

The influence of nations: A study of their effects on cross-border M&A

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Abstract

Country-specific factors have far-reaching effects on everything from how nations operate to how their economies perform. In order to analyze their impacts on cross-border mergers and acquisitions, we utilize data from deals between 10 different countries within the time period of 2000 to 2014. Using multivariate regressions, we find that several macroeconomic factors, including corporate taxes and gross domestic product per capita, influence the bidder returns in the three year period following each deal. Furthermore, we also find statistically significant results when analyzing cultural factors and corporate governance standards. Moreover, our findings indicate that the results are more robust when the success measures are based on stock prices (CAR and BHAR) than earnings per share.

Keywords: Cross-border, M&A, country-specific factors, bidder returns

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1 Introduction

Around the world, companies in all industries are increasingly turning towards cross-border mergers and acquisitions (M&A) as a way of expanding their businesses and staying competitive. This push towards a more connected and intertwined business landscape has inspired numerous studies ranging from those attempting to understand the driving forces behind the movement to those that try to evaluate how businesses should adapt to the new environment. As the markets continue to change, it is becoming progressively more important for companies and investors to understand the seemingly endless number of factors that can influence how these cross-border M&A deals play out. Furthermore, due to the nature of these transactions, it is imperative to get a grasp of how the countries themselves can play a role in the success or failure of deals. Due to this, our paper focuses on analyzing various country-specific factors and how they relate to post-merger bidder gains in cross-border M&A deals.

In order to provide some structure to this study and examine how the country-specific factors impact the outcomes of cross-border M&A deals, we have chosen to break down our research questions into three groups based upon the attributes of the factors. The first, and largest, group is macroeconomic variables. Here we investigate the impacts that factors such as corporate taxes and gross domestic product (GDP) per capita have on our dependent variables. Our rationale for including these in our study is that they influence the individual countries and represent important trends within them. This begs the question of whether they are worth considering before engaging in a cross-border M&A deal. For example, the interest rate in a country plays a pivotal role in investment decisions due to its impact on borrowing costs. This leads us to wonder if companies can leverage the difference in interest rates between country-pairs in order to get more out of a merger or acquisition. In the next group, we look at cultural and geographic factors which includes explanatory variables such as the distance between capital cities of country-pairs as well as how trusting people are of others. These variables are largely inspired by the seminal work by (Ahern et al., 2015) which concludes that there is an important connection between culture and short-term abnormal returns for the acquirer. Following in their footsteps, we ponder the financial implications of these factors over a longer window of time. Finally, the last group is a single factor regarding corporate governance. This section is particularly interesting

because it is largely dependent on the political environments of the various countries. Based on their histories and recent events, countries place differing amounts of trust in companies and, therefore, they have different laws and regulations regarding corporate governance such as shareholder rights. This leads us to explore whether countries can directly influence the outcomes of cross-border M&A deals based upon their corporate governance standards and whether companies should pay particular attention to this in the M&A decision process.

Using multivariate regression analysis, coupled with the controlling of various fixed effects such as country-pairs and country-year, this study finds several connections between country-specific factors and post-merger bidder returns over a three-year period. Among the statistically significant results, we find macroeconomic variables such as the difference in GDP per capita and the difference in corporate taxes which both indicate that more similar countries lead to higher bidder gains. Furthermore, we find that deals perform better if the target has a lower governance standard than the acquirer. In some circumstances, we also find statistically significant results related to culture and geography, such as how trusting people within the countries are as well as the geographic distance between them.

When compared to prior studies, this paper aims to contribute to existing literature by delving deeper into long-term returns while analyzing the effects of country-specific factors on three different measures of success. (Ahern et al., 2015) find a strong connection between the cultures of countries and short-term bidder returns. Specifically, their results indicate that cultural distance decreases bidder returns. Similarly, (Chakrabarti et al., 2009) argue that cultural distance is linked to both short-term and long-term bidder returns. In their results, however, they find a positive correlation between distance and bidder returns. (Uddin and Boateng, 2011), on the other hand, study macroeconomic variables and how they influence cross-border M&A activity in the UK. An interesting angle used in this study is the separation of inbound and outbound M&A activity which ends up indicating that macroeconomic factors can influence the two separately. Together, these studies and others provide a much needed glimpse into the inner workings of cross-border M&A deals, and our paper intends to illuminate some of the missing pieces.

Following this introduction, the rest of the paper is structured as follows: section

2 is geared towards a literature review which covers important prior research and their results. Section 3 contains our hypotheses regarding the various factors that we analyze as well as our motivations for researching them. Section 4 is the data and methodology portion which explains how we gathered and processed our data plus general information about the final dataset. Section 5 is the results segment which lists out our findings and how they stack up against prior research as well as our hypotheses. In section 6, we go through the robustness tests that we have performed and how they relate to our original results. Section 7 is the discussion portion where we review remaining, unanswered questions and propose paths for future research. Finally, the conclusion can be found in section 8 which contains our final thoughts on this topic and paper.

2 Literature Review

This section gives an overview of the most important findings and theoretical frameworks used in previous research on cross-border M&A determinants and gains.

The 1990s experienced a large wave of cross-border acquisitions as part of increased economic integration and internationalization, mostly due to increased international trade and consolidation of industries and regions (Bjorvatn, 2004). Following this, cross-border M&A became a popular field of research (Shimizu et al., 2004). They point out, however, that the literature has been fragmented. This has left gaps to fill, especially regarding the different outcomes of M&A into countries with differing institutional environments. The volume of cross-border acquisitions accelerated even further in the 2000s and the literature has had a hard time keeping pace. According to (Erel et al., 2012) cross-border deals grew from 23% of total merger volume in 1998 to 45% in 2007. As deal volumes accelerated, many researchers tried to study the characteristics and determinants of these cross-border transactions. When doing so, the commonly used framework has been to use multivariate regressions while controlling for fixed effects such as country-year fixed effects and country-pair fixed effects. Depending on the focus of the paper, the dependent variable is usually a measure of country-pair deal volumes or a measure of short-term announcement gains. The determinants for cross-border M&A found in the literature can be classified into three

main groups: macroeconomic factors, cultural & geographical factors, and corporate governance factors. Hence, the following sections will give an overview on each of the groups.

2.1 Literature on the Effect of Macroeconomic Factors on Cross-Border M&A

After the increase in cross-border M&A in the 1990s, (Dunning, 2009) was one of the first to highlight the importance of macroeconomic factors. He encourages more research on the topic as he argues that these variables have potential implications for the location of foreign direct investments and multinational enterprise activity.

One of the main papers investigating macroeconomic factors as determinants is written by authors (Erel et al., 2012). Their analysis focuses on several factors that potentially affect cross-border M&A that are not present in domestic M&A, including many macroeconomic factors. Their particular interest is to look at differences in valuation and how the macroeconomic factors may lead to mergers where the target is relatively inexpensive to the acquirer. They use an extensive sample of 56,978 cross-border mergers between 1990 and 2007 that cover 48 countries. The analysis is carried out using a multivariate regression framework, controlling for acquirer-year fixed effects and country-pair fixed effects. Their dependent variable is focused on the volume of deals between countries. Despite the fact that cross-border mergers happen for many of the same synergistic reasons as domestic mergers, they find that country-level factors seem to make some mergers much more attractive to the acquiring firm. In particular, they find positive and significant results for the difference in log GDP per capita and GDP growth, indicating that targets tend to come from countries with poorer economic development. Furthermore, the target country usually has a lower corporate tax rate than the acquiring country. Additionally, the target country and acquiring country tend to have high bilateral trade (measured as the maximum of exports and imports). Lastly, connecting to their valuation argument, they find that targets are more likely to have had a depreciating currency and a worse performing stock market preceding the merger, and that the larger the difference, the higher the likelihood of a merger.

Other authors investigating these factors includes (Uddin and Boateng, 2011). Their study is not as extensive as (Erel et al., 2012), as they are solely focusing on

explaining the trends in inward and outward UK cross-border acquisitions. Their study encompasses 1986-2006, and similarly to (Erel et al., 2012), they use the number of deals as the dependent variable in a multivariate regression analysis. The study finds several significant macroeconomic variables including GDP, interest rate, exchange rate, share price, and money supply.

Another interesting topic is explored by (Moeller and Schlingemann, 2005) who investigate whether there is a relationship between macroeconomic factors and short-term bidder gains. They use the market-adjusted return for $(-1, +1)$ days around the announcement date. One of the country characteristics they study is economic freedom and development. They use general economic indices designed to reflect the economic freedom of a country which are based on trade policy, taxation, government intervention, foreign investment policy, banking, pricing controls, property rights, and regulation. They also use the World Bank classification of incomes as well as the country credit rating as proxies for the countries' economic development. They find that the countries that are the most restrictive (lowest score on indices and variables) have negative and significant coefficients, with the UK being an exception. That is, bidder returns are lower if the target is in a country with a more restrictive economy.

2.2 Literature on the Effect of Cultural and Geographical Factors on Cross-Border M&A

The studies on cultural differences are few and contradictory. The most comprehensive, and the first large-scale, study on these factors is by (Ahern et al., 2015). Their main finding is that the cultural factors of trust, hierarchy, and individualism, affect both deal volume and synergy gains in cross-border M&A. In their study, deal volumes are lower when countries are more culturally distant from each other, and the greater the cultural distance in trust and individualism, the lower the combined announcement returns are. They use a large sample from 52 countries between 1991 and 2008, and like others, they use a multivariate regression framework accounting for fixed effects.

(Erel et al., 2012) also find support that cultural and geographical differences matter. Crucially, they find that geography is a pivotal determinant of the likelihood of a merger happening. Holding other variables constant, they find that the shorter the distance between two countries, the more likely it is that we will observe acquisitions

between the two countries. The reason, they argue, might be that these countries are more likely to have similar cultural backgrounds.

Earlier findings are contradictory. For example, (Chakrabarti et al., 2009) find that cross-border acquisitions perform better in the long-run if the acquirer and the target come from countries that are more culturally disparate. They argue that one reason could be that companies may require higher standards for expected synergy gains when acquiring in a culturally distant country. A possible explanation for their contradictory findings is that their paper is one of the few that focuses on long-term stock returns. As their success measures, they use the cumulative abnormal return (CAR) and buy-and-hold abnormal return (BHAR) methodologies. Each measure begins at the deal effective date and encompasses the following 30 to 36 months. Their reasoning behind this decision is that they do not wish to capture any stock price run-up prior to each deal being finalized. They also attempt to run regressions on short-term gains, as other studies have done, but do not find support for their findings looking at only short-term “announcement effects”. Additionally, they use the Hofstede measure (Hofstede, 1980) of cultural dimensions to measure cultural differences and control for both deal-specific and country-level fixed effects. Hence, the chosen time horizon seems to matter significantly for results when analyzing cultural factors.

2.3 Literature on the Effect of Corporate Governance on Cross-Border M&A

Moving on to corporate governance, numerous articles (Erel et al., 2012, Moeller and Schlingemann, 2005, Rossi and Volpin, 2004, Martynova and Renneboog, 2008, 2011, La Porta et al., 1997, 1998, 2000, Dissanaike et al., 2017, Drobetz and Momtaz, 2016, Bris et al., 2008) have studied its effects on cross-border M&A volume.

Starting with (Erel et al., 2012), they find that target companies tend to be in countries with lower corporate governance standards than the country of the acquirer. They argue that this is due to the potential value that can be created based on variables such as accounting standards and shareholder protections. For example, with regards to shareholder protections, they find that value creation can be achieved because the minority shareholders of the target company get better protections if the acquiring firm is from a country with better governance standards. In order to analyze this con-

nection, they use governance indices constructed by (La Porta et al., 1997, 1998) and (Djankov et al., 2008) as measures for accounting standards and shareholder protections, respectively, because they tend to correlate with corporate governance standards. Their findings are in line with earlier studies done by (Rossi and Volpin, 2004) who find similar results. With this in mind, it is clear that there are arguments for more deals being made in the direction of the target being in a country with lower corporate governance standards, but when analyzing the short-term results of these mergers and acquisitions, (Moeller and Schlingemann, 2005) find different outcomes. In their study, which also makes use of the governance indices created by (La Porta et al., 1997), they find that bidder returns are positively correlated with the target country having a legal system that offers better shareholder rights than that of the acquirer. Basing their theory on (La Porta et al., 2000), which argues that the value of a firm can increase if acquired by a firm that has a relatively higher corporate governance standard, they expect that bidder returns could be the result of foreign targets being undervalued due to weaker shareholder rights and corporate governance, as this would be associated with higher agency and information asymmetry costs. Surprisingly, however, (Moeller and Schlingemann, 2005) find that bidder returns are actually higher when investing in targets offering better shareholder rights which calls into question the reasoning behind firms acquiring companies in countries with lower corporate governance standards.

More current research on this topic includes studies by (Drobetz and Momtaz, 2016) and (Dissanaike et al., 2017) who focus on the effects of the corporate governance convergence in Europe. They find that the probability of cross-border deals, especially large-cap deals in Europe, has increased after the European Commission Merger Regulation reform in 2004. (Drobetz and Momtaz, 2016) also focus on whether the convergence has led to increased cross-border M&A wealth effects. They examine the convergence effects in Europe during 2001-2011, using, amongst other things, newer governance indices constructed by (Martynova and Renneboog, 2011). Their index methodology, however, is based on (La Porta et al., 1997). In their analysis, they find that the consequences of the convergence differ depending on the legal system of the acquirer. For example, companies from Anglo-Saxon countries engage less in cross-border deals while French legal origin firms have become more active in cross-border M&A. Even though acquirers usually have higher governance standards than targets,

(Drobetz and Momtaz, 2016) don't find any marginal bidder wealth effects for firms that acquire either weaker or stronger governance targets. This lack of robust results does not support the governance motive hypothesis (Bris et al., 2008, Martynova and Renneboog, 2008, Rossi and Volpin, 2007).

