The Impact of Cultural Differences on the Performance of Mergers and Acquisitions

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Abstract

Despite the increasing importance of cross-border mergers and acquisitions (M&A), there is no economic consensus regarding the effect of cultural differences on the performance of M&A. The purpose of this paper is twofold; firstly, empirically determine the impact of cultural differences on the performance of M&A by a quantitative analysis. Secondly, through qualitative analysis explore the potential impact of cultural differences on the integration process as a possible explanation for the previous contradictory findings. In the first part, multilevel regressions were performed for 5,096 mergers in 81 different countries. In the second part three in-depth interviews were conducted with executives of three cross border merged companies. Main results showed that, M&A performances were lower when countries were more culturally distant. These findings were robust to different years. The qualitative part showed that the outcomes of M&A were dependent upon the development of the integration process. When taking into account the cultural differences within the integration process, M&A performances not necessarily suffered from cultural differences. The way cultural differences were handled within the integration process could be the reason for the contradictory outcomes of previous researches.
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1. Introduction

1.1 Motivation

The number of cross-border mergers and acquisitions (M&A) has grown tremendously during the last decade. In 1998, 23% of the total mergers were cross-border, while in 2007 this was already 45% (Erel, Liao & Weisbach, 2012). M&As are established to achieve synergy by integrating two businesses, which together will increase competitive advantages (Porter, 1985). These competitive advantages could be reached through economies of scale, economies of scope, cross selling products through complementary sales organizations and distribution channels, and cost reductions through elimination of reluctant staffs and operations (Schweiger & Very, 2003). The motivation for M&As is often to gain access to knowledge of the target firm, and to transfer this knowledge to the acquiring firm. Although a lot of research has been done about the economic, financial and strategic aspects of M&As, not much attention is paid to the role of human factors in M&A performance (Cartwright, 1998). Nowadays, capital is not the most important resource anymore, we have entered an era in which knowledge is the most important resource for achieving positive economic performances. However, knowledge transfers are, more difficult when cultural distance increases (Bresman et al., 1999).

Only half of all M&As meet the initial financial expectations (Cartwright & Cooper, 1993a). Cultural differences have often been blamed for this high failure rate (Zollo & Meier, 2008). Cross-border M&As do not only bring two companies with two different organizational cultures together, but also two companies with different national cultures (Very et al. 1993; Schneider & De Meyer, 1991). Cultural differences could add costs to the integration process and undermine the ability of firms to achieve synergy and thereby offset the expected financial benefits of the merger or acquisition (Weber, 1996). Integration between the firms, and large scale operations are necessary to achieve synergy and advantages of M&As. Integration is needed in different divisions such as finance, personnel policy and marketing (Larsson & Finkelstein, 1999). The integration process has appeared to be a more complicated process than expected (Datta, 1991). Marks (1982) is the first who explicitly addressed the impact of culture on the integration process. He stated that cultural differences could result in misunderstandings and conflicts between the two merging organizations.

Evidence has repeatedly been provided which argues that cultural differences matter in M&As. The findings of researchers on the effect of cultural differences on M&As are however contradictory and inconclusive. While some argue that cultural differences can be a source of
value creation, innovation and learning (Morosini et al., 1998; Harrison et al. 1991; Vermeulen & Barkema, 2001), others state that cultural differences lead to misunderstandings and conflicts (Marks, 1982; Datta & Puia, 1995). It has turned out to be a very complicated relationship that is poorly understood. The question therefore is not whether cultural differences matter, but when they matter, under what conditions and in which way. Better understanding of the effect of cultural differences on M&As is needed. The integration process has been treated as a black box in former research. In literature, there is a lack of insight into the way the integration process is affected by cultural differences, and in which way this can be managed more efficiently. Research on integration planning is very fragmented. Due to the risk involved in cross-border M&As and the difficulties of ‘double-layered acculturation’ (Barkema et al., 1996), additional research is certainly necessary. This research therefore focuses on the effect of cultural differences on the performances of M&As, thereafter a closer look is taken at the integration process as a possible explanation for the differences in performances of M&A.

1.2 Research Question

Due to globalization companies strive to become bigger and try to gain larger market shares which has resulted in an increase in the number of M&As around the world. Therefore, it is becoming more important to understand international M&As. M&As give access to local intelligence and competence without starting up a business from zero (Teerikangas & Very, 2006). Culture has also become increasingly important in international business research and is measured using multiple dimensions of national culture. The definition of Hofstede is used in this research: “Culture is the collective programming of the mind which distinguishes the members of one human group from another” (Hofstede, 1980: 21). It is necessary to be aware of the distinction between national and corporate culture. This research only focuses on national culture because differences in national culture predict stress, lack of cooperation and negative attitudes towards the merger or acquisition (Weber et al, 1996). National cultural values are more rigid than operating practices which form corporate cultures (Ahern et al., 2015). Thus differences in national culture will impose a greater obstacle to realize synergy gains in M&As than corporate cultures. In this research is assumed that cultures differentiate between national boundaries because members of a nation face the same experiences, themes, and institutions which shape value orientations and norms.

Cultural differences in the context of cross-border M&As represent differences in norms, routines, new product development, organizational designs, and other aspects of
management that are found in the countries of origin of the firms (Kogut & Singh, 1988). Cultural differences are mostly blamed for the high failure rate in M&As (Zollo & Meier, 2008), because it could result in polarization of groups among which no sharing, communication and collaboration exists. Therefore coordination and teamwork can be very complicated. In collectivistic cultures for example, teamwork and relationships are valued above individual work, while in individualistic cultures individual work is valued more. Cultural integration between culturally distant firms is therefore necessary to achieve successes.

M&As are often researched and discussed together. They are however, not completely the same and result from two different transactions. A merger is a combination of corporations build up, either by the transfer of all assets to one surviving corporation, or by the joining together of the companies into a single new corporation. Thus it is a cooperative agreement of equal partners. Although in practice it appears that power is not always evenly distributed. An acquisition emerges when a company buys enough shares to get control over the other company. The acquiring firm is the dominant partner, and formal power relations are more clear-cut (Gertsen, Soderberg & Torp, 1998). Domestic M&As are conducted within the same country, while cross-border M&As involve two companies from two different countries and thus two different cultures. Therefore the focus in this research is on cross-border M&As.

While the motives for M&As are multiple and various, the objective of any organizational combination is to strengthen its financial health. Hovers (1973) defines this as follows: ‘The main aim of every takeover is to produce advantages for both, the buying and selling companies compared with the alternative situation in which both companies would continue independently.’ Synergy within the M&A context means financial synergy. However instead of achieving the expected economies of scale, M&As often face lower productivity, worse strike records, higher absenteeism and poorer accident rates rather than greater profitability (Meeks 1977; Sinetar, 1981). Cross-border M&As result in different cultural dynamics which could result in conflicts and difficulties that in turn could hamper expected positive results.

Efficiency motives for M&As are achieving synergies that can include different products, R&D know-how, market access, or managerial synergies from applying complementary competencies (Larsson & Finkelstein, 1999). M&As could increase economies of scale or scope. An important reason to establish an acquisition or a merger is to get access to the knowledge of the acquired company and to transfer this knowledge to other parts of the firm (Bresman et al, 1999). The integration process consists of these knowledge transfers between the firms, which becomes more difficult with more culturally distant firms. It is demonstrated
that the most important factor in explaining synergy realization is the integration process and thus these knowledge transfers (Larsson & Finkestein, 1999).

This research conceptualizes integration as the successful merge of two cultures or the imposition of the existing culture of the acquirer or dominant merger partner into the other. It is the transfer of capabilities and the sharing of resources. M&As are complicated organizational events because they disturb cultures which can lead to misunderstandings, but also force employees to integrate with people who do not share the same reality. However, firms can better share and transfer knowledge between individuals and groups than markets. Knowledge is kept by individuals themselves, but is also expressed in regularities by which members cooperate in social communities (Kogut & Zander, 1992). Human integration is the development of a shared identity and positive attitudes towards the new organization. This socio-cultural integration is most important to realize synergy. Shared identity and trust among members is necessary to overcome conflicts, misunderstandings and to transfer knowledge. This is caused by the fact that people are attracted to people who have the same attitudes and values (Byrne et al., 1986; Darr & Kurtzberg, 2000).

In sum, cultural differences could result in conflicts and difficulties and therefore make economic performance of M&As less likely. A possible explanation for these failing economic performances is that cultural differences could increase the integration costs. First the relationship between cultural differences and M&A performance will be considered, whereby an answer will be given to the question: What is the effect of cultural differences on the performance of M&As? Subsequently, a closer look will be taken at the integration process as a possible explanation for the differences in economic performances of M&As. Here, an answer will be given to the question: Could the integration process be a possible explanation for the differences in performances of M&As?

1.3 Structure

The purpose of this research is to shed light on the influences of accultural stress on the financial performance and the integration process. This will be examined on the basis of the existing literature, data and interviews. This thesis starts with a literature overview that forms the theoretical framework on the basis of which the empirical study is was built.

First, the impact of cultural differences is discussed by the use of the model of Hofstede. In this section the focus is on the impact on organizations. It discusses how cultural differences could result in positive outcomes such as creating opportunities, synergies and learning effects.
(Harrison et al., 1991; Vermeulen & Barkema, 2001), and in which way it could cause negative outcomes such as misunderstandings, conflicts and difficulties. This section indicates under which conditions these outcomes will occur.

The effect of cultural differences on the performance of M&As is discussed in the next section. It is important to get insight into the way cultural differences affect economic performances of M&A, because of the contradictory findings of previous researches. It becomes clear to what extent a fit between the cultures of the two organizations directly correlates with the success of the merger or acquisition.

The integration process as a possible explanation for failing performances of M&As is discussed in the third section. The way this process is exactly constructed is examined. It becomes clear in which way and under which conditions cultural differences impact the integration process. The Social Identity Theory, the degree of integration, and integration planning are discussed in this section.

For the empirical part, the Global Mergers and Acquisitions database of Thomson Financial Securities Data, an extensive data base on M&As was used. It consists of data of cross-border merger deals in different industries. Regressions reveal the effect of cultural differences on the performance of M&A. Because the integration process is the most important indicator for realizing synergy and thus positive economic performance, a closer look is taken at that. Due to the fact that there are no data available on these internal processes, interviews were conducted to get more insight into this. Interviews were held with the leader of the Integration Management office of NXP, a managing director of PON and a manager who has worked on the acquisition of the ICT systems of Shell by T-systems.

Finally, after explaining the effects of cultural differences on the performance of M&A, the way the integration process works and in which way this could be an explanation for the differing performances, a recommendation is given, as to how this integration process could be managed more efficiently.

2. Literature Overview

2.1 Effect of Culture on Organizations

2.1.1. Cultural Dimensions of Hofstede
Due to globalization more and more companies from different countries work together in M&As, which also means that different national cultures meet more often (Gancel et al, 2002). Cultural differences are, as already stated above, often claimed to be the major cause of the high
failures rates in M&As (Datta Pinches, & Narayanan, 1991; King, Dalton, Daily & Covin, 2004). However, previous researches on the impact of cultural differences on M&As has provided contradictory results and organizations often neglect cultural differences (Yong & Tian, 2007). The definition of Hofstede of culture is used which says that ‘Culture is the collective programming of the mind which distinguishes the members of one human group from another’ (Hofstede, 1980: 21). Within a group or corporation the culture is shaped by its members shared history and experiences (Schein, 1985). National cultural ideologies are reflected in the relationship between financial institutions and trade union influences, business and government, and the shape and orientation of the economy (Cartwright & Cooper, 1992). Culture affects the way people interact in organizations and in groups. People are rarely fully aware of their own national cultural values which are path dependent and transferred from generation to generation, and reinforced by institutions (Olie, 1990). This research expects that national culture plays a crucial factor in M&A conflict, as well as in the quest for successful integration. National culture relates to central layers which are represented by values. Values are feelings of right and wrong and are obtained during early childhood and are mostly resistant to change in later years.

