



The impact of cultural heterogeneity in the long-run M&A performance of cross-border acquisitions

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Dissertation
Master in Finance



Supervised by
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2021

Acknowledgements

First of all, I want to thank my supervisor, Professor Miguel Sousa, for all of his support, for always being available to answer any question that I had and for all of his advice that were so important throughout this process.

I'm very thankful for my friends, Inês, Cata, Eliana, Zé, Maria, Sofia and Teresa for all the encouragement and for all the conversations where we share our frustrations, experiences and achievements.

Lastly, and most importantly, I want to express my deep gratitude to my mother and my brother, for all their patience, guidance, motivation, unconditional love and for always being by my side.

Abstract

The last decades have been strongly marked by an increase in cross-border M&A activity, as these are used by managers to grow their companies, enter into new markets and to achieve synergies. However, a significant number of these have failed and one of the main reasons is the cultural distance between companies.

Unlike what has been reported for the short-term, studies such as the ones performed by Morosini, Shane, and Singh (1998) and Chakrabarti, Gupta-Mukherjee, and Jayaraman (2009) defend that in the long-term, cultural differences enhance the acquirer's value. This way, if there is a positive effect, with the benefits overcoming the costs, managers will be able to incorporate the culture distance factor into their future M&A decisions.

To study the impact of culture distance in the long-term performance of cross-border deals, it's used a sample from 2009 to mid-2018. To measure the national cultural distance between the countries it's used both Hofstede and GLOBE's dimensions, first with one consolidate measure and then with each individual dimension. To measure the performance, it's applied the buy-and-hold abnormal returns measure (BHAR).

Our results suggest that the cultural differences between acquirer and target countries enhance the value created to the acquirer company. However, when using Hofstede as a measure, the results are not statistically significant. Regarding each individual dimension, Hofstede's Individualism differences between countries negatively impact the acquirer's performance, whilst differences in GLOBE's In-Group Collectivism improves it.

Key-Words: Cross-Border; Mergers & Acquisitions; Culture Differences; National Culture

JEL-Codes: G14; G15; G34

Sumário

As últimas décadas têm sido marcadas por um crescimento no número de aquisições entre empresas de diferentes países, visto que, estas são usadas pelos managers para ajudar as empresas a crescer, a entrar noutros mercados e a realizar sinergias, mas, apesar destas vantagens, um número significativo tem falhado e a distância cultural tem sido apontada como uma das principais razões.

Ao contrário do que é reportado em relação aos retornos no curto prazo, há estudos como os de Morosini et al. (1998) e Chakrabarti et al. (2009) que defendem que no longo-prazo, as diferenças culturais aumentam o valor da empresa que adquire. Assim, se o impacto é positivo, com os benefícios a serem superiores aos custos, as empresas podem incorporar o fator cultural nas suas futuras decisões em relação a aquisições.

De forma a estudar o impacto da distância cultural no desempenho a longo prazo em aquisições entre empresas de países diferentes, vai ser usada uma amostra com dados entre 2009 e meados de 2018. De forma a medir a distância cultural entre os países, vão ser usadas as dimensões de Hofstede e de GLOBE, primeiro com uma medida consolidada e depois com cada dimensão individual. Para medir o desempenho, vai ser aplicada a medida *buy-and-hold abnormal returns* (BHAR).

Os resultados obtidos sugerem que, as diferenças culturais entre os países da firma que adquire e da que é adquirida, aumentam o valor criado à empresa que adquire. Contudo, quando é aplicada a medida Hofstede, os resultados não são estatisticamente significativos. Em relação aos resultados de cada dimensão, quanto maiores forem as diferenças entre países, a medida *Individualism* de Hofstede destrói o valor da empresa que adquire, enquanto que, a *In-Group Collectivism* de GLOBE melhora o desempenho.

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1. Introduction

This dissertation analyzes how the cultural differences between countries impact the acquirer's long-term performance, and so the value creation, after a cross-border acquisition.

In the literature regarding the world of mergers and acquisitions, the cultural differences are known to be one of the main factors to have a big impact in the failure of these deals, as companies struggle to adapt to the traditions and values of one another, with the acquirer being inclined to underestimate the people factor, leading to a negative employee reaction and a high tension, thus, affecting financial and managerial performance (Lodorfos & Boateng, 2006). This heterogeneity implies a significant post-acquisition challenge for the acquiring firms, therefore, it is important to understand if when companies acquire others with a different set of values and norms, if the advantages that come with entering a new culturally distant country overcome the costs, therefore enhancing the creation of value and the success of the performance when compared to firms that acquire others with a more similar culture.

The purpose of this research is to bring more information to this area and to its impact, so that companies can have a better understanding and take into consideration the cultural clash that may occur by helping them make better decisions for their future. Chakrabarti et al. (2009) suggest that in the long run the impact of the cultural differences is positive, as it comes with higher synergies and organizational strengths, consequentially, managers may consider acquiring companies with an incompatible culture. If the results show that the impact is negative, then managers may want to think twice and acquire a company that is culturally closer their company.

Regarding the relevance of this topic, it's very important to understand all the aspects of the mergers and acquisitions, as these kinds of operations will help a company grow, reach into different markets and into different countries where otherwise it would be very difficult for them to do so. Now, with globalization, companies can acquire not only firms that they are familiar with, but also firms that have a different culture and work ethics, meaning that they may have different views and different ways of operating. The empirical studies still present inconclusive results, thus, this study aims to contribute to the research and provide new insights to the matter.

The Research Question is: What is the impact of the cultural differences on the acquirer's long-term performance in cross-border M&As?

To be able to answer this research question, it's performed an event study around two different events, the announcement date of the acquisition and the deal close date. As a measure of the performance, it will be calculated the BHAR (buy-and-hold abnormal returns). As a measure of the cultural differences, it will be used the Hofstede and GLOBE dimensions, first with one consolidate measure and then with each individual dimension. Additionally, it's included deal-specific and country-specific control variables and year and target-country fixed effects. This methodology is based on the methodology presented by Chakrabarti et al. (2009), however the sample contains more recent data, there's different event windows, the Hofstede measure includes all six dimensions, instead of four and, the GLOBE measures will be included in the study to make the results more robust.

The results show that when using the GLOBE measure, the more culturally distant the countries are, the better the performance. Whilst the Hofstede measure, even though it always indicates a positive effect, it never presents a statistically significant impact on the abnormal returns.

When it comes to the individual dimensions, Hofstede's Individualism can present as an integration problem, if the acquirer and the target are from countries with significantly differences on this dimension. Regarding GLOBE, the dimension In-Group Collectivism indicates that the bigger the difference in terms of the perception of loyalty to groups, the better the impact in the future returns.

After the Introduction, this study is structured as follows: in Chapter 2 the literature review will be explored, and the Chapter 3 describes the sample and the methodology. Chapter 4 presents and discusses the results. Finally, Chapter 5 concludes and presents the study limitations and suggests future research.

2. Literature Review

2.1 Mergers and Acquisitions

Over the last decades, the phenomenon of mergers and acquisitions has been increasing all over the globe (Cartwright & Cooper, 1993). “Since 2000, more than 790’000 transactions have been announced worldwide with a known value of over 57 trillion USD. In 2018, the number of deals has decreased by 8% to about 49’000 transactions, while their value has increased by 4% to 3.8 trillion USD” (Institute for Mergers Acquisitions and Alliances [IMAA], 2020).

This trend can be linked to globalization, as M&A can be used as a strategic tool for companies to increase their market share into foreign markets and seek higher returns (Cartwright & Cooper, 1993; Haspeslagh & Jemison, 1991). This process comes with several advantages for the firms, it includes the realization of synergies; achievement of economies of scale and economies of scope (Chakrabarti et al., 2009); and access to the local knowledge, assets and technology without having to create their own subsidiary from zero in a whole new country (Haspeslagh & Jemison, 1991; Teerikangas & Very, 2006).

Despite the popularity, Cartwright and Cooper (1993, p. 57) state that “at best, only half of all mergers and acquisitions meet initial financial expectations”. According to R. Weber and Camerer (2003), failure of M&As happens in more than one dimension, as, after the merger announcement, the stock prices of the acquiring firm tend to decrease; the profitability of the target falls after the acquisition and even many of these are sold off after a few years.

M&A research was mainly being focused on the financial and strategic aspects, with the human factor being ignored (Cartwright & Cooper, 1993; Nahavandi & Malekzadeh, 1988), and only with the known factors to impact performance, such as degree of relatedness, payment method and degree of diversification, being used to predict it (King, Dalton, Daily, & Covin, 2004; Stahl & Voigt, 2008). The failure of these deals can be linked to the development of trauma and stress specially in the target’s employees and managers, occurrence of misunderstandings, low collaboration and resentment between players, thus resulting in a chain of problems that end up affecting negatively the financial performance

and the achievement of synergies¹ (Lodorfos & Boateng, 2006; Y. Weber, 1996; Y. Weber & Menipaz, 2003).

Among others, one of the main factors that has been pointed to blame for this high failure rate is the cultural incompatibility that arises between two organizations (Buono, Bowditch, & Lewis, 1985; Cartwright & Cooper, 1993; Kogut & Singh, 1988; Nahavandi & Malekzadeh, 1988).

2.2 Organizational and National Culture

The concept of culture has been attributed several definitions, there's not a homogeneous definition accepted by all authors, Cartwright and Cooper (1993, p. 60) state "culture fit and culture compatibility are well used but ill-defined expressions.". The most common definitions used for culture include the organizational and national culture ones.

Similarly, organizational culture has been assigned numerous definitions (Martin, 2001). R. Weber and Camerer (2003, p. 402) sum up several definitions in one and describe it as "a general shared social understanding, resulting in commonly held assumptions and views of the world among organizational members". This culture emphasises the assumptions, values and beliefs that are shared between the employees of an organization, it's created through their interaction over the time, an example is the language used, it can include rules, codes and symbols, allowing the members to communicate and coordinate tacitly amongst themselves (Schein, 1985; Teerikangas & Very, 2006; R. Weber & Camerer, 2003).

Regarding national culture, Hofstede (1984, p. 21) defines it as "the collective programming of the mind which distinguishes the members of one human group from another". Culture significantly affects the individual's principles, as they feel the need to act accordingly with the other citizens. (Teerikangas & Very, 2006).

