 (.698)	0.004 (.527)	0.006 (.791)		0.009 (.751)	0.003 (.243)	0.007 (.654)	0.005 (.42)	
Bilateral Investment Treaty	-0.013 (-.482)	-0.012 (-.459)	-0.011 (-.381)	-0.012 (-.428)		-0.013 (-.957)	-0.012 (-.807)	-0.013 (-.97)	-0.012 (-.834)		-0.003 (-.174)	-0.002 (-.089)	-0.004 (-.206)	-0.002 (-.118)	
Same Legal System	-0.006 (-1.26)	-0.006 (-1.082)	-0.006 (-1.092)	-0.007 (-1.442)		0.001 (.409)	0.002 (.957)	0.001 (.323)	0.0 (-.16)		0.001 (.196)	0.006 (.769)	0.004 (.547)	0.003 (.329)	
Acquirer Antidirector Index High	0.133 (.718)	0.127 (.668)	0.112 (.607)	0.119 (.67)	0.001 (.028)	0.025 (.63)	0.028 (.674)	0.025 (.572)	0.034 (.804)	-0.004 (-.13)	-0.239 (-.561)	-0.162 (-.365)	-0.209 (-.46)	-0.166 (-.379)	-0.039* (-2.595)
Target Antidirector Index High	0.093 (.946)	0.101 (1.074)	0.095 (.983)	0.094 (.97)		0.075 (.794)	0.072 (.773)	0.079 (.804)	0.080 (.81)		-0.144 (-.628)	-0.107 (-.46)	-0.119 (-.521)	-0.137 (-.595)	
M&A Private Fraction	-0.005 (-.221)	-0.006 (-.254)	-0.008 (-.357)	-0.010 (-.398)	0.209 (1.589)	0.008 (.443)	0.008 (.445)	0.005 (.295)	0.007 (.385)	-0.313* (-2.405)	0.002 (.653)	0.002 (.548)	0.002 (.538)	0.002 (.66)	0.128 (.372)
M&A Public Fraction	0.001 (.066)	0.001 (.033)	-0.001 (-.068)	-0.003 (-.148)	0.212 (1.574)	0.009 (.576)	0.010 (.599)	0.007 (.407)	0.010 (.52)	-0.301* (-2.195)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.127 (.37)
<i>Deal level</i>															
Transaction Value	0.0* (-1.99)	0.0* (-2.17)	0.0** (-2.628)	0.0** (-2.535)	0.0** (-2.512)	0.0 (-1.12)	0.0 (-1.153)	0.0 (-1.167)	0.0 (-1.116)	0.0 (-1.279)	0.0 (-1.185)	0.0 (-2.256)	0.0 (-2.229)	0.0 (-2.252)	0.0 (2.086)
Acquirer Market Value	0.0*** (-4.738)	0.0*** (-4.881)	0.0*** (-5.206)	0.0*** (-5.034)	0.0*** (-10.81)	0.0 (-1.952)	0.0 (-2.017)	0.0 (-1.913)	0.0 (-1.967)	0.0 (-1.77)	0.0* (-2.139)	0.0 (-1.916)	0.0 (-2.011)	0.0 (-2.014)	0.0*** (-4.837)

(continued)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Acquirer Past Return	-0.001 (-.583)	-0.001 (-.579)	-0.001 (-.573)	-0.001 (-.569)	-0.005 (-1.191)	0.004 (1.533)	0.004 (1.509)	0.004 (1.496)	0.004 (1.476)	-0.005 (-1.955)	-0.013 (-1.15)	-0.014 (-1.189)	-0.014 (-1.178)	-0.013 (-1.159)	-0.007 (-1.975)
Acquirer Past Volatility	0.763* (1.962)	0.759* (1.948)	0.760* (1.956)	0.759* (1.963)	0.024 (.234)	0.219 (1.38)	0.210 (1.269)	0.224 (1.364)	0.215 (1.263)	0.048 (.394)	-0.209 (-1.116)	-0.205 (-1.106)	-0.206 (-1.105)	-0.209 (-1.129)	0.102 (1.254)
Target Market Value	0.0*** (-6.93)	0.0*** (-6.694)	0.0*** (-7.62)	0.0*** (-7.363)	0.0 (-.263)	0.0 (-.304)	0.0 (-.272)	0.0 (-.27)	0.0 (-.261)	0.0 (-.674)	0.0 (.129)	0.0 (.16)	0.0 (.199)	0.0 (.107)	0.0** (-3.881)
Target Past Return	-0.001 (-.21)	-0.001 (-.183)	0.0 (-.133)	0.0 (-.128)	-0.003 (-1.131)	0.0 (-.126)	0.0 (-.217)	0.0 (-.169)	0.0 (-.222)	-0.006*** (-8.742)	-0.002 (-1.07)	-0.002 (-1.104)	-0.002 (-1.082)	-0.002 (-1.151)	-0.008*** (-5.85)