The international merger is a unique case. Focusing on M&As at an international level is very complicated because of differences in national cultures and associated management styles. Culture can be seen as a lens through which we perceive the world, it is a frame of reference that guides our actions and thoughts. Cultural conflicts in acquisitions can be solved through the bargaining power of the dominant partner. However this is not possible for mergers because both partners are equal in size and thus no dominant culture exists. Therefore, in mergers this frame of reference has to be created while in acquisitions such a frame is supplied by the parent organization through absorption and redesign. Within mergers it is therefore necessary to integrate into a ‘third culture’ that has to be developed. Research on national cultures has revealed that some cultures can be combined more easily than others (Hofstede, 1980).

Different national cultures in M&As leads members make assessments and draw conclusions about the employees of the other culture. This involves reference to ideologies and national cultural stereotypes (Crisp, 1977). Culture affects information, the presentation and formulation of strategies, and the way issues are perceived by the other group. National culture creates a form of ethnocentrism which leads to a tendency to regard activities that are not in accordance with one’s own view as abnormal and deviant (Olie, 1990). This perceived threat
of nationalism could be a barrier to successful international M&As and could be a reason why a lot of M&As fail to meet the expected positive results.

The study of Hofstede (1980) is the first, and one of the most influential studies on national differences in a cultural context. Nevertheless the study has some empirical and theoretical limitations. The empirical limitations of the study are the out-datedness, one point in time study, single company data and the lack of measurement equivalence. Theoretical limitations are based on the fact that the dimensions are derived from post-analysis factor structure and the ecological fallacy. The lack of measurement equivalence is caused by the fact that Hofstede’s questions measure specific values that together make up the four different dimensions. Despite these limitations, the model of Hofstede is used in this research because many replications have shown that the results are still valid and very valuable especially for M&As researches (Kirkman et al, 2006).

Hofstede participated in a team which together conducted an attitude questionnaire survey of 117 000 employees of IBM in more than forty different countries. Because IBM had a strong corporate culture, this was considered as a constant factor for all respondents. Thus any difference reflected national cultural differences and could not be due to differences in corporate culture. His findings showed that it was meaningful to compare cultures on four key dimensions which will be described below. These cultural dimensions represent preferences for one situation over another which differentiates countries from each other. These cultural dimensions could be linked to country scores which are used in this research to measure cultural distance. These scores are relative and therefore only meaningful by comparison. The scale ranges from 0 to 100, where a high score meant high individualism, power distance, uncertainty avoidance and masculinity.\footnote{The data is obtained from https://geert-hofstede.com/, Date accessed 14-05-2016}

\textbf{Individualism versus collectivism}

The first dimension created by Hofstede is ‘individualism versus collectivism’ which refers to the degree to which a society emphasizes the role of the individual versus the role of the group (Hofstede, 1980: 45-46). In individualistic societies ties between individuals are loose and everyone is expected to take care of him- or herself. The Anglo-world and the Netherlands are examples of individualistic cultures. Here links between people are voluntary and individual freedom will not be abandoned for social cohesion. In collectivistic countries relationships are sustainable and enduring. Individuals in these societies are integrated from birth onwards into
cohesive in-groups. People in these groups continue to protect each other in exchange for loyalty (Ulijn et al., 2010).

In a business context this is translated in different employer-employee contracts. Contractual relationships in individualistic countries are based on mutual advantages, whereas in collectivistic countries the relationship is more like a family relationship with moral foundations. These differences in orientations are also reflected within M&As. The judgments of experienced senior executives to persuade the other party of the mutual strategic advantage of a partnership are very important and relied upon in individualistic countries. Whereas within collectivistic countries a wider consultative approach is adopted, where middle managers are involved in identifying the opportunities and in collecting cultures. ‘We’ will dominate over ‘I’ (Cartwright & Cooper, 1992). It is way more difficult to do business with strangers from the collectivist point of view. In collectivistic cultures people are more cooperative in negotiations within the group than people outside their cultural group (Wade-Benozoni, Brett, Tenbrunsel, Okumura, Moore, and Bazerman, 2002). Individualistic countries value Foreign Direct Investment (FDI) over exports. This is because individualistic societies are more opportunistic, and therefore tend to see higher transaction costs which are removed by FDI (Shane, 1991).

Western European countries, the U.S. and Australia are countries that are more individualistic. Whereas most Latin American, East Asian and African countries are more collectivistic (Hofstede, 2001).

**Power Distance**

Power Distance refers to the equal distribution of power between bosses and subordinates and the extent to which any inequality of power is accepted (Hofstede, 1980). Individuals in low power distance cultures expect a greater degree of individual autonomy and are challenging authority and status more. Leaders who are not functioning will be replaced. Management focuses on diminishing gaps in status such as empowerment, career development, job rotation and mutual assessments. Relationships between bosses and subordinates and, parents and children are conceived as unequal in large power distance countries. Leaders will remain leader during their entire life and are intrinsically on a different level than subordinates. Subordinates do not expect to take responsibilities and therefore precise assignments are needed from leaders (Ulijn et al., 2010). Creating M&As involves negotiations which are more difficult in large power distance societies. This is because authority sharing in large power distance societies is seen as a loss in status which is not socially acceptable. Cultural differences in the power distance dimension will result in frictions when firms try to merge. In high power distance
cultures, leaders will not understand workers with a low power distance culture and in turn, the latter will not follow orders without justification. Vice versa, in low power distance cultures, leaders will not be respected by high power culture workers if the leader treats employees as their equal (Ahern, 2015).

Latin European and South East Asian countries are countries with higher power distance cultures, while German and British cultures have more low distance power culture (Hofstede, 1980).

**Masculinity versus femininity**

More masculine cultures have preferences for achievement, assertiveness, heroism, decisiveness and have the desire to achieve recognition by doing a good job and increasing earnings. Competition is seen as a good way to eliminate controversies and people should not be trusted implicitly (Ulijn et al., 2010). Companies in these cultures are expected to compete aggressively, whereby strong leadership is highly valued. More feminine cultures have preferences for consensus seeking, cooperation, modesty, caring for the weak, quality of life and interpersonal relationships. Cooperation between men and women rather than competition is perceived as morally good and also cooperation between companies is admired.

In feminine cultures, equality, teamwork and good working conditions are valued highly. Organizations in these cultures are relationship oriented and strive for equality. This results in the fact that managers and employees are on the same level. Organizations are smaller and less working hours are preferred. Organizations in masculine cultures are bigger and more focused on internal competition and accomplishment. Managers are not at the same level as employees but are seen as heroes and there are large wage differences (Hofstede & Hofstede, 2001).

Japan and Italy are more masculine countries which is in contrast with Scandinavia and France who have more feminine cultures.

**Uncertainty avoidance**

Uncertainty avoidance refers to the extent to which members feel threatened by ambiguous situations and have created beliefs and institutions that try to avoid these. It is associated with dogmatism, authoritarianism, traditionalism and superstition (Hofstede, 1980). People in countries with high uncertainty avoidance will plan over a longer period and have more time pressures. Here, a strong desire for truth, certainty and a preference for monitoring, controlling
and planning are present (Hofstede, 1980). People are more instinctive and more philosophical in their reasoning in cultures with high uncertainty avoidance. Qualitative information is therefore more used, while people in low uncertainty avoidance countries oversimplify the reality and therefore quantitative information is of more importance. Low uncertainty avoidance societies are tolerant of divergent ideas and practices (Ulijn et al., 2015).

More confidence prevails in low uncertainty avoidance countries. Trust facilitates trade and therefore the presence of low uncertainty avoidance will increase the number of M&As. These countries are more likely to buy or sell firms through mergers. Trust has, thereby, beneficial effects on the integration process, because it facilitates the post-merger cooperation (Zak & Knack, 2001). On the other hand, high uncertainty avoidance leads to the preference of short-term feedback. This leads to top-down management types which can be implemented quickly. This results in quick sales growth, which has a beneficial impact on M&A performance.

Countries that have high uncertainty avoidance culture are Japan, France, Italy and Austria, while the U.K., Canada, China and the U.S have low uncertainty avoidance cultures (Hofstede, 1980).

**Table 1**
Cultural dimension for different regions in the world

<table>
<thead>
<tr>
<th>Country</th>
<th>PD</th>
<th>ID</th>
<th>MA</th>
<th>UA</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>40 L</td>
<td>91 H</td>
<td>65 H</td>
<td>46 L</td>
</tr>
<tr>
<td>Germany</td>
<td>35 L</td>
<td>67 H</td>
<td>66 H</td>
<td>65 M</td>
</tr>
<tr>
<td>Japan</td>
<td>54 M</td>
<td>46 M</td>
<td>95 H</td>
<td>92 H</td>
</tr>
<tr>
<td>France</td>
<td>68 H</td>
<td>71 H</td>
<td>43 M</td>
<td>86 H</td>
</tr>
<tr>
<td>Netherlands</td>
<td>38 L</td>
<td>80 H</td>
<td>14 L</td>
<td>53 M</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>68 H</td>
<td>25 L</td>
<td>57 H</td>
<td>29 L</td>
</tr>
<tr>
<td>Indonesia</td>
<td>78 H</td>
<td>14 L</td>
<td>46 M</td>
<td>48 L</td>
</tr>
<tr>
<td>West Africa</td>
<td>77 H</td>
<td>20 L</td>
<td>46 M</td>
<td>54 M</td>
</tr>
<tr>
<td>Russia</td>
<td>95*H</td>
<td>50*M</td>
<td>40*L</td>
<td>90*H</td>
</tr>
<tr>
<td>China</td>
<td>80*H</td>
<td>20*L</td>
<td>50*M</td>
<td>60*M</td>
</tr>
</tbody>
</table>

*estimated, PD = Power Distance; ID = Individualism; MA = Masculinity; UA = Uncertainty Avoidance. H = Top third, M = Medium third, L = Bottom third (among 53 countries and regions)

*Source* based on Hofstede (1993)

The Table above shows the cultural dimensions in different regions in the world. Individualism and power distance are negatively correlated. The easiest environment for M&As is an individualistic, small power distance and uncertainty tolerant society. The Anglo-world and Scandinavia have the best environment for M&As. Hofstede’s work shows that organizations are culture-bound (Hofstede, 1980).
2.1.2. National Cultural Distance

National cultural distance is defined as the degree to which cultural norms in one country are different from those in another country (Kogut & Singh, 1988). It is the sum of factors on the one hand, creating a need for knowledge, and on the other hand, barriers to the knowledge flow between the home and target countries (Benito & Gripsrud, 1992). Cultural distance affects the norms, routines, and repertoires for organizational design (Kogut & Singh, 1998). Hofstede’s cultural distance hypothesis argues that difficulties as costs, risks and communication increase when the cultural distance between groups or organizations becomes larger (Hofstede, 1980).

It is shown that specific routines vary significantly across countries and are in direct association with national cultures (Jeminson & Sitkin, 1986; Hofstede 1980). Cultural distance particularly affects the top management, whose motivation and commitment influences the motivation of the other employees (Kitching, 1967, Perry 1986, Sales & Mirvis, 1984). Shared experiences are needed for assimilation of beliefs and values which make up the corporate culture. While managers are most important in shaping and transferring corporate culture signals to the whole organization (Schein, 1985). Corporate culture is thus influenced by the national culture and so, national culture and corporate culture are interdependent. Managers can see themselves, and be perceived by others as most important advocates of the national culture represented in the international M&As (Weber et al, 1996). Routines of a company are the way of doing business which is specific for every firm. Specific routines are related to innovation effectiveness (Shane, 1995), decision making practices (Kreacic & Marsh, 1986), entrepreneurship (McGrath et al, 1992), and the power and control structures of an organization (Brossard & Maurice, 1974). Institutions and cultures affect routines and so the way of doing business which is therefore not easily imitated by firms in other cultures (Barney, 1986).

Employees are strongly embedded in their own national culture. Because of this, M&As within culturally distant firms will result in misunderstandings, misattributions of motives and intentions which complicates interactions (Buono & Bowditch, 1989). Difficulties with interaction will lead to negative feelings such as uncertainty, stress, hostility, helplessness, and confusion (Hofstede, 2001). These negative feelings decrease loyalty, productivity, commitment, satisfaction and cooperation (Very et al., 1996). Culture affects the way business is done. Organizations value cultural differences, however, these are often as not important compared to product market and resource synergies. Culture determines the shared understanding during meetings and in policies. It determines whether promises that are made will be carried out and also, it determines time management and priorities that are set (Weber & Carerer, 2003). Language differences also lead to failures of M&As because it impedes
communication which eventually leads to cultural conflicts. Cultural differences can lead to the defense of employees own group which prolong the existence of the identities of the businesses (Schweiger & Goulet, 2005). It intensifies polarization, anxiety, negative evaluations and ethnocentrism between employees.