In the context of cross-border, national culture distance represents the differences between norms, routines and values between different countries. (Hofstede, 1980; Kogut & Singh, 1988).

¹ A known example of a merger failure due to the human factor is the Daimler-Chrysler case. (See Annex I)

When comparing both cultures, Schneider (1988) suggests that national culture is the one that influences the organizational one, therefore the former culture works at a deeper level than the latter (Teerikangas & Very, 2006; Y. Weber & Menipaz, 2003).

2.2.1 Hofstede Dimensions

To measure the differences in between national cultures, Hofstede (1980) developed a framework that consisted of four dimensions and later, in Hofstede (2001) and Hofstede, Hofstede G, and Minkov (2010), updated it to six dimensions, assigning each with standardized country scores. The dimensions include Masculinity/Femininity, Uncertainty Avoidance, Power Distance, Individualism/Collectivism, Long Term/Short Term Orientation and Indulgence/Restraint.

The **Masculinity/Femininity** dimension is connected to “the division of emotional roles between women and men” (Hofstede, 2011, p. 8). In this sense, cultures considered more feminine prioritize values such as solidarity, equality and looking for a consensus when taking a decision. More masculine cultures value competition, ambition and focus on performance (Hofstede, 2011; Van Everdingen, 2003).

Uncertainty Avoidance consists of “the level of stress in a society in the face of an unknown future” (Hofstede, 2011, p. 8), it’s how the members of a society accept ambiguity. This dimension examines to what degree a certain culture affects the citizens to feel comfortable or uncomfortable when faced with situations that are new, unexpected, and unknown (Hofstede, 2011).

Power Distance is related to “the different solutions to the basic problem of human inequality” (Hofstede, 2011, p. 8). This dimension analysis how the ones that have lower power in an organization or an institution expect and accept the way that power is unequally distributed (Hofstede, 2011).

Individualism/Collectivism is connected to “the integration of individuals into primary groups” (Hofstede, 2011, p. 8). In individualist cultures each person is expected to look after themselves and their own immediate family. In collectivist cultures, individuals, from early on, are integrated into several groups, such as extended family, where they are expected to look after each other (Hofstede, 2011).

Long Term/Short Term Orientation consists of “the choice of focus for people's efforts: the future or the present and past” (Hofstede, 2011, p. 8). Cultures that are considered to have a long-term orientation prioritize values, such as, persistence, the notion that events that are the most important will happen in the future and the willingness to adapt traditions to more modern conditions. Cultures with a short-term orientation are more focused on traditions and give more importance to the past (Van Everdingen, 2003).

Indulgence/Restraint is related to “gratification versus control of basic human desires related to enjoying life” (Hofstede, 2011, p. 8). An indulgence society is characterized by the members allowing themselves to have fun and to enjoy their life. A restraint society doesn't attribute importance to leisure and possesses more controlled social norms (Hofstede, 2011).

2.2.2 Hofstede Criticism and Alternatives

Even though the measure of cultural differences presented by Hofstede (1980) is the most recognized one across the international business literature (Chakrabarti et al., 2009), it has been criticized for several factors: Hofstede uses data from only one company; not all countries are covered; the results for the dimensions are time dependent, they're according to a specific time interval and now are out-of-date; there's a western bias, with mostly western countries being considered; the number of dimensions is not enough to measure something as complex and there's an ecological fallacy, the data collected at a national level is used to generalize into individuals (Bauer, Matzler, & Wolf, 2016; Chakrabarti et al., 2009; Minkov & Hofstede, 2011).

There are several other proxies that can be used to measure culture, such as language or religion (Chakrabarti et al., 2009). The principal alternative being discussed is the Global Leadership and Organizational Behaviour Effectiveness (GLOBE) developed by House, Hanges, Javidan, Dorfman, and Gupta (2004).

Even after the criticism, the Hofstede's measure remains the most accepted in literature (Chakrabarti et al., 2009; Minkov & Hofstede, 2011; Y. Weber, Shenkar, & Raveh, 1996).

2.2.3 GLOBE Dimensions and Criticism

The GLOBE project is inspired by Hofstede's work and is constituted by nine different dimensions (House, Javidan, Hanges, & Dorfman, 2002).

Some of the dimensions are in common with Hofstede's, such as Power Distance and Uncertainty Avoidance, but they also divided Masculinity/Femininity into Gender Egalitarianism and Assertiveness, and then, Individualism/Collectivism into In-Group Collectivism and Institutional Collectivism. Additionally, there are also new ones: Future Orientation, Performance Orientation and Human Orientation (Li, Li, & Wang, 2016). It's possible to refer that in total there are eighteen dimensions, as each of the nine dimensions contemplates scores for two categories, "society as it is", it's the practical scores, how society actually behaves and "society as it should be", it's the value scores, how the members of the society wish that it could be (Hofstede, 2011; House et al., 2002).

Power Distance is connected to "the degree to which members of an organization or society expect and agree that power should be unequally shared" (House et al., 2002, p. 5).

Uncertainty Avoidance is related to "the extent to which members of an organization or society strive to avoid uncertainty by reliance on social norms, rituals, and bureaucratic practices to alleviate the unpredictability of future events" (House et al., 2002, p. 5).

Gender Egalitarianism consists of "the extent to which an organization or a society minimizes gender role differences and gender discrimination" (House et al., 2002, p. 5).

Assertiveness is related to "the degree to which individuals in organizations or societies are assertive, confrontational, and aggressive in social relationships" (House et al., 2002, p. 6).

In-Group Collectivism is connected to "the degree to which individuals express pride, loyalty and cohesiveness in their organizations or families" (House et al., 2002, p. 5).

Institutional Collectivism is related to "the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action" (House et al., 2002, p. 5).

Future Orientation consists of "the degree to which individuals in organizations or societies engage in future-oriented behaviours such as planning, investing in the future, and delaying gratification" (House et al., 2002, p. 6).

Performance Orientation is related to “the extent to which an organization or society encourages and rewards group members for performance improvement and excellence” (House et al., 2002, p. 6).

Human Orientation consists of “the degree to which individuals in organizations or societies encourage and reward individuals for being fair, altruistic, friendly, generous, caring, and kind to others” (House et al., 2002, p. 6).

Similarly to Hofstede, the GLOBE project also received some criticism. Hofstede (2011) points out that the GLOBE project uses an excessive number of dimensions. These dimensions are used to help comprehend and analyse the social world, therefore, models that are based on dimensions can't be too complex, as the capacity of the human minds is limited when it comes to processing information, and consequentially, models that use too many will “not be experienced as useful” (Hofstede, 2006; 2011, p. 21). Another critique pointed out by Hofstede (2006, p. 884) is that GLOBE is a US centred study, falling into an “ethnocentric bias”, this means that a culture is perceived based on the characteristics of another, instead of its own.

2.3 Cultural Impact on Performance

Through the years, several empirical studies have been trying to understand what kind of impact culture, more specifically national culture, has on the long-term performance of cross-borders acquisitions and the reasons that drive this impact.

Morosini et al. (1998) tested the hypothesis of the national culture distance improving the performance through the access of firms to a new set of routines and repertoires.

The authors define routines and repertoires “as the ways in which a firm typically addresses aspects of organizing its business activities” (Morosini et al., 1998, p. 139), these include the firm's own policies and R&D, and as the national culture varies from country to country, the same occurs with the routines and repertoires (Hofstede, 1980; Kogut & Singh, 1988). Therefore, if multinational companies want to compete and grow in different markets that are so diverse among themselves, they will need to get access to an also diverse set of routines and repertoires that are exclusive to the firm, hence, they cannot be easily replicated by other firms.

The Resource-Based View presented by Barney (1986b) defends that for a firm to be able to own a sustainable competitive advantage, they need to possess resources, either financial, physical or human, that are rare, valuable and inimitable by others. Regarding the human capital resources, their advantage mostly comes from the routines and repertoires, as these can't be easily replicated, each firm has their own and they are developed over the years and influenced by the surrounding environment (Collis, 1991; Morosini et al., 1998).

It's favorable for firms to possess a diverse set of routines and repertoires, thus enhancing the probability of the company owning the one that will provide them with a competitive advantage in the future, so companies engage in cross-border acquisitions of firms that are culturally distant to them, as acquirers don't have the required conditions, history and national culture necessary to develop them (Barney, 1986a; Morosini et al., 1998).

Morosini's empirical research included a survey of about 52 companies and interviews of firm's executives and the result proposed was that national cultural differences do have a positive impact on the long-term performance of cross border acquisitions, due to the access of new, unique and valuable routines and repertoires, the findings also suggest that the acquisitions tend to have a more positive performance the bigger the difference in culture of the target with the acquire (Morosini et al., 1998).

Chakrabarti et al. (2009) finds that cultural differences do have a positive impact on long term performance, and this positive impact is bigger, the more culturally distant the countries are in between them, even though the median buy-and-hold abnormal returns (BHAR's) were not positive for the acquirer's stocks in the three years after the deal, suggesting that they underperformed in their country, but this is expected, as literature has been documenting underperformance of the acquirers.

This positive impact in the long run performance comes from two possible mechanisms: first, from the synergies that are realized after the deal, as they improve the firm's organizational strengths and second, from the acknowledgement and acceptance of the existing cultural differences before the deal, this way acquirers take into consideration the risks and will be stricter when choosing a target.

On the other hand, a study conducted by **Conn, Cosh, Guest, and Hughes (2005)** finds a negative relation between the cultural distance between countries and the long-term acquirer performance. The authors suggest that this negative effect is mostly due to the post-acquisition integration process, as managers find it difficult to successfully integrate the target

firm, due it being a procedure that is expensive and that takes a lot of their time, as it requires planning and then an effective execution.

2.3.1 Emerging Market

Most of the studies presented in the literature were focused on American and European acquisitions, but recent studies have started to focus on the emerging markets, one example is the study by **Gubbi, Aulakh, Ray, Sarkar, and Chittoor (2010)**. The authors analyzed acquisitions performed by Indian firms and the findings suggest that there is value created for shareholders and the firm's performance is positive when the target is from a more a evolved country, both economically and institutionally, as there are several opportunities for capability transfer (Gubbi et al., 2010; Teerikangas & Very, 2012).