Target Past Volatility	-0.086* (-2.314)	-0.087** (-2.447)	-0.087** (-2.399)	-0.087* (-2.298)	0.018 (.394)	0.0 (.439)	0.0 (.433)	0.0 (.435)	0.0 (.351)	-0.140 (-1.305)	0.233 (1.696)	0.233 (1.744)	0.231 (1.717)	0.231 (1.672)	-0.017 (-1.007)
Relative Size	0.0 (1.117)	0.0 (1.088)	0.0 (1.118)	0.0 (1.082)	0.0** (3.152)	0.001 (.568)	0.001 (.537)	0.001 (.573)	0.001 (.536)	0.0 (.348)	-0.001* (-2.181)	-0.001* (-2.168)	-0.001* (-2.231)	-0.001* (-2.231)	0.0 (-1.349)
Majority Cash	0.016*** (9.484)	0.016*** (9.506)	0.016*** (9.201)	0.016*** (9.563)	0.010** (2.888)	0.009** (2.853)	0.008* (2.706)	0.009** (2.814)	0.008* (2.707)	0.004** (3.107)	-0.001 (-.377)	0.0 (-.118)	-0.001 (-.247)	-0.001 (-.32)	0.006* (2.275)
Attitude	-0.006 (-.288)	-0.007 (-.297)	-0.007 (-.311)	-0.007 (-.326)	-0.040 (-1.869)	0.011 (.41)	0.011 (.407)	0.012 (.427)	0.012 (.441)	-0.031 (-1.327)	-0.074*** (-6.44)	-0.073*** (-6.353)	-0.074*** (-6.491)	-0.073*** (-6.269)	-0.007 (-.599)
Acquirer Termination Fee	-0.028*** (-4.081)	-0.028*** (-3.983)	-0.028*** (-3.847)	-0.028*** (-4.083)	-0.003 (-.285)	-0.009 (-.615)	-0.010 (-.652)	-0.009 (-.588)	-0.010 (-.619)	-0.006 (-.734)	-0.005 (-.387)	-0.006 (-.424)	-0.005 (-.396)	-0.005 (-.407)	0.009 (.987)
Target Termination Fee	0.012** (3.174)	0.012** (3.284)	0.012** (3.301)	0.012** (3.226)	0.003 (1.737)	0.011 (1.135)	0.011 (1.14)	0.011 (1.138)	0.011 (1.139)	0.009* (2.218)	0.007 (.901)	0.007 (.918)	0.007 (.911)	0.007 (.972)	0.017*** (5.546)
Same Industry	0.002 (1.456)	0.002 (1.388)	0.002 (1.331)	0.002 (1.298)	0.003 (1.516)	0.007** (3.898)	0.007** (3.602)	0.007** (3.774)	0.007** (3.478)	0.003 (1.63)	0.007 (1.092)	0.007 (1.062)	0.006 (1.08)	0.007 (1.1)	0.004 (1.225)
Constant	-1.268 (-.551)	-1.192 (-.498)	-1.009 (-.432)	-1.112 (-.501)	-0.389 (-.537)	-0.432 (-.716)	-0.411 (-.689)	-0.468 (-.726)	-0.535 (-.879)	-0.262 (-.723)	-2.878 (-1.498)	-2.276 (-1.083)	-2.482 (-1.206)	-2.668 (-1.41)	0.437 (.553)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.133	0.133	0.135	0.136	0.044	0.127	0.129	0.127	0.129	0.051	0.146	0.142	0.139	0.150	0.094
Observations	833	833	833	833	2,181	996	996	996	996	2,585	781	781	781	781	2,109

Appendix 7 Panel C regressions, Public-to-public M&A, BHARs

The dependent variable is the 36 month BHAR of the public-to-public M&A transactions from 1985-2014. Columns 1–4 include cross-border transactions, and column 5 domestic transactions. The transactions have been retrieved from Thomson One, the stock prices for estimating the BHARs from DataStream. The methodology can be found in chapter 4.2.2. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. The country-level control variables have been described in 4.2.3.1, and deal-level variables in 4.2.3.2. The stars denoting the statistical significance on a *10%, **5% and ***1% level.