More culturally related firms often perform better than culturally unrelated firms (Ahern et al., 2015). At the individual level, cultural distance can result in resistance to change, a focus on personal security instead of focusing on organizational goals and simultaneous fight-flight responses between managers and employees. At the organizational level, cultural distance can lead to a tendency to not pass information, to not communicate with the respective organizations, and to conflicts between the acquired organizations. This will lead to lower earnings and productivity (Shane, 1995).

The proposition that ‘distance’ is always equal to ‘incongruence’ is questionable, but on the other hand successes of M&As are also not guaranteed. Evidence shows that congruence can also be reached by achieving complementarities, and not necessarily by achieving similarities (Haspeslagh & Jeminson, 1991). Cultural distance can deteriorate M&As successes due to high information costs and difficulties in transferring management techniques and values. The opposite may happen when the business methods are perceived to provide an advantage in the host country (Weber et al, 1996). Access to another way of doing business could be obtained, which may enhance the performance in M&A. This is because firms could interact and thus learn from each other by pooling their organizational routines. Firms in cross-border M&As could also benefit from each other by specialization. By merging with another firm, one can get access to routines in a specific local context and this way can enter the market more successfully. However, it is cheaper to have employees who perform tasks in ways that are consistent with their own culture (Shane, 1993).

The majority of the empirical research has, however provided evidence that the greater the national cultural distance between two countries, the greater the difficulties and thus the greater the likelihood of failing performances of M&As (Teerikangas &Very, 2006). High levels of cultural distance can result in ‘cultural ambiguity’ and lead to losses (Jeminson & Sitkin, 1986). Culturally distant countries have different organizational practices such as management and decision making styles, human resource management practices and codes of ethics (Slangen, 2006). The larger the distance between the merging organizations, the more dissimilar their practices and the more complicated to transfer and to manage. A cultural clash will be the strongest with intensive contact between the advocates of the opposing cultures, where the goals, strategic choices and other operation for the acquired company are determined.
When cultures clash, the way of doing business differs. This results easily in misinterpretations whereby people feel frustrated and anxious, leading to demoralization and defections.

### 2.2 Effect of Cultural Differences on the Performance of M&As

M&As are undertaken if they create a positive net value. These potential gains are determined by the synergies to the acquirer and target. Synergy gains are caused by lower costs or increased revenue. International mergers or acquisitions could be more profitable than domestic ones because they offer growth potentials in new markets, allow for more efficient distribution systems, and could improve managerial deficiencies (Ahern et al., 2015). Cultural differences however, could increase the integration costs and thus limit the profitability. Cultural differences will make teamwork and coordination more difficult. This is because employees prefer to work with people who share the same cultural values, which is at the costs of efficiency losses (Hewstone, Rubin & Willis, 2002). By increasing the costs, cultural differences limit the performance of M&As. Expectedly, the higher the cultural distance, the lower the performance of M&As.

M&As have become significant factors to achieve corporate growth, economies of scale, vertical integration and diversification. The combination of economic and cultural factors generate firm specific assets which can lead to failures (Brown et al, 1989). Most investigations in the management literature show that the tighter the fit of cultures, the more the core technologies of the merging companies are related and thus the more value is created for the acquiring firm’s shareholders (Lubatkin, 1983). Employee support is an important determinant for reaching successes. Without this, the expected performance will rarely be realized (Buono & Bowditch, 1989).

There are different motives for establishing mergers or acquisitions, such as achieving operating synergies in marketing, production, managerial experience, compensation systems or scheduling (Chatterjee, 1986). Others only merge to achieve financial synergies by getting access to more favorable financial terms and risk reduction through diversification (Steiner, 1975). With large cultural distances, the acquired firm is expected to only adjust to the other firm’s financial and planning systems. The firm will be relatively unaffected by the buyer’s organizational and national culture in this situation (Dundas & Richardson, 1982). Autonomy is less likely in mergers between cultural related firms, and operating and financial synergies can be achieved (Chatterjee, 1986). The culture of the top management is very important,
evidence shows a significant relationship between the culture of the top management and the financial performance of firms (Dennison, 1990). Interaction is necessary between the members of the two cultures. Top managers interact frequently throughout the negotiation and transition period. The contact between middle and lower managers starts at a later stadium (Schweiger & Walsh, 1990). The research of Chatterjee, Lubatkin, Schweiger & Weber in 1992 argues that M&As between large cultural distance firms have less operational synergies, and therefore different types of contact between the management of the two firms is present as opposed to mergers with similar cultures. In general, operating synergies are harder to achieve than financial synergies (Galbraith & Stiles, 1984).

Shareholder value is often used in researches to measure performance. This perception is based on the central tenet that the capital asset market is efficient and therefore security prices reflect all publicly available information (Fama, 1976). Thus, the market estimates of the firm’s future financial performance are represented by the shareholder value. These researches assume that the capital asset market does factor the human side of M&As because of the adverse effects of cultural clashes in the business process. It is hard to quantify the costs of cultural differences. The capital market would not be able to forecast, a priori, the actual earnings with complete accuracy. The market, nevertheless, incorporates all available information when setting a price, and investors in the market who are familiar with top management teams of the combining firms are able to form an opinion about consolidation costs (Fama, 1976).

Despite the fact that shareholder value is repeatedly used as a determinant of performances, shareholder value does not fully measure performance outcomes of M&As. It merely reflects the security markets ‘a priori’ expectations (Montgomery & Wilson, 1986). Shareholder value is not used in this research as measurement of performance because of the fact that whether businesses consist of shareholders is culturally dependent. In the ‘Anglo-Saxon world’ it is, for example more common to trade shares of businesses than in the ‘Rhineland world’ (Weimer & Pape, 1999). Therefore, the shareholder value would relatively be more available for businesses in the Anglo-Saxon world. Because these differences could bias results, the shareholder value is not used to measure performance. Sales growth could be seen as a more appropriate performance measure because it is a significant predictor of the performance of a firm (Lieberson & O’Connor (1972). Sales growth is the key performance indicator which is highly rated for measuring performance of international businesses such as M&As. Accurate objective measures of performance are preferred over subjective measurements (Dess & Robinson, 1984) and therefore objective measures are used in this research.
Shimizu et al. 2004 have argued that the performance of the merger or acquisition is determined by the integration process and the adopted control system. Culture acculturation is the ‘changes induced in (two cultural) systems as a result of the diffusion of cultural elements in both directions (Berry, 2005, p. 215) which is needed for positive performances of M&As. Acculturation is dependent on language, communication and cultural fit.

### 2.3 Integration Process

Cultural distance is often seen as a difficulty nevertheless, the outcome of a merger or acquisition is dependent upon the steps taken during the integration process (Haspeslagh & Jeminson, 1991). Extensive research has shown that the integration strategy affects the amount of interactions between the organizations in the merger or acquisition and hence the level of culture clash that occurs (Bower, 2001; Cartwright & Cooper, 1992; Olie, 1994). The integration process appeared to be the most important factor in achieving success in M&As according the survey of European CEOs (Booz, Allen & Hamilton, 1985). It is defined as “the making of changes in the functional activity arrangements, organizational structures and systems, and cultures of combining organization to facilitate their consolidation into a functioning whole” (Pablo, 1994: 806). It is an interactive and gradual process in which individuals from two organizations must learn to work together and cooperate (Weber et al, 2011). The integration process involves the way people deal with uncertainty, stress and anxiety which are caused by cultural differences (Olie, 1990). The pre-merger phase is mostly influenced by financial issues, while cultural distance problems are most important during the integration process. Although some firms maintain cultural rigidity, others are able to obtain a certain degree of flexibility (Cartwright & Cooper, 1992). Cultural distance between the management of both organizations could result in stress, distrust, annoyance, negative attitudes on the part of the acquired team towards the acquiring organization. The resulting stress and negative attitudes reduce the commitment of the acquired top managers to successful integration of the merging companies and their cooperation with the acquiring firm’s top executives.

The specific way of doing business and the routines of a firm also affects post-acquisition performance through learning and specialization (Haspeslagh & Jeminson, 1991; Jeminson & Sitkin, 1986). To have a sustainable competitive advantage, routines should not be easy to imitate by other firms. Unique routines are not easily replicated by other companies when they did not follow a similar path of historical development or institutional environment.
Institutions and the historical path are highly influenced by culture. Some routines such as innovation, stakeholder relationship, strategies, decision making practices, and structure and training are more established in some cultures than others because of the effect of institutions (Morosini et al., 1998, Kreacic & Marsh, 1986, Hofstede, 1980).

Different integration strategies are introduced in the research of Haspeslagh and Jeminson 1991: *symbiosis, absorption* and the *preservation* integration strategy. In symbiotic integration, both organizations have to change to create shared structures and management systems, this implies a moderate level of integration. The acquired firm is fully merged into the buying organization in absorption integration, thus there are high integration levels. This strategy is recommended when the cultural distance is small. In preservation, the acquired firm maintains its autonomy. Therefore, this strategy has the lowest levels of integration and is recommended when cultural differences are high. Hence, cultural differences could not directly have an impact on the performance of M&A, but via the degree of integration (Teerikangas & Very, 2006). High levels of uncertainty avoidance will use the highest levels of integration, thus full absorption (Calori et al, 1994). Accordingly, acquirers with higher level of uncertainty avoidance and high levels of integration will perform better than acquirers with high levels of uncertainty avoidance which use low levels of integration.

Preceding the merger, employees of the merging organizations draw conclusions upon the culture of the employees in the other organization. The tendency prevails to value activities that are not in accordance with one’s own view as abnormal and deviant. The more distant the cultures are, the more resistance could be expected from the employees. The resistance of employees is correlated with the cultural distance and thus the changes that are involved. The more radical the change, the more resistance can be expected. When employees are forced to give up their identity, they will openly resist. The attitude towards the merger or acquisition has a major influence on the performance successes.

Creating loyalty to the other firm is one of the most difficult aspects in the integration process. Loyalty is necessary to create a common identity between the merging companies. The top management has a crucial role in this process. Cultural differences could result in the tendency to not pass information, conflicts and to not communicate with employees of the other national culture. A strong minded and very determined management is needed to make the necessary changes and to bridge the conflicting interest of the two groups. Synergies can be gained more quickly by common management programs, responsibilities for managers, integration of task and creating common quantifiable goals and projects (Olie, 1990).
For a successful integration process a transfer to new identities and loyalty to the new firm is needed. The tendency to stick to old identities which is caused by emotional and cultural factors counteracts this. There are ‘nationalistic’ feelings within a firm which provide an identity of which one is proud and this is why people would attach to a certain identity. Maintaining the status quo is mainly preferable to the powerful groups of people, because merging with another firm could imply a loss of status or even one’s job. This will result in resistance to change. The Social Identity Theory explains why it is often hard to create this common identity.

2.3.1. Social Identity Theory

The Social Identity Theory is developed by Tajfel and Turner in 1979. This theory states that groups are defined in terms of people’s self-conception as group members. Group members evaluate themselves in terms of shared norms, values and attributes that distinguish them from others (Hogg & Abrams, 1988). Within groups there is a self-categorization and enhancement created that favor the in-group at the expense of the out-group. Within mergers this social identity theory suggests that even after the merger the individual's own pre-merger organizational identification dominates (Knippenberg et al, 2002). The more an individual sees himself as a member of the group, the more he identifies himself with the group, and thus the more his behavior and attitudes are governed by this group membership (Tajfel & Turner, 2004). The identification with their organization reflects ‘the perception of oneness with or belongingness to an organization, where the individual defines him or herself in terms of the organization(s) in which he or she is a member’ (Mael & Ashforth, 1992; p. 104). Higher levels of organizational identification will result in a higher probability of acting in the organization’s interest and taking the organization’s perspective (Ashforth & Mael, 1989).