2.3.2 Degree of Integration

Another factor that influences the impact on performance is the magnitude of the integration. **Slangen (2006)** suggests that the impact of the cultural differences is bigger when the target is integrated into the operations of the acquirer, as there will be more interactions between the members of both companies, and thus, more chances for misunderstandings and conflicts to occur. However, this impact can be positive if the target keeps a degree of their autonomy and is not obligated, against their will, to be integrated.

2.3.3 Indirect impact on performance

Other studies defend that the impact of cultural differences on performance is not direct.

Brock (2005) identified an indirect relationship between culture and the creation of synergies. There's a causal link between two of the Hofstede's dimensions, power distance and individualism, and the number of resources shared between the firms and the effectiveness of the post-acquisition integration, respectively. These in turn, then have an impact on the magnitude of the synergies are realized. Different dimensions will have different types of impact on the performance: power distance most likely affects the level of sharing of resources and individualism will affect the integration process (Brock, 2005; Teerikangas & Very, 2012).

Reus and Lamont (2009) defend that cultural distance has, simultaneously, both a positive and a negative impact on performance. There is a negative effect that results from culture delaying the integration process by affecting communication and creating conflict. At the same time, there is a positive effect that comes from the learning opportunities that emerge from the deal. The results show that there's an indirect impact of culture on performance, as it depends on the integration capabilities of the firms, it requires good communication, comprehension and retention of the key employees (Reus & Lamont, 2009; Teerikangas & Very, 2012).

Regarding the degree of integration, Reus and Lamont (2009) defend that by keeping a degree of autonomy, there are risks that are associated with cultural differences that are avoided, however, autonomy will also prevent the learning opportunities that are available from taking place when acquirers present favorable integration capabilities. This way, integration should occur between both firms, but the risks should be mitigated with a strong integration process.

2.4 Other Factors That Influence M&A

2.4.1 Merger Type

Regarding the **Merger Type**, mergers between related firms, meaning when they acquire firms with similar businesses, resources or skills, are expected to reach higher synergies, since there are several similarities between them, such as operational work, resources and departments, for example the marketing one, leading to cost reductions (Chatterjee, 1986; Datta, 1991; Seth, 1990).

On the other hand, as it's referred by Nahavandi and Malekzadeh (1988, p. 81), "in related mergers, the acquirer is more likely to impose its own culture and practices on the acquired company", this way, the probability of conflict is higher, as members of both cultures have to interact with each other more often. In unrelated mergers, the main objective is not to reach operational synergies but more to obtain financial ones, and so, the contact between both firms is much lower (Nahavandi & Malekzadeh, 1988; Y. Weber, 1996). This goes accordingly with studies, such as the one performed by Chatterjee (1986), where it's suggested that related firms are outperformed by unrelated ones, even though the first ones are associated with higher synergies.

Another perspective is proposed by Stahl and Voigt (2008, p. 166), “no simple relationship exists between degree of relatedness and integration design”, as when it comes to the integration of related business it can either be with a high level of integration, as pointed before, or it can happen with the target being able to keep some autonomy, and without an imposition of culture. Moreover, there’s not a clear conclusion on whether the benefits that come with a related business are able to balance the costs that result from a high-level integration (Huang, Zhu, & Brass, 2017; Stahl & Voigt, 2008).

2.4.2 Relative Size

When it comes to the **Relative Size**, the managers of a relatively small target firms, when they are acquired, might feel as if they are no longer important, overlooked and might even be replaced for managers of the acquirer, which can lead to demotivation and a turnover of top managers, thus influencing the long run performance of a firm and impeding it from reaching the expected financial synergies (Walsh, 1989; Y. Weber, 1996; Y. Weber & Menipaz, 2003). In a study by Martynova, Oosting, and Renneboog (2007), the results are similar, acquirers gain more when there are relatively larger targets involved in the deal, than with smaller ones.

2.4.3 Payment Method

Regarding the **Payment Method**, there are two main options: cash and equity. It’s expected that the method of cash will be used if managers believe their stock is undervalued and the method of equity when they expect it to be overvalued. This way, when cash is used, managers signal the market that they have strong expectations regarding the post-acquisition performance (King et al., 2004).

When it comes to cross-border acquisitions, Dutta, Saadi, and Zhu (2013) suggest that stock might actually be viewed positively due to the integration problems that occurs between both firms, so payment in stock would give targets some power and dilute the information asymmetry that rises in these deals, leading them to fail. However, the results don’t reflect this assumption and stock payments underperform compared to cash. A study performed by Chakrabarti et al. (2009), reaches the same results, with cash payments performing better.

2.4.4 Acquirer Size

According to Moeller, Schlingemann, and Stulz (2004), in the short run, there's a negative announcement effect when it comes to the acquirer size, the authors then verify if this relation continues in the long-run. They then confirm that the bigger the acquirer size, the worse the future performance, the same negative relation remains. A possible explanation given by the authors is that in smaller acquiring firms, the incentives and goals of the managers are similar, additionally, as is also defended by Roll (1986), in larger firms managers are susceptible to hubris, leading them to overpay.

In a study performed by Dikova and Rao Sahib (2013), the negative relationship between the size of the acquirer and its long-run performance is reinforced.

2.4.5 Corporate Governance

In cross-border mergers, **Corporate Governance** differences between two countries can be an important factor to determine the success of a cross-border merger. According to Bris and Cabolis (2002), these differences can be measured by the level of investor protection provided by each country and when a merger occurs, targets frequently adopt the corporate governance system of the acquiring company. The authors demonstrate that when the level of investor protection of the target country is lower than the one of the acquirers, there's an increase in the Tobin's Q of the firm, that results from importing a higher level of protection. According to these findings, differences in corporate governance, should result in a positive effect in the abnormal returns.

2.5 Critical Analysis of the Literature Review

The previous literature points out cultural differences as a factor that leads to the failure of cross-border M&A deals, as it could be traced back to stress and trauma mainly among the target's employees and managers; low collaboration; feelings of resentment between employees and episodes of misunderstandings and conflict.

When mentioning culture, there are two definitions to be considered, national and organizational culture, but since national culture is related to the individual's core values and the organizational one is linked to individuals inside an organization, it can be implied that

the national culture influences the organizational one. To measure national culture there are two main measures, the Hofstede the GLOBE dimensions.

Regarding the impact of the national culture on the performance, most studies presented in the literature suggest that the long-run impact is positive, mostly due to access to new routines and repertoires and to realization of synergies. On the other hand, a study finds a negative relation, due to the problems that arise with the complex post-acquisition integration process.

When it comes to acquisitions performed by firms in the emerging markets, the impact is positive when the target is from a more evolved country. Another factor that influences the impact is the degree of integration, as it can be positive if the target is able to maintain some of its autonomy. Other studies point out that culture has an indirect impact, one defends that occurs a positive and a negative impact simultaneously and another that there is a causal link between two of the Hofstede dimensions and the number of resources shared and the effectiveness of the integration.

There are other factors, that alongside culture, have an impact on cross-border M&A, such as the merger type, relative size, payment method, acquirer size and corporate governance differences.

This study aims to contribute to the research of the long-term effect that cultural differences between countries have on the acquirer when they perform cross-border acquisitions, since there are still studies with contradictory results. This way, based on the existing literature, the research **hypothesis** is:

- National culture distance has a positive impact on the long-term acquirer's performance in cross-border acquisitions.

3. Sample and Methodology

In this chapter, it's described the sample that is going to be used in this study, followed by a presentation of the methodology. The chapter ends with the descriptive statistics of all the variables that are going to be used.

3.1 Sample

The sample was collected from the Zephyr database, one of the main databases related to mergers and acquisitions worldwide.

All the M&A deals have to be cross-border and completed in the period between 2009 and October 2018. This limit in 2018 is applied in order to be able to obtain stock price information of the acquirer 30 months after the acquisition, and so, have enough information to calculate the BHAR's, the dependent variable. In addition, the acquirer has to be listed in the moment of the acquisition, acquire a stake of 100% of the target shares and the transaction requires a deal value minimum of 100 million dollars (USD).

Furthermore, in order to not include "shell" operations, a few countries are removed, both from the acquirer and the target side, such as Bahamas, Bermudas, Cayman Islands, Puerto Rico, Papua New Guinea, Curaçao, Brunei, Gibraltar and the British Virgin Islands. As financial firms have different reporting systems and regulations, these will also be removed from the sample by excluding the financial US SIC Primary Codes². Finally, the target relative size to the acquirer, must be higher than 10%, as if it's lower, there won't be much of an impact on the acquirer and no bigger than 150%. The relative size was measured by dividing the total assets of the target firm by the total assets of the acquirer, both before the deal.

The final sample of this study consists of 222 cross border deals, with 28 different acquiring countries and 27 different target ones. As it's presented in Table 1, United States of American, United Kingdom and Canada are the countries most represented, both on the acquiring side, representing 55% of the sample, and on the target side with a total share of 51.8%. Additionally, five continents are represented, however there's a significant difference between the number of players in Europe and America, mostly, North America, and Africa.

² Depository Institutions; Non-Depository Credit Institutions; Security and Commodity Brokers, Dealers, Exchanges and Services; Insurance Carriers; Insurance Agents, Brokers, and Service; Real Estate; Holding and Other Investment Offices; Public Finance, Taxation, and Monetary Policy

In Annex II, it's presented the number of deals between each country, where the most common pair to execute a deal is United States of America and Canada.

Table 1 - Acquirers and Targets of the Sample

This table shows all the acquiring and target countries and the number of deals each have been involved.

Acquirer Country	N	%	Target Country	N	%
United States of America	55	24.8	United States of America	67	30.2
Canada	36	16.2	Canada	26	11.7
United Kingdom	31	14.0	United Kingdom	22	9.9
France	12	5.4	France	14	6.3
Sweden	13	5.9	Germany	13	5.9
Japan	11	5.0	Italy	11	5.0
Spain	10	4.5	Netherlands	11	5.0
Belgium	7	3.2	Spain	9	4.1
Germany	7	3.2	Australia	9	4.1
China	6	2.7	Norway	6	2.7
Netherlands	5	2.3	Luxembourg	5	2.3
Italy	5	2.3	Denmark	4	1.8
Finland	4	1.8	Sweden	4	1.8
Ireland	3	1.4	Belgium	3	1.4
Australia	3	1.4	Singapore	3	1.4
Singapore	2	0.9	Portugal	3	1.4
South Africa	2	0.9	Finland	2	0.9
Denmark	1	0.5	Greece	2	0.9
Portugal	1	0.5	Brazil	1	0.5
Luxembourg	1	0.5	Poland	1	0.5
Poland	1	0.5	South Africa	1	0.5
Austria	1	0.5	Japan	1	0.5
Thailand	1	0.5	Malaysia	1	0.5
Malaysia	1	0.5	Russian Federation	1	0.5
Switzerland	1	0.5	New Zealand	1	0.5
Mexico	1	0.5	Jamaica	1	0.5
New Zealand	1	0.5			
Total	222	100%	Total	222	100%

Table 2 presents the number of acquisitions per year, where the biggest number occurred in 2016, representing 18.5% of all acquisitions, on the other hand, the worst year for M&A was in 2009 with only 4.1%, which is most likely explained by the financial crisis still hitting this period.