3 Hypotheses and Motivation

The ever increasing number of cross-border mergers and acquisitions makes it important to understand how various country-specific factors impact investment decisions and outcomes. More specifically, do underlying macroeconomic, cultural, and corporate governance related factors affect the results of cross-border deals? If so, then recognizing and considering these variables should be a part of the decision making process for firms that are either looking to merge with or acquire firms abroad. This makes the topic particularly relevant today as markets around the world are becoming more intertwined. Moreover, it becomes further applicable since existing research has largely excluded the long-term consequences of the aforementioned factors. Furthermore, as cross-border M&A are not short-term events, we argue that their success can better be measured over a long-term period. Therefore, in order to get a more accurate understanding of bidder firm performance, this paper aims to contribute to existing literature by delving into the topic with a focus on long-term returns. Additionally, we have also collected more recent data, both for the success of cross-border deals and for several of our independent variables. One example being the creation of a new corporate governance index. Furthermore, it is also valuable to run regressions on cultural factors with newer merger data to see whether the importance of such factors have decreased or increased over time. Lastly, previous research has mostly considered stock price returns as the dependent variable. Thus, it is important to consider that stock prices are heavily reliant on investor sentiment. Since we are also concerned about general firm performance, we have included earnings per share (EPS) among our dependent variables which we argue will lead to less opinion biased results. Adding it all together, this paper hopes to provide a more accurate and current picture of actual cross-border M&A deal outcomes and what effects them.

3.1 Macroeconomic Factors

In our first section of hypotheses, we cover several country-specific macroeconomic variables that have been reviewed in prior research both as determinants of the number of M&A deals and as influencing factors in the outcome of completed transactions.

GDP per capita is one of the most frequently cited indicators of the wealth and productivity of nations. As such, it is particularly useful for comparing how similar countries are with regards to economic output. Additionally, it is a good proxy for how wealthy the citizens of countries are and how much they spend. Put together, these elements of GDP per capita make it suited for analyzing how economies of countries can influence cross-border M&A deals. In line with its usefulness in these types of studies, there are several papers that have included it in various types of research on international M&A deals. (Chakrabarti et al., 2009) examine the connection between the factor and its impact on the BHAR returns of the acquirer over a 36-month period. Specifically, they analyze whether firms in countries with differences in GDP per capita end up with higher gains. Their results are both positive and significant, indicating that acquirers targeting firms in countries that are less similar with regards to GDP per capita manage to outperform companies that acquire firms in countries that are more similar at the GDP per capita level. Another influential study, written by (Ahern et al., 2015), also looks at GDP per capita, but focuses instead on the log value of acquirer GDP per capita and target GDP per capita, separately. In their results, they indicate that the acquirer GDP per capita is negatively, and significantly, correlated to bidder returns while the target GDP per capita is positively correlated with bidder returns. Additionally, (Erel et al., 2012) examine the difference in log GDP per capita and its impact on merger volume. Similarly to (Chakrabarti et al., 2009), they find that the factor is both positively and significantly correlated with their dependent variable. Yet another study, this time by (Rossi and Volpin, 2004), examines a similar factor, namely gross national product (GNP). In their results, they state that the log of GNP per capita has a positive and highly significant correlation to M&A deal volume. A curious twist to their results, however, comes with a second study they published a few years later. In (Rossi and Volpin, 2007), they examine motives behind cross-border M&A, and here they find that the log of GNP per capita has both a negative and significant correlation with the dependent variable. Thus, one can conclude from their studies that

the log of GNP per capita is a driver in the volume of M&A deals even though it serves the opposite purpose when it comes to the motive behind cross-border transactions. Another study, this time by (Steigner and Sutton, 2011), measures the difference in GDP between the acquirer and target countries. Using this factor as an independent variable in their regression on post-merger abnormal operating performance for the bidder firm, they find that the results are inconclusive. An important consideration regarding all of these studies is that they have differing ways of regressing GDP, in its various forms, on their dependent variables. Additionally, it is interesting to see how varied their results are. Regardless, the prevalence of GDP as an explanatory variable in studies on cross-border M&A is indicative of its importance to cross-border M&A deals at large. As for our hypothesis regarding GDP per capita, we hypothesize that it, and by extension economies and markets of nations, can create value for acquirers by being more disparate between the countries involved in a deal. We argue that this is due differing markets allowing for the introduction of new products as well as the use of cheaper or more educated workforces. Essentially, the acquirer can exploit differences to increase sales and optimize production processes.

Another variable that we have chosen to examine is the significance of the corporate tax rates on our dependent variables. Due to its ability to directly influence the profitability of companies, firms tend to do all that they can in order to lower how much they pay in taxes. Considering this pivotal role, it is not surprising that other authors have researched it to various degrees. One example is (Erel et al., 2012), who find that the difference in corporate income tax is both positively and significantly correlated with the number of transactions that are completed. Conversely, (Ahern et al., 2015) do not find a similar result when regressing the effects of the corporate tax rate on the CAR of the bidder. Instead, they state that there is no statistically significant correlation between the corporate tax rate and abnormal returns of the bidder. Making matters more interesting, (Ahern et al., 2015) also examine the importance of corporate tax rates on the volume of cross-border mergers, similarly to (Erel et al., 2012). When changing their focus to this dependent variable, their results change significantly. In fact, they find that the corporate tax rate is negatively, and significantly, correlated with M&A deal volume. An important consideration here is that (Ahern et al., 2015) do not use the difference between the two countries, but rather the log of the corporate

tax rate of the target country. Once again, we find that the results of studies can change drastically depending on how one measures the independent variable. Though prior research is inconclusive, we argue that the optimization of the tax rate will create value for companies. Due to this, we have chosen to research the difference in corporate tax rates. Our hypothesis is therefore that more differing tax rates between countries is beneficial for acquirers since that can make it possible to shift costs and revenues to lower the amount of taxes paid overall.

The next country-specific factor that we analyze is bilateral trade which is generally defined by the level of imports, exports, or both, between the acquiring country and target country. Due to it being a measure of how much two nations rely on each other for the purchase and sale of goods, the factor is particularly useful for measuring the economic ties between the countries. Prior studies that use it as an explanatory variable include (Chakrabarti et al., 2009), who define bilateral trade as the summation of exports and imports between the two countries. Their regressions show no correlation between the dependent and independent variables. However, when (Erel et al., 2012) define bilateral trade as the maximum of imports and exports between the two countries, they find that the factor is positively and highly significantly correlated with M&A deal volume. In another study, this time by (Ahern et al., 2015), bilateral trade is defined as the log of imports from the acquiring country by the target country. Conversely to (Erel et al., 2012), their results indicate that bilateral trade has a negative, and significant, correlation to both post-merger bidder returns and to M&A deal volume. This disparity once more highlights how varied results can be depending on the authors' choice of definition, but it is clear that bilateral trade has a role to play in M&A deals. We argue that bilateral trade is important for companies because it means that there is a demand for products between the nations. This means that the acquirer can either sell to the new market or produce goods in the target country and sell them in the home market. Due to this, we hypothesize that bilateral trade is positively correlated with the acquirer firm's performance.

Our next factor is the difference in current account of the acquiring country and target country. Though it is similar to bilateral trade, it has some distinct and important differences. Most notably of which is the fact that it accounts for more than simply the trade between the two countries involved in a given M&A deal. Since this

measure gives us a wider perspective of the balance of trade, based on overall imports and exports, for the country-pair, we have chosen to include it as well. Furthermore, it is also interesting to delve into the factor because no readily available prior research has included it as a variable in cross-border M&A deals. However, (Moeller and Schlingemann, 2005) put forth the importance of economic freedom, and uses an index that, amongst other things, includes trade policy. Therefore, by drawing inspiration from (Moeller and Schlingemann, 2005), and the effects of bilateral trade, we put forth the hypothesis that the difference in current account will be correlated to post-merger bidder returns.

Moving on to our interest rate variable, we have decided to include it because it plays a central role in the cost of borrowing. Not only is this important for companies who use debt to finance acquisitions, but it also has an impact on how much consumers spend. This, in turn, affects most firms with revenues driven by consumers. (Uddin and Boateng, 2011), in their analysis of M&A activity with regards to the UK, include the country's interest rate as one of their variables. In their findings, they state that the interest rate is negatively, and significantly, correlated with the number of outgoing M&A deals. Though individual country interest rates may be worth exploring, we contend that more meaningful insights can be gained from the difference between the countries tied to acquisitions. We contend this because a difference in interest rates has a few implications. One benefit is that it allows the acquiring firm to take on debt in the country with lower interest rates which can lower overall interest payments. Another perk is that particularly extreme interest rates can be a sign of poorly functioning economies which means there are potential bargain deals to be found. Due to these reasons, we have chosen to examine the difference in interest rate between the acquiring country and the target country. Furthermore, our hypothesis regarding this factor is that a larger difference between country-pair interest rates will lead to greater gains for the acquiring firm.

The next macroeconomic variable we analyze is inflation. Similar to the interest rate factor, inflation is particularly useful because it can be used to get an idea of the health of economies. Since extreme levels of inflation are likely to cause undue strain on companies that are affected by it, we believe that acquirers can find bargain deals by utilizing it. Due to this, we contend that a difference in inflation rates is

beneficial for acquiring companies. In their study, (Uddin and Boateng, 2011) cover a number of macroeconomic factors and regress their impacts on the volume of outgoing and ingoing M&A deals related to the UK. When they examine inflation, they find no statistically significant correlation between it and the volume of M&A deals. We consider this to be particularly striking because inflation is highly correlated with interest rates set in countries, yet their interest rate variable is significantly correlated with the dependent variable while inflation is not. Though (Uddin and Boateng, 2011) find no statistically significant results, our hypothesis remains that a larger difference in inflation will correlate with greater gains for the acquiring company.

Another interesting variable to study is the foreign exchange (FX) rate between the acquirer and target countries. In their analysis of post-merger abnormal operating performance of the bidder firms over a 3-year period, (Steigner and Sutton, 2011) define the FX rate as the relative strength of the target country's currency with respect to the U.S. dollar. They measure this by subtracting the average FX rate in the announcement year from the average FX rate during the sample period, and dividing the result by the average FX rate during the sample period. Using this 'relative strength' measure, they find no correlation between the FX rate and post-merger abnormal returns for the bidder firm. In a separate study, (Ahern et al., 2015) use the pre-announcement FX growth rate as an independent variable regressed on both M&A volume and on post-bidder abnormal returns. In their analysis of deal volume, they find that FX growth rate is both positively and significantly correlated with dependent variable. Similarly, when they examine the post-merger bidder returns, they also find that the FX growth rate is positively and significantly correlated with the dependent variable. In yet another study, this time by (Moeller and Schlingemann, 2005), the FX rate is defined as whether the acquiring country's currency was strong during the acquisition year when compared to its average strength versus the target currency over the sample period. This 'relative strength' measure is quite similar to that of (Steigner and Sutton, 2011) and, in line with their research, (Moeller and Schlingemann, 2005) find no statistically significant relationship between the dependent and independent variables. Motivated by the work of (Ahern et al., 2015), we have decided to expand on their research by making our variable the log of FX growth over our deal time-periods. Furthermore, basing our hypothesis on the positive and significant correlation found in their study,

we contend that our factor will positively correlate with abnormal post-merger bidder returns.

Another variable that is analyzed by (Moeller and Schlingemann, 2005) is the impact of the target country credit rating on the bidder firm gains. Their results, however, do not indicate any significant correlation between the variables. In another study, (Fauver et al., 2003) attempt to examine the impact that various factors have on the excess value achieved by the acquirer firm in cross-border M&A. Unlike the findings of (Moeller and Schlingemann, 2005), however, they do find a relationship between the country credit rating and bidder returns. In fact, their results indicate that the target country credit rating is both negatively and significantly correlated with bidder firm excess value. This means that it is better to invest in a country with a lower credit rating. Due to how our dummy variable is constructed, however, this relationship is the same as a positive correlation in our regressions. Therefore, by building on the findings of (Fauver et al., 2003), we believe that our newer dataset will show a positive correlation between our dummy variable and the long-term bidder return.

As indicated by the prior paragraphs, the vast majority of our macroeconomic variables have been researched to some degree before. Often with mixed results. There are, however, two other variables which we have not seen in any earlier studies, but due to their macroeconomic significance, we believe they are worth exploring. The factors in question are the unemployment rate and inequality (measured by the Gini index) of each country. More specifically, we are interested in probing the connection between the difference in unemployment rate, and inequality, of the country-pairs and the post-merger bidder returns. When it comes to unemployment, we argue that it can influence the success of deals because it has a direct impact on how much consumers spend and how competitive the labor market is. For example, a difference in unemployment rate can potentially be exploited by going to where labor is cheaper and more abundant. This can become more beneficial by exporting the cheaply made goods to the country with more consumer spending. As for the inequality index, we contend that a difference in inequality can be used in a similar fashion to unemployment, particularly with regards to labor costs. A higher level of inequality goes hand in hand with lower labor regulations, fewer unions, and lower salaries. Furthermore, lower levels of inequality are beneficial for consumer demand as more people are likely to have discretionary income.

Overall, we expect both of these factors to play a role in the outcomes of cross-border M&A deals, but due to a lack of readily available studies that include these variables, we will simply contend that they will prove to be significantly correlated with our dependent variables.

3.2 Cultural and Geographical Factors

Following both (Guiso et al., 2006) and (Ahern et al., 2015), we also define culture as "those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation". This is, according to (Guiso et al., 2006) a sufficiently narrow definition to study the link between cultural factors and economic outcomes. It is a known argument in previous literature that differences in national cultures have a negative impact on cross-border M&A performance due to high integration costs (Morosini et al., 1998). Integration of a firm is to a large extent about integrating values, processes, employees etc. As pointed out by (Ahern et al., 2015), this integration process is highly dependent on employees' abilities to work together as a group. Hence, one could imagine that this process would go smoother if employees share common values and beliefs. This can, in turn, be connected to the theories within behavioral economics about individuals preferences (Guiso et al., 2006). However, as documented in our data gathering, there are many deals between countries with highly differing cultures. The question is then, why would a company choose to invest in a country with differing beliefs? One possible explanation is that the higher costs will be outweighed by other benefits such as a higher degree of innovation, fundamentals, and geographical diversity, all leading to higher efficiency and thus greater gains. Intrigued by this, researchers tried to find an answer to the actual effects of cultural differences.

(Ahern et al., 2015) use a model of cultural distance measured by "trust", "individualism", and "hierarchy", as well as geographical distance to predict the intensity of cross-country relations. By regressing their results in lieu of this model, they find that the outcome of an M&A deal with a firm in a geographically and/or culturally distant country makes the return lower than if the target firm was less distant. Though this holds true for short-term announcement returns, there is, however, no evidence of a connection when analyzing longer-term returns.