Mergers are seen from this social identity perspective as a formal rearrangement of two social groups into a new group. A merger combines two groups in a relatively short period of time (Dutton et al, 1994). It is argued that employees often miss the feeling that they are still working for essentially the same organization as before. Rousseau argues that a sense of continuity is essential to maintain identification (Rousseau, 1998). Mergers may miss this because the merged organization is mainly a continuation of the other organization. Mergers can give the impression that one group is required to adjust to the other groups’ culture. It could therefore be seen as a threat to their own culture (Hogan & Overmyer-Day, 1994). The most important factor here is the extent to which your own organization dominates or is dominated
by another organization. Even though mergers should involve equal partners, from psychological perspective most mergers are takeovers.

The change of the organization’s identity is smaller for employees of the dominant organization. Hence employees of the dominant organization are more likely to experience a sense of continuity than employees of the dominated organization (Cartwright & Cooper, 1992). The smaller the continuity between pre- and post-merger the lower the levels of identification and thus the integration. In the paper of Knippenberg et al. (2002) is found that pre-merger identification and post-merger identification is more equal for the dominant organization than for the dominated organization.

2.3.2. The Degree of Integration

The degree of integration can vary from very weak to very strong. Organizations which are weakly integrated are only financially integrated. This means that only financial and reporting relations are modified according to the other company. Operational integration is strong integration, which involves significant changes in the target firm (Buono & Bowditch, 1989). While mergers are more cooperation based than acquisitions, this does also not automatically lead to positive attitudes towards the partner. Mergers could also be the result of having no other option. The middle management can thereby disagree with the top management. The attitude of the middle management is very important because they have to bring about the merger (Olie, 1990).

Integration will be more difficult with more cultural distant M&As due to difficulties with absorption and redesign. Culture is central to a group’s identity and view of reality. The goal of M&As is to achieve synergy. This can be accomplished by integration processes in two variants, one being a loosely coupled structure, where the companies are united under an umbrella organization, where most of the original organization is intact. The other variant is an extreme, in which two organizations are closely interwoven, creating a completely new structure. In such an operation, relocation of departments and transfer of managers across the national border is necessary as well as changes in strategy, communication and the way of working (Olie, 1990). However it is often the case that contrary to the expected outcome of creating a common identity, both parties tend to think in terms of separate entities with divergent interest (Olie, 1990).

Higher levels of integration in more culturally distant firms will lead to further conflict because it underscores the cultural differences and lowers commitment and cooperation (Weber
et al, 2015). Acceptance of power distance and high levels of uncertainty avoidance (British vs. French acquirers) is associated with higher integration levels (more centralized control) (Lubatkin, Calori, Very & Veiga, 1998). The success of the integration process is dependent on cooperation and the top management commitment (Weber & Schweiger, 1992). Large cultural differences will lead to more integration problems because of many interactions while members are willing to hold on to their own culture.

When the level of integration is low, differences in national culture could be beneficial which is in line with the positive results of Morosini et al in 1998. Firms need to have a diverse set of organizational practices which is obtained by cross-border M&As in order to be successive. These positive results will only be reached with low levels of integration, because in this situation the acquired unit itself can select and implement the practices that are considered to be attractive and useful (Slangen, 2006). By this way the acquired unit gains access to country-specific practices and can select and adopt the most attractive ones, without being forced to implement them all.

2.3.3. Integration Planning

There is not one best way to integrate two businesses. Formerly, executives focused only on making the deal, where after they handed the whole process unceremoniously to the managers to integrate. The Watson Wyatt Deal Flow Model conceptualizes the fundamental stages of the deal process (Wyatt, 1998). Processes that are involved in M&As are due diligence, negotiation and integration, which are all dynamic and engage learning (Shimizu et al, 2004). For every 5 stages the organization can create specific activities to establish strategy, manage training, policy etcetera. These stages are represented as parallel but are highly interlinked.

**Figure 1**
Watson Wyatt Deal Flow Model

<table>
<thead>
<tr>
<th>Formulate</th>
<th>Locate</th>
<th>Investigate</th>
<th>Negotiate</th>
<th>Integrate</th>
<th>Motivate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy and integration process development</td>
<td>Predeal (assessing, planning, forecasting value)</td>
<td>Deal (agreeing on value)</td>
<td>Postdeal (realizing value)</td>
<td>Ongoing (sustaining and building long-term value)</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Wyatt (1998)*

Several steps are necessary to make the integration process successful, these will be discussed in this section. The planning of the integration process should begin as soon as
possible, which is even before the closing of the deal. This creates the possibility of starting to integrate the two businesses from the very beginning. Firstly, it is necessary to set up management integration teams and series of integration work teams that consists of a balanced mix of employees of the acquirer and the acquired business (DePamphilis, 2014). It is important to have representatives of both organizations, because often a lack of shared understanding of the different strategies and practices is present. To minimize this potential confusion it is important to get the integration manager involved in the process as early as possible. The use of managers from both organizations enables the combined organization to capture the best capabilities for both organizations. It also gives employees trust in knowing that there are executives who understand their respective situations. The Management Integration Team (MIT) focuses on the activities that are creating the greatest value for the organization, such as long-term revenue, cost, and cash-flow performance targets. They are also responsible for the building of the major integration plan, which includes: what should be done, by whom, and by what date. The work teams are determined by the MIT and include combinations of each function and business unit. All work teams are focusing on one specific component of the integration plan and should include employees from both merging organizations. Local consultants could advice these work teams. These teams should be encouraged to create solutions, instead of dictating processes and procedures. The optimum approach combines ‘best practices’ of both firms, combined with other practices reflecting the acquirer’s national traditions. The practices in the integration process are path dependent, because the capacity to undertake this task is conditioned by their existing capabilities and previous experience (Child et al., 2001).

Successful integration processes in cross-border M&As recognize cultural differences and coordinate them to overcome these difficulties (Zhu & Huang, 2007). Cultural differences can be coordinated by combining norms, values, attributes and behavior modes of the different organizations. This is not simply combining two cultures, but a process of selecting, absorbing and integrating the two national cultures. Cross-culture management can positively influence the integration process. This management method is based on the understanding and respecting of the other culture. Communication and adjustment to changes are important factors here. By this way employee support could be gained which is an important determinant for reaching successes. Loyalty is needed to create a common identity between the merging companies. Thus a shared sense of reality has to be created

There should be strategic goals that are clear to the managers, but also to the employees. Successful integration requires getting employees to work towards achieving specific
objectives (Borghese & Borghese, 2001). This is created by building credibility and trust, which can be gained from cooperation and experiencing successes. Hence the management should give insight into the goals, strategies, practices and desired work culture. Managers should work together with the work teams instead of giving orders. The integration managers should therefore have excellent interpersonal and project management skills (Porter & Wood, 1998). A clearly defined approach facilitates faster decision making and organizes the entire integration effort, which results in a more quick and smooth integration process. Without clear strategies and practices different functions within the business will be working on different schedules and produce deliverables that vary widely in terms of quality and content (Child et al., 2001).

All the employees within the merging organizations should be given continuous communication and feedback. This will help to understand and accept the integration. Moreover, it gives insight into the areas that need more attention or effort (Galpin & Herndon, 1999). Culture highly influences the way people communicate within a firm. Different cultures have different attitudes towards communication and language barriers inevitable complicate that. Open communication, and the creation of a generally less restrictive atmosphere is particularly important to gain successes in M&A. In this way employees get motivated. It is necessary to create an organizational environment in which they can best contribute to its competitive and innovative performances.

Hence, it is essential to form integration teams who plan, coordinate and implement the integration process. These teams should be aware of the influences of human factors. There should be integration leaders, who are more skilled and guide these teams (Haspeslag & Jeminson, 1991). Integration processes are different for every particular merger or acquisitions. However the integration processes are dependent upon the existing capabilities and previous experiences. Organizations that conduct multiple cross-border M&As can learn from previous incidents. Open communication is thereby necessary to get employees motivated and get the strategy and practices clear. Successful M&As with lasting integration requires operations, systems and procedures to be connected to the cultures of the merging businesses (Galpin & Herndon, 1999).
3. Methodology

It is questionable whether only quantitative analyses, are appropriate to characterize the multiform and highly diverse contextual aspects of cross-cultural M&As. This research has therefore combined, quantitative and qualitative analyses to gain deeper understanding of the effects of cultural differences. Firstly, the analysis of the impact of cultural differences on the performance of M&As with the help of quantitative methods, will be discussed. Where after a closer look will be taken at the integration process as a possible explanation for the differences in performances of M&A. The integration process was analyzed by the use of in-depth interviews. The use of multiple research methods is highly advocated and is called triangulation (Webb et al., 1966). This approach argues that qualitative and quantitative analyses are complementary rather than rivalry. Denzin (1978) defines triangulation as ‘the combination of methodologies in the study of the same phenomenon (Denzin, 1978: 291).’ This research has used quantitative and qualitative analyses to study the same phenomenon in different ways. It has given insights from different viewpoints. The qualitative part has shed light on the quantitative data and offered a more complete, holistic and better substantiated outcome (Diesing, 1971). The results were therefore more valid. Triangulation is the most appropriate research strategy in this case because of the contradictory results of earlier researches. This research method has contributed to a more extensive understanding. Because of the combination of qualitative and quantitative analyses this study is one of the first comprehensive studies that has examined the impact of national cultural differences on the performance of M&As.

3.1 Performance of M&As

In this section the quantitative analyses that were performed to test the impact of cultural differences on the performance of M&A, are discussed. First the variables used in this research are explained. Thereafter the data is illustrated in more detail. Finally, the results of the analyses are given.

3.1.1. Variables

Performance

Market-based measures appeared to be superior for performance measurement (Chatterjee et al, 1992; Singh & Montgomery, 1987). According to Hofer (1983) sales growth is the most appropriate measurement of performance in international business research, and was therefore
used in this research. The performance of M&As, the dependent variable, was measured by 5-year sales growth. This variable was obtained through the Thomson One Database, which is a database consisting of accurate objective measurements of sales growth (Lara et al., 2006). The 5-year period has provided the strongest tests, because the negative effects of cultural distance are strongest during the first few years of the merger or acquisition (Buono & Bowditch, 1989). By taking a 5-year period, the integration process of the two firms is likely to be entirely completed. Sales growth has also been used as a measure of performance in earlier international business researches (Morosini et al, 1998; Datta, 1991; Haspeslagh & Jemison; 1991), where it has appeared to be an appropriate measure of M&A performance.

*Cultural distance*

Cultural distance formed the most important independent variable in this research. In line with previous research national cultural distance was measured using the Kogut and Singh (1988) index (Morosini et al, 1988; Shenkar, 2001). This index was used to measure cultural distance based on the 4 cultural dimensions of Hofstede, i.e. individualism, power distance, uncertainty avoidance and masculinity. Despite the fact that the index has some limitations (Shenkar, 2001), this index is considered to be the best measure of national cultural distance available. This is because the scores of Hofstede are available for a huge amount of countries and many researchers have confirmed the validity (Van Oudenhoven, 2001). This suggests that the index can be used reliably to discover cultural distance between countries.

A limitation of the Kogut and Singh index according to Shenkar 2001 is the illusion of symmetry which assumes that cultural distance between countries is the same in both directions for both countries. This is however not necessarily the case because it could be easier to invest in China for U.S. firms than vice versa. Another limitation of the Kogut and Singh index is that cultural distance cannot be studied in isolation. In this study the multidimensional construct was therefore investigated together with geographical distance.

The Kogut and Singh index measures cultural distance between two countries based on the 4 different cultural dimensions of Hofstede. The index corrects for differences in the variance of each dimension where after it is arithmetically averaged:

\[
CD_j = \sum_{i=1}^{4} \frac{(I_{ij} - I_{in})^2}{4V_i}
\]

CD\(_j\) is the cultural distance between the two countries of the merger or acquisition. I\(_{ij}\) is the first country’s score on the ith cultural dimension and I\(_{in}\) is the score of the other country on this dimension. V\(_i\) is the variance of the dimensions. The equation was divided by 4, because of the
4 dimensions of Hofstede that were in this research. This index was used to take cultural differences between countries into account. For each of the 5138 mergers or acquisitions the cultural distance between the two countries was calculated using the Kogut Singh index based on the scores of the four cultural dimensions of Hofstede.

In line with previous research and literature it was expected that the bigger cultural differences are, the lower the performance of M&As will be. Therefore a negative relation is expected between M&A performance and cultural distance.