Model	BHAR _{0,+36}				
	Cross-Border (1)	Cross-Border (2)	Cross-Border (3)	Cross-Border (4)	Domestic (5)
$\ln(1 + \Delta \text{ Trust})$	0.805 (.)			0.839 0.325	
$\ln(1 + \Delta \text{ Hierarchy})$		0.881 (.)		0.875 1.945	
$\ln(1 + \Delta \text{ Individualism})$			1.568 (.)	1.566 (.)	
<i>Country-level characteristics</i>					
$\ln(1 + \Delta \text{ Corporate Tax Rate})$	-0.168 (-1.93)	-0.141 (-1.64)	-0.091 (-1.01)	-0.048 (-0.53)	
$\ln(\text{Acquirer nation GDP})$	0.006 (.019)	0.010 (.031)	0.0 (.001)	0.015 (.046)	0.122 (.498)
$\ln(\text{Target nation GDP})$	-0.332 (-1.3)	-0.325 (-1.268)	-0.269 (-.95)	-0.266 (-.941)	
$\ln(\text{Acquirer openness})$	-0.532 (-5.28)	-0.537 (-5.31)	-0.796 (-7.78)	-0.792 (-7.71)	1.270 (1.354)
$\ln(\text{Target openness})$	-0.349 (-3.21)	-0.337 (-3.12)	-0.496 (-4.24)	-0.503 (-4.29)	
$\ln(\text{Acquirer GDP / Capita})$	6.393 (.926)	6.672 (.944)	6.689 (.886)	6.085 (.825)	-5.991 (-9.61)
$\ln(\text{Target GDP / Capita})$	-10.307 (-8.05)	-9.859 (-7.84)	-11.873 (-8.68)	-12.197 (-8.71)	
Same Religion	-0.090 (-1.071)	-0.087 (-1.051)	-0.095 (-1.101)	-0.095 (-1.093)	
Same Language	-0.117 (-.659)	-0.072 (-.399)	-0.050 (-.32)	-0.020 (-.117)	
$\ln(\text{Geographic Distance})$	0.066* (1.801)	0.055 (1.551)	0.061 (1.696)	0.047 (1.396)	
Share Border	-0.025 (-.36)	-0.024 (-.349)	-0.026 (-.37)	-0.019 (-.287)	
Exchange Rate volatility	4.678 (.185)	4.163 (.165)	3.953 (.157)	4.350 (.171)	
Exchange Rate Growth	-0.238 (-.599)	-0.250 (-.622)	-0.236 (-.595)	-0.235 (-.597)	
Double Tax Treaty	0.057 (.621)	0.089 (.851)	0.077 (.751)	0.074 (.792)	
Bilateral Investment Treaty	-0.149 (-1.033)	-0.156 (-1.074)	-0.173 (-1.207)	-0.171 (-1.194)	
Same Legal System	-0.022 (-.186)	-0.043 (-.392)	-0.062 (-.623)	-0.053 (-.474)	

(continued)	(1)	(2)	(3)	(4)	(5)
Acquirer Antidirector Index High	0.002	-0.186	-0.046	-0.053	-0.287
	0.001	-0.079	-0.020	-0.022	-0.462
Target Antidirector Index High	-2.420***	-2.334**	-2.318**	-2.315**	
	-2.802	-2.716	-2.699	-2.715	
M&A Private Fraction	0.038	0.072	0.0	-0.089	0.732
	0.271	0.490	0.092	-0.632	0.546
M&A Public Fraction	-0.232	-0.196	-0.098	-0.358	0.837
	-1.359	-1.260	-0.678	-1.436	0.640
<i>Deal level characteristics</i>					
Transaction Value	0.0	0.0	-0.370	0.0	0.0*
	0.208	0.173	-1.489	0.108	(-2.034)
Acquirer Market Value	0.0***	0.0***	0.0***	0.0***	0.0***
	-3.704	-3.728	-3.681	-3.673	(-3.359)
Acquirer Past Return	-0.047	-0.047	-0.047	-0.047	-0.112
	-1.235	-1.233	-1.248	-1.244	(-1.245)
Acquirer Past Volatility	-1.262	-1.256	-1.264	-1.288	-0.214
	-0.382	-0.379	-0.385	-0.393	(-0.053)
Target Market Value	0.0	0.0	0.0	0.0	0.0
	0.786	0.794	0.800	0.797	(-0.713)
Target Past Return	-0.008	-0.008	-0.006	-0.007	-0.011
	-0.452	-0.464	-0.305	-0.341	(-0.97)
Target Past Volatility	-0.001	-0.001	-0.001	-0.001	-0.275