Table 2 - Number of Mergers and Acquisitions Per Year

This table presents the number of deals per year and their percentage in the sample.

Year	N	%
2018	20	9,0
2017	26	11,7
2016	41	18,5
2015	28	12,6
2014	26	11,7
2013	13	5,9
2012	14	6,3
2011	29	13,1
2010	16	7,2
2009	9	4,1
Total	222	100%

3.2 Methodology

The goal of this study is to understand the impact of the national culture differences between countries on the acquirer long-term performance.

This research uses an event study methodology that focuses on the long-term abnormal returns of the acquirer firm, around two events, the deal announcement and close date.

The buy-and-hold abnormal returns (BHAR) will be used to measure the performance and it will be our dependent variable. As explanatory variables, the variables of interest will be the Hofstede and GLOBE measures, two of the most recognized measures of cultural distance in the literature (Teerikangas & Very, 2012). It's also included a set of control variables, namely deal-specific variables, country-specific variables and target country and year fixed effects. These fixed effects help control for aspects that are specific and common to for certain groups.

The methodology in this study follows Chakrabarti et al. (2009), but uses a more recent data, a different event window, and expands the cultural measures to include six Hofstede dimensions, instead of four, and adds the GLOBE dimensions.

Finally, the following regressions for each of the different BHAR's will be estimated:

$$\begin{aligned} \text{BHAR}_i = & \alpha + \beta_1 \text{LOG}(\text{HOFSTEDE})_{A,T} + \beta_2 \text{DUMMY_CASH}_i + \beta_3 \text{DUMMY_RELATED}_i \\ & + \beta_4 \text{LOG}(\text{MV})_i + \beta_5 \text{OPEN_TARGET}_T + \beta_6 \text{FOREX_VOLATILITY}_{A,T} \\ & + \beta_7 \text{LOG}(\text{BILATERAL})_{A,T} + \beta_8 \text{CORP_GOV_DIFF}_{A,T} + \text{FE}_T + \gamma_t + \varepsilon_i \end{aligned} \quad (3.1)$$

$$\begin{aligned} \text{BHAR}_i = & \alpha + \beta_1 \text{LOG}(\text{GLOBE})_{A,T} + \beta_2 \text{DUMMY_CASH}_i + \beta_3 \text{DUMMY_RELATED}_i \\ & + \beta_4 \text{LOG}(\text{MV})_i + \beta_5 \text{OPEN_TARGET}_T + \beta_6 \text{FOREX_VOLATILITY}_{A,T} \\ & + \beta_7 \text{LOG}(\text{BILATERAL})_{A,T} + \beta_8 \text{CORP_GOV_DIFF}_{A,T} + \text{FE}_T + \gamma_t + \varepsilon_i \end{aligned} \quad (3.2)$$

Where BHAR is the buy-and-hold abnormal return of the acquirer for the firm i , LOG (HOFSTEDE) and LOG (GLOBE) are the cultural distance measures between the acquirer country A , and the target country T . FE_T and γ_t are the target country and year fixed effects, respectively. ε_i is the error term. All the other variables will be further described in the next sections. In Annex V, there's a summary of all the variables used.

3.3 Dependent Variable

To measure the long-term performance of the acquirer is used the BHAR (buy-and-hold abnormal returns). This variable is commonly used in studies that analyze the long-run stock performance, as it measures the abnormal returns, over the market, that an investor would obtain in case he bought shares of the acquiring firm in the month of the acquisition and held them for some years (Chakrabarti et al., 2009). According to Lyon, Barber, and Tsai (1999, p. 198), this approach “accurately represents investor experience”.

However, as discussed by Barber and Lyon (1997), this variable presents some limitations, such as new listing bias, skewness bias and rebalancing bias. The first one occurs, as the BHAR considers the returns of a benchmark, such as an index, and in turn, this index will continue to consider new companies after the event has already occurred, thus affecting the result of the abnormal returns. The skewness bias emerges as the distribution of the long-term abnormal returns are positively skewed. Finally, the rebalancing bias arises from the compound returns of an index suffering a rebalancing that occurs regularly, thus, there's an adjustment of the weights of the assets in a portfolio, whereas the same doesn't happen in the firm's compound returns.

To be able to compute the BHAR of the acquirer, it was created two windows for the event-study analysis, one in the month of the announcement and the other in the close month of the M&A. This way, in the first event the market hasn't internalized their expectations yet, whilst the same doesn't happen in the second, which will measure the acquirer actual performance compared to the acquirer expected performance at the time of the deal. Afterwards, it was applied the market-adjusted returns method, it consists of the difference between the cumulative return of the stock and the cumulative benchmark return, in this case, the market index returns for the country of the acquirer. The cumulative return is calculated by compounding the monthly returns of the stock of the acquirer throughout the event window. The cumulative market return for the benchmark is computed similarly.

Regarding the event-study analysis, it will be constructed a window with a length of 30 months after the close month event, with it being month 0, BHAR (0,30). The other window starts in the month before the announcement of the deal, but only ends 30 months after the deal is closed, BHAR (-1, 30). The use of the 30 months after the close effective date is to ensure that the deal has been completed during the window of the event, which might not happen if it was considered 30 months after the announcement.

As, each deal has different time stamps between their announcement and their effective date, and to be able to compare the results of the different BHAR's, the returns are annualized.

In order to calculate the BHAR and obtain the necessary share and index prices data, it was used the Datastream database. It's computed as follows:

$$BHAR_i = \left[\prod_{t=1}^T (1+r_{i,t}) - 1 \right] - \left[\prod_{t=1}^T (1+r_{m,t}) - 1 \right] \quad (3.3)$$

Where:

T - n° of trading months

$r_{i,t}$ - the return of the firm i in the event window month t

$r_{m,t}$ - the return of the market index during the corresponding time period

The statistics summary of the dependent variable is presented in Table 3, all the BHAR values were annualized, in order to be able to compare them. All the means present positive

values, which could indicate positive long-run performances for the acquirers. However, for the BHAR (0,30), even though the mean is positive, the median is negative, that implies that the “winners” obtain larger gains, than what the “losers” lose. Given the existence of outliers, the variables were winsorized at 5th and 95th percentile to control for the impact they have in the results.

The t-test and the Wilcoxon rank-sum test are performed in order to test if the means and medians of both are different from zero, and so if the events result in statistically significant acquirer’s abnormal returns. For both variables, the results are never statistically significant, there’s not enough evidence to reject the hypothesis that they are equal to zero.

Table 3 - Descriptive Statistics of the Dependent Variables

This table presents the descriptive statistics of both dependent variables. For both measures the means are positive which indicates a positive performance, however the median for BHAR (0,30) is negative, which implies the existence of outliers. To test if the means and medians are different from 0, it’s applied a t-test, for the means, and a Wilcoxon rank-sum test for the medians. The classification ***, **, * denotes for 1%, 5% and 10% significance level, respectively.

	Event	Mean	Median	Maximum	Minimum	Std. Dev.	N
BHAR (0,30)	Effective Close Month	0.006	-0.010	1.383	-0.784	0.307	222
BHAR (-1,30)	Announcement Month	0.018	0.009	1.409	-0.821	0.302	222

3.4 Independent Variables

The main independent variable is the cultural distance between the acquirer and the target. Two different measures of culture were used to assess the cultural distance between the acquirer and target countries, the Hofstede and the GLOBE, practical scores, measures.

Hofstede is constituted by six³ different dimensions and GLOBE by nine⁴. The data for the Hofstede⁵ and GLOBE⁶ dimensions were obtained from their websites. To quantify these distances, it was applied the cartesian measure of distance between the different dimensions, as used by Chakrabarti et al. (2009). It is computed as follows:

³ The country of Jamaica only has information for four dimensions.

⁴ The scores for Germany and South Africa are an average of two. Germany is an average of Germany East and Germany West. South Africa is an average of black and white population.

⁵ <https://geerthofstede.com/>

⁶ <https://globeproject.com/>

$$\text{Hofstede Distance} = \frac{\sqrt{\sum_{i=1}^6 (S_{A,d} - S_{T,d})^2}}{6} \quad (3.4)$$

$$\text{GLOBE Distance} = \frac{\sqrt{\sum_{i=1}^9 (S_{A,d} - S_{T,d})^2}}{9} \quad (3.5)$$

Where:

$S_{A,d}$ - Acquirer score on dimension d

$S_{T,d}$ - Target score on dimension d

The statistics summary of the independent variable is presented in Table 4. The number of observations is lower for GLOBE, as there's not data for a few countries that are included in this study, such as Belgium, Norway, Luxembourg and Jamaica.

Table 4 - Descriptive Statistics of the Independent Variables

This table presents the descriptive statistics of the cultural distant measures. Whilst Hofstede is constituted by 6 dimensions, GLOBE uses 9 dimensions.

	Mean	Median	Maximum	Minimum	Std. Dev.	N
Hofstede Distance	48.680	47.990	112.116	8.062	26.554	222
GLOBE Distance	1.371	1.264	3.691	0.448	0.565	199

For both the Hofstede and GLOBE measures⁷, the countries that display the lowest distance, thus, have the most similar cultures, are the United States of America and Australia. For Hofstede, the most distant national culture occurs between United States of America and China, whilst for GLOBE, the most different pair belongs to the Netherlands and Russia.

To perform the regression, the variables will be logarithmized (LOG (HOFSTEDE) and LOG (GLOBE)) to capture any existing nonlinearities in the relation between the acquirer and the target (Chakrabarti et al., 2009).

⁷ Annexes III and IV show the cultural distance values between each country for Hofstede and GLOBE, respectively.