**Control Variables**

Previous research has shown that relatedness of industries between firms of M&As enhances the performance (Salter & Weinhold, 1979; Lubatkin, 1983; Datta, 1991). It appeared that performances of M&As within the same industry were higher than in unrelated industries. Therefore the research controls for industry relatedness of M&As in this research. *Industry relatedness* was measured based on the Standard Industrial Classification (SIC) code. If the merging companies operated in the same industry, the merger or acquisition received a relatedness score of one. When this was not the case, thus when the companies are from different industries, the relatedness score received a value of zero.

The *size* of a company could also influence the relationship between cultural differences and the performance of M&As. The larger an organization, the harder it is for the buying firm to understand all the areas in which integration is needed (Shirvastava, 1986). Given this potential impact, this research controlled for the size of organizations by measuring the dollar value of the target’s net sales in the year of the merger or acquisition. Therefore a negative relationship between size and M&A performance was expected.

*Geographical Distance* is the physical distance between the two merging organizations. This was measured by the distance between both firms’ countries’ most important city (in terms of populations). The influence of geographical distance on the performance of M&A is two folded in theory. On the one hand it could increase costs and thus negatively impact the performance of M&A. It is costly to transport products (tangible), information (intangible) and people over large distances (Ghemawat, 2001). The further you are, the harder it is to conduct a business. On the other hand, when geographical distance is large, firms will rely relatively more on FDI instead of exports. In the research of Lankhuizen et al. (2011) is found that the share of FDI sales increases when geographical distance increases. This is because geographical distance represents a relatively higher cost to exports than to FDI. Therefore it was expected that geographical distance positively influences the performances of M&As.
Economic and financial conditions vary year by year and have therefore an explicit impact on the performance of M&As. Hence, the third control variable represents the time in which merger or acquisition occurred, which controls for aggregate shocks. For this, a dummy variable was created which indicated the year the merger or acquisition was established. The first year, 1985 is left out the regression and is therefore the reference year.

Several researches have shown that culture is a stronger determinant of institutions than vice versa. Therefore it was not necessary to control for the impact of institutions on the performance of M&As (Ahern, 2015; Licht, Goldschmidt, & Swartz, 2007; Gorodnichenko & Roland, 2010, Guiso, Sapienza, & Zingales, 2010).
### Table 2
Countries with most Frequent Country Pairs Mergers and Acquisitions

<table>
<thead>
<tr>
<th>Target Country</th>
<th>Australia</th>
<th>Canada</th>
<th>France</th>
<th>Germany</th>
<th>Hong Kong</th>
<th>Italy</th>
<th>Japan</th>
<th>Netherlands</th>
<th>Spain</th>
<th>Sweden</th>
<th>Switzerland</th>
<th>UK</th>
<th>US</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
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<td>13</td>
<td>9</td>
<td>2</td>
<td>19</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>59</td>
<td></td>
<td></td>
<td>256</td>
</tr>
<tr>
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<td>6</td>
<td>2</td>
<td>0</td>
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<td>5</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>10</td>
<td>26</td>
<td></td>
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<td>2</td>
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<td>1</td>
<td>27</td>
<td>7</td>
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<td>7</td>
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<td>26</td>
<td></td>
<td>96</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>36</td>
<td>1</td>
<td>7</td>
<td>6</td>
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<td>10</td>
<td>4</td>
<td></td>
<td></td>
<td>96</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>23</td>
<td>33</td>
<td>42</td>
<td>37</td>
<td>18</td>
<td>11</td>
<td>23</td>
<td>14</td>
<td>7</td>
<td>11</td>
<td>19</td>
<td>193</td>
<td></td>
<td>442</td>
</tr>
<tr>
<td>United States</td>
<td>33</td>
<td>160</td>
<td>78</td>
<td>53</td>
<td>35</td>
<td>16</td>
<td>81</td>
<td>54</td>
<td>22</td>
<td>26</td>
<td>47</td>
<td>172</td>
<td></td>
<td>802</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>245</td>
<td>302</td>
<td>258</td>
<td>89</td>
<td>112</td>
<td>217</td>
<td>146</td>
<td>77</td>
<td>109</td>
<td>128</td>
<td>374</td>
<td></td>
<td>2980</td>
</tr>
</tbody>
</table>
3.1.2. Data

The Thomson one database was used to get an exhaustive list of mergers to test the effect of cultural differences on the performance of M&As. To test the predictions of M&A performance within a national cultural context, a multilevel data set of firm-level and country-level information was assembled. The Thomson One Database includes 271,677 cross-border M&As deals. All completed cross-border deals in the period from January 1985 till January 2016 were selected. This initial sample consisted of 6,687 M&As. The country of origin, the year, the industry, the size, absolute sales and sales growth were recorded for each deal. However, due to constraints on some variables the sample was reduced in subsequent tests. Any deals without observations of sales growth, absolute sales, country of origin, year, and industry were excluded from the sample. The reduction in the sample size was primarily driven by the relative scarcity of available data of the sales growth numbers.

After filtering, the data included 5,138 mergers and acquisitions in 102 different countries. Acquirers are from 81 different countries and targets from 91 different countries. Country pairs in 81 different countries could be obtained and were used in the multilevel analyses. This leaves the data with 5,096 different M&As. Table 2 above shows a detailed matrix of the 13 countries with most M&As. As can be seen, cross-border M&As are not random, but highly focused within specific country pairs. For instance Canada and the U.S., and the U.K. and the U.S. have strong cross-border merger ties. It is remarkable that the U.K. and Canada have relatively few cross-border deals. The top five acquiring countries in cross-border M&As are the U.S., the U.K., France, Germany, Japan, Canada and the Netherlands as can be seen in Table 3. The U.S. is the leader by far, after which there is a large drop in merger or acquisition activity. The merger and acquisition market is a complex network of flows where trading partners are clearly not random.

Table 3

<table>
<thead>
<tr>
<th>Countries with most mergers and acquisitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>Japan</td>
</tr>
<tr>
<td>Canada</td>
</tr>
<tr>
<td>Netherlands</td>
</tr>
</tbody>
</table>

*Source: Thomson One database*
Figure 2 below shows that cross-border M&A deals have increased tremendously since 1985. Firms are not only buying more targets, but also in many more foreign countries. All five top target nations have increasing numbers of M&A. There was a peak in 2000 and 2007. 2000 was the year of the dot-com bubble and 2007 was just before the outset of the credit crisis. Economically weaker periods and recessions caused the drops in M&A activity in 2001-2003 and 2007-2009. The number of deals fell in these periods by 52% and 39% respectively. The value of M&As fell even faster than the number of deals because of declining valuations and cancelling of the largest transactions which was partly due to limited access to finance (Holmstrom & Kaplan, 2001).

**Figure 2**
Number of M&As 1985-2015

The Standard Industrial Classification (SIC) was used to divide the mergers into different industries. Mergers or Acquisitions between firms with the exact same SIC code are industry related and a dummy variable has controlled for this. The sample included 594 different SIC codes, which were subdivided into 9 different industry groups. These industry groups are shown in Table 4 below. Most M&As take place in the manufacturing industry representing 41.75 % of total. There is not much M&A activity in the agriculture, forestry, fishing and construction industries.
<table>
<thead>
<tr>
<th>Industries</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>35</td>
<td>0.68</td>
</tr>
<tr>
<td>Mining</td>
<td>402</td>
<td>7.82</td>
</tr>
<tr>
<td>Construction</td>
<td>86</td>
<td>1.67</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2,145</td>
<td>41.75</td>
</tr>
<tr>
<td>Transportation, Communications, Electric and Gas</td>
<td>559</td>
<td>10.88</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>165</td>
<td>3.21</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>144</td>
<td>2.80</td>
</tr>
<tr>
<td>Financial Insurance and Real Estate</td>
<td>866</td>
<td>16.85</td>
</tr>
<tr>
<td>Services</td>
<td>736</td>
<td>14.32</td>
</tr>
<tr>
<td>Total</td>
<td>5138</td>
<td>100</td>
</tr>
</tbody>
</table>

Cultural values were measured per country by the cultural dimensions of Hofstede. Because national cultural values are more rigid than corporate cultures, national cultures impose a greater obstacle to realize synergy gains. Therefore, national cultures were used in this research to measure cultural differences. Every country has received a score between 0-100 on the 4 national culture dimensions of Hofstede. These scores were linked to the countries of the M&As used in this researched. For each of the 5138 mergers or acquisitions the cultural distance was calculated using the Kogut-Singh index. Every deal received an index score in which a number close to 0 indicates low cultural distance and high scores indicates high cultural distance between the countries of the merging firms.

3.1.3. Method

The gravity model has often been used in international economics to explain for example regional patterns of trade, following the work of Tinbergen (1962). A gravity model uses geographic distance to predict the intensity of cross-country relations. This approach was followed, however distance was not only measured in geographic distance, but also in cultural space. This cultural distance was measured according to the 4 dimensions of Hofstede as discussed above. Hence the model was used to generate an empirical estimating equation of the gains in M&A. This equation measures the performance gains. The following is estimated:
M&A performance\textsubscript{ijt} = β\textsubscript{0} + β\textsubscript{1}(Cultural distance\textsubscript{ij}) + β\textsubscript{2}(Size\textsubscript{jt}) + β\textsubscript{3}(Industry Relatedness\textsubscript{ij}) + β\textsubscript{4}(Geographic Distance\textsubscript{ij}) + Time Dummies + ε\textsubscript{ijt} \hspace{1cm} (2)

The dependent variable, is the performance of M&A measured by the 5-year sales growth during the years 1985 to 2016. M&A performance\textsubscript{ijt} represents the combined performance, for the \textit{j} th firm in the \textit{i} th dyad. The independent variables are, respectively: Cultural Distance, represented by the Kogut-Singh index measuring the absolute difference between two countries for the four dimensions of Hofstede, the size of the target firm, measured by the absolute level of Sales, Industry Relatedness, based on the exact same SIC code, Geographical Distance which is the great circle distance between the most important cities or agglomerations (in terms of population) between a pair of countries in thousand kilometers\(^2\). Year dummies were included in the sample to control for macro-economic shocks, as currency crises, bubbles, and changes in market valuations. Lastly, ε\textsubscript{ijt} is the error term. Between-dyad variables are variables wherein all variation in the variable is between the dyads. Thus the members of the dyad have the same score on the variable. In this research this were the variables: Cultural Distance and Geographic Distance. The dependent variable is a within dyads variable because the sum of the performance of the acquiring and target country together is the same for every dyad (Kenny, 2006).

The M&A took place within different combinations of two countries, so the relationship between two firms were measured. Thus dyads, M&A within combinations of two countries, were researched. These dyads consisted of an acquiring and a target firm. This means that both firms within the dyad were distinguishable. The most frequent combinations of countries are shown in Table 2. All 81 different countries were used in this research. Not many missing values needed to be dealt with, because almost all combinations of countries were present in the sample. Because large numbers of countries were used in this research, multilevel regression provided robust conclusions about ‘country effects’ (Bryan & Jenkins, 2015). Multilevel analysis was used in this research to specify the effect of the social context on firm-level outcome. The dependent variable, the performance of M&A were measured on the interval level of measurement. Performance is measured by the 5-year sales growth as discussed above. This study examines M&A performances for 5,096 firms concurrently with firm-level predictors and predictors from cultural contexts of 81 different countries. Multilevel analysis was used in this research because of the clustered data. The crossed levels were analyzed by multilevel

regressions which permits to use societal characteristics with firm-level traits that cause organizations to differ from one another in M&A performances. The multilevel model consists of the first level representing data at the firm level and the second level representing dyads. This firm level data are the industry relatedness and the size of the target firm. The second level data representing the dyads are the cultural distance and the geographic distance. The variation in performances was thus explained on the basis of firm level data; the industry relatedness of and the size, and dyad level data; cultural and geographic distance between countries. These cross level interactions made it possible to test in which way the effect of M&A performances is depended upon the context in which these different M&As were established.

3.1.4. Results
Table 5 shows the descriptive statistics including the means, the standard deviations and the correlation coefficients. All variables are defined in Appendix A. As can be seen in the table, the correlations between the independent variables are generally low. The highest correlation is 0.1122 which is between Cultural Distance and Geographic distance. The Variance Inflation Factor is 1.02 which indicates that this study does not suffer from multicollinearity.