	-0.802	-0.872	-0.947	-0.919	(-0.776)
Relative Size	0.0*	0.0*	0.0*	0.0*	0.0*
	-1.929	-1.891	-1.944	-1.876	(-1.811)
Majority Cash	-0.005	-0.006	-0.011	-0.012	0.012
	-0.108	-0.127	-0.242	-0.252	(0.367)
Attitude	-0.106	-0.105	-0.090	-0.090	0.062
	-0.555	-0.548	-0.452	-0.450	(0.664)
Acquirer Termination Fee	-0.136	-0.134	-0.122	-0.126	0.043
	-1.485	-1.457	-1.365	-1.400	(0.594)
Target Termination Fee	0.006	0.003	0.005	0.006	-0.177***
	0.114	0.066	0.100	0.107	(-0.3491)
Same Industry	0.106	0.103	0.107	0.107	0.075*
	1.596	1.584	1.610	1.591	(1.716)
Constant	6.377	6.356	5.702	5.381	-3.380
	0.855	0.853	0.731	0.686	(-0.682)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
R ²	0.069	0.069	0.071	0.071	0.008
Observations	3,457	3,457	3,457	3,457	9,202

Appendix 8 Panel C merger waves regressions, Public-to-public M&A, BHARs per merger wave

The dependent variable is the 36 months BHAR of the public-to-public M&A transactions for three merger waves. The 5th merger waves contains the years 1993-2000, the 6th merger wave the years 2003-2007, and the 7th merger wave the years 2010-2014. Columns 1–4, 6–9, 11–14 include cross-border deal, and column 5, 10, 15 only domestic deals. The transactions have been retrieved from Thomson One, the stock prices for estimating the BHARs from DataStream. The methodology can be found in chapter 4.2.2. $|\Delta|$ indicates the absolute difference between the country-pairs on the distance between the variables. Trust is defined whether people trust each other or not, Hierarchy as the belief that people follow instructions even if they disagree, and Individualism as the belief that people expect maximizing self-interest rather than the well-being of the society. The legal system – English, German, French or Scandinavian Law – and Antidirector Index – an index of 6 shareholder protection measurements – have been according La Porta et al. (1998), and continuing papers. The country-level control variables have been described in 4.2.3.1, and deal-level control variables in 4.2.3.2. The stars denote the statistical significance on a *10%, **5% and ***1% level.

Model	BHAR _{0,+36}														
	Wave 5					Wave 6					Wave 7				
	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic	Cross-Border	Cross-Border	Cross-Border	Cross-Border	Domestic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
$\ln(1 + \Delta \text{ Trust})$	0.886			0.842		-0.006			.001		0.336			0.609	
	(.)			0.023		(-.248)			(.065)		(.)			1.273	
$\ln(1 + \Delta \text{ Hierarchy})$		-0.142		0.020			.049**		.051**			1.846		1.441	
		(.)		7.904			(2.798)		(3.201)			(.)		6.477	
$\ln(1 + \Delta \text{ Individualism})$			1.121	1.123				.016	.02				1.487	1.363	
			(.)	(.)				(.723)	(.901)				(.)	(.)	