3.5 Control Variables

3.5.1 Deal-level variables

Alongside cultural differences, deal-level characteristics are recognized for having an impact in the long-run performance of an M&A, and so, are added as control variables. To obtain data for these variables it was used the Zephyr and Datastream databases.

Payment Method: According to authors, such as Dutta et al. (2013), it's expected for payments in cash to perform better than other types of payment. For this variable, it's created a dummy that will present the value of 1 if the payment method used is entirely in cash and the value of 0 if otherwise (DUMMY_CASH).

Relatedness: Deals between related firms can be expected to create value due to synergies, just like reports Datta (1991), or, prejudicial due to integration problems (Chatterjee, 1986). It's generated a dummy that shows the value of 1 in case the acquisition is between related firms and the value of 0 if it's not. The relatedness between the acquirer and the target is measured by the matching of three-digit SIC codes (DUMMY_RELATED).

Acquirer Market Value: As is defended by Moeller et al. (2004), the bigger the acquirer size, the worse the performance, thus, it's expected a negative relation between both. To measure the size, it's used the natural algorithm of value of outstanding equity presented in the month before the acquisition (LOG (MV))

Relative Size: According to authors such as Martynova et al. (2007), the bigger the relative target size to the acquirer size, the better the value expected of the performance. The variable is measured by dividing the total assets of the target by the total assets of the acquirer, both before the deal (RELATIVE_SIZE).

3.5.2 Economic Country-level variables

Following the methodology used by Chakrabarti et al. (2009) economic country differences are expected to have an impact on the abnormal returns, thus country-level control variables are introduced.

Openness of the Target: According to Chakrabarti et al. (2009) this is a measure of the level of international trade, in which a high-level can affect the level of difficulty that the

acquirer has to face when handling new departments. This study suggests that this variable can negatively affect the acquirer due to a lower number of trade barriers in the target, leading to more competition. This is quantified by the ratio of the target's trade, its exports plus imports, to their GDP, in the year prior to the acquisition. The data was obtained from The World Bank database. It's calculated as follows:

$$\text{OPEN_TARGET} = \frac{\text{Target Nation Import} + \text{Target Nation Export}}{\text{Target Nation GDP}} \quad (3.6)$$

Per Capita Income Difference: According to Chakrabarti et al. (2009), economic disparities result in socio-economic differences, in this study, the author finds a positive impact in the long-run, due to lower costs in the target country. This is measured by the ratio between the difference of the income per capita of the acquirer and the target and the sum of the income per capita, in turn, per capita income is calculated by dividing GDP by the population. The data was obtained from The World Bank database. It's computed as follows:

$$\text{PCI_DIFF} = \frac{\text{Per Capita GDP Acquirer Nation} - \text{Per Capita GDP Target Nation}}{\text{Per Capita GDP Acquirer Nation} + \text{Per Capita GDP Target Nation}} \quad (3.7)$$

Forex Volatility: Chakrabarti et al. (2009) suggests that exchange rate volatility is likely to affect the decision of entering into an M&A, however, it's not clear what impact it should have. The volatility is computed by using historical data and is calculated the standard deviation of the exchange rate between the currency of the acquirer and the target for a -30 to -1 month window, where month of acquisition is 0. Afterwards, the volatility was annualized. The data was obtained from Yahoo Finance (FOREX_VOLATILITY).

Bilateral Trade: This corresponds to all trade, imports and exports, between the target and the acquirer country and can, thus, be a proxy of the level of economic integration between both nations. According to Ferreira, Massa, and Matos (2009), economic integration is expected to positively impact the performance. It's calculated by the sum of the imports of the target from the acquirer and exports of the target to the acquirer, in the year before the acquisition's effective year.

$$\text{LOG(BILATERAL)} = \ln(\text{Imports Target from Acquirer} + \text{Exports Target to Acquirer}) \quad (3.8)$$

Corporate Governance Difference: Bris and Cabolis (2002) suggests that the bigger the difference in the nation’s investor protection, the bigger the impact on performance. Investor protection can be measured by the Antidirector Index, which can be obtained from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008). This variable is computed as:

$$\text{CORP_GOV_DIFF} = \text{Acquirer Antidirector Index} - \text{Target Andirector Index} \quad (3.9)$$

Table 5 presents the descriptive statistics for the control variables. In this sample less than half of the deals, namely 45.9%, are between related firms. Cash was the method of payment in 48.6% of the deals.

Table 5 - Descriptive Statistics of the Control Variables

This table presents the descriptive statistics of all the control variables considered.

Control Variables	Mean	Median	Maximum	Minimum	Std. Dev.	N
Payment Method	0.486	0	1	0		222
Relatedness	0.459	0	1	0		222
MV (millions \$)	6,780.8	1,938.8	104,569.0	9.5	13,421.7	222
Relative Size	0.432	0.264	1.500	0.095	0.388	222
Openess of the Target	0.638	0.585	4.373	0.245	0.487	222
PCI Diff.	-0.036	-0.023	0.774	-0.848	0.240	222
Forex Volatility	0.082	0.084	0.216	0.000	0.043	222
Bilateral Trade (millions \$)	148,801.8	62,069.5	666,543.3	23.5	200,997.1	222
Corporate Governance Diff.	0.185	0.250	3.000	-4.000	1.352	222

3.6 Correlation matrix

The correlation matrix between the independent and control variables is used in order to check for the multicollinearity problem and is presented in Annex VI. The correlation between the logarithms of the Hofstede culture distance and the GLOBE distance is high, 0.854, this indicates that both of these methods measure culture in a similar way, however, they are always used in separate regressions, so the problem is avoided. Regarding the rest of the variables, they are all uncorrelated, with the highest correlation being between the natural logarithm of bilateral trade and the natural logarithm of GLOBE with a value of -0.389.

4. Results

This chapter starts with presenting the results for a univariate analysis. Afterwards, the results for the multivariate analysis are shown, ending with a closer look to the individual dimensions of the cultural measures.

4.1 Univariate Analysis

This analysis divides the sample in two, dividing it into deals that occurred between firms from culturally distant countries and deals between firms from culturally close countries. This division is made according to the median of the culture measure, both for Hofstede and GLOBE. The t-test and the Wilcoxon rank-sum test are performed in order to test the equality of means and medians of both subsamples.

Table 6 reports the results of the univariate analysis, in Panel A for the Hofstede measure and in Panel B for GLOBE.

The results show that, for all the tests performed, none of the variables are statistically significant for all the significance levels, this means that there's not enough evidence to be able to determine that the means and the medians of the subgroups are significantly different. These results suggest that there is no difference in the performance associated to differences in cultural distance between the acquirer and the target countries.

Table 6 - Univariate Analysis

This table presents the descriptive statistics of the BHAR's for two sub-groups: firms engaging in culturally distant deals and firms engaging in culturally close ones. Panel A presents the results using the Hofstede measure, whilst Panel B presents the ones using the GLOBE. The test of equality in means, t-test, and the test of equality for medians, Wilcoxon rank-sum test, report the p-values. The classification ***, **, * denotes for 1%, 5% and 10% significance level, respectively.

<i>Panel A: Univariate Analysis using Hofstede measure of culture</i>								
Variables	Culturally Distant			Culturally Close			Tests of Equality	
	Mean	Median	N	Mean	Median	N	Mean	Medians
BHAR (0,30)	-0.004	-0.014	111	-0.013	0.000	111	0.787	0.905
BHAR (-1,30)	0.013	0.002	111	-0.001	0.009	111	0.678	0.779

<i>Panel B: Univariate Analysis using GLOBE measure of culture</i>								
Variables	Culturally Distant			Culturally Close			Tests of Equality	
	Mean	Median	N	Mean	Median	N	Mean	Medians
BHAR (0,30)	-0.005	-0.005	98	-0.017	-0.009	101	0.723	0.810
BHAR (-1,30)	0.021	0.020	98	-0.006	0.009	101	0.419	0.554

4.2 Multivariate Analysis

This section presents the results of the cross-sectional OLS regressions. To mimic the effect of the fixed effects, dummy variables are used to control for target and year fixed effects. Furthermore, the Newey-West estimator is used for any heteroskedasticity and autocorrelation.

For each regression, four different models are estimated. The first considers only the impact of the independent variable on the performance, the second model includes the deal-specific control variables. In the third model, country-specific control variables are added and, finally, in the fourth model, the corporate governance variable is included.

Finally, as explained before, the dependent variables were winsorized at 5th and 95th percentile to decrease the impact of the outliers in the results.

Results with dependent variable: BHAR (0,30)

Table 7 presents the results for the four models using as independent variable the Hofstede measure. Even though the coefficient for the cultural distance variable is positive in all models, which could indicate that there's a positive impact, the variable is not statistically significant in any of them, the results are not in accordance with the findings of Morosini et al. (1998) and of Chakrabarti et al. (2009). Therefore, with this independent variable there's not enough evidence that supports the hypothesis that the cultural difference between the target and acquirer countries impacts the acquirer long-term performance.

When it comes to the control variables, Relative Size presents a positive coefficient and is statistically significant in the model II and III, which indicates that higher the relative size of the target, the better the long-term performance, this is consistent with what is predicted by Martynova et al. (2007) and Y. Weber and Menipaz (2003), in which the managers from smaller targets firms might feel overlooked, thus, creating integration problems.

Openness of the Target also has a positive and a statistical significant impact, indicating that the more open the target economy is to the world, the better the performance, this is not in line with the results obtained by Chakrabarti et al. (2009), as they predict a negative influence on the acquirer gains, possibly due do to the high competition that, then, dilutes the advantages. However, in this thesis, this competition seems to be beneficial, as probably there are more trade opportunities for the acquirer.

Additionally, Corporate Governance Difference presents a positive coefficient and is statistically significant, indicating that the bigger the difference in investor protection between the target and acquirer countries, the better the effect on the long-term performance, just like is reported in the study performed by Bris and Cabolis (2002) where it defends that target firms import the better governance system used by the acquirers, thus, improving the abnormal returns.

Table 7 - Results for the Dependent Variable BHAR (0,30) and Hofstede as Culture Measure

This table presents the results of the OLS regressions, where the dependent variable is the annualized buy-and-hold return for an event window of 30 months following the close date of the acquisition, BHAR (0,30), and the independent variable is the natural algorithm of the Hofstede measure. In all regressions is used the Newey-West estimator and is also included fixed effects for the effective close year and for the country of the target. Robust standard errors are reported in parenthesis under each coefficient. The classification ***, **, * denotes for 1%, 5% and 10% significance level, respectively.