In contrast to the general perception, (Morosini et al., 1998) and (Chakrabarti

et al., 2009) test the opposite hypothesis, namely that there is a positive relationship between cultural differences and deal gains. An important consideration, however, is that the sample in (Morosini et al., 1998) is limited to 52 deals between 1987-1992. Nonetheless, they do find a positive relationship between cultural differences and deal success, indicating that these deals lead to better routines and repertoires, innovation, entrepreneurship, and decision-making practices. In contrast to others, they choose to look at sales growth for the two years following the deal, arguing that since M&A in itself is an operational phenomenon, it is more effective to capture success with an operational measure. (Chakrabarti et al., 2009) find supporting results for this hypothesis, however, they also have a fairly small sample of 800 cross-border deals from 1991-2004.

In light of these contradictory findings, one cannot yet give a straight answer to whether cultural differences lead to gains or losses in the long-term. Even though innovation and efficiency could prevail, the majority of research suggests that cultural differences lead to lower gains. Hence, we hypothesize that cultural and geographical distances are inversely related to deal success.

3.3 Corporate Governance Factor

Previous studies have found clear evidence that the acquiring firms tend to come from countries with better shareholder rights and corporate governance standards while the targets tend to come from countries with weaker shareholder rights and corporate governance practices (Erel et al., 2012, Rossi and Volpin, 2004). The reason for this finding is believed to be that the target is undervalued due to higher agency and information asymmetry costs (La Porta et al., 2000, Bris et al., 2008, Erel et al., 2012). Furthermore, by reducing the cost of capital for these firms, value can be created (Volpin and Rossi, 2007). These findings are consistent with those of (Volpin and Rossi, 2004, Bris and Caboli, 2002). Even though a number of papers have found support for this hypothesis, the findings for the actual wealth effects are mixed, suggesting that the governance motive in cross-border M&A might not be the reason that targets tend to come from weaker governance countries. For example, (Moeller and Schlingemann, 2005) find the opposite relationship when looking at announcement gains, suggesting

that the investors do not believe in the governance motive. (Chakrabarti et. al., 2009) find that the effect from differences in corporate governance is positive and significant, even over a longer period of time, suggesting that potential synergies can be realized by merging companies regulated by different corporate governance laws. Their study provides some support for the governance motive, but it ignores whether it is the target or the acquirer that comes from nation with weaker governance standards. The most recent study, by (Drobetz and Momtaz, 2016), does not find any support for the governance motive as they find no marginal bidder wealth effects for firms that acquire targets that are regulated by either weaker or stronger corporate governance laws. However, these results are based on a short-term event window surrounding the announcement date, ignoring longer-term effects. Given the vast amount of literature suggesting that targets are undervalued because of weaker governance, we contend that it would be valuable to study the long-term performance of firms acquiring targets with weaker governance. Furthermore, the majority of older studies have used the index constructed by (La Porta et al., 1998). Even though slightly newer versions of the index have been developed by (Martynova and Renneboog, 2011), there is a clear need for a newer governance index. Since governance standards have changed substantially for some countries since (La Porta et al., 1998), we believe that it is valuable to create a new governance index (based on (OECD, 2017), see Appendix D, table 15 and 16 for specific descriptions and data). By doing so, we believe that our results will be a more accurate reflection of today’s regulatory environment. Based on the previous research and our newer data, we hypothesize that there is an inverse relationship between the relative strength of corporate governance laws of the target versus the acquirer and deal success.

3.4 Summary of Hypotheses

Hypothesis 1: The difference in GDP per capita is positively correlated with bidder returns.

Hypothesis 2: The difference in corporate tax rates is positively correlated with bidder returns.

Hypothesis 3: Bilateral trade is positively correlated with bidder returns.

Hypothesis 4: The difference in current accounts is correlated with bidder returns.

Hypothesis 5: The difference in interest rates is positively correlated with bidder returns.

Hypothesis 6: The difference in inflation rates is positively correlated with bidder returns.

Hypothesis 7: The size of the FX growth is positively correlated with bidder returns.

Hypothesis 8: The credit rating dummy variable is positively correlated with bidder returns.

Hypothesis 9: The difference in unemployment rate is correlated with bidder returns.

Hypothesis 10: The inequality in the target country is correlated with bidder returns.

Hypothesis 11: Cultural and geographical distances are inversely correlated with bidder returns.

Hypothesis 12: There is an inverse relationship between the relative strength of corporate governance laws of the target versus the acquirer and bidder returns.

4 Data and Methodology

4.1 Data Collection and Construction of Final Sample

For our analysis of cross-border M&A results, we start with a large sample of transactions which eventually becomes significantly smaller due to a lack of data as well as due to constraints that we impose. The initial sample comes from SDC Platinum database where we restrict the data to acquirers with a public status, percent owned of target company after transaction is over 50%, deal value is greater than or equal to \$1 million, and the transaction occurred between or within 20 specific countries. However, due to a lack of data, the number of nations included was truncated to ten. In alphabetical order, the remaining countries are as follows: Australia, Canada, France, Germany, Italy, Japan, Spain, Sweden, United Kingdom, and United States of America. The chosen countries are ten of the top countries when it comes to the highest number of mergers and acquisitions during our sample period which ranges from the beginning of 2000 to the end of 2014. For each transaction, we download several important char-

acteristics including Stock Exchange Daily Official List (SEDOL) and Committee on Uniform Securities Identification Procedures (CUSIP) identifiers, the announcement date, the effective date, and the deal value (in millions of USD).

The initial export, containing each of the constraints, yields a sample of 48,261 mergers and acquisitions. Since the vast majority of deals are domestic, we remove 39,602 in order to get our focus group which encompasses only cross-border deals. Of the remaining 8,659, the top five acquirer nations are the U.S.A. (2,518 acquisitions), the U.K. (1,972), Canada (1,792), Australia (606), and France (465). The top three are the clear leaders, responsible for 6,282 of cross-border acquisitions during our time frame. At the bottom of our list is Spain which was home to the acquiring company 142 times. Though that is only 6% of the acquisitions made by the U.S.A. and a mere 2% of our cross-border sample, it is still enough to average close to one acquisition per month across our entire sample period.

When it comes to the downloaded data, some of our firms have gone through multiple deals over the course of our time-frame. In most cases, this is not an issue since we have been able to retrieve data that shows deal information down to the month that it is announced and effective. Therefore, companies that have performed several mergers, during different time periods, will simply show up in our dataset more than once. On the other hand, a small subset of deals have been performed by the same company in the same month. Since we have no way of discerning the deals based on the data that we have retrieved, we have had to remove them from the dataset. A separate subset of deals are the ones where a firm was involved with more than one transaction in a single year. Since EPS data only exists on an annual basis, we have therefore had to adjust the results for companies with several transactions within a year by averaging their EPS values. This allows us to avoid double counting them in our analysis.

For our dependent variables: change in earnings per share (ΔEPS), CAR, and BHAR, the data was collected from several sources. Annual EPS data for the U.S.A. and Canada is from Compustat North America while the remaining countries' data was retrieved from Compustat Global Fundamentals. When it comes to the share price data, we downloaded monthly prices for the U.S.A. and Canada from The Center for Research in Security Prices (CRSP). To get the same data for the other eight

countries, we acquired daily share price data from Compustat Global Security Daily which we then converted to monthly prices.

Once we had gathered all of the data needed for our analysis, we used SEDOL and CUSIP numbers to merge them. Due to some M&A deals missing data, we further cleaned our set of transactions which brought the total number of deals down to 3,135. Surprisingly, this led to a shift in the rankings of which countries performed the greatest number of deals. Prior to the cleaning, the U.S.A. was in the lead, but due to a sharp drop in deals, from 2,518 to 833, the U.K. became the most common acquirer country with 1,079 deals.

4.2 Sample Characteristics

Out of our final sample of 3,135 deals (appendix B, tables 5-7), the U.K. and the U.S.A. make up over half of the dataset with roughly 1,900 transactions stemming from them. The remaining deals are more evenly spread out with the highest number of deals coming from Australia with around 320 transactions while the lowest number comes from Spain which had about 45 transactions. When it comes to statistics on the country-pairs, the data varies significantly. In most cases, each country has been both the target and the acquirer with each other country, but for 17-18 country-pairs, that is not that case. At the other extreme, we see that the U.K. was home to the acquirer for roughly 600 U.S.A. targets. Furthermore, when looking at the U.S.A. and the U.K. as a country-pair, they have a total of about 900 transactions between themselves, which again makes them an important outlier in our dataset.

Besides the country-level information regarding our M&A data, we can also look at the number of deals that have been completed each year. In appendix B, table 4, the number of deals are shown based on the effective date. Since the deals in 2000 need to be announced and effective in the same year, there are particularly few transactions in that year. When analyzing the other years, however, there is a cyclical pattern to the market for cross-border M&A. Leading up to the 2007 crash, there was a sharp increase in the number of completed transactions with around 360 deals in our samples for 2007 alone. Following the crash, the cross-border activity in our samples was cut down to its lowest point at roughly 120 deals - a drop of more than 50% in two years. After the market crash, the number of cross-border M&A deals started to move up

again, but was once more pushed down during the European debt crisis in 2013.

When we combine the country-level data with the number of M&A deals per year, we get graphs 1, 2, and 3, which can be found in appendix B. Each one shows how often the various countries participated in cross-border M&A deals as the acquirer and they are split apart based on the type of dependent variable used. Though there is some fluctuation in the graphs, an important conclusion that can be drawn is that the countries are fairly stable as a percentage of deals done throughout our sample time-frame. This tells us that it is unlikely that our results will be skewed at the country-level when we test the robustness of our findings during different sub-sample-periods.

Since each of our dependent variables have their own sample, differing only by the top and bottom 1% of deals that have been winsorized, we have also included the data for the mean, median, and standard deviation for each of our 15 variables. This information is displayed in appendix B, table 8, and shows that none of the factors are distinctly different when analyzed by dependent variable even though the samples differ slightly.

4.3 Methodology

In order to analyze the effects of country-level factors, we follow the standard approach within the literature and use a multivariate regression framework. The convention is to adjust for fixed effects to the largest extent possible. Nearly all previous literature adjust for country-year and country-pair level fixed effects in order to remove omitted variable bias (Chakrabarti et al., 2009, Ahern et al., 2015, Erel et al., 2012). Furthermore, in order to capture any specific events affecting a certain industry in a specific year, we also choose to adjust for industry-year fixed effects (Goergen et al., 2004, Bris et al., 2008, Malmendier et al., 2016). By doing so, we can more accurately measure the impact of our independent variables on the dependent variables.

When it comes to factors to control for, (Ahern et al., 2015) find the transaction value to be appropriate. Though they try to get more accurate results by controlling for this variable, in addition to the various fixed effects, they do not get any significant results for it. Other studies, such as (Moeller and Schlingemann, 2005), also try to control for deal sizes. Unlike (Ahern et al., 2015), however, they do find highly statistically significant results across the board for the deal size. Furthermore, all of the

regressions indicate that the coefficient is positive, meaning that larger deals are correlated with higher post-merger bidder abnormal returns over a short time period. In consideration of the results achieved by (Moeller and Schlingemann, 2005), we contend that the variable is worth controlling for and include it in all of our regressions.

In order to assess the importance of our country-level variables, we measure bidder gain by the three previously mentioned dependent variables: Δ EPS, CAR, and BHAR. Each of the variables cover three-year periods, but due to constraints imposed by the annual recording of EPS, we have split the three into two groups (i.e. one based on annual changes and the other based on monthly changes). The Δ EPS period goes from the year prior to the effective date to two years after the effective date in order to capture the increase or decrease in EPS from merging the two entities. The less constrained monthly share price data instead goes from the month prior to announcement to 36 months later. Since these two variables are based on monthly data, we chose to begin each transaction period before the announcement date in order to capture the announcement returns as we consider this to be a part of the overall return of the deals.

The motivation behind CAR and BHAR comes from the methodology used by (Chakrabarti et al., 2009) which is supported by earlier studies (Ritter, 1991, Franks et al., 1991, Barber and Lyon, 1997, Rau and Vermaelen, 1998). While (Ritter, 1991) argue for the use of both CAR and BHAR methodology, (Barber and Lyon, 1997) favor the BHAR method over CAR. They argue that BHAR is a more appropriate measure of long-term performance following corporate events. The main argument being that CAR is a biased predictor of BHAR. They do, in fact, find that in random samples, researchers would draw different conclusions using CARs in lieu of BHARs in roughly 4% of the situations. With this in mind, we have decided to run regressions on both measures to see whether results differ significantly. Later studies, such as the one by (Mitchell and Stafford, 2001), criticize the use of CAR and BHAR as long-term performance measures, due to cross-sectional dependence problems between firms. They advocate instead to use calendar-time portfolios (CTAR) as an alternative measure of long-term performance. However, like (Chakrabarti et al., 2009), we choose not to use this approach. First, because the cross-sectional dependence should be partially accounted for by adjusting for fixed-effects. Second, and more importantly, like (Chakrabarti et al., 2009), we want to study the cross-sectional variances in returns

as a function of differences in macroeconomic, cultural, and governance environments across countries. Based on (Chakrabarti et al., 2009), "the CTAR methodology does not lend itself to such cross-sectional analysis." Hence, for our study's purpose, CAR and BHAR become the most suitable measures of post-deal performance when using share prices.

As pointed out in our motivation, in order to also have a measure that does not include investor sentiment, we want to include ΔEPS . Furthermore, commonly known investment decisions, like mergers, are often reliant on being accretive to EPS. Since, according to finance theory, future accretion/dilution should be reflected by share price, this measure might not give us substantially differing results. However, (Andrade, 1999) find that the effects on share price are only visible for up to a year and a half following closing of the deal. Additionally, ΔEPS is a statistic that is prominently featured in the financial press and in formal offer documents (Firth, 1979). One paper that used the EPS methodology was (Hogarty, 1970). Thus, we include ΔEPS as a third dependent variable.

4.3.1 Calculation of Abnormal Returns

Motivated by the methodology in (Yung et al., 2008), we use the simple market model in order to calculate the abnormal return, which is derived as follows:

$$AR_{it} = R_{it} - R_{mt} \quad (1)$$

Let R_{it} be the stock return for firm i during the month of the deal announcement t . Similarly, R_{mt} is the return of the MSCI World Index m during the same month. MSCI World Index is chosen as the market benchmark as it includes all of the relevant countries. Another reason being the methodology in (Dissanaike et al., 2017). Using market-adjusted CARs they point out that "results do not materially change when using local indices".