<i>Country-level</i>															
$\ln(1 + \Delta \text{ Corporate Tax Rate})$	0.685	0.646	0.759	0.742		-0.503	-0.469	-0.413	-0.453		-6.810	-7.021	-5.000	-5.342	
	2.266	2.818	1.252	0.871		-0.260	-0.309	-0.261	-0.212		1.875*	2.247*	1.570	1.764	
$\ln(\text{Acquirer nation GDP})$	0.658	0.842	0.289	0.191	-0.552	-0.250	-0.287	-0.232	-0.187	-2.685	2.283	2.310	1.352	1.447	2.237
	2.644*	2.675*	3.338*	3.295*	(.)	-1.298	-1.312	-1.270	-1.258	(.)	-0.586	-0.385	-0.276	-0.434	(.)
$\ln(\text{Target nation GDP})$	2.072	2.101	2.187	2.117		-1.615	-1.629	-1.752	-1.674		-0.255	-0.192	-0.132	-0.184	
	-1.431	-1.645	-2.841	-2.657		-5.210***	-5.202***	-5.212***	-5.220***		2.171	2.452	2.741	2.532	
$\ln(\text{Acquirer openness})$	-0.300	-0.328	-0.459	-0.458	1.465	-5.087	-4.876	-5.007	-4.844	0.944	0.645	0.677	0.654	0.555	-0.943
	0.830	2.282	-1.296	-2.304	(.)	-0.654	-0.712	-0.671	-0.614	(.)	-1.702	-1.747	-1.037	-1.533	(.)
$\ln(\text{Target openness})$	0.189	0.453	-0.310	-0.558		-0.532	-0.524	-0.471	-0.455		-0.224	-0.237	-0.146	-0.206	
	-75.749	-98.993	-29.125	-13.313		-40.991*	-39.145	-39.515	-41.380*		-42.356	-48.853	-26.178	-29.812	
$\ln(\text{Acquirer GDP / Capita})$	-0.426	-0.548	-0.137	-0.061	1.259	-2.376	-2.039	-2.121	-2.180	1.058	-1.394	-1.464	-0.872	-1.031	-3.970
	-80.634	-74.202	-111.566	-115.357	(.)	10.187	11.305	10.040	8.989	(.)	1.596	-3.997	-1.034	-0.20	(.)
$\ln(\text{Target GDP / Capita})$	-0.767	-0.688	-1.343	-1.395		0.545	0.580	0.582	0.495		0.109	-0.437	-0.162	-0.019	
	-0.394	-0.379	-0.443	-0.453		-0.036	-0.027	-0.024	-0.032		-0.023	0.013	-0.045	-0.042	

(continued)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Same Religion	-0.394 (-1.12)	-0.379 (-1.095)	-0.443 (-1.19)	-0.453 (-1.195)		-0.036 (-.491)	-0.027 (-.352)	-0.024 (-.325)	-0.032 (-.441)		-0.023 (-.116)	0.013 (.069)	-0.045 (-.231)	-0.042 (-.192)	
Same Language	-1.324 (-1.371)	-1.288 (-1.516)	-1.066 (-1.484)	-1.106 (-1.659)		-0.058 (-.257)	-0.069 (-.344)	-0.038 (-.162)	-0.027 (-.118)		0.238 (.786)	0.454 (1.215)	0.483 (1.054)	0.592 (1.251)	
ln(Geographic Distance)	0.032 (.398)	0.033 (.372)	-0.002 (-.023)	0.001 (.01)		-0.005 (-.217)	-0.017 (-.432)	-0.013 (-.638)	-0.002 (-.037)		0.139 (1.254)	0.066 (.618)	0.112 (1.135)	0.063 (.645)	
Share Border	-0.322 (-.596)	-0.403 (-.631)	-0.375 (-.598)	-0.313 (-.555)		0.035 (.15)	0.030 (.127)	0.039 (.161)	0.044 (.183)		-0.060 (-.387)	0.017 (.132)	-0.024 (-.189)	0.019 (.18)	
Exchange Rate volatility	56.903 (1.031)	47.455 (.996)	77.634 (1.047)	84.201 (1.067)		77.833 (1.449)	81.135 (1.54)	79.194 (1.571)	75.964 (1.453)		-55.107 (-.895)	-56.721 (-.885)	-47.910 (-.761)	-49.511 (-.773)	