**Table 5**
Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Growth</th>
<th>CD index</th>
<th>Size</th>
<th>Rel.</th>
<th>Dist.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Growth</td>
<td>18.749</td>
<td>43.90</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD index</td>
<td>-0.326</td>
<td>1.445</td>
<td>-0.0327</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>5.530</td>
<td>2.219</td>
<td>-0.0210</td>
<td>0.0714</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rel.</td>
<td>0.335</td>
<td>0.472</td>
<td>0.0140</td>
<td>-0.0245</td>
<td>0.0772</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Distance</td>
<td>7.925</td>
<td>1.280</td>
<td>0.0650</td>
<td>0.1122</td>
<td>-0.1079</td>
<td>-0.0465</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Note: subscript ‘Sales Growth’, performance M&A measured in 5-year Sales growth; ‘CDindex’, Cultural Distance index; ‘Size’, Size of the target firm measured in absolute sales value; ‘Rel’, industry relatedness of the two merging companies; ‘Distance’, geographic distance between countries of the merging organizations.

The figures below show two scatter plots of the data, which displays the association between the dependent variable, the performance of M&As (Sales growth) and the most important independent variable, cultural distance (CD index). Several possible influential cases appeared which could had too strong of an influence on the regression. These outliers were situated far from the center of the other data points. Cook’s distance indeed indicated outliers with a too strong influence. Cases with a Cook’s distance higher than 1 were removed from the sample, which can be seen in the Table 6 below.
All variables were tested for normality. The variables CDindex, Size and Distance were not normally distributed, and were therefore transformed by taking their natural logarithm (Field, 2009). After transformation, the variables Size and Distance were normally distributed, however CDindex was still not normally distributed. The sample size was extremely large consisting over 5000 observations and therefore the lack of normality of the variable CDindex.
will not have influenced the validity of the research (Field, 2009). This is because the distribution of the disturbance term has approximated normality in this case (Rice, 1995).

No constant variances of the error terms indicated possible heteroskedasticity. Heteroskedasticity causes the standard errors of parameters to be biased and makes statistical tests non-reliable. Therefore the White test was conducted to test this. The test indicated a value of 0.0423. This shows that the data suffers from heteroscedasticity. In the analyses heteroskedasticity was addressed by White’s procedure. The estimations show White corrected standard errors.

The relationship between the dependent and independent variable was assumed to be linear. Tests indicated that the assumption of linearity was not violated. It showed however that the variables CDindex and Size were very skewed. These variables measured respectively the cultural distance between the two countries and the absolute value of the sales of the target firm. This was solved by taking a natural log that transformed the variables. The Kernel density estimation is a non-parametric way to estimate the probability density function of a random variable (Studenmund, 2014) and showed that the transformation helped greatly to correct for the skewedness.

Furthermore, a test was conducted to see whether a model specification error was present in this research. This occurs when relevant variables are missing or irrelevant variables are included in the model. This would lead to fact that the common variance will be wrongly attributed to the variables and thus affect the regression coefficient substantially. The ovtest was conducted to see whether there were omitted variables. The test created new variables based on the predictors and refitted the model using these new variables to see whether any would be significant. Ho: Model has no omitted variables. Test indicated no significant results (0.2868). Hence, Ho could not be rejected and the model did not have no omitted variables. The linktest checked for the correctness of link function specification and indicated that there were no omitted variables or irrelevant variables included.

After having checked all the assumptions, it appeared that the regressions could be used reliably in this research. Relation (2) was estimated by first performing standard Ordinary Least Squares (OLS) and OLS with correction for clustering. These regressions were not perfectly adequate because of the clustered data. It gives, however an indication of the impact of cultural differences on the performance of M&A. The Random Effects regressions were conducted to correct for characteristics within the industry that could bias the outcomes. Eventually, Multilevel Analyses on country level were performed which adequately measured the impact
of Cultural Differences on M&A performance, by approaching the issue of clustered data. Also multilevel analyses per industry group were performed to control specific industry factors.

Table 7
The effect of Cultural Differences on M&A performances measured by OLS

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln(CDindex)</td>
<td>-0.966*</td>
<td>-1.214**</td>
<td>-1.214**</td>
<td>-1.196**</td>
</tr>
<tr>
<td></td>
<td>(-2.27)</td>
<td>(-2.82)</td>
<td>(-2.73)</td>
<td>(-2.63)</td>
</tr>
<tr>
<td>Size</td>
<td>0.315</td>
<td>0.197</td>
<td>0.197</td>
<td>0.205</td>
</tr>
<tr>
<td></td>
<td>(-1.13)</td>
<td>(-0.70)</td>
<td>(-0.62)</td>
<td>(-0.64)</td>
</tr>
<tr>
<td>Industry Rel.</td>
<td>-1.277</td>
<td>-1.035</td>
<td>-1.035</td>
<td>-1.027</td>
</tr>
<tr>
<td></td>
<td>(-0.98)</td>
<td>(-0.79)</td>
<td>(-0.79)</td>
<td>(-0.79)</td>
</tr>
<tr>
<td>Ln(Distance)</td>
<td>2.331***</td>
<td>2.331***</td>
<td>2.329***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.79)</td>
<td>(4.62)</td>
<td>(4.61)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>20.60***</td>
<td>1.321</td>
<td>1.321</td>
<td>1.802</td>
</tr>
<tr>
<td></td>
<td>(12.19)</td>
<td>(0.30)</td>
<td>(0.29)</td>
<td>(0.38)</td>
</tr>
<tr>
<td>Observations</td>
<td>5138</td>
<td>5138</td>
<td>5138</td>
<td>5138</td>
</tr>
</tbody>
</table>

-Statistics in parentheses * p<0.05, ** p<0.01, *** p<0.001.

Note: t-statistics are reported in parentheses in the line below the parameter estimates. Standard errors are corrected for by White’s procedure. In column (3) and (4) the coefficients’ standard errors are corrected for clustering by countries. In column (4) time dummies are included (not shown). Symbols: ln(.) logarithm; subscript ‘CDindex’, Cultural Distance index; ‘Size’, Size of the target firm measured in absolute sales value; ‘Industry Rel’, industry relatedness; ‘Distance’, geographic distance between countries of the merging organizations.

Table 7 shows the OLS and OLS regressions with correction for the clustering of countries. The OLS estimates in column 1 and 2 are unbiased but underestimate the coefficients’ standard deviation. Therefore there was corrected for the coefficients’ standard deviation for this clustering of observations. The sensitiveness of the results was investigated for this correction, which is shown in column 3 and 4. The Cultural Distance index (CDindex), the Target firm size (Size) variables and Geographic distance (Distance) all showed the expected signs.

In column 2 the geographical distance between the merging organization was included. Distance is positively signed, as was expected, which means that when the distance increases, the performance of M&A will also increase. This is in accordance with the expectations based on the research of Lankhuizen et al. (2011). In columns 3 and 4 the clustering of countries was taken into account. This did not influence the coefficients, but resulted, as expected, into greater standard errors. As a robustness check, times dummies were included in column 4 to control for aggregate shocks. This check showed no major differences in outcomes indicating that the results were robust.
Hence, the results indicated that consistent with the hypothesis and controlling for the size of the target firm, industry relatedness, geographical distance and time significant negative effects of cultural differences are encountered in all four regressions in Table 7. The sign of the impact of the target firm size turned out to be as was expected. However no significant effects were found. This is not in accordance with the expectation, that the larger the size of the company that is being taken over, the harder it is for the buying company to understand all the areas in which integration is needed.

Previous research has argued that industry relatedness has a positive effect on the performance of M&A. The regressions in Table 7 show, however insignificant, but negative results. This estimated effect does not support the ex-ante expectations arguing that industry relatedness would positively influence M&A performance. However, relatedness between industries was only indicated in the previous regressions when both industries were exactly the same according the SIC-code. The SIC-code is a Standard Industrial Classification code assigned by the U.S. government to identify the primary business of the establishment. These classifications can be grouped into 9 different industry groups. These 9 divisions are: 1. Agriculture, Forestry, and Fishing; 2. Mining; 3. Construction; 4. Manufacturing; 5: Transportation, Communications, Electric, Gas, and Sanitary Services; 6; Wholesale Trade; 7. Retail Trade; 8; Finance, Insurance, and Real Estate; 9. Services. These 9 industry groups could also affect the outcomes because each industry has its own characteristics. To control for this, Random effects (RE) was used. Characteristics within the industry may bias the outcome and RE controlled for this. By using RE the time invariant variables (i.e. Geographic Distance; Industry Relatedness) could be included. RE assumes that the error term is not correlated with the predictors which allows time invariant variables to be explanatory. The unique errors were not correlated with the regressors and also the Hausman test showed insignificant results (0.2072) indicating that random effects instead of fixed effects needed to be used. The Hausman test’s null hypothesis indicated that the preferred model should be random effects versus the alternative fixed effects (Green, 2008). The results of the random effects are shown in Table 8. In column 2 the time dummy was included (not shown), to control for aggregate shocks. By performing the RE the significant effect of cultural differences disappeared by taking into account the time variable, which indicated no robustness of the outcomes. The effect of geographical distance stayed significantly positive. The effect of size of the target country and industry relatedness in both regressions still showed insignificant results. Therefore multilevel analyses were performed to take into account the clustered data.
Thus, approaching the issue of clustered data, multilevel analyses were performed. The outcomes, the firm level performance of M&A, can be explained as a function of firm-level characteristics (size of the target firm & industry relatedness) and country level characteristics (cultural distance & geographic distance). The clustered data consisted of 5,096 mergers, i within 81 countries, j. Table 9 below shows the multilevel regression. It appeared that by taking into account the clustered data, the impact of cultural differences is significantly negatively effecting the performance of M&A controlling for the target firm size, industry relatedness, geographic distance. In column (2) the time dummy was included as a robustness check. It showed that including the time dummy, controlling for shocks the negative impact of cultural differences was still significant. The coefficient of Cultural Distance turned out to be smaller as shown in column (2). Nevertheless, even smaller coefficients point at the importance of Cultural distance for the performance of M&A. The effect cultural distance index variable is -1.196 (Table 9, column 2), which means that when cultural distance increases with one unit, the sales growth decreases with 1.196, while keeping all other variables constant. Hence, greater cultural differences will result in lower M&As performances, which is in line with expectations from the literature and previous researches. The signs and significance levels of the impact of
size, industry relatedness and geographic distance on M&A performances did not change in comparison with the previous regressions.

**Table 9**
The effect of Cultural Differences on M&A performances measured by Multilevel analyses

<table>
<thead>
<tr>
<th></th>
<th>Multilevel Including time dummies</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln(CDindex)</td>
<td>-1.214**</td>
<td>-1.196**</td>
<td>(-2.73)</td>
</tr>
<tr>
<td></td>
<td>(-2.73)</td>
<td>(-2.63)</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>-0.197</td>
<td>-0.205</td>
<td>(-0.62)</td>
</tr>
<tr>
<td></td>
<td>(-0.62)</td>
<td>(-0.64)</td>
<td></td>
</tr>
<tr>
<td>Industry Relatedness</td>
<td>-1.035</td>
<td>-1.027</td>
<td>(-0.79)</td>
</tr>
<tr>
<td></td>
<td>(-0.79)</td>
<td>(-0.79)</td>
<td></td>
</tr>
<tr>
<td>Ln(distance)</td>
<td>2.331***</td>
<td>2.329***</td>
<td>(4.62)</td>
</tr>
<tr>
<td></td>
<td>(4.62)</td>
<td>(4.62)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.321</td>
<td>1.802</td>
<td>(0.29)</td>
</tr>
<tr>
<td></td>
<td>(0.29)</td>
<td>(0.38)</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>5096</td>
<td>5096</td>
<td></td>
</tr>
</tbody>
</table>

*Note: t-statistics are reported in parentheses in the line below the parameter estimates. Standard errors are corrected for by White’s procedure. Time dummies are included (not shown). Symbols: ln(.) logarithm; subscript ‘CDindex’, Cultural Distance index; ‘Size’, Size of the target firm measured in absolute sales value; ‘Industry Rel’, industry relatedness; ‘Distance’, geographic distance between countries of the merging organizations.