Once the abnormal return has been calculated, the Cumulative Abnormal Return (CAR_{it}) can be computed as in formula 2. Additionally, formula 3 describes the process

used to get the Buy-and-Hold Abnormal Return ($BHAR_{it}$).

$$CAR_{it} = \sum_{t=1}^T AR_{it} \quad (2)$$

$$BHAR_{it} = \prod_{t=1}^T (1 + R_{it}) - \prod_{t=1}^T (1 + R_{mt}) \quad (3)$$

Since both CAR and BHAR cover 36-month periods, each deal contains the time frame encompassing the month prior to the announcement month to 36 months later.

4.3.2 Regression Framework

In our analysis of various country-specific factors on the success of cross-border mergers and acquisitions, we focus on three different measures of the dependent variable Y as proxies for performance: ΔEPS_{it} , CAR_{it} , and $BHAR_{it}$. Thus, our regression model is as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \cdots + \beta_k X_{k,it} + \gamma_2 D_{2i} + \cdots + \gamma_n D_{ni} + u_{it} \quad (4)$$

Here, β_0, \dots, β_k and $\gamma_2, \dots, \gamma_n$ are unknown coefficients to be estimated while X_1, \dots, X_k are the independent variables and D_2, \dots, D_n represent the fixed effects we control for. Each proxy represents a 36-month period that encompasses the deal itself and the years following it. For most of our independent variables, we include five different fixed effect controls: host-country-year, source-country-year, country-pair, host-industry-year, and source-industry-year. These are used to capture unobserved heterogeneity that would otherwise contaminate our analysis. The host-country-year and source-country-year controls are included in order to capture country specific factors that remain constant across the time frame of our analysis. Examples of these include factors such as religion and language. The country-pair control, on the other hand, is included because some of the countries have fixed effects relative to one another. Prominent examples of this type of fixed effect are countries that share the same currency, such as the Euro, and trade agreements. Finally, the host-industry-year and source-industry-year controls are inserted because some industries may have unobserved fixed effects for the duration of our sample period. Additionally, due to the likelihood that our data is heteroskedas-

tic at the country-pair level, we have also chosen to cluster our standard errors with that in mind in order to mitigate unwanted noise in our results. Though most of our independent variables exhibit a difference under scrutiny over time, and can be found in column 3 of our regressions, we have chosen to create two other regression groups because not all of our variables fit that criteria. In the first of these, column 1, we have country-specific factors that do not change significantly over time which includes country credit rating and the perceived trustfulness of citizens. Since attempting to control for this type of fixed effect would end up capturing the lack of variability at the country level, we therefore cannot control for country-pair effects nor source-country-year effects. In the second group, column 2, we do not control for any fixed effects except for the host-industry-year and source-industry-year. This group contains the inequality index known as Gini as well as our index for corporate governance. Similarly to the prior group, this one contains factors that do not change under scrutiny over time which is why we have also removed host-country-year fixed effects.

A detailed description of each factor can be found in the appendix A. Since we have three different dependent variables (ΔEPS , CAR , and BHAR), and three separate groupings of the fixed effects, we end up with a total of nine regression scenarios.

Besides the regression itself, we have also chosen to alter some of our independent variables by logarithmically transforming them. Where necessary, such as for differences between countries, we have also taken the absolute value of the factor beforehand. This has been done for two main reasons. First, it is useful for non-linear relationships because it makes the data better at fitting a linear model. And secondly, logarithmic transformations allow us to distribute highly skewed variables into more approximately normal distributions.

5 Results

In this section, we display our empirical findings on the role that various country-specific factors have in the post-merger outcomes of acquiring companies. We break down this analysis into three sections based on the type of country-specific factor being discussed. In the first category we present the impacts of various macroeconomic variables such as GDP per capita and inflation. In the second category we cover the

influence of cultural and geographic factors such as trust and distance. Finally, in the third category we review how corporate governance standards can sway the results achieved by the bidder firm.

5.1 Effects of Macroeconomic Factors on Bidder Gains

Starting with the difference in GDP per capita $\ln(|\Delta GDPcap|)$, we find that it is not significantly correlated with ΔEPS (table 1), but that it does play a role when measuring bidder returns using CAR or BHAR. In these regressions, shown in tables 2 and 3, we find that the variable has a negative coefficient. In the regression on CAR, the coefficient is (-0.06) with a p-value significant at the 10% level. When analyzing its impact on BHAR, however, the coefficient becomes (-0.08) and is significant at the 5% level. These results suggest that acquirers perform better, post-acquisition, if they acquire firms in countries that are more similar with regards to GDP per capita. These findings are the opposite of what (Chakrabarti et al., 2009) present in their analysis of how much bidder BHAR is impacted by the variable. There are four potential reasons for this discrepancy. First, (Chakrabarti et al., 2009) calculate the difference in GDP per capita by subtracting the host-country GDP per capita from the source-country GDP per capita and then dividing the result by the sum of the respective countries' GDP per capita. Second, their dataset starts with different criteria such as all transactions being valued at \$100 million or more and the transactions occurring during 1991-2004. Additionally, they have 43 host countries and 65 source countries. Third, they derive their dependent variable differently. Unlike us, they choose to start their 36-month period during the month of the effective date which means that they do not account for changes in the stock price that are related to the announcement of the deal. Furthermore, they use the cumulative market return for the acquirer country instead of a world index. The fourth and final reason for the discrepancy between our empirical studies is that they do not control for the same fixed effects as they only include the source-country fixed effects and the year fixed effects. Though our results are not aligned with those of (Chakrabarti et al., 2009), they are similar to those of (Ahern et al., 2015) who indicate that host-country GDP per capita is negatively and significantly correlated with bidder returns. However, they also find that the source-country GDP per capita is positively correlated with bidder returns,

but the coefficient is noticeably smaller and less significant. Overall, our results do not line up with our hypothesis as they seem to indicate that there is a negative correlation between the difference in GDP per capita and bidder returns. This can be due to a few reasons including that countries that are more similar economically are likely to be more culturally alike. Another reason might be that countries with more similar GDP per capita are more likely to be interested in similar products. This can drive sales between the countries depending on the industry. Similarly, there is an argument to be made for limiting losses rather than making further gains. This can be due to factors such as costs associated with merging countries in two distinctly different countries.

Regarding country credit rating *CountryRating*, our hypothesis is that the "target country credit rating is positively correlated with bidder returns". In theory, this means that the country with the lowest credit rating (which has a score 9 in the dummy variable) should give a higher return than one of the higher ranked countries. This is because the country credit rating could be seen as a proxy for economic development (Fauver et al., 2003, Moeller and Schlingemann, 2004). We do find support for this when using BHAR. As can be seen in table 3, the coefficient is positive at (0.03) with a p-value significant at the 5% level. This implies that deals where the target comes from a country with lower credit rating performs slightly better. So, in contrast to (Fauver et al., 2003, Moeller and Schlingemann, 2004), we find some evidence that it is in fact more profitable to invest in a less developed country, when using credit rating as a proxy. However, the variable is not robust to the choice of success measure, as we find no significance using ΔEPS or CAR.

One reason for the differing results might be that there are too many effects from changes in country credit ratings. For example, it increases the cost of capital, the country's divestments generally increase, and usually it changes the patterns of funding and acquisition activity (Baker McKenzie, 2017). Moreover, some economies are more resilient to changes than others and will be affected differently by a decrease or increase in credit rating. Hence, one explanation for our lack of consistent significance may be that our dataset includes too few, or similar, countries and thus might not be diverse enough to capture effects from differences in credit ratings. Another cause that might explain the insignificance is that even if a decrease in credit rating could lead to value investing opportunities, this does not necessarily imply that these firms will

perform better in the long term. At least not within a few years of the acquisition.

Regarding foreign exchange $\ln(|FX|)$, we do not find any significance in our results in any of the regressions. This underlines earlier findings by (Moeller and Schlingemann, 2005) and (Steigner and Sutton, 2011) who do not find a connection either. However, their studies use different "relative strength" measures for the FX rates. Since we instead choose to expand and define our variable more in line with (Ahern et al., 2015) it is more interesting that we do not instead find similar results as them. The economic interpretation might be related to the time frames we are studying. (Ahern et al., 2015) focus on short-term effects. And, as shown by authors such as (Erel et al., 2012), FX rate differences do have valuation affects in the short term, affecting, for example, the volume of M&As. In the long-term, however, FX rate differences can have both positive and negative effects depending on which currency the company is receiving and paying its revenues and costs in, respectively. Furthermore, the country in which the company has structured debt and interest payments also complicates matters. Lastly, a company can hedge currency exposure in the short-term through derivatives contracts or in the long-term by structural changes to operations or diversifications. Therefore, this variable can be seen as transforming into a company-level variable in the longer-term, which may be a cause for the insignificant results at the country-level. Overall, we do not find support for our hypothesis. Thus, for future research, it would be more valuable to analyze this variable on a company-level. The focus should then rather be on how companies hedge themselves and how this correlates to success.

When it comes to the inequality factor (as measured by Gini), there are no readily available studies that have analyzed it in this context, i.e. connecting it to the success of M&A deals. Due to this, it is particularly interesting that the variable is significant when using ΔEPS as the success measure. As seen in table 1, Gini has a positive coefficient of (3.22), with a p-value significant at the 10% level. This means that countries with higher income inequality are better investments for foreign firms. This might not be too surprising, as employee rights are lower, and the pay gap is larger, the acquirer can exploit cheap labor in these economies. This could be especially profitable if the acquirer can export the products to the acquiring country or elsewhere. The factor is, however, not significant when regressing it on CAR or

BHAR (tables 2 and 3). Thus, it seems like the factor is affecting the earnings of the company rather than share price. It might be that the information in earnings is not captured in the share price or that there is other noise or signaling in the share price, overshadowing the effect of inequality.

Another factor that has not been explored by other authors is the difference in unemployment between the two countries $\ln(|\Delta UnempRate|)$. Again, the variable gives us insignificant results for CAR and BHAR, but significant results when running it on ΔEPS . As seen in table 1, $\ln(|\Delta UnempRate|)$ has a positive coefficient of (0.22), with a p-value significant at the 5% level. Hence, the result suggests that it is better to invest in a country with a larger difference in unemployment. One economic interpretation could be that unemployment tends to correlate with recessions, and general low economic activity. Hence, recessions and high unemployment could create cheap investment opportunities. Then, once the economy rebounds in the long-term, the investment pays off more than if there were no difference in the unemployment rate. Furthermore, a difference in unemployment rate has the potential for allowing companies to transfer segments, such as manufacturing, to the country with higher unemployment rate which will likely make labor costs lower. Additionally, the products can then be sold in the nation with the lower unemployment rate since it is likely to have higher consumer discretionary spending.

Together, these findings do support our hypotheses that inequality and differences in unemployment correlate with deal success. However, since the effects are only significant in EPS and not in CAR or BHAR, we believe this gives cause to further investigate the variables in the future.

When it comes to the impact that the difference in interest rates $|\Delta InterestRate|$ has on cross-border M&A, we find significant results for ΔEPS . In this regression, the coefficient is negative at (-2.15) and significant at the 5% level. Similar to (Uddin and Boateng, 2011), who find that the interest rate is negatively correlated with the number of outgoing M&A deals, our results indicate that the interest rates of the involved countries are important to consider in cross-border M&A deals. Due to the central role of interest rates in the respective economies of the various countries, there are a few potential reasons for why it can be unfavorable for a company to acquire a firm if the interest rates between the acquirer and target countries are more disparate.

One explanation is that the interest rates are tied to monetary policy. In turn, it can be argued that acquirers perform better post-acquisition if the two economies are more closely aligned. Furthermore, interest rates that are particularly unlike may signal that one country is struggling. In this case, the difference in interest rates is not important for how much the acquirer can gain, but rather how much it can avoid losing by not having operations in a nation with a poorly performing economy. Though we find significant results when regressing our interest rate variable on ΔEPS , we do not find any significant results when regressing it on CAR or BHAR. Again, the difference in interest rates is negatively correlated, but the results are not significant. These results cast some doubt on our other result as it is possible that other factors are influencing the outcomes of deals. As mentioned earlier, the difference in interest rate has the potential to be disadvantageous, but there are variables related to interest rate that may negate those downsides. For example, taking on debt in a country with lower interest rates could make the acquisition cheaper over time. Additionally, a particularly extreme interest rate may be correlated with a recession since the monetary policy is either loose or strict in order to balance other economic factors such as inflation, lending, and borrowing. This can lead to cheaper deals if the target company is struggling simply due to an economic downturn.

Another variable that we analyzed but only found significant results for in one of the regressions is bilateral trade $\ln(\text{BiTrade})$. This time, the coefficient is positive at (0.42) and significant at the 1% level for the regression on CAR. In prior studies, the findings have varied greatly, so perhaps it should not be too surprising that the regressions on ΔEPS and BHAR provide no significant results. It is worth pointing out, however, that the coefficient is positive for all three regressions. In general, our results are most closely aligned with (Erel et al., 2012) who state that bilateral trade has a positive correlation with M&A deal volume. Furthermore, (Chakrabarti et al., 2009) find no significant results when analyzing effects on BHAR over a 36-month period which is in line with our data for ΔEPS and BHAR. In contrast to our results, however, (Ahern et al., 2015) argue that that bilateral trade has a negative correlation to post-merger bidder returns as well as to M&A deal volume. Though the mixture of studies on the subject thus far have proven to be inconclusive overall, there are some good arguments in favor of more bilateral trade being beneficial for post-merger bidder

returns. One reason is that countries who trade with each other are likely to be more similar culturally. This can lead to lower friction during the merging process which lowers integration costs. Another reason in favor of more bilateral trade is that it serves as a proxy for how intertwined the country-pair economies are. This is a good indicator for whether the acquirer and target markets will move in tandem, and therefore of the potential upside that comes with market growth. Additionally, countries with more bilateral trade are more likely to have similar tastes in products and services. This means that consumers in the target country are likely to be more open to new products and services from the acquiring company. Though there are economic interpretations for our positive and significant results, there are also arguments that cast doubt on whether bilateral trade is beneficial in cross-border M&A. For example, countries that are more similar are less likely to provide diversity which can be beneficial for growth. Furthermore, target countries with less bilateral trade are less likely to have similar products and services which can, potentially, make it easier to break into an untapped market. Overall, our findings strengthen arguments in favor of bilateral trade having a positive relationship with bidder returns, but there is clearly a need for further research on the subject.