Exchange Rate Growth	-2.199 (-.854)	-2.168 (-.861)	-2.265 (-.837)	-2.287 (-.83)		-0.545** (-3.192)	-0.542** (-3.194)	-0.545** (-3.23)	-0.549** (-3.218)		0.686 (1.137)	0.624 (1.161)	0.848 (1.318)	0.829 (1.235)	
Double Tax Treaty	0.014 (.046)	0.159 (1.542)	-0.123 (-.315)	-0.232 (-.48)		0.086 (1.253)	0.049 (.617)	0.043 (.554)	0.080 (1.087)		0.028 (.068)	0.182 (.424)	0.163 (.383)	0.224 (.5)	
Bilateral Investment Treaty	0.621 (1.241)	0.528 (1.374)	0.706 (1.36)	0.773 (1.277)		-0.593 (-2.073)	-0.589 (-2.051)	-0.588 (-1.962)	-0.591 (-2.079)		-0.257 (-.704)	-0.311 (-.862)	-0.407 (-1.047)	-0.434 (-1.096)	
Same Legal System	0.833 (1.017)	0.730 (.99)	0.694 (1.012)	0.773 (1.031)		-0.012 (-.064)	0.016 (.092)	-0.009 (-.054)	-0.036 (-.203)		-0.332 (-.914)	-0.399 (-.978)	-0.398 (-.955)	-0.390 (-.983)	
Acquirer Antidirector Index High	4.008 (.735)	4.869 (.895)	2.983 (.444)	2.368 (.341)	-0.807 (-1.129)	0.533 (.312)	0.435 (.236)	0.520 (.275)	0.618 (.318)	3.451*** (5.112)	-12.703 (-1.364)	-14.641 (-1.458)	-11.404 (-1.068)	-12.388 (-1.108)	3.539* (2.445)
Target Antidirector Index High	-4.244** (-2.425)	-4.814** (-2.96)	-5.017** (-2.38)	-4.555* (-2.234)		-3.228 (-1.503)	-3.209 (-1.516)	-3.099 (-1.572)	-3.120 (-1.574)		1.074 (.326)	0.541 (.191)	0.494 (.158)	0.627 (.176)	
M&A Private Fraction	1.909 (1.339)	1.851 (1.32)	1.462 (.907)	1.510 (.984)	-3.567* (-2.269)	-0.172 (-.771)	-0.198 (-.905)	-0.226 (-.911)	-0.199 (-.797)	27.652** (3.357)	0.082 (.47)	0.077 (.471)	0.075 (.517)	0.073 (.513)	2.922 (.278)
M&A Public Fraction	0.954 (.481)	0.870 (.439)	0.448 (.193)	0.517 (.234)	-3.344* (-2.017)	-0.268 (-1.878)	-0.297* (-2.643)	-0.328 (-1.856)	-0.298 (-1.849)	27.957** (3.458)	0.0*** (.)	0.0*** (.)	0.0*** (.)	0.0*** (.)	3.481 (.329)
<i>Deal level</i>															
Transaction Value	0.364 0.0	0.292 0.0	-0.072 0.0	0.014 0.0	-2.412 0.0	0.867 0.0**	0.826 0.0**	0.828 0.0**	0.890 0.0**	1.271 0.0	-1.087 0.0	-1.087 0.0	-1.153 0.0	-1.158 0.0	-1.701 0.0**
Acquirer Market Value	-1.226 -0.105*	-1.257 -0.105*	-1.185 -0.103*	-1.165 -0.103*	-1.092 -0.204**	-3.436 -0.037	-3.457 -0.036	-3.385 -0.037	-3.475 -0.038	0.173 -0.303	-0.137 -0.088	-0.253 -0.086	-0.080 -0.083	-0.091 -0.085	-3.678 0.478

(continued)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Acquirer Past Return	-0.105*	-0.105*	-0.103*	-0.103*	-0.204**	-0.037	-0.036	-0.037	-0.038	-0.303	-0.088	-0.086	-0.083	-0.085	0.478
	(-2.135)	(-2.118)	(-2.077)	(-2.074)	(-3.46)	(-.675)	(-.672)	(-.663)	(-.69)	(-1.069)	(-.348)	(-.34)	(-.343)	(-.343)	(1.028)
Acquirer Past Volatility	14.899	15.098	14.911	14.753	0.364	-3.873	-3.997	-3.893	-3.776	12.120	2.010	1.965	1.851	1.889	-7.614