	Model I	Model II	Model III	Model IV
LOG (HOFSTEDE)	0.006 (0.028)	0.007 (0.028)	0.010 (0.029)	0.020 (0.030)
DUMMY_CASH		0.042 (0.032)	0.037 (0.031)	0.036 (0.031)
DUMMY_RELATED		0.031 (0.028)	0.035 (0.029)	0.038 (0.030)
LOG (MV)		0.012 (0.014)	0.012 (0.014)	0.014 (0.014)
RELATIVE_SIZE		0.094** (0.047)	0.094* (0.048)	0.085 (0.047)
OPEN_TARGET			0.583*** (0.174)	0.473*** (0.173)
PCI_DIFF			0.018 (0.086)	0.033 (0.087)
FOREX_VOLATILITY			-0.112 (0.477)	-0.117 (0.465)
LOG (BILATERAL)			0.003 (0.016)	0.010 (0.015)
CORP_GOV_DIFF				0.037** (0.015)
CONSTANT	-0.162 (0.143)	-0.473 (0.306)	-0.843 (0.544)	-1.026 (0.531)
Year Fixed Effects	Yes	Yes	Yes	Yes
Target - Country Fixed Effects	Yes	Yes	Yes	Yes
R ² (%)	18.511	21.357	23.649	25.063
N	222	222	222	222

Table 8 presents the results with the GLOBE variable as a measure of cultural distance.

In this case, the independent variable is always statistically significant with a positive coefficient. Therefore, by using the GLOBE measure, there is evidence to support our hypothesis that the more culturally distant firms are in cross-border acquisitions, the better the long-run performance of the acquirer. These findings are consistent with the results obtained by Dikova and Rao Sahib (2013) and Sarala and Vaara (2010), where both use GLOBE as a measure and consistent with Morosini et al. (1998) and Chakrabarti et al. (2009), where, even though they perform studies using Hofstede, their result is of a positive relation between national culture differences and performance.

These authors suggest that the positive effects come from factors, such as knowledge transfer, synergies and access to a new set of routines and repertoires.

Regarding the control variables, once again, Relative Size, Openness of the Target and Corporate Governance Difference present a positive coefficient and are statistically significant.

Cash Dummy also has a positive coefficient and is statistically significant in all models, indicating that payments in cash add more value than any other type of payment, such as stock, this is in line with the studies by Chakrabarti et al. (2009) and Dutta et al. (2013).

Table 8 - Results for the Dependent Variable BHAR (0,30) and GLOBE as Culture Measure

This table presents the results of the OLS regressions, where the dependent variable is the annualized buy-and-hold return for an event window of 30 months following the close date of the acquisition, BHAR (0,30), and the independent variable is the natural algorithm of the GLOBE measure. In all regressions is used the Newey-West estimator and is also included fixed effects for the effective close year and for the country of the target. Robust standard errors are reported in parenthesis under each coefficient. The classification ***, **, * denotes for 1%, 5% and 10% significance level, respectively.

	Model I	Model II	Model III	Model IV
LOG (GLOBE)	0.098* (0.050)	0.084* (0.050)	0.088* (0.055)	0.118** (0.056)
DUMMY_CASH		0.068* (0.035)	0.063* (0.033)	0.059* (0.033)
DUMMY_RELATED		0.030 (0.031)	0.037 (0.032)	0.035 (0.032)
LOG (MV)		0.012 (0.014)	0.012 (0.014)	0.014 (0.014)
RELATIVE_SIZE		0.078* (0.048)	0.074 (0.049)	0.067 (0.049)
OPEN_TARGET			0.654*** (0.177)	0.532*** (0.178)
PCI_DIFF			-0.012 (0.100)	-0.002 (0.099)
FOREX_VOLATILITY			0.072 (0.499)	0.076 (0.497)
LOG (BILATERAL)			0.002 (0.018)	0.014 (0.018)
CORP_GOV_DIFF				0.041** (0.017)
CONSTANT	-0.115 (0.106)	-0.422 (0.325)	-0.825 (0.572)	-1.077* (0.576)
Year Fixed Effects	Yes	Yes	Yes	Yes
Target - Country Fixed Effects	Yes	Yes	Yes	Yes
R ² (%)	16.051	19.336	22.237	23.762
N	199	199	199	199

Results with dependent variable: BHAR (-1,30)

Table 9 presents the results with the Hofstede measure as the cultural distance variable. Just like in the previous results, the Hofstede measure has a positive coefficient, however, it's never statistically significant, thus, it's not possible to conclude that there is any impact

in the performance of the acquirer, which is not line with the results obtained by Morosini et al. (1998) Chakrabarti et al. (2009).

Regarding the control variables, Relative Size, Openness of the Target, Corporate Governance Difference and the Cash Dummy present a positive coefficient and are statistically significant in all models they are included.

Table 9 - Results for the Dependent Variable BHAR (-1,30) and Hofstede as Culture Measure

This table presents the results of the OLS regressions, where the dependent variable is the annualized buy-and-hold return that has as event the announcement date, with the window starting in the previous month and ending 30 months after the completed date, BHAR (-1,30). The independent variable is the natural algorithm of the Hofstede measure. In all regressions is used the Newey-West estimator and is also included fixed effects for the announcement year and for the country of the target. Robust standard errors are reported in parenthesis under each coefficient. The classification ***, **, * denotes for 1%, 5% and 10% significance level, respectively.

	Model I	Model II	Model III	Model IV
LOG (HOFSTEDE)	0.007 (0.027)	0.007 (0.026)	0.017 (0.028)	0.025 (0.030)
DUMMY_CASH		0.057* (0.032)	0.055* (0.032)	0.053* (0.032)
DUMMY_RELATED		0.021 (0.030)	0.019 (0.031)	0.021 (0.034)
LOG (MV)		0.013 (0.013)	0.013 (0.013)	0.014 (0.013)
RELATIVE_SIZE		0.118** (0.042)	0.119*** (0.043)	0.112** (0.043)
OPEN_TARGET			0.445*** (0.165)	0.365** (0.169)
PCI_DIFF			0.006 (0.077)	0.016 (0.078)
FOREX_VOLATILITY			-0.322 (0.428)	-0.322 (0.419)
LOG (BILATERAL)			0.008 (0.015)	0.014 (0.015)
CORP_GOV_DIFF				0.027* (0.014)
CONSTANT	-0.234* (0.124)	-0.581* (0.285)	-0.929* (0.518)	-1.046** (0.515)
Year Fixed Effects	Yes	Yes	Yes	Yes
Target - Country Fixed Effects	Yes	Yes	Yes	Yes
R ² (%)	20.279	24.339	26.150	26.939
N	222	222	222	222

Table 10 shows the results of the regression with the GLOBE measure as the independent variable. The GLOBE measure is statistically significant and with a positive coefficient. These findings demonstrate, again, that the more culturally distant the firms are, the better the long-term performance of the acquirer. The results are consistent with what is shown by Dikova and Rao Sahib (2013), Sarala and Vaara (2010), Morosini et al. (1998) Chakrabarti et al. (2009). For the control variables, the results are the same as in Table 9.

Table 10 - Results for the Dependent Variable BHAR (-1,30) and GLOBE as Culture Measure

This table presents the results of the OLS regressions, where the dependent variable is the annualized buy-and-hold return that has as event the announcement date, with the window starting in the previous month and ending 30 months after the completed date, BHAR (-1,30). The independent variable is the natural algorithm of the GLOBE measure. In all regressions is used the Newey-West estimator and is also included fixed effects for the announcement year and for the country of the target. Robust standard errors are reported in parenthesis under each coefficient. The classification ***, **, * denotes for 1%, 5% and 10% significance level, respectively.

	Model I	Model II	Model III	Model IV
LOG (GLOBE)	0.106** (0.051)	0.090* (0.050)	0.105* (0.054)	0.126** (0.058)
DUMMY_CASH		0.073** (0.035)	0.069** (0.034)	0.066* (0.034)
DUMMY_RELATED		0.021 (0.033)	0.021 (0.034)	0.020 (0.035)
LOG (MV)		0.014 (0.014)	0.014 (0.014)	0.015 (0.014)
RELATIVE_SIZE		0.102** (0.042)	0.099** (0.044)	0.094** (0.044)
OPEN_TARGET			0.529*** (0.162)	0.445*** (0.168)
PCI_DIFF			-0.013 (0.090)	-0.007 (0.089)
FOREX_VOLATILITY			-0.237 (0.487)	-0.232 (0.480)
LOG (BILATERAL)			0.008 (0.016)	0.017 (0.017)
CORP_GOV_DIFF				0.030* (0.020)
CONSTANT	-0.242*** (0.082)	-0.595* (0.304)	-0.963* (0.529)	-1.131** (0.537)
Year Fixed Effects	Yes	Yes	Yes	Yes
Target - Country Fixed Effects	Yes	Yes	Yes	Yes
R ² (%)	17.600	21.703	24.111	24.955
N	199	199	199	199

In both dependent variables, both measures of culture present a positive coefficient, but only GLOBE is consistently statistically significant. One possible explanation could be the number of observations, as GLOBE doesn't provide information for four countries, and so the sample is reduced by 23 observations. Alternatively, as Teerikangas and Very (2006) point out, culture is a subjective concept, so the explanation can be due to the core differences between these two measures. The first difference is the number of dimensions, Hofstede presents six, whilst GLOBE contains nine, hence, some authors believe that with a bigger number of dimensions, it's provided a more in-depth information of the national culture of the countries (House et al., 2004; Reus & Lamont, 2009; Sarala & Vaara, 2010). Another difference is the period that the data of the dimensions was collected, as Hofstede's was collected during the 1970's and the GLOBE's was collected in the 1990's, hence, the latter provides more current data and is closer to the time interval used in this study. (Reus & Lamont, 2009).

4.3 Individual Dimensions

In this section, it's analyzed the impact of each dimension on the performance. The variables are calculated by using the difference between the acquirer country score and the target country score.

Hofstede Dimension

Table 11 displays the results for each Hofstede dimension. Even though the Hofstede distance measure never showed any statistical significance, the difference between the acquirer and the target in the Individualism dimension always presents statistical significance with a negative coefficient.