When it comes to differences in current account $\ln(|\Delta CA|)$, we do not find any significant results. This is not in line with (Moeller and Schlingemann, 2005) who find negative coefficients for more restrictive economies. However, their economic freedom index includes several other factors, and not just trade related ones. Therefore, even though current account could be seen as a proxy for an economy's general openness, our insignificant results suggest that current account by itself does not matter for the specific deals. Given our results for bilateral trade, it is likely that the trade and policies between the exact country-pairs are more important than the target being a net exporter or importer in general.

Switching to the difference in inflation $\ln(|\Delta Inflation|)$, we find some contradictory results. In the regression on ΔEPS , the coefficient is (-0.13) and significant at the 5% level, but the coefficient from the regression on CAR is (0.04) and also significant at the 5% level. Furthermore, the regression on BHAR is flat and insignificant. Since (Uddin and Boateng, 2011), who analyze the effects of inflation on inbound and outbound M&A deals, find no significant correlation between the independent variable and their

dependent variables, our result for BHAR is the most closely aligned to their study. Though it is possible that the difference in the levels of inflation is not correlated with bidder returns, there are arguments in favor of a positive relationship and a negative relationship. Similarly to the difference in interest rates, the arguments are tied to the economic conditions of the countries involved. Therefore, a reason in favor of more disparate rates of inflation is that the acquiring firm may be in a country with an optimal inflation rate while the target is not. This can be an indicator of suboptimal economic conditions for the target which can lead to a loss in value for it. In turn, this means that the acquirer can get a bargain deal. When it comes to economic interpretations that support more similar inflation rates, one argument is that it is better for firms to avoid extreme interest rates. This ties into the financial difficulties that can be imposed on a firm by a particularly high or low inflation rate. An important note here is that this means that it is more rare to see cross-border acquisitions between two countries that both have extreme inflation rates. This means that a potential reason for the results we get from ΔEPS is that most of our observations occur in countries with more optimal levels of inflation. Due to this, the negative coefficient found for ΔEPS is going to be influenced more by similar inflation rates that are beneficial versus inflation rates that are both constraining. This does not provide a balanced view and further serves to muddy the water in terms of finding a clear result. Overall, however, our result for CAR is in line with our hypothesis, but when considered alongside our other results, the findings are inconclusive. This is not entirely surprising, though, since inflation is more likely to serve as a proxy for underlying macroeconomic variables. This makes it more difficult to find significant results that are consistent and suggests that other factors should be investigated instead.

When it comes to the impact that the difference in taxes $\ln(|\Delta Tax|)$ has on bidder returns in cross-border M&A deals, we find similar results for CAR and BHAR. In the regression on CAR, the coefficient is (-0.07) and significant at the 10% level while BHAR has a coefficient of (-0.08) with a p-value at 5%. However, we do not find any significant results for ΔEPS , but the coefficient is positive. When comparing our findings to those of other studies, our significant results are most closely aligned with (Ahern et al., 2015) who state that the corporate tax rate is negatively correlated with M&A deal volume. In contrast to our findings, however, (Ahern et al., 2015)

find no significant correlation between tax rates and bidder returns while (Erel et al., 2012) state that the difference in tax rate is positively and significantly correlated with M&A activity. Since our results indicate that a greater difference in tax rate is disadvantageous for the acquirer, they do not line up with our hypothesis. As stated in our hypotheses section, a positive relationship between $\ln(|\Delta\text{Tax}|)$ and bidder returns could be explained by potential gains from legally changing the location of the acquirer company’s headquarter and by the use of tax shields. When it comes to the negative correlation found in our results, however, we contend that it is more likely that the difference in tax rates is correlated with other factors that are actually the cause of the results. Some of the potential underlying factors that we have considered are the similarity between markets, economies, and cultures, as well as costs of assimilation and synergistic benefits.

5.2 Effects of Cultural and Geographic Factors on Bidder Gains

Given the previous literature, we expected to find results supporting the largest study on cultural factors by (Ahern et al., 2015) which states that greater cultural division is a negative factor for the acquirer. In contrast to (Ahern et al., 2015), we find mixed results. Cultural differences do not appear to have any significant impact on ΔEPS or BHAR, as seen in tables 1 and 3. However, the results change when using CAR as the success measure. It can be seen in table 2 that the variable for how trusting people are ΔTrust has a positive coefficient (0.51) with a p-value significant at the 5% level. This implies that deals between two countries that are more culturally disparate actually perform better than deals between countries that are more culturally similar. This supports the findings by (Morosini et al., 1998, Chakrabarti et al., 2009), who state that diversity might lead to benefits outweighing the costs. When we look at the difference in individualism $\Delta\text{Individualism}$, however, we do not find any significant results. Furthermore, the coefficients are mixed as the result in table 1 are positive while the remaining two are negative. Though the results are not statistically significant, the coefficients for CAR and BHAR are consistent with our hypothesis and are in line with the findings of (Ahern et al., 2015), that cultural distances are inversely related to deal success. Overall, the lack of consistent significant results might suggest

that cultural factors do not play that big of a role in deal success over the longer term. One economic interpretation is that in the long run, the costs of integrating culturally different companies might be outweighed by the benefits from diversity, such as innovation, better routines, entrepreneurial-thinking, and more efficient decision-making practices. Therefore, the drawbacks and benefits of cultural differences equal out over time, leading to insignificant or inconsistent variables. This interpretation fits well into the literature considering the contradictory findings.

Turning to geographical distance $\ln(Distance)$, the coefficients are close to zero for all regressions. In the regression on CAR (table 2), however, we find a slightly positive coefficient of (0.03) with a p-value significant at the 5% level. Since the coefficient is positive, the result implies that deals between countries that are further apart perform slightly better than deals between countries that are geographically closer to each other. Again, this is not in line with (Ahern et al., 2015). Furthermore, it does not provide support for the findings by (Erel et al., 2012). They find that geography is an important determinant of the likelihood of a merger happening and that the shorter the distance between two countries, the more likely it is that we will observe acquisitions between them. The reason, they argue, is that these countries are more likely to have similar cultural backgrounds and may therefore experience lower integration costs. However, as argued by (Morosini et al., 1998, Chakrabarti et al., 2009) different cultural backgrounds might also provide several benefits, and therefore our results are more in line with their research. Thus, the economic interpretation of coefficients being close to zero is that there are potentially both costs and benefits from merging entities that are culturally and geographically apart.

In conclusion, these results do not give clear support for our hypothesis that cultural and geographical distances are inversely related to deal success. Nonetheless, we do find some significant results indicating that cultural and geographical factors affect deal outcomes. However, what can be interpreted from the mixed results and previous literature is that due to both positive and negative effects from distances, these variables may become less significant in the long-run. This is an important consideration for further research and for companies engaging in cross-border acquisitions.

5.3 Effects of Corporate Governance Standards on Bidder Gains

When analyzing the results for the corporate governance index $\Delta GovernanceIndex$, we find support for our hypothesis and the governance motive for cross-border M&A when using CAR and BHAR as success measures. Running the regression on CAR, as can be seen in table 2, we have a negative coefficient (-0.16) with a p-value significant at the 5% level. This implies that if the target has a lower governance standard than the acquirer, then the deal performs better in the long run in comparison to when the acquirer has lower governance standards than the target. Using BHAR, in table 3, gives almost exactly the same result with a negative coefficient (-0.15) significant at the 5% level. This clearly supports the governance motive discussed by (Erel et al., 2012, Rossi and Volpin, 2004, 2007, La Porta et al., 2000, Bris et al., 2008), that acquiring firms tend to have better governance standards and shareholder rights than the target. The economic interpretation could be, as suggested by (La Porta et al., 2000, Bris et al., 2008, Erel et al., 2012), that the target is undervalued due to higher agency and information asymmetry costs, and therefore value is created in these deals. The results are also partially in line with (Chakrabarti et al., 2009), suggesting that synergies can be realized due to merging companies with different corporate governance laws. However, our results are not in line with the most current research by (Drobetz and Momtaz, 2016) who find no support for the governance motive. The main distinction between their study and ours, though, is the choice of time horizon. Hence, one possible explanation is that value is created over time when integrating the new company and while improving overall governance and shareholder protections. Therefore, their short-term return window may not have captured the eventual changes to acquirer returns due to governance standards.

In conclusion, when focusing on long-term CAR and BHAR for companies involved in cross-border M&A deals, governance seems to play a role in the deal outcomes. An important point to mention, though, is that we do not see any significant results supporting the governance motive when we analyze effects on ΔEPS , as seen in table 1. However, the coefficient does still holds the same negative sign. Therefore, in spite of lacking significance using ΔEPS , we conclude that there is enough results supporting our hypothesis that there is an inverse relationship between the relative strength of

corporate governance laws of the target versus the acquirer and deal success.

Table 1

Regression on ΔEPS

In this table, the dependent variable is the ΔEPS for the acquiring company, from the year prior to the effective merger date to two years after the effective date. Yearly data from between 2000-2014. All three regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variable	Acquirer ΔEPS		
	(1)	(2)	(3)
CountryRating	0.00 (0.04)		
ΔTrust	0.84 (0.68)		
$\Delta\text{Individualism}$	0.15 (1.36)		
$\ln(\text{Distance})$		-0.08 (.06)	
$\ln(\text{FX})$		0.03 (0.04)	
Gini		3.22* (1.66)	
$\Delta\text{GovernanceIndex}$		-0.40 (0.28)	
$\ln(\text{BiTrade})$			1.02 (0.76)
$\ln(\Delta\text{GDPcap})$			0.03 (0.11)
$\ln(\Delta\text{CA})$			0.19 (0.18)
$\ln(\Delta\text{Inflation})$			-0.13** (0.06)
$ \Delta\text{InterestRate} $			-2.15** (1.02)
$\ln(\Delta\text{Tax})$			0.14 (0.17)
$\ln(\Delta\text{UnempRate})$			0.22** (0.09)
$\ln(\text{DealValue})$	0.02 (0.03)	0.01 (0.02)	0.29 (0.19)
Acquirer-Country-Year FE	Yes	No	Yes
Target-Country-Year FE	No	No	Yes
Country-Pair FE	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes
R^2	0.21	0.16	0.27
Adjusted R^2	0.09	0.07	0.10
N	3,135	3,135	3,135

Table 2

Regression on CAR

In this table, the dependent variable is CAR for the acquiring company, going from the month prior to announcement to 36 months later. Monthly data from between 2000-2014. All three regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variable	Acquirer CAR		
	(1)	(2)	(3)
CountryRating	0.02 (0.01)		
Δ Trust	0.51** (0.24)		
Δ Individualism	-0.67 (0.42)		
$\ln(\text{Distance})$		0.03** (0.01)	
$\ln(\text{FX})$		0.00 (0.01)	
Gini		0.05 (0.42)	
Δ GovernanceIndex		-0.16** (0.07)	
$\ln(\text{BiTrade})$			0.42*** (0.16)
$\ln(\Delta \text{GDPcap})$			-0.06* (0.03)
$\ln(\Delta \text{CA})$			0.06 (0.04)
$\ln(\Delta \text{Inflation})$			0.04** (0.02)
$ \Delta \text{InterestRate} $			-0.29 (0.18)
$\ln(\Delta \text{Tax})$			-0.07* (0.04)
$\ln(\Delta \text{UnempRate})$			0.04 (0.03)
$\ln(\text{DealValue})$	-0.02*** (0.01)	-0.02*** (0.01)	-0.02*** (0.01)
Acquirer-Country-Year FE	Yes	No	Yes
Target-Country-Year FE	No	No	Yes
Country-Pair FE	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes
R ²	0.21	0.15	0.25
Adjusted R ²	0.08	0.06	0.07
N	3,135	3,135	3,135

Table 3

Regression on BHAR

In this table, the dependent variable is BHAR for the acquiring company, going from the month prior to announcement to 36 months later. Monthly data from between 2000-2014. All three regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variable	Acquirer BHAR		
	(1)	(2)	(3)
CountryRating	0.03** (0.01)		
Δ Trust	0.23 (0.23)		
Δ Individualism	-0.24 (0.28)		
ln(Distance)		0.01 (0.01)	
ln(FX)		0.00 (0.01)	
Gini		0.07 (0.46)	
Δ GovernanceIndex		-0.15** (0.06)	
ln(BiTrade)			0.16 (0.17)
ln(Δ GDPcap)			-0.08** (0.03)
ln(Δ CA)			0.05 (0.05)
ln(Δ Inflation)			0.00 (0.02)
Δ InterestRate			-0.24 (0.18)
ln(Δ Tax)			-0.08** (0.04)
ln(Δ UnempRate)			0.02 (0.03)
ln(DealValue)	0.00 (0.00)	0.00 (0.01)	-0.01 (0.01)
Acquirer-Country-Year FE	Yes	No	Yes
Target-Country-Year FE	No	No	Yes
Country-Pair FE	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes
R ²	0.23	0.16	0.28
Adjusted R ²	0.11	0.07	0.11
N	3,135	3,135	3,135

6 Robustness Tests

6.1 Robustness Before and After the 2008 Financial Crash

Due to the widespread effects of the financial crisis in 2008, we are particularly interested in ensuring that our findings do not change over time. This is especially important since the companies in our sample are likely to have experienced a period of decreased returns and increased difficulty in allocating funding for M&A deals. In order to test this, we analyze the robustness of our results over time. Therefore, we have split the dataset into two time-periods: one leading up to the 2008 financial crisis and one following the crisis. The results of the robustness tests can be found in tables 9-11, in appendix C.

Starting with the robustness tests of our results from the regressions on ΔEPS (table 9), we find that there is indeed a stark difference between the findings in the sub-sample periods. In the years leading up to 2008, both CountryRating and ΔTrust are significant with negative and positive coefficients, respectively. In the years following the crisis, however, both factors lose their significant results. Furthermore, both of the coefficients flip signs which hints at a hidden but important change. Besides changes between the sub-samples, it is also clear that none of our four significant results from the full sample period are represented in either of the two new time-periods. Unlike many of the other variables, however, they mostly have the same sign before the coefficient which suggests that our economic interpretations of them are still valid. For example, Gini still has a positive coefficient which indicates that countries with higher income inequality are better to invest in than countries with lower income inequality. This supports our economic interpretation that acquirers can potentially exploit cheap labor and less extensive employee rights which can, in turn, allow them to outperform when compared to companies that acquire firms with less income inequality.