	(.822)	(.815)	(.81)	(.805)	(.1)	(-1.278)	(-1.32)	(-1.283)	(-1.21)	(.846)	(.311)	(.304)	(.298)	(.298)	(-1.217)
Target Market Value	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(.489)	(.508)	(.486)	(.488)	(.003)	(2.012)	(2.036)	(2.011)	(1.925)	(1.264)	(1.441)	(1.617)	(1.516)	(1.606)	(-1.03)
Target Past Return	-0.031	-0.035	-0.003	-0.001	-0.008	-0.002	-0.003	-0.004	-0.003	-0.004	0.090	0.089	0.080	0.078	-0.157
	(-.587)	(-.652)	(-.069)	(-.014)	(-.466)	(-.242)	(-.362)	(-.367)	(-.34)	(-.082)	(1.537)	(1.442)	(1.423)	(1.343)	(-1.296)
Target Past Volatility	-0.844	-0.764	-0.804	-0.866	-1.037	-2.406	-2.347	-2.348	-2.407	-4.588	-3.363*	-3.377	-3.751**	-3.745**	0.423
	-0.726	-0.720	-0.744	-0.767	-1.812	(-1.674)	(-1.661)	(-1.649)	(-1.655)	(-1.673)	-2.364	-2.093	-3.047	-2.821	0.701
Relative Size	0.0	0.0	0.0	0.0*	-0.002	0.033*	0.033*	0.034*	0.034*	0.0	0.004	0.004	0.003	0.002	0.0
	(-1.495)	(-1.648)	(-1.77)	(-1.902)	(-.552)	(2.275)	(2.36)	(2.236)	(2.401)	(.246)	(.337)	(.323)	(.202)	(.195)	(-1.724)
Majority Cash	-0.128	-0.123	-0.129	-0.134	-0.065	-0.016	-0.017	-0.017	-0.016	-0.034	0.048	0.038	0.029	0.030	0.064
	(-.72)	(-.724)	(-.707)	(-.721)	(-1.333)	(-.188)	(-.215)	(-.214)	(-.191)	(-.661)	(.917)	(.698)	(.505)	(.503)	(.589)
Attitude	-0.382	-0.389	-0.470	-0.463	0.139	0.182	0.175	0.189	0.197	-0.232	-0.215	-0.248	-0.190	-0.209	0.225
	(-.958)	(-.979)	(-1.13)	(-1.127)	(1.212)	(1.023)	(.912)	(.944)	(1.01)	(-.873)	(-.712)	(-.814)	(-.631)	(-.686)	(.68)
Acquirer Termination Fee	-0.010	0.017	0.010	-0.010	0.064	-0.103	-0.107	-0.10	-0.097	0.129	-0.196	-0.178	-0.184	-0.177	-0.043
	(-.091)	(.182)	(.093)	(-.086)	(1.586)	(-.731)	(-.763)	(-.727)	(-.683)	(1.052)	(-.66)	(-.592)	(-.625)	(-.591)	(-.344)
Target Termination Fee	0.093	0.087	0.081	0.087	-0.180***	-0.114	-0.112	-0.113	-0.115	-0.146	-0.003	-0.012	0.015	0.006	-0.138
	(.806)	(.873)	(.796)	(.811)	(-3.943)	(-1.694)	(-1.648)	(-1.624)	(-1.699)	(-1.447)	(-.029)	(-.114)	(.132)	(.055)	(-1.094)
Same Industry	0.228	0.211	0.207	0.220	0.086	0.016	0.018	0.020	0.018	0.178**	0.170	0.160	0.172	0.163	-0.110
	(1.124)	(1.153)	(1.108)	(1.087)	(1.162)	(.139)	(.151)	(.168)	(.156)	(3.4)	(1.813)	(1.754)	(1.94)	(1.844)	(-1.246)
Constant	-100.865	-113.421	-90.457	-81.413	9.327	32.377*	33.706*	31.768	30.485	7.044	-15.083	-24.526	-17.321	-16.737	-42.886
	(-1.424)	(-1.668)	(-1.1)	(-.942)	(.624)	(2.26)	(2.234)	(1.803)	(1.786)	(.574)	(-.317)	(-.556)	(-.35)	(-.303)	(-1.42)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.136	0.134	0.144	0.146	0.047	0.168	0.167	0.168	0.168	0.047	0.303	0.306	0.306	0.308	0.025
Observations	833	833	833	833	2,181	996	996	996	996	2,585	781	781	781	781	2,109