The Individualism dimension measures the importance of individual rights and how a population values their independence, on the other hand, Collectivism cultures value interdependency and teamwork. This way, our results suggest that the bigger the difference between the acquirer and the target countries, the worse the impact on the acquirer, for example, a target company with a low culture on individualism is used to receiving orders, so they might feel overwhelmed when the acquirer delegates authority (Brock, 2005).

These results are different from the ones obtained by Chakrabarti et al. (2009), as he finds a negative effect only in the Masculinity dimension. On the other hand, it's similar to the results obtained by Brock (2005), where there are more integration problems due to individualism differences.

Table 11 - Results for Individual Hofstede Dimensions

This table presents the results of the OLS regressions for dependent variables: BHAR (0,30) and BHAR (-1,30). The independent variables are the difference in individual Hofstede dimensions, between the country of the acquirer and the country of the target. In the last two columns the control variables are included. In all regressions is used the Newey-West estimator and is also included fixed effects for the country of the target and fixed effects for the year of the effective date for the dependent variables with the close date as an event and fixed effects for the announcement year for the dependent variable with announcement date as event. Robust standard errors are reported in parenthesis under each coefficient. The classification ***, **, * denotes for 1%, 5% and 10% significance level, respectively.

	BHAR (0,30)	BHAR (-1,30)	BHAR (0,30)	BHAR (-1,30)
INDIVIDUALISM_DIFF	-0.005*** (0.001)	-0.004*** (0.001)	-0.005*** (0.001)	-0.004*** (0.001)
INDULGENCE_DIFF	0.003 (0.002)	0.002 (0.002)	0.001 (0.002)	0.000 (0.002)
LONG_TERM_ORIENTATION_DIFF	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
MASCULINITY_DIFF	0.001 (0.001)	0.000 (0.001)	0.000 (0.000)	0.000 (0.001)
POWER_DISTANCE_DIFF	0.000 (0.001)	-0.001 (0.001)	0.000 (0.002)	0.000 (0.002)
UNCERTAINTY_AVOIDANCE_DIFF	0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.001 (0.001)
CONSTANT	-0.164 (0.106)	-0.276*** (0.089)	-1.211** (0.550)	-1.231** (0.499)
Control Variables			Included	Included
Year Fixed Effects	Yes	Yes	Yes	Yes
Target - Country Fixed Effects	Yes	Yes	Yes	Yes
R ² (%)	22.852	24.396	29.345	30.831
N	222	222	222	222

GLOBE Dimensions

Table 12 demonstrates the results for each GLOBE dimension. The Future Orientation dimension presents significance when only the cultural dimensions are considered but loses it when the control variables are added. On the other hand, In-Group Collectivism dimension is always statistically significant and with a positive coefficient.

In-Group Collectivism is the degree that the individuals are loyal and see with positivity and pride the groups they are in, these include families or institutions, so, in cultures that present high-level scores, decisions are made considering the needs of the group, whilst in a society with low scores, personal goals are more important and are more rational in decision making. Our results suggest that the bigger the difference between the acquirer and the target, the better the long-term results of the deal. Possibly there could be a similar effect to what is proposed by Bris and Cabolis (2002) for corporate governance differences, the target countries with a lower score learn from the acquirer countries, taking in pride in the organizations they are in, thus positively affecting the acquirer's performance.

Nevertheless, when considering that only one dimension out of all the nine, presents any significance, it seems that either this one is strong enough that even when combined with the other eight dimensions it doesn't lose its impact, or that the positive impact doesn't come from just the difference in one variable, but rather from the combined differences of all of them.

Table 12 – Results for Individual GLOBE Dimensions

This table presents the results of the OLS regressions for dependent variables: BHAR (0,30) and BHAR (-1,30). The independent variables are the difference in individual GLOBE dimensions, between the country of the acquirer and the country of the target. In the last two columns the control variables are included. In all regressions is used the Newey-West estimator and is also included fixed effects for the country of the target and fixed effects for the year of the effective date for the dependent variables with the effective month as an event and fixed effects for the announcement year for the dependent variable with announcement date as event. Robust standard errors are reported in parenthesis under each coefficient. The classification ***, **, * denotes for 1%, 5% and 10% significance level, respectively

	BHAR (0,30)	BHAR (-1,30)	BHAR (0,30)	BHAR (-1,30)
ASSERTIVENESS_DIFF	-0.090 (0.148)	-0.075 (0.153)	-0.051 (0.138)	-0.038 (0.142)
FUTURE ORIENTATION_DIFF	0.148* (0.081)	0.111 (0.086)	-0.042 (0.107)	-0.060 (0.002)
GENDER_EGALITARIANISM_DIFF	0.032 (0.084)	0.015 (0.083)	0.032 (0.086)	0.035 (0.078)
HUMAN_ORIENTATION_DIFF	-0.045 (0.073)	-0.054 (0.073)	-0.041 (0.064)	-0.070 (0.070)
IN_GROUP_COLLECTIVISM_DIFF	0.111*** (0.039)	0.106*** (0.040)	0.174** (0.078)	0.172** (0.072)
INSTITUTIONAL_COLLECTIVISM_DIFF	0.050 (0.094)	0.057 (0.101)	0.091 (0.095)	0.116 (0.102)
PERFORMANCE_ORIENTATION_DIFF	0.074 (0.110)	0.059 (0.108)	0.038 (0.121)	0.031 (0.129)
POWER_DISTANCE_DIFF	0.100 (0.096)	0.068 (0.099)	-0.103 (0.158)	-0.119 (0.142)
UNCERTAINTY_AVOIDANCE_DIFF	-0.066 (0.061)	-0.048 (0.057)	0.000 (0.077)	-0.005 (0.075)
CONSTANT	-0.219 (0.109)	-0.236** (0.10)	-1.245* (0.632)	-1.291** (0.548)
Control Variables			Included	Included
Year Fixed Effects	Yes	Yes	Yes	Yes
Target - Country Fixed Effects	Yes	Yes	Yes	Yes
R ² (%)	21.373	21.737	28.442	29.184
N	199	199	199	199

5. Conclusion

In this research, we aim to examine the effect of national culture distance in the acquirer long-run performance. This hypothesis comes from previous literature, such as Morosini et al. (1998), that show that culturally distant acquisitions allows firms to have access to new resources, routines and repertoires, thus offering a great advantage to the firms in the long-run and Chakrabarti et al. (2009) that proposes that the more culturally distant firms are, the higher the synergies and strengths provided to the acquiring firm.

The study is based on a sample of 222 cross-border M&A's, from 2009 until mid-2018. There are acquiring firms from 28 different countries and target firms from 27 different countries.

The results obtained in this study suggest that the acquirer long-term performance is improved the more culturally distant the countries of the target and the acquirer are, as both the cultural measures, Hofstede and GLOBE always show a positive coefficient, with only the latter presenting statistical significance. This difference in the results can be due to differences in the sample size or due to culture being a subjective concept, just as is mentioned by Teerikangas and Very (2006), which shows the importance of using more than one cultural measure to provide more reliable results.

Regarding the impact of the individual dimensions, Hofstede's Individualism indicates that differences in working methods, individually or in a team, between the country of the acquirer and the country of the target could lead to conflicts during the integration process. Whilst GLOBE's In-Group Collectivism dimension implies that differences in the individuals' loyalty to their own groups seems to be beneficial in the long-term.

The findings in this study can be an indicator for managers that, acquiring firms in countries that are culturally distant to their own can be seen as an opportunity for value enhancement, as the advantages, such as the synergies and the access to new resources, seem to overcome the risks and costs that are usually associated with this type of acquisitions, mainly due to integration conflicts.

This study is subject to some limitations. Regarding the sample, there's the survivorship bias that occurs when only firms that "survived" or have available data for the time period of the study are examined, leaving others that also performed cross-border acquisitions out of the study; only public acquirers are considered; the size of the sample is relatively small when compared to other studies in this field of research, a bigger sample could result in

different results and provide more information. Additionally, there isn't a big variety of countries, and so there isn't much diversity in national cultural differences, since most of deals involve countries in North America and Europe. Other limitations are related to the use of the BHAR as a measure of performance, just as was mentioned before in the Methodology section, according to Barber and Lyon (1997) this measure is associated with new listing bias, skewness bias and rebalancing bias.

In terms of future research, the samples should be bigger and with a significant variety of national cultures, and, due to the limitations of the BHAR, other measures of long-term performance should be considered. More studies could include both the national culture measures, Hofstede and GLOBE, as to robust check their results. The positive relation between differences in In-Group Collectivism and the long-term performance should be further analyzed. Additionally, more control variables should be added, including post-acquisitions integration ones.

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Annexes

Annex I: Daimler-Chrysler Merger

There's one known example that can help better illustrate the negative impact of the cultural incompatibility in a M&A deal, the Daimler-Chrysler merger. Both companies were successful, pre-merger, and both were from the auto manufacture industry, but Daimler was from Germany and Chrysler from the United States. The expectation was that their "merger of equals" would allow the firms to benefit from each other's skills and strengths. Accordingly, the stock prices increased with optimism, but, after the merger, these declined significantly and the performance was very poor, especially Chrysler's, as its division started losing money. The cultural clash was the main reason for the failure, as both companies operated very differently, the Germany firm's culture favours a more strict management and the American prefers a more relaxed one, as a consequence, at Chrysler, the employee's satisfaction declined and a lot of main employees left (DePamphilis, 2009; R. Weber & Camerer, 2003).

Annex II : The Number of Deals Between Each Acquirer Country and Each Target Country

This table presents the number of deals that occurred between each acquiring country and each target country. There are 28 different acquiring countries and 27 different country of targets and in total there 222 deals. The most common pair is between United States of America and Canada.