The main criticism of Shenkar on the use of the Kogut and Singh index is that the index assumes that cultural distances are the same in both directions for both countries. Distance suggests symmetry. This implies that the distance from country A to country B is the same as for country B to country A. However the perceived cultural distance is not necessarily symmetric. The cultural distance perceived for country A to B could be greater than it is for country B to A. For this reason the symmetry assumption of the Kogut and Singh index was tested in this research.

The inhabitants of high Uncertainty Avoidance (UA) countries prefer to control every aspect of life as much as possible. High UA-countries are therefore hostile to foreign influences and thus to M&A. Managers and Employees within firms in high UA-countries, expect and prefer rigid and clear rules, whereas the opposite holds for managers and employees in low-UA countries. (Hofstede, 2001). Therefore differences in UA avoidance impede the functioning of
M&A. This is in line with the findings of Barkema and Vermeulen (1997), which stated that differences in UA reduce the likelihood of success of M&A. People in high UA-countries are more risk averse towards uncertain situations. Cross-border M&A are very uncertain and risky situations. Cross-border M&A have greater uncertainty for the target firms than for the acquiring firms. This is because firms within the target country do not exactly know what will happen and cannot influence the decisions of the acquiring company completely. The quality of the cross-border information may be lower and analyzing the information may be more difficult. It appeared that a higher price is paid for control in cross-border M&A when UA is high. This is because they try to avoid the uncertainty of the deal by paying higher control premiums (Bremer et al., 2015). Firms in countries with higher levels of uncertainty avoidance have less takeover M&A activity, have more diversifying takeovers and require higher premiums on takeovers (Frijns et al., 2013).

Table 10
The impact of Uncertainty Avoidance on the outcomes of M&A

<table>
<thead>
<tr>
<th></th>
<th>Multilevel Target countries - high UA (1)</th>
<th>Multilevel Acquiring countries – high UA (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln(CDindex)</td>
<td>-1.144</td>
<td>-0.620</td>
</tr>
<tr>
<td></td>
<td>(-0.49)</td>
<td>(-0.60)</td>
</tr>
<tr>
<td>Size</td>
<td>-0.149</td>
<td>0.0183</td>
</tr>
<tr>
<td></td>
<td>(-0.20)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Industry Relatedness</td>
<td>-0.178</td>
<td>-6.480**</td>
</tr>
<tr>
<td></td>
<td>(-0.06)</td>
<td>(-3.08)</td>
</tr>
<tr>
<td>Ln(distance)</td>
<td>2.557*</td>
<td>2.581**</td>
</tr>
<tr>
<td></td>
<td>(2.07)</td>
<td>(3.00)</td>
</tr>
<tr>
<td>Constant</td>
<td>9.471</td>
<td>1.630</td>
</tr>
<tr>
<td></td>
<td>(0.81)</td>
<td>(0.21)</td>
</tr>
</tbody>
</table>

Observations 749 749

*t-statistics in parentheses * p<0.05, ** p<0.01, ***p<0.001.

Note: t-statistics are reported in parentheses in the line below the parameter estimates. Standard errors are corrected for by White’s procedure. Column 1: shows the impact of CDindex on the performance of M&A when UA is large in the target country. Column 2 shows the impact of CDindex on the performance of M&A when UA is large in the acquiring country. Time dummies are included (not shown). Symbols: ln(·) logarithm; subscript ‘CDindex’, Cultural Distance index; ‘Size’, Size of the target firm measured in absolute sales value; ‘Industry Rel’, industry relatedness; ‘Distance’, geographic distance between countries of the merging organizations.
In this research, a greater negative effect of cultural differences was expected when uncertainty avoidance was large in target countries. Hence, high UA target countries experience relatively greater negative effects of cultural differences than high UA acquiring countries. This was tested by performing regressions when UA was high for the target countries and comparing these results when UA was high for the acquiring countries. This was done by constructing a dummy variable which gets value 0 when uncertainty avoidance of the target country is large (i.e. higher than 66) and 1 when uncertainty avoidance of the acquiring country is large. The results are shown in Table 10 above.

Column 1 shows the impact of cultural differences when the UA of the target country is large, while column 2 shows the impact when the UA of the acquiring country is large. In Table 10 can be seen that the effects of cultural differences on the performance still are negative. It appeared that the impact of cultural differences was indeed larger when the UA of the target country is large, however the coefficients are insignificant. When the asymmetry criticism of Shenkar holds both coefficients should differ significantly from each other. To test whether the coefficients differ significantly from each other, and thus checking whether cultural distance between countries was asymmetric, a Chi$^2$-test was performed. The outcomes are shown in Table 11 below. No significant difference between the two coefficients was found, which means that no support for the criticism of Shenkar was found. Hence, it appeared that no asymmetric cultural distance is specified between countries in this investigation.

### Table 11
Testing for significant differences indicating possible asymmetry of cultural distance

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>Significant Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln(CDindex)</td>
<td>-1.144</td>
<td>-0.620</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>(-0.49)</td>
<td>(-0.60)</td>
<td>(0.8470)</td>
</tr>
</tbody>
</table>

Note: t-statistics in parentheses * p<0.05, ** p<0.01, ***p<0.001.

Additionally, multilevel analyses were performed for each of the 9 different industry groups. These results are shown in Table 12 below. The 9 different columns represent the 9 different

---

3 Multilevel analyses without time dummies are shown in appendix B. However no major different outcomes appeared, so results are robust.
industry groups. It is striking that in all but one industry, the significant impact of cultural differences disappeared within related industries. This could mean that industry relatedness compensated the negative impact of cultural differences. Cultural differences only significantly negatively impacted M&As performance within the service industry. The coefficient of -2.168 (Table 12, column 9) indicated that when cultural distances increases with one unit, the sales growth decreases with 2.168, while keeping all other variables constant.

A possible reason for the fact that only negative effects of cultural differences on the M&A performance were found within the service industry could be that services are more sensitive to cultural and institutional differences. This is in accordance with the research of Melnikova & de Jong (2014). They argued that corruption is more detrimental to international trade in services than in goods and that thereby the quality of institutions has a greater impact on trade in service industries. Services are often considered as being intangible and non-storable. Services production requires expertise gained by education, training or experience. Services are, therefore very labor-intensive, which requires a lot of communication (Lennon, 2008). Literature shows that communication is more difficult between employees of different cultures, because it could result in misunderstandings. This could be a reason for the fact that only negative effects of cultural distances on the performance of M&A were found within the service industry.

The size of a company showed a significant positive impact within industry 2 (Mining). The coefficient of 3.405 (Table 12, column 2) indicated a significant positive impact of bigger target firms on the performance of M&As. This estimated effect does not support the ex-ante expectations. The expectation was that the larger the size of firm is, the lower the performance of M&A. the geographical distance coefficients all indicated the expected signs.
### Table 12
The effect of Cultural Differences on M&A performance per industry group measured by multilevel analyses

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln(CDindex)</td>
<td>-1.460</td>
<td>-1.904</td>
<td>-3.567</td>
<td>-0.549</td>
<td>1.659</td>
<td>-3.060</td>
<td>-0.520</td>
<td>0.169</td>
<td>-2.168*</td>
</tr>
<tr>
<td></td>
<td>(-0.29)</td>
<td>(-0.82)</td>
<td>(-1.19)</td>
<td>(-0.99)</td>
<td>(1.16)</td>
<td>(-1.58)</td>
<td>(-0.49)</td>
<td>(0.16)</td>
<td>(-2.16)</td>
</tr>
<tr>
<td>Size</td>
<td>-2.862</td>
<td>3.405**</td>
<td>1.617</td>
<td>-0.683</td>
<td>-0.114</td>
<td>1.669</td>
<td>-1.908</td>
<td>1.314</td>
<td>-0.956</td>
</tr>
<tr>
<td></td>
<td>(-0.77)</td>
<td>(3.01)</td>
<td>(0.88)</td>
<td>(-1.38)</td>
<td>(0.12)</td>
<td>(1.01)</td>
<td>(-1.99)</td>
<td>(1.84)</td>
<td>(-1.04)</td>
</tr>
<tr>
<td>Ln(distance)</td>
<td>7.404***</td>
<td>8.967***</td>
<td>4.053</td>
<td>1.554**</td>
<td>3.801*</td>
<td>2.016</td>
<td>1.546</td>
<td>1.368</td>
<td>-0.924</td>
</tr>
<tr>
<td></td>
<td>(1.44)</td>
<td>(3.72)</td>
<td>(1.63)</td>
<td>(2.61)</td>
<td>(2.41)</td>
<td>(1.01)</td>
<td>(1.55)</td>
<td>(0.95)</td>
<td>(-0.80)</td>
</tr>
<tr>
<td>Constant</td>
<td>-29.32</td>
<td>-82.20***</td>
<td>-3.324</td>
<td>8.532</td>
<td>-7.731</td>
<td>-7.989</td>
<td>17.31</td>
<td>-1.349</td>
<td>45.74***</td>
</tr>
<tr>
<td></td>
<td>(-1.05)</td>
<td>(-3.30)</td>
<td>(-0.13)</td>
<td>(1.26)</td>
<td>(-0.55)</td>
<td>(-0.64)</td>
<td>(1.61)</td>
<td>(-0.12)</td>
<td>(3.67)</td>
</tr>
<tr>
<td>Observations</td>
<td>35</td>
<td>399</td>
<td>85</td>
<td>2135</td>
<td>551</td>
<td>165</td>
<td>144</td>
<td>849</td>
<td>733</td>
</tr>
</tbody>
</table>

*t-statistics in parentheses * p<0.05, ** p<0.01, ***p<0.001.

Note: t-statistics are reported in parentheses in the line below the parameter estimates. Standard errors are corrected for by White’s procedure. In all columns time dummies are included (not shown). All different columns represent the 9 different industry groups. Symbols: ln(.) logarithm; subscript ‘CDindex’, Cultural Distance index; ‘Size’, Size of the target firm measured in absolute sales value; ‘Industry Rel’, industry relatedness; ‘Distance’, geographic distance between countries of the merging organizations.
Although the coefficients are not significant, it is remarkable that 2 industries groups (5 & 8) indicated positive effects, while all others indicated negative effects of cultural differences on the performance of M&As. This could be caused by the fact that possible positive effects as learning effects of cultural distances are industry dependent. Therefore it was investigated whether the coefficients of Cultural Distance were significantly different from each other between industries. To test the significance of differences between two corresponding coefficients a Chi$^2$-test was performed. As can be seen in Table 13, within industries 3, 5 and 8 (3. Construction; 5. Transportation, Communications, Electric, Gas, and Sanitary Services; 8. Finance, Insurance, and Real Estate) no significant impact of cultural differences was found. Therefore both industries (5 & 8) experiencing positive results of cultural differences were tested against the industry who experience the largest, but insignificant positive effects of cultural differences (3). It appeared that industries 5 and 3 differ significantly from each other. Thus the impact of cultural differences on M&A performances turned out to be significantly different for industries 3 and 5. Industry 5 was also tested against industry 6 to check for significant differences, but it appeared that there were only significant differences between industry 5 and 6. Thus, there are differences between industries whereby the impact of cultural differences on M&A differs significantly between industries. Industries have their own characteristics, and these characteristics influence the way the industry can handle cultural differences.

Table 13

| Significant differences between two corresponding coefficients |
|------------------------|--------|--------|--------|--------|--------|--------|--------|
|                      | (3)    | (5)    | Sig. dif. | (3)    | (8)    | Sig. dif. | (5)    | (6)    | Sig. dif. |
| Ln(CDindex)          | -3.567 | 1.659  | 4.30*    | -3.567 | 0.169  | 1.95     | 1.659  | -3.060 | 2.15     |
|                      | (-1.19)| (1.16) | (0.0382) | (-1.19)| (0.16) | (0.163)  | (1.16) | (-1.58) | (0.1426) |

$t$-statistics in parentheses * p<0.05, ** p<0.01, ***p<0.001.
Note: $t$-statistics are reported in parentheses in the line below the parameter estimates. Symbols: ln(.) logarithm; subscript ‘CDindex’, Cultural Distance index; The test for significance of the difference between the two corresponding coefficients is a Chi2-test. The corresponding p-value is reported between brackets below the Chi2statistic.