Moving on to the time-related robustness check of our results from the regression on CAR (table 10), we get more promising findings than in ΔEPS . One of the first things to notice is that the vast majority of the variables do not change significantly between the two time-periods. Indeed, many are close to identical. This suggests that CAR, as a dependent variable, is less susceptible to being altered by swings in the global financial markets than ΔEPS . Furthermore, unlike the robustness check of the

prior dependent variable, the variables with significant results from the full-sample regression on CAR are largely represented in the sub-sample regressions. Out of the seven factors that were significant in the original regression, five are still significant and also keep their sign before the coefficient. Three of the factors, $\ln(\text{Distance})$, $\Delta\text{GovernanceIndex}$, and $\ln(|\Delta\text{Tax}|)$, are only significant in the years leading up to the financial crisis. However, the remaining two, $\ln(\text{BiTrade})$ and $\ln(|\Delta\text{GDPcap}|)$, are particularly interesting because their results are significant in both sub-sample periods. This leads us to suspect that we are on the right track with our economic interpretations of their importance for cross-border M&A deals.

The last time-related robustness check is from the regression on BHAR which can be found in table 11. Similarly to the robustness check of CAR, the majority of the variables retain their coefficient. This leads us to think that success factors that are based on share price, rather than net income, are better at providing accurate results over time as well as during economic downturns. Furthermore, all of the four variables that show significant results in the original regression are significant in one time-period or the other while retaining the sign before the coefficient. None of the factors have significant results in both sub-sample periods, but these findings suggest that our economic interpretations are likely on the right track. Drilling down on these results further, we find that only CountryRating is significant in the original regression and in the years following the crisis. The remaining three factors are all significant in the years preceding the economic downturn. Similarly to our findings in the robustness check of CAR, the variables that are only significant in one of the sub-sample periods indicate that some of our results are driven primarily by one time-period.

6.2 Robustness when Excluding the U.S.A.

Besides analyzing the robustness of our results over time, we are also interested in exploring how our findings hold up when we exclude acquirers from the U.S.A. The main reason for performing this type of robustness test is that the U.S.A. is particularly overrepresented in the global M&A market and plays a large role in our dataset as well. Due to this, we want to examine how robust our results are without the influence of these acquirers (appendix C, tables 12-14).

In the first robustness test on ΔEPS , found in table 12, we get some mixed results.

One thing that stands out is that most of the factors have similar results. There are a few exceptions including $|\Delta\text{InterestRate}|$ which goes from having a negative and significant coefficient to not being significant and having a positive coefficient. Besides that, however, both $\ln(|\Delta\text{Inflation}|)$ and $\ln(|\Delta\text{UnempRate}|)$ show significant results in the original regression and in the robustness test. Furthermore, their results are quite similar in both regressions with $\ln(|\Delta\text{Inflation}|)$ being particularly comparable. These findings indicate that, at large, US acquirers do not alter our results to a great degree. Since the US is home to the acquiring company in over a quarter of our sample of cross-border M&A deals, we contend that the lack of changes in the robustness test is due to US acquirers experiencing similar returns, based on ΔEPS , as those in our other sample countries.

Switching our focus to the robustness test on CAR without the U.S.A. acquirers, in table 13, we again find positive results. Similar to ΔEPS , most factors have comparable results in both regressions. There are some notable exceptions, however, such as $|\Delta\text{InterestRate}|$ which does not have a significant result in the original regression, but has a result significant at the 5% level in the robustness regression. This tells us that the U.S.A. acquirers produce a large amount of noise in our dataset with regards to interest rates which can be caused by dissimilarity between the factor for the U.S.A. acquirers and acquirers from the remaining nine countries. Besides the differences between the regression, we also find that five out of the seven significant results in the original regression remain significant in the robustness test. This further proves that the U.S.A. acquirers do not notably alter our results in all cases. Reasons behind this finding are likely tied to the performance of US acquirers as well as the similarity of many of the variables when compared to their counterparts from other countries in our sample. An example of the similar factors is ΔTrust which has a positive coefficient significant at the 5% level in both regressions. This illustrates that the trust factor is a useful measure for cultural differences and that M&A deals between countries with more dissimilar trust indexes is correlated with higher bidder returns, whether the U.S.A. acquirers are considered or not.

In the last robustness check we examine the impact of removing the U.S.A. acquirers from the regression on BHAR. The results can be found in table 14. Once more, the findings are quite similar to those from the regressions on the full sample.

In fact, out of the four factors that were significant in the original regression, three are significant in the robustness check. The only variable that lost its significant result is CountryRating which has a positive coefficient, significant at the 5% level, in the original regression, while the robustness check shows a coefficient of (0.00) that is not significant. This change suggests that the country driving the original results is the US. With it removed in the robustness regression, our result for the CountryRating variable now becomes entirely inconclusive when measured against BHAR. Though there are differences, as seen in the prior robustness checks as well, it is important to point out that overall, our results are not significantly changed by removing the U.S.A. acquirers. Even though they make up a quarter of the original dataset.

Overall, none of our factors have significant results across all robustness checks. This is line with our original results where none of the explanatory variables were consistent across all three dependent variables. These findings indicate that the U.S.A. is not the reason for the lack of consistency. Though none of our country-factors have statistically significant results across the board, we are particularly drawn to the results for three of the variables: $\Delta\text{GovernanceIndex}$, $\ln(|\Delta\text{GDPcap}|)$, and $\ln(|\Delta\text{Tax}|)$. Not only do we see similar results for them in our full-sample regressions on CAR and BHAR, but the robustness checks provide further support for the factors by again showing comparable findings for CAR and BHAR. This leads us to conclude, when measuring bidder success based on stock price, that each of them play a measurable role in the outcomes of cross-border M&A deals. Furthermore, our findings indicate that it is better for the acquiring firm if the applicable countries are more similar to each other with regards to corporate tax rate and GDP per capita. Additionally, our findings also underline that value can be created for the bidder if the target country has a lower corporate governance standard than the acquirer country.

7 Discussion

Our analysis of the correlation between country-factors and bidder returns in cross-border M&A deals provides some interesting insights into variables that companies may wish to consider before engaging in cross-border deals. It is, however, important to distinguish between the explanatory variables in our study and the factors that firms

actually take into account when contemplating engaging in M&A deals. Prior studies, such as (Ahern et al., 2015) and (Uddin and Boateng, 2011), attempt to put some numbers on the latter part by researching how various factors affect merger volume. These types of studies have succeeded in linking factors such as culture and FX rates to merger volume, but companies are particularly likely to be focused on company-level information. After all, companies are not solely acquiring abroad because of how much cheaper a firm has become due an appreciate in the local currency. Instead, firms are making decisions based upon elements such as operational performance of the target firm as well as the synergies that can be taken advantage of through a merger. Furthermore, there is no single way of measuring the success of a cross-border M&A deal. One company may consider a transaction a success if they achieve the synergies they hoped for while another may be more focused on market development. These discrepancies between individual transactions further complicate the topic, but, on the other hand, they also ensure that there is plenty left to investigate. As can be seen, there are several important components of cross-border M&A deals to consider and understand before one can attempt to conclusively write about the various aspects of the deals. Fortunately, by combining different types of studies, such as (Ahern et al., 2015) and our own, we can start to unravel what aspects of cross-border M&A deals that firms are doing a good job of considering and, more importantly, where they can improve.

When it comes to future research, there are a number of interesting and potentially illuminating ways to proceed. Since M&A deals are long-term in their nature, we will start by suggesting an even longer time-frame for measuring bidder success. In our research, we have focused on a three-year period, but it is possible that synergies are not fully realized at this point which can lead to misleading results. Furthermore, there may be some variables that we have not considered that lead to losses in the long-term which can, in turn, make M&A deals less attractive at large. An important consideration when deciding on a time-frame, however, is how much external variables will alter the results and if their impacts can be controlled for. Another thread to explore is the use of other success factors. The use of CAR and BHAR gives a glimpse into bidder success, but stock prices aren't the only thing to contemplate when measuring deal outcomes. Additionally, Δ EPS does not appear to be a particularly revealing

dependent variable. This finding is, in fact, in line with some prior studies including (Hazelkorn et al., 2004) who argue that the development of EPS is a poor predictor of value created with regards to M&A deals. Thus, researching bidder performance pertaining to variables such as operational measures, which is explored in the banking sector by (Correa, 2009), may shed further light on how important country specific factors are with regards to long-term M&A outcomes.

8 Conclusion

This paper investigates the relationship between country-specific factors and three-year bidder returns, defined as ΔEPS , CAR, or BHAR, in cross-border M&A deals. From our sample of 3,135 cross-border M&A deals encompassing 10 different countries and that were completed between 2000 and 2014, we find a wide range of results based upon the choice of success factor and explanatory variable.

The most promising results are found when we consider bidder success as CAR or BHAR. In these regressions, we find that deals perform better if the target comes from a country with lower corporate governance standards than the acquirer. Moreover, GDP per capita and corporate tax rates indicate that bidder returns are increased when the two countries are more closely aligned based on the given factors. Furthermore, when robustness tests are performed, we find that the results hold when excluding deals originating from the U.S.A. Additionally, they are largely robust over time as well, though the period leading up to the 2008 financial crisis seems to be the driver of some of the results.

While stock price appears to be a good measure for bidder success, we are less convinced by the results from the regressions on ΔEPS . Across the board, there is a lack of consistency and robustness in our findings. In fact, none of the original results that show statistical significance hold up when we drill down on consistency over time. This leads us to argue that time and effort can be better spent in future research by exploring alternative success factors.

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10 Appendices

10.1 Appendix A - Variable Definitions

Δ EPS: The percentage change in the acquiring firm's earnings per share from one year prior to the effective date to two years after the effective date (Source: Compustat).

CAR: The cumulative abnormal return of the acquiring firm over the three-year time period surrounding the acquisition. The measurement begins one month prior to the announcement of the acquisition and ends 36 months later. (Sources: CRSP and CGSD)

BHAR: The buy-and-hold abnormal return of the acquiring firm over the three-year time period surrounding the acquisition. The measurement begins one month prior to the announcement of the acquisition and ends 36 months later. (Sources: CRSP and CGSD)

CountryRating: Target country credit rating at effective date. Created as a dummy variable where (AAA) is 1 and the lowest in our sample (BBB) is 9. (Source: <https://countryeconomy.com/ratings>, Fitch ratings)

Δ Trust: Index based on the percentage of people in the target country who say that other people can generally be trusted. (Source: World Value Survey)

Δ Individualism: Weighted average measure of what people in the target country think with regards to how equal incomes should be in their country. A 1 means that the people believe that incomes should be more equal while a 10 means that they think that incomes should be less equal. (Source: World Value Survey)

ln(Distance): Distance in kilometers between the capital cities of the acquiring and target countries, measured by putting the longitude and latitude of the cities into the great circle formula. (Source: <https://www.latlong.net/>)

$\ln(|\mathbf{FX}|)$: Growth in average exchange rate for target against acquirer currency over the two years after effective date of transaction. (Source: OECD)

Gini: Measure of target country overall income inequality. Each country assigned a number between 0 and 1, where 0 is complete equality and 1 is complete inequality. (Source: OECD)

$\Delta\mathbf{GovernanceIndex}$: Target governance score minus acquirer governance score. For the earlier part (through 2007) of the data set, the (La Porta et al., 1998) index is used, and for the latter part (2008 and forward) of the data, our newly constructed index is used. See Appendix D for further explanation. (Sources: (La Porta et al., 1998, Martynova and Renneboog, 2011, OECD, 2017)

$\ln(\mathbf{BiTrade})$: Measure of how much the target country exports to the acquiring country as a percentage of its GDP. (Sources: <https://comtrade.un.org/data/> & OECD)

$\ln(|\Delta\mathbf{GDPcap}|)$: Percent difference in average GDP/capita for the two years following the acquisition, between the acquiring and target country (Source: OECD).

$\ln(|\Delta\mathbf{CA}|)$: Percent difference in average current account for the two years following the acquisition, between the acquiring and target country (Source: OECD).

$\ln(|\Delta\mathbf{Inflation}|)$: Percent difference in average inflation for the two years following the acquisition, between the acquiring and target country (Source: World Bank).

$|\Delta\mathbf{InterestRate}|$: Percent difference in average interest rate (long-term yearly) for the two years following the acquisition, between the acquiring and target country (Source: OECD).

$\ln(|\Delta\mathbf{Tax}|)$: Difference in tax rate for two years after the acquisition, between acquiring and target country (Source: OECD)

$\ln(|\Delta \text{UnempRate}|)$: Average unemployment rate for two years following the acquisition for target country (Source: OECD)

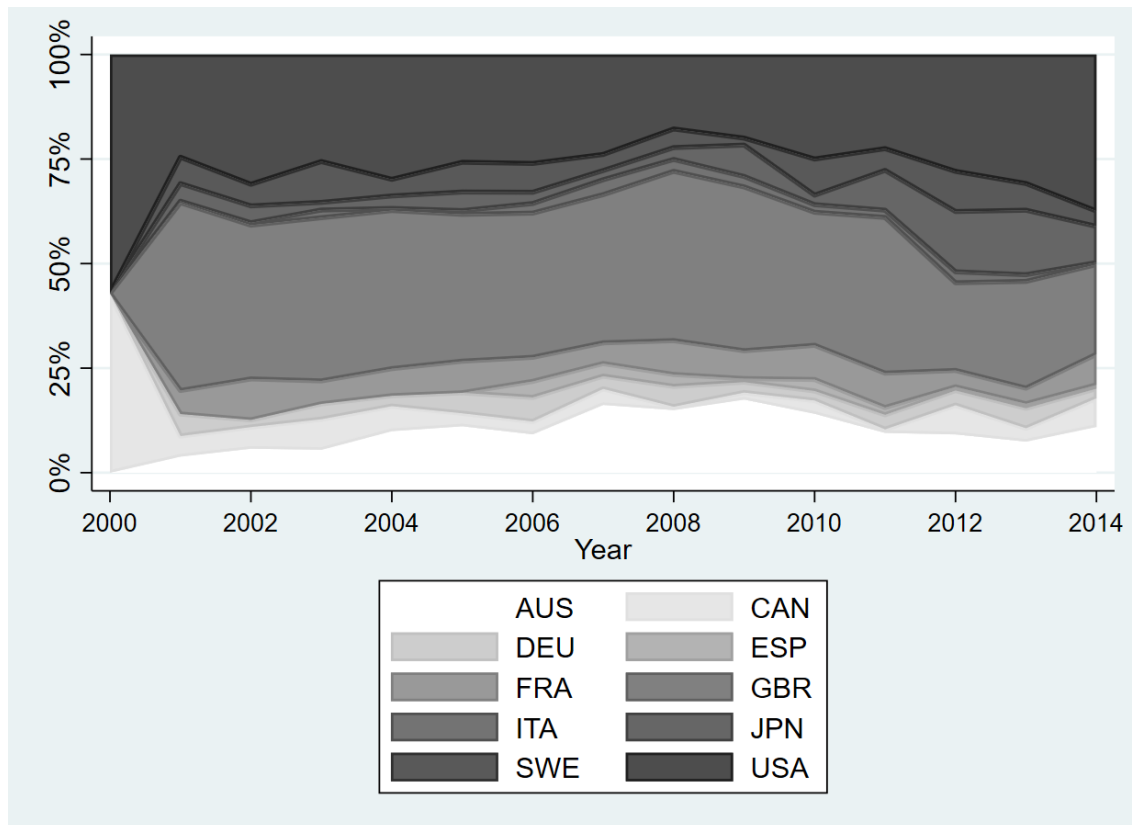
$\ln(\text{DealValue})$: Transaction value in dollars. (Source: SDC Platinum)