Acquirer Countries	Target Countries																										
	USA	Canada	UK	France	Sweden	Japan	Spain	Belgium	Germany	Netherlands	Italy	Finland	Australia	Singapore	Denmark	Portugal	Luxembourg	Poland	South Africa	Malaysia	New Zealand	Norway	Brazil	Russia	Greece	Jamaica	
United States of America	-	16	8	4	2	1	3	0	4	2	5	1	3	0	1	0	2	0	0	0	0	2	1	0	0	0	
Canada	24	-	4	1	0	0	0	1	0	1	0	3	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
United Kingdom	15	5	-	0	1	0	0	0	2	3	1	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	
France	5	0	2	-	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
Sweden	2	0	0	0	-	0	0	0	1	2	3	1	0	0	1	1	0	0	0	0	0	2	0	0	0	0	
Japan	4	0	3	1	0	-	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
Spain	2	1	2	0	0	0	-	0	0	1	1	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	
Belgium	1	1	0	2	0	0	0	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
Germany	4	0	0	1	0	0	1	0	-	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
China	1	0	1	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	
Netherlands	2	0	0	0	0	0	1	0	-	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	
Italy	1	0	0	2	0	0	0	0	1	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Finland	0	0	0	1	1	0	0	0	2	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ireland	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Australia	1	1	1	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Singapore	2	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	
Denmark	0	0	0	0	0	0	0	0	1	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	
Portugal	0	0	0	0	0	0	1	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	
Luxembourg	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	
Poland	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	
Austria	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
South Africa	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	
Thailand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
Malaysia	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	-	0	0	0	0	0	0	0	
Switzerland	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mexico	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
New Zealand	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	-	0	0	0	0	0	

Annex III: Hofstede Distance for Each Country Pair

This table presents the Hofstede Distance between each acquirer country and each target country. The countries with the lowest distance are United States of America and Australia, whilst the one with the highest are United States of America and China.

Acquirer Countries	Target Countries																									
	USA	Canada	UK	France	Sweden	Japan	Spain	Belgium	Germany	Netherlands	Italy	Finland	Australia	Singapore	Denmark	Portugal	Luxembourg	Poland	South Africa	Malaysia	New Zealand	Norway	Brazil	Russia	Greece	Jamaica
Unites Sates of America	-	18.055	28.142	70.100	69.628	99.730	70.349	80.660	70.788	64.490	62.442	50.626	8.062	102.162	59.186	-	57.175	-	29.257	-	-	61.213	71.582	-	-	-
Canada	18.055	-	26.230	59.800	-	-	58.558	71.120	60.523	-	57.088	-	20.616	-	-	-	42.626	-	-	-	19.621	-	-	-	-	-
United Kingdom	28.142	26.230	-	71.610	64.668	91.641	75.756	-	57.000	58.095	60.258	-	34.569	-	-	-	-	-	36.083	-	-	66.761	-	-	-	-
France	70.100	59.800	71.610	-	-	64.977	27.622	25.534	50.388	57.680	39.077	54.891	-	-	92.060	-	-	-	-	-	-	-	-	-	-	-
Sweden	69.628	-	64.668	-	-	-	-	-	85.983	32.909	95.368	45.552	-	-	26.889	109.138	-	-	-	-	-	36.152	-	-	-	-
Japan	99.730	-	91.641	64.977	-	-	66.955	-	-	-	-	-	101.779	103.019	-	-	-	-	-	-	-	-	-	-	-	-
Spain	70.349	58.558	75.756	27.622	-	66.955	-	-	54.754	63.340	44.091	-	-	-	-	39.724	-	32.558	-	-	-	-	-	-	-	-
Belgium	80.660	71.120	-	25.534	-	-	-	-	47.318	66.189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58.103	-
Germany	70.788	60.523	57.000	50.388	85.983	-	54.754	47.318	-	-	-	63.008	-	-	88.352	-	31.177	-	-	-	-	-	-	-	-	-
China	112.116	-	100.658	86.960	-	-	-	-	-	-	-	-	-	39.408	-	-	81.296	-	-	-	-	-	-	-	-	-
Netherlands	64.490	-	58.095	57.680	32.909	-	63.340	66.189	-	-	72.526	-	-	-	48.662	-	-	-	-	-	-	-	-	97.232	-	-
Italy	62.442	57.088	60.258	39.077	95.368	-	44.091	-	-	-	72.526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72.402
Finland	50.626	-	-	54.891	45.552	-	-	-	63.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	-	28.267	-	-	-	-	74.135	92.190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Australia	8.062	20.616	34.569	-	-	101.779	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.452
Singapore	102.162	-	-	-	-	103.019	-	-	-	-	-	-	-	-	-	-	-	-	-	52.972	-	-	-	-	-	-
Denmark	59.186	-	-	92.060	26.889	-	-	-	88.352	48.662	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	109.138	-	39.724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	57.175	42.626	-	-	-	-	-	-	31.177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	32.558	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	64.676	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Africa	29.257	-	36.083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53.861	-	-	-	-	-	-
Malaysia	-	-	-	-	-	-	-	-	-	-	-	-	-	52.972	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-	58.086	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	-	81.817	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	-	19.621	-	-	-	-	-	-	-	-	-	-	23.452	-	-	-	-	-	-	-	-	-	-	-	-	-

Annex IV: GLOBE Distance for Each Country Pair

This table presents the GLOBE Distance between each acquirer country and each target country. The countries with the lowest distance are United States of America and Australia, whilst the one with the highest are the Netherlands and Russia.

Acquirer Countries	Target Countries																				
	USA	Canada	UK	France	Sweden	Japan	Spain	Germany	Netherlands	Italy	Finland	Australia	Singapore	Denmark	Portugal	Poland	South Africa	Malaysia	New Zealand	Brazil	Russia
United States of America	-	0.883	1.007	1.334	2.251	1.495	1.869	1.601	1.300	1.824	1.426	0.448	2.347	2.034	-	-	0.797	-	-	1.478	-
Canada	0.883	-	0.980	1.646	-	-	2.374	1.893	-	2.262	-	0.615	-	-	-	-	-	-	1.489	-	-
United Kingdom	1.007	0.980	-	1.004	1.595	1.541	1.984	1.246	1.235	1.846	-	0.878	-	-	-	-	-	-	-	-	-
France	1.334	1.646	1.004	-	-	1.946	1.403	1.285	1.942	1.172	1.499	-	-	2.492	-	-	-	-	-	-	-
Sweden	2.251	-	1.595	-	-	-	-	2.492	1.736	3.013	-	-	-	1.300	2.844	-	-	-	-	-	-
Japan	1.495	-	1.541	1.946	-	-	2.232	-	-	-	-	1.356	2.224	-	-	-	-	-	-	-	-
Spain	1.869	2.374	1.984	1.403	-	2.232	-	1.840	2.800	0.924	-	-	-	-	1.264	1.471	-	-	-	-	-
Germany	1.601	1.893	1.246	1.285	2.492	-	1.840	-	-	-	1.615	-	-	2.631	-	-	-	-	-	-	-
China	2.074	-	2.163	2.164	-	-	-	-	-	-	-	-	1.867	-	-	-	-	-	-	-	-
Netherlands	1.300	-	1.235	1.942	1.736	-	2.800	-	-	2.701	-	-	-	1.135	-	-	-	-	-	-	3.691
Italy	1.824	2.262	1.846	1.172	3.013	-	-	-	2.701	-	-	-	-	-	-	-	-	-	-	-	-
Finland	1.426	-	-	1.499	1.045	-	-	1.615	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	-	1.309	-	-	-	-	2.065	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Australia	0.448	0.615	0.878	-	-	1.356	-	-	-	-	-	-	-	-	-	-	-	-	-	1.401	-
Singapore	2.347	-	-	-	-	2.224	-	-	-	-	-	-	-	-	-	-	-	-	1.739	-	-
Denmark	2.034	-	-	2.492	-	-	-	2.631	1.135	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	2.844	-	1.264	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	1.471	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	1.327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Africa	0.797	-	1.106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.696	-
Malaysia	-	-	-	-	-	-	-	-	-	-	-	-	1.739	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	1.445	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	-	1.848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	-	1.489	-	-	-	-	-	-	-	-	-	1.401	-	-	-	-	-	-	-	-	-

Annex V: Summary of the Variables

Summary of all the variables used in this study

Dependent Variables	BHAR (0,30)	Event window that starts in the deal close month and ends 30 months after
	BHAR (-1,30)	Event window that starts in the month before the announcement of the deal and ends 30 months after the close date
Independent Variables	LOG (HOFSTEDE)	Log of cartesian distance of the 6 Hofstede dimensions between the countries of the acquirer and of the target
	LOG (GLOBE)	Log of cartesian distance of the 9 GLOBE dimensions between the countries of the acquirer and of the target
Control Deal - level Variables	DUMMY_CASH	Dummy Variable that presents the value 1 when the payment is done in cash and 0 otherwise
	DUMMY_RELATED	Dummy Variable that presents the value of 1 when acquisitions are between related firms and 0 otherwise (3-digit SIC Code)
	LOG (MV)	Log of the acquire's outstanding equity in the month before acquisition
	RELATIVE_SIZE	Measured by dividing the total assets of target by the total assets of acquirer, before the deal
Control Country - level Variables	OPEN_TARGET	The target's exports plus imports, to their GDP, in the year prior to the acquisition
	PCI_DIFF	Ratio between the difference of the incomes per capita of the acquirer and the target and the sum of their incomes per capita
	FOREX_VOLATILITY	Standard deviation of the exchange rate between the currency of the acquirer and the target for a -30 to -1 month window
	LOG (BILATERAL)	Log of sum of imports of the target from the acquirer and exports of the target to the acquirer, in year before the acquisition.
	CORP_GOV_DIFF	Difference in Investor Protection in the country of the acquirer and the country of the target

Annex VI: Correlation Matrix

Correlation Matrix between independent and control variables

	1	2	3	4	5	6	7	8	9	10	11
1 LOG (HOFSTEDE)	1										
2 LOG (GLOBE)	0.854	1									
3 DUMMY_CASH	0.061	0.047	1								
4 DUMMY_RELATED	0.032	0.052	-0.028	1							
5 LOG (MV)	0.078	-0.004	0.150	-0.066	1						
6 RELATIVE_SIZE	-0.027	0.072	-0.187	0.111	-0.113	1					
7 OPEN_TARGET	0.210	0.290	0.084	-0.072	-0.186	0.006	1				
8 PCI_DIFF	-0.030	0.017	0.025	0.102	-0.074	0.002	0.001	1			
9 FOREX_VOLATILITY	-0.089	-0.190	0.058	-0.053	0.099	-0.085	-0.253	-0.059	1		
10 LOG (BILATERAL)	-0.386	-0.389	0.053	0.077	0.152	-0.036	-0.193	-0.034	0.075	1	
11 CORP_GOV_DIFF	-0.021	-0.018	0.030	-0.060	0.120	0.115	-0.152	0.038	-0.088	-0.010	1