10.2 Appendix B - Summary Statistics

Graph 1

Relative number of deals - Δ EPS

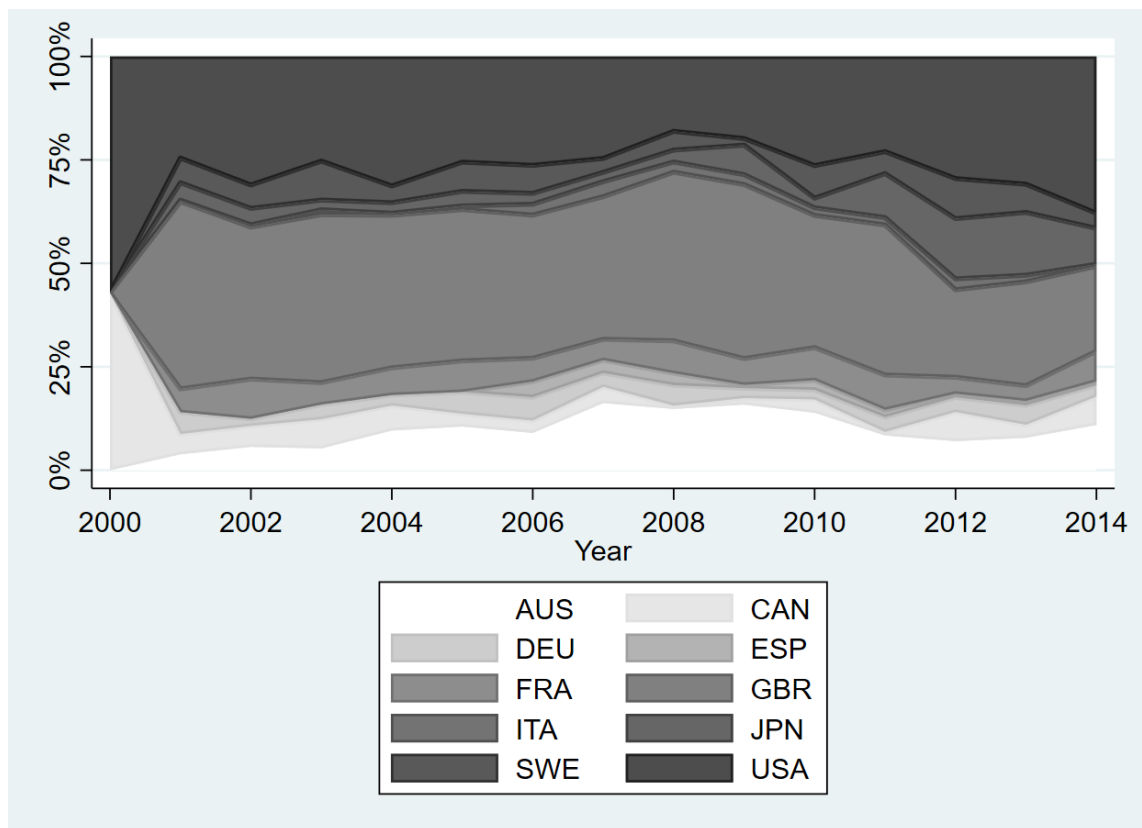
In this graph, the relative number of deals by acquiring country per year is shown for the dataset pertaining to Δ EPS. The data is from 2000 to 2014 and the countries are stacked in alphabetical order from bottom to top.



Graph 2

Relative number of deals - CAR

In this graph, the relative number of deals by acquiring country per year is shown for the dataset pertaining to CAR. The data is from 2000 to 2014 and the countries are stacked in alphabetical order from bottom to top.



Graph 3

Relative number of deals - BHAR

In this graph, the relative number of deals by acquiring country per year is shown for the dataset pertaining to BHAR. The data is from 2000 to 2014 and the countries are stacked in alphabetical order from bottom to top.

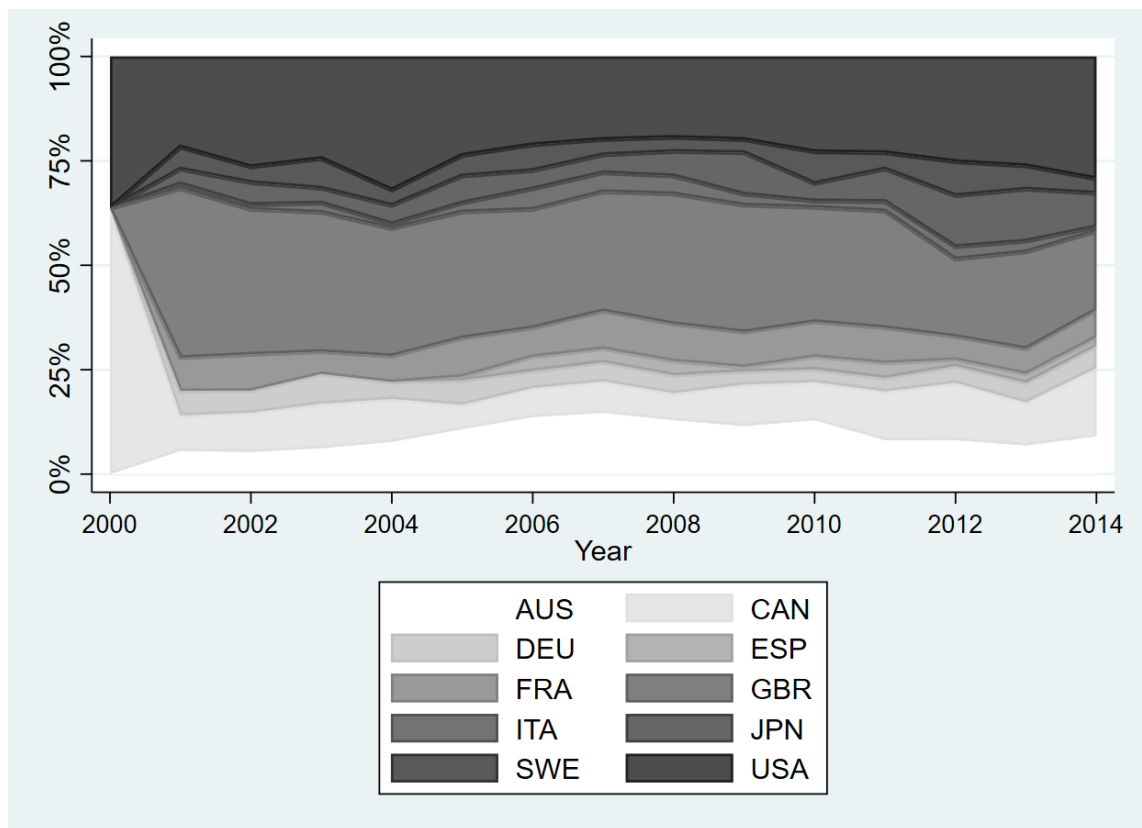


Table 4

M&A deals per year

In this table, the number of deals with an effective date during each year is listed by the type of dependent variable that they are related to. The first column shows the year in question while the remaining columns indicate the number of effective deals during the year for Δ EPS, CAR, and BHAR, respectively. Each dataset is nearly identical except for the top and bottom 1% of deals which have been winsorized separately for each dependent variable.

Year	EPS	CAR	BHAR
2000	7	7	7
2001	285	285	285
2002	174	177	177
2003	164	170	158
2004	201	198	191
2005	225	227	228
2006	261	266	270
2007	364	357	370
2008	247	243	243
2009	120	126	126
2010	220	216	218
2011	231	226	230
2012	229	227	223
2013	188	191	189
2014	219	219	220

Table 5Deal frequency by country-pair - Δ EPS

This table displays the number of cross-border M&A deals that are related to each country-pair in our dataset for Δ EPS. The data is obtained between 2000 and 2014. The countries listed at the top are the target countries while the countries listed on the left are the acquirer countries.

		Target country										Total
		AUS	CAN	DEU	ESP	FRA	GBR	ITA	JPN	SWE	USA	
Acquirer Country	AUS		51	8	2	8	85	3	3	7	161	328
	CAN	12		2		1	12		1	1	100	129
	DEU	3	2				33		3	9	66	116
	ESP		1				13			1	30	45
	FRA	6	11				44		4	6	131	202
	GBR	76	68	119	39	84		43	7	33	607	1076
	ITA	5	2				22		3	1	22	55
	JPN	22	6	15	5	13	35	7		3	71	177
	SWE	7	8	29	13	17	34	4			73	185
	USA	66	198	77	25	85	299	26	7	39		822
	Total	197	347	250	84	208	577	83	28	100	1261	3135

Table 6

Deal frequency by country-pair - CAR

This table displays the number of cross-border M&A deals that are related to each country-pair in our dataset for CAR. The data is obtained between 2000 and 2014. The countries listed at the top are the target countries while the countries listed on the left are the acquirer countries.

		Target country										Total
		AUS	CAN	DEU	ESP	FRA	GBR	ITA	JPN	SWE	USA	
Acquirer Country	AUS		45	8	2	8	82	3	3	7	157	315
	CAN	12		2		1	12		1	1	100	129
	DEU	3	2				35		3	9	67	119
	ESP		1				13			1	29	44
	FRA	6	11				44		4	6	129	200
	GBR	75	67	121	37	89		41	7	34	607	1078
	ITA	4	2				22		3	1	22	54
	JPN	22	6	15	5	13	34	7		4	71	177
	SWE	7	8	28	13	16	32	3			75	182
	USA	67	201	78	26	86	307	26	7	39		837
	Total	196	343	252	83	213	581	80	28	102	1257	3135

Table 7

Deal frequency by country-pair - BHAR

This table displays the number of cross-border M&A deals that are related to each country-pair in our dataset for BHAR. The data is obtained between 2000 and 2014. The countries listed at the top are the target countries while the countries listed on the left are the acquirer countries.

		Target country										Total
		AUS	CAN	DEU	ESP	FRA	GBR	ITA	JPN	SWE	USA	
Acquirer Country	AUS		47	8	2	8	82	4	2	7	157	317
	CAN	12		2		1	12		1	1	100	129
	DEU	3	2				35		3	8	67	118
	ESP		1				13			1	30	45
	FRA	6	11				44		4	6	130	201
	GBR	76	66	122	39	90		44	7	33	602	1079
	ITA	4	2				22		3		22	53
	JPN	20	5	15	5	12	36	7		4	71	175
	SWE	7	8	29	13	16	33	4			75	185
	USA	67	200	78	26	86	304	26	7	39		833
	Total	195	342	254	85	213	581	85	27	99	1254	3135

Table 8

Mean, median, and standard deviation

In this table, the mean, median, and standard deviations for the deals within our datasets are shown based on the dependent variable that they are related to. In the first three columns of numbers, each measure is from the dataset for ΔEPS while the second and third set of three columns are related to CAR and BHAR, respectively. Each dataset is nearly identical except for the top and bottom 1% of deals which have been winsorized separately for each dependent variable.

Variable	EPS			CAR			BHAR		
	Mean	Median	Std	Mean	Median	Std	Mean	Median	Std
Gini	0.35	0.36	0.04	0.35	0.36	0.04	0.35	0.36	0.04
CountryRating	1.18	1.00	0.82	1.18	1.00	0.83	1.18	1.00	0.83
$\Delta\text{GovernanceIndex}$	-0.02	0.00	0.22	-0.02	0.00	0.22	-0.02	0.00	0.22
$\Delta\text{Individualism}$	0.06	0.05	0.04	0.06	0.05	0.04	0.06	0.05	0.04
ΔTrust	0.11	0.09	0.08	0.11	0.09	0.08	0.11	0.09	0.08
$\ln(\Delta\text{GDPcap})$	-1.88	-1.57	0.94	-1.87	-1.57	0.94	-1.88	-1.57	0.94
$\ln(\Delta\text{CA})$	0.67	0.18	1.40	0.68	0.19	1.39	0.67	0.18	1.39
$\ln(\text{Distance})$	8.37	8.68	1.09	8.36	8.68	1.09	8.35	8.68	1.09
$\ln(\Delta\text{Inflation})$	-1.03	-0.99	1.15	-1.03	-0.99	1.15	-1.03	-1.02	1.15
$ \Delta\text{InterestRate} $	-2.03	-1.97	1.29	-2.03	-1.97	1.29	-2.03	-1.97	1.28
$\ln(\Delta\text{Tax})$	-2.69	-2.41	0.71	-2.68	-2.41	0.71	-2.68	-2.41	0.71
$\ln(\Delta\text{UnempRate})$	-4.70	-4.41	1.51	-4.70	-4.42	1.50	-4.70	-4.42	1.51
$\ln(\text{FX})$	-3.55	-3.06	1.53	-3.56	-3.06	1.55	-3.56	-3.06	1.55
$\ln(\text{DealValue})$	3.89	3.71	1.92	3.89	3.70	1.91	3.89	3.71	1.91
$\ln(\text{BiTrade})$	-4.88	-5.24	1.40	-4.86	-5.16	1.41	-4.87	-5.16	1.40

10.3 Appendix C - Robustness Tables

Table 9

Robustness - Δ EPS over time

In this table, the dependent variable is Δ EPS for the acquiring company, going from the year prior to the effective merger date to two years after the effective date. Yearly data from between 2000-2014 with the first three columns containing deals executed before 2008 and the second three with deals executed from 2008. All six regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variables	Δ EPS before 2008			Δ EPS since 2008		
	(1)	(2)	(3)	(1)	(2)	(3)
CountryRating	-0.20*			0.06		
	(0.11)			(0.05)		
Δ Trust	1.56*			-0.40		
	(0.81)			(1.49)		
Δ Individualism	0.68			-0.08		
	(2.02)			(2.02)		
ln(Distance)		-0.01			-0.19**	
		(0.08)			(0.09)	
ln(FX)		0.03			0.04	
		(0.05)			(0.06)	
Gini		4.38			2.45	
		(3.92)			(2.19)	
Δ GovernanceIndex		-0.52			-0.37	
		(0.48)			(0.40)	
ln(BiTrade)			2.44			-1.08
			(1.67)			(0.92)
ln(Δ GDPcap)			-0.25			0.52
			(0.24)			(0.33)
ln(Δ CA)			-0.45			0.28
			(0.36)			(0.35)
ln(Δ Inflation)			-0.11			0.02
			(0.16)			(0.12)
Δ InterestRate			-5.24			-1.77
			(14.08)			(1.16)
ln(Δ Tax)			0.06			-0.06
			(0.32)			(0.26)
ln(Δ UnempRate)			0.15			0.16
			(0.21)			(0.12)
ln(DealValue)	-0.03	-0.04	-0.03	0.07*	0.08*	0.05
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Acquirer-Country-Year FE	Yes	No	Yes	Yes	No	Yes
Target-Country-Year FE	No	No	Yes	No	No	Yes
Country-Pair FE	No	No	Yes	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.24	0.18	0.28	0.18	0.15	0.27
Adjusted R ²	0.13	0.10	0.10	0.04	0.04	0.05
N	1,681	1,681	1,681	1,454	1,454	1,454

Table 10

Robustness - CAR over time

In this table, the dependent variable is CAR for the acquiring company, going from the month prior to announcement to 36 months later. Monthly data from between 2000-2014 with the first three columns containing deals executed before 2008 and the second three with deals executed from 2008. All six regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variable	CAR before 2008			CAR from 2008		
	(1)	(2)	(3)	(1)	(2)	(3)
CountryRating	0.00 (0.03)			0.03** (0.01)		
Δ Trust	0.53 (0.32)			0.44 (0.28)		
Δ Individualism	-0.63 (0.55)			-0.68 (0.41)		
ln(Distance)		0.04** (0.02)			0.01 (0.02)	
ln(FX)		0.00 (0.01)			0.01 (0.02)	
Gini		0.59 (0.80)			-0.37 (0.43)	
Δ GovernanceIndex		-0.19* (0.11)			-0.19 (0.13)	
ln(BiTrade)			0.74** (0.37)			0.60*** (0.22)
ln(Δ GDPcap)			-0.21*** (0.05)			-0.13* (0.08)
ln(Δ CA)			0.03 (0.09)			0.07 (0.07)
ln(Δ Inflation)			0.06 (0.04)			0.03 (0.03)
Δ InterestRate			0.73 (2.40)			-0.24* (0.14)
ln(Δ Tax)			-0.17** (0.07)			0.04 (0.05)
ln(Δ UnempRate)			0.00 (0.06)			0.08* (0.03)
ln(DealValue)	-0.02** (0.01)	-0.03** (0.01)	-0.02* (0.01)	-0.02** (0.01)	-0.02 (0.01)	-0.03** (0.01)
Acquirer-Country-Year FE	Yes	No	Yes	Yes	No	Yes
Target-Country-Year FE	No	No	Yes	No	No	Yes
Country-Pair FE	No	No	Yes	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.19	0.15	0.24	0.24	0.15	0.30
Adjusted R ²	0.07	0.06	0.05	0.10	0.04	0.09
N	1,687	1,687	1,687	1,448	1,448	1,448

Table 11

Robustness - BHAR over time

In this table, the dependent variable is BHAR for the acquiring company, going from the month prior to announcement to 36 months later. Monthly data from between 2000-2014 with the first three columns containing deals executed before 2008 and the second three with deals executed from 2008. All six regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variable	BHAR before 2008			BHAR from 2008		
	(1)	(2)	(3)	(1)	(2)	(3)
CountryRating	0.03 (0.02)			0.03** (0.01)		
Δ Trust	0.25 (0.19)			0.20 (0.40)		
Δ Individualism	-0.03 (0.41)			-0.44 (0.35)		
ln(Distance)		0.02** (0.01)			-0.02 (0.02)	
ln(FX)		-0.01 (0.01)			0.01 (0.02)	
Gini		0.51 (0.54)			-0.23 (0.61)	
Δ GovernanceIndex		-0.20*** (0.07)			-0.12 (0.14)	
ln(BiTrade)			-0.05 (0.32)			0.13 (0.29)
ln(Δ GDPcap)			-0.11* (0.06)			-0.10 (0.10)
ln(Δ CA)			0.02 (0.09)			0.01 (0.10)
ln(Δ Inflation)			-0.01 (0.05)			0.01 (0.03)
Δ InterestRate			2.89 (2.27)			-0.16 (0.17)
ln(Δ Tax)			-0.14* (0.07)			-0.11 (0.08)
ln(Δ UnempRate)			0.05 (0.06)			0.01 (0.04)
ln(DealValue)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.00 (0.02)	0.01 (0.02)	-0.01 (0.02)
Acquirer-Country-Year FE	Yes	No	Yes	Yes	No	Yes
Target-Country-Year FE	No	No	Yes	No	No	Yes
Country-Pair FE	No	No	Yes	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.22	0.17	0.27	0.24	0.15	0.30
Adjusted R ²	0.11	0.08	0.09	0.10	0.04	0.09
N	1,686	1,686	1,686	1,449	1,449	1,449

Table 12Robustness - Δ EPS without US acquirers

In this table, the dependent variable is Δ EPS for the acquiring company, going from the year prior to the effective merger date to two years after the effective date. Monthly data from between 2000-2014 while excluding all deals originating from USA. All three regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variable	Δ EPS without US acquirers		
	(1)	(2)	(3)
CountryRating	-0.01 (0.05)		
Δ Trust	1.47* (0.78)		
Δ Individualism	-1.19 (2.46)		
ln(Distance)		-0.12* (0.06)	
ln(FX)		0.05 (0.06)	
Gini		2.71 (1.77)	
Δ GovernanceIndex		-0.34 (0.35)	
ln(BiTrade)			0.73 (0.76)
ln(Δ GDPcap)			0.10 (0.12)
ln(Δ CA)			-0.10 (0.14)
ln(Δ Inflation)			-0.15* (0.07)
Δ InterestRate			1.15 (1.26)
ln(Δ Tax)			0.07 (0.22)
ln(Δ UnempRate)			0.37*** (0.10)
ln(DealValue)	0.00 (0.03)	0.01 (0.03)	-0.01 (0.03)
Acquirer-Country-Year FE	Yes	No	Yes
Target-Country-Year FE	No	No	Yes
Country-Pair FE	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes
R ²	0.28	0.22	0.35
Adjusted R ²	0.13	0.10	0.13
N	2,313	2,313	2,313

Table 13

Robustness - CAR without US acquirers

In this table, the dependent variable is CAR for the acquiring company, going from the month prior to announcement to 36 months later. Monthly data from between 2000-2014 while excluding all deals originating from USA. All three regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variable	CAR without US acquirers		
	(1)	(2)	(3)
CountryRating	-0.02 (0.02)		
Δ Trust	0.64** (0.28)		
Δ Individualism	-0.95 (0.65)		
ln(Distance)		0.02 (0.02)	
ln(FX)		0.00 (0.01)	
Gini		0.50 (0.55)	
Δ GovernanceIndex		-0.20** (0.08)	
ln(BiTrade)			0.38 (0.27)
ln(Δ GDPcap)			-0.11*** (0.03)
ln(Δ CA)			0.06 (0.05)
ln(Δ Inflation)			0.05** (0.02)
Δ InterestRate			-0.52** (0.24)
ln(Δ Tax)			-0.11** (0.05)
ln(Δ UnempRate)			0.01 (0.03)
ln(DealValue)	-0.02*** (0.01)	-0.03*** (0.01)	-0.02** (0.01)
Acquirer-Country-Year FE	Yes	No	Yes
Target-Country-Year FE	No	No	Yes
Country-Pair FE	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes
R ²	0.24	0.19	0.30
Adjusted R ²	0.08	0.06	0.05
N	2,298	2,298	2,298

Table 14

Robustness - BHAR without US acquirers

In this table, the dependent variable is BHAR for the acquiring company, going from the month prior to announcement to 36 months later. Monthly data from between 2000-2014 while excluding all deals originating from USA. All three regressions are OLS regressions adjusted for the suitable fixed effects (FE). FE inclusions can be seen in the last rows of the table. All standard errors are clustered at the country-pair level. $|\Delta|$ indicates the absolute value of the difference between the acquirer and target country variables. Variable definitions can be found in appendix A. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Variable	BHAR without US acquirers		
	(1)	(2)	(3)
CountryRating	0.00 (0.02)		
Δ Trust	0.18 (0.32)		
Δ Individualism	-0.44 (0.46)		
ln(Distance)		-0.01 (0.01)	
ln(FX)		0.00 (0.01)	
Gini		0.62 (0.54)	
Δ GovernanceIndex		-0.18*** (0.07)	
ln(BiTrade)			0.36 (0.27)
ln(Δ GDPcap)			-0.11*** (0.04)
ln(Δ CA)			0.01 (0.06)
ln(Δ Inflation)			0.00 (0.03)
Δ InterestRate			-0.17 (0.29)
ln(Δ Tax)			-0.13** (0.06)
ln(Δ UnempRate)			0.02 (0.04)
ln(DealValue)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Acquirer-Country-Year FE	Yes	No	Yes
Target-Country-Year FE	No	No	Yes
Country-Pair FE	No	No	Yes
Acquirer-Industry-Year FE	Yes	Yes	Yes
Target-Industry-Year FE	Yes	Yes	Yes
Clustered Standard Errors	Yes	Yes	Yes
R ²	0.28	0.20	0.34
Adjusted R ²	0.12	0.08	0.11
N	2,302	2,302	2,302

10.4 Appendix D - Corporate Governance Index

Methodology employed are based on (Martynova and Renneboog, 2011), which builds on the original methodology used by (La Porta et al., 1998). Shareholder rights are used as a proxy for corporate governance. All data that are available and applicable to the methodology of (Martynova and Renneboog, 2011) are included from the (OECD, 2017) report.

The Corporate Governance index (max 22), reflects the shareholders' ability to counter inept managerial behavior. It is comprised of 4 sub-indices:

1. The appointment rights index (max 4) – Measuring the degree of alignment of the interests of management and shareholders.

- Employee representation: 2 if not required, otherwise 0
- Tenure on the board: 2 if less than 4 years, 1 if 4 years, 0 if more than 4 years

2. The decision rights index (max 4) – Captures the shareholder ability to mitigate managerial discretion.

- Percentage needed to call for extraordinary meeting: 0 if no rule or more than 20%, 1 if 20% or less but more than 5%, 2 if 5% or less
- Voting caps: 0 if allowed, 2 if not

3. The trusteeship index (max 8) – Measures the efficiency of the board of directors in monitoring the actions of CEOs.

- Board independence: 2 if CEO cannot be the chairman of the board of directors, 0 otherwise
- Director independence from "substantial shareholders": 2 if requirement, 1 if partly so, otherwise 0
- Employee representation: 2 if not required, otherwise 0
- Separate board of auditors: By law 100% independence gives 2, by law less than 100% but greater than 50% independence gives 1, otherwise 0

4. The transparency index (max 6) - Based on the quality of information about the company, ownership structure, and management, available to investors.

- Requirement to disclose managerial compensation: 2 if required on individual basis, 1 if required on aggregate basis, 0 if not required
- Requirement to disclose any transactions between management and company: 2 if additional disclosure, 1 if required in Financial Statements, 0 if not required
- Comply or explain rule: 2 if required, 0 otherwise

Table 15

Corporate Governance Indices

The columns named "Shareholder rights index" show the assigned scores for each country. In (La Porta et al., 1998) the maximum score that can potentially be obtained is 7. In "New Index 2017", the maximum score that can be obtained is 22. These numbers are used to normalize the values before they are used in the regression.

Corporate Governance Indices				
	New index (2017)		La Porta et. al. (1998)	
	Shareholder rights index	Normalized values	Shareholder rights index	Normalized values
Australia	15	0,68	4	0,57
Canada	15	0,68	5	0,71
United Kingdom	13	0,59	5	0,71
United States	13	0,59	5	0,71
<i>English-origin avg.</i>	<i>14,00</i>	<i>0,64</i>	<i>4,75</i>	<i>0,68</i>
France	11	0,50	3	0,43
Italy	18	0,82	1	0,14
Spain	15	0,68	4	0,57
<i>French-origin avg.</i>	<i>14,67</i>	<i>0,67</i>	<i>2,67</i>	<i>0,38</i>
Germany	12	0,55	1	0,14
Japan	19	0,86	4	0,57
<i>German-origin avg.</i>	<i>15,50</i>	<i>0,70</i>	<i>2,50</i>	<i>0,36</i>
Sweden	11	0,50	3	0,43
<i>Scandinavian-origin avg.</i>	<i>11,00</i>	<i>0,50</i>	<i>3,00</i>	<i>0,43</i>

Table 16

Scores for each part of the Total New Index (2017)
 The four columns to the right display country-scores for each part of the Total New Index (2017). The second column from the left, Total New Index (2017), is the total sum of the scores from each part.

Scores for each part of the Total New Index (2017)					
	Total New Index (2017)	The appointment rights index	The decision rights index	The trusteeship index	The transparency index
Australia	15	4	2	4	5
Canada	15	4	2	4	5
United Kingdom	13	4	2	2	5
United States	13	4	1	4	4
<i>English-origin avg.</i>	<i>14,00</i>	<i>4,00</i>	<i>1,75</i>	<i>3,50</i>	<i>4,75</i>
France	11	0	2	3	6
Italy	18	4	2	6	6
Spain	15	2	2	5	6
<i>French-origin avg.</i>	<i>14,67</i>	<i>2,00</i>	<i>2,00</i>	<i>4,67</i>	<i>6,00</i>
Germany	12	0	4	2	6
Japan	19	4	4	5	6
<i>German-origin avg.</i>	<i>15,50</i>	<i>2,00</i>	<i>4,00</i>	<i>3,50</i>	<i>6,00</i>
Sweden	11	2	1	3	5
<i>Scandinavian-origin avg.</i>	<i>11,00</i>	<i>2,00</i>	<i>1,00</i>	<i>3,00</i>	<i>5,00</i>