In conclusion, the effects of cultural differences on the performance on M&As differs between industries. It could be that the impact of cultural differences on the performance of M&As is dependent upon the level of integration and how this integration process is set up (Datta, 1991; Very, Lubatkin, Calori & Veiga, 1997). This means that the impact of national cultural distance on the performance is dependent of the integration process. Because no data
are available about the integration processes, interviews were conducted to shed light on this and will be discussed in the next section.

4. Integration Process

4.1 Interviews

The second part of this research consisted of the qualitative analysis for which three interviews were conducted. These were done to provide better understanding of the mechanisms by which national cultural distance were addressed in the corporations and to get more insight into the integration processes. The interviews were conducted with high ranking executives with knowledge of their companies’ international M&A activities. These executives were directly involved in the decision-making processes and M&A activities throughout the assessment, negotiation, and implementation phases. Detailed desk research particularly focusing on the cross-border M&As activities of these companies was conducted preceding the interviews. The interviews were structured and focused on the impact of cultural differences on M&A activities within the integration process. The in-depth interviews were conducted in individual meetings, and were recorded, transcribed and analyzed. These interviews were held with the managing directors of NXP and PON and an interview was conducted with an executive who led the acquisition of T-systems of Shell in Malaysia. First, a short description of the three organizations is given where after the structure of the interviews is explained and subsequently the main findings of the interviews are discussed.

NXP is a global semiconductor manufacturer headquartered in Eindhoven, in The Netherlands. The company has locations in more than 35 countries. NXP semiconductors offers mixed signal and standard product solutions based on its security, identification, automotive, networking, and power management expertise. It manufactures automotive chips for in-vehicle networking and passive keyless entry. NXP has merged with Freescale Semiconductor U.S. in 2015. After this, NXP has become the market leader in automotive semiconductor solutions in general purpose microcontroller production.

PON is an international trading and service organization spread over 450 locations in 32 countries, headquartered in Almere in the Netherlands. PON is a transport service company providing services including repairing, leasing, renting and insurance of transport vehicles. PON is concentrated in different industries from commercial vehicles to earth moving equipment and electrical engineering. In 2015 PON has taken over the traditional company Aluca. Aluca is a company which produces in-vehicle racking systems. Aluca transforms general transport vans into perfectly organized workshops on wheels and mobile storage units.
The focus of the company is on ergonomics, fuel economy, load optimization, safety and a reduction of CO2 emissions. Aluca has its headquarter situated in Germany.

T-systems is a global IT services and consulting company in Germany. T-systems is an international service provider with a broad spectrum of secure cloud computing services. In 2008, T-systems took over all key Shell locations to ensure a robust IT environment. T-systems provides Shell with data center infrastructure and computing services worldwide. The third interview focused on the takeover of the Shell location in Malaysia by T-systems.

The type of the merger and acquisitions were quite different and these analyses therefore give an encompassing image. The structure of the interviews can be found in Appendix C. During the interviews, first several questions were asked related to the time leading up to the merger or acquisition. These questions focused on the motivation of choosing for M&A, the general opinion of the employees towards the merger or acquisition and the primary cultural differences that were encountered. The second part of the interview focused on the cultural differences during the integration process itself. Questions such as in which way the strategies of both firms were managed, and the necessity of any changes in practices were asked. This section will also focus on the way communication took place during the integration process and what was done to improve the involvement and commitment of the employees. The section ends with questions about the way cultural differences influenced the cooperation between the management of both organizations, whether cultural differences resulted in difficulties such as polarization and misunderstandings or rather positive effects such as learning effects. The third part of the interview focused on the period after the integration process. The executives were asked to give some recommendations, to argue their opinions about the ultimate impact of cultural difference and the visibility of the two different cultures in the merged organization after the integration process was completed.

4.2 Findings

4.2.1. Motivation M&A

To provide a better understanding of the mechanism through which the integration process influences the performance outcomes of mergers of acquisitions, the major outcomes of the conducted interviews are outlined in this section. The literature has shown that the motivations for M&As are different but that the objective of every business combination is to strengthen its financial health. The findings of the interviews showed that all motivations where strategically. The motivation for the merger of NXP with Freescale and PON with Aluca were
the complementary processes which together offer a comprehensive portfolio. This way M&As ensured access to different innovative routines, repertoires and products. However the most important underlying motivation for all three organizations was based on the expected financial benefits. These financial benefits could be achieved because additional customers could be reached due to the more extensive portfolios, but also because costs such as overhead costs could be shared.

4.2.2. Major Cultural Differences

The literature has emphasized that differences in business practices could be caused by cultural differences. This could result in misunderstandings, misattribution of motivations and intentions which complicate interactions during the integration process. Culture determines the shared understanding within these business practices. The interviews with the executives of PON and T-systems indicated that the primary cultural differences encountered were based on differences within the hierarchical systems. The German acquired company, Aluca for example had a much more hierarchical system than the acquiring Dutch company, PON. This resulted in the fact that workers were afraid to tell their disagreements and to make mistakes, which resulted in stagnation and doing nothing at all. Malaysia has an even more hierarchical system than Germany. This became apparent with the acquisition of the ICT department of Shell by T-systems in Malaysia. Malaysia has a hierarchical system which is deeply rooted in the culture of the country. This hierarchical system is based on discrimination of ancestries. There are three major ancestries; Muslims, Indian people and Chinese people. Muslims are seen as the ‘real’ inhabitants and enjoy more rights than the Indian and Chinese people. Only Muslims could reach senior posts, such as management functions.

Another major cultural difference that was encountered, became apparent during all three interviews and is based on differences in bureaucratic systems and the levels of formality. Within the merger of NXP, the acquiring Company NXP was much more formally orientated than Freescale. The primary goal of NXP was to obtain money and people were very rationally orientated. The sense of duty is present in the way of working which can be seen in the fact that everybody within NXP always needs to be reachable, also during weekends and holidays. This is the result of 10 years of trying to improve performances. This tougher culture was tried to be implemented within Freescale. This is in contrast with the acquisitions of T-systems and Aluca, where the acquiring companies were the more informal ones. Here, the acquiring companies tried to create a culture of consultation, where people can speak freely, without implementing one forced culture. They believe that this will result in the best and most surprising results.
Different cultures gives different insights, because people from different cultures assess problems from different viewpoints.

4.2.3. Feelings Towards the Merger or Acquisition

In the literature, it has appeared that employees from different cultures have the tendency to value activities that are not in accordance with their own view as abnormal and deviant. The presence of different cultures could in this way lead to resistance, which results in not passing information or not communicating with each other. The interview with a manager of PON showed that there are several different stages of feelings towards the merger or acquisitions of employees. First there will be a stage of anxiety, wherein people are afraid of the consequences of the merger for their jobs. Next, a stage of curiosity takes place. In this stage employees do not exactly know what will happen, but start to find it interesting. In the last stage employees fully understand the merger or acquisition. These stages depend on the way management implements the integration process. Managers are earlier informed than the regular employees and will therefore precede employees in the different stages. The interview illustrated that it is important to give employees insight into the goals and strategy of the business. This gives trust and understanding whereby they are willing to work for the ‘new’ company. The manager of PON argued that there will always be people who are capable, but are not willing to work properly because they are opposed to the merger. In this case these people have to be fired, because otherwise they will use their knowledge as a power mechanism.

The literature has argued that people from the same culture understand each other more easily and need less thorough explanation, while distinct cultures require more and clearer explanations. The managing director of PON pointed out that employees of Aluca work very structured and document everything. While within PON a more loose way of working prevails. Here, people arrange things during lunch breaks and in the hallways. This complete shared understanding is absent within the ‘new company’, which resulted in misunderstandings and miscommunications. Adjustments were therefore necessary in the way employees interact with each other. Now, everything is documented more clearly.

4.2.4. Integration Planning

Previous researches have highlighted the importance getting insight in the encountered cultural differences, open communication and feedback. This is in line with the philosophy of the leader of the Integration Management Office of NXP who argued that it is very important to get insight into the cultural differences. When the cultural differences are clear, the
integration plan can be developed. Within NXP the Integration Management Office conducted surveys to get insight into the cultural differences. 20 work teams were set up who focused on the integration process specifically per department. Every work team consisted of two leaders of both firms of the same department. This gave insight into working processes, norms, values and practices in both firms. Because the merger between NXP and Freescale was a merger between equals, the best of both systems was chosen by the Integration Management Office for every department. Within the acquisition by T-systems, no integration plan was established at all. There was an enormous underestimation of the power of culture. Thus no cultural differences were taken into account and this resulted in the fact that no common identity was created for more than 3 years. Insight into cultural differences between Aluca and PON was obtained by introductory meetings, workshops and departmental meetings. Managers who would lead the integration were thereby prepared by culture trainings. These trainings gave insight into the encountered differences in norms and values. They learned in which way they could deal with these differences and could take this into account by making decisions and setting strategies.

Literature has shown that to make employees of two different companies collaborate, they must understand the goals, strategy, and values of the ‘new company’. Within NXP this was done by giving workshops explaining the required way of working, values, and goals. The cultural differences were so large between the employees of Germany and Malaysia within T-systems. Therefore it was necessary to first getting to know each other. This was necessary because the cultures were so different, that it severely influenced the way of working. Muslims for example have longer lunch breaks because they go praying, while Indian people leave earlier because they have family diners at 5. When planning meetings these cultural habits should be taken into consideration. Meetings were organized to build connections between employees. Connection is needed to collaborate. It appeared that people only started working when they understood and appreciated the takeover. The manager of T-systems emphasized that the management should give the right tools, environment and strategy, but that the employees are the most important spoil and determine whether the merger becomes a success or not.

4.2.5. Degree of Integration

In the literature it has appeared that the degree of integration is an important determinant for the successes of M&A. Higher levels of integration in large culturally distant firms will lead to large conflicts which lowers commitment and cooperation. In this case low integration levels
are more beneficial because this way firms could select themselves the practices that are considered to be attractive and useful. This is in line with the findings of the interviews which are discussed now. As already mentioned, NXP conducted surveys to get insight into the cultural differences. Questions were asked to get insight into differences in interactions and ways of working. An example of a survey question is: “When you receive an e-mail of your boss, do you need to answer it within 10 minutes or do you allow yourself some time to think about it.” It appeared however, that cultural differences were relatively small. This is caused by the fact that they had the same sort of history. Both firms originate from two consumer market companies, Philips and Motorola. Both companies eventually started to make their own semiconductors. Thereby, they were both bought by private equities who managed them for a while where after they were brought to the stock market. In this merger the tougher culture of NXP was implemented in all departments of Freescale. This could successfully be done because cultural differences were relatively small. They changed the whole identity of Freescale with their practices, strategies, culture, but also their mail addresses, and logo’s.

The literature has shown that the best strategy when cultural differences are large is a loosely coupled structure where companies are united under an umbrella organization. Here, most of the original organization is intact. This is in line with the findings of the interviews with T-systems and PON. Within these acquisitions, the practices and way of working were mostly intact in the acquired companies. Because the level of integration was low in these acquisitions, differences in national cultures were beneficial. Employees learned from each other which gave remarkable insights. The cultural differences between Malaysia and Germany were so extreme that the German practices did not work one-to-one in Malaysia. Therefore, a completely central program was not possible, and should only give a framework. Within this framework of T-systems the way of working is dependent on the local differences. The manager of T-systems argues that trying to change the whole culture in a company can actually lead to the opposite and enlarge the distance between the two firms.

In sum, the literature has shown that large cultural differences could be managed by lower integration levels and low cultural differences could be best managed by high integration levels. This is partly in line with the argumentation of the manager of NXP. He argued that the benefits of cultural differences are dependent of the aim. With complementary portfolio’s much collaboration is needed, and thus more similar cultures are more convenient. When the primary goal of an acquisition is getting access to another culture, large cultural differences are preferred. The success of mergers and acquisitions is therefore not dependent on the cultural
distance but on the goal of the merger or acquisition and in which way there is dealt with cultural differences within this goal.

4.2.6. Positive Effect of Cultural Differences
The manager of PON argued that there are also positive effects of cultural differences. It resulted in surprising solutions within the merger of PON and Aluca. This is because problems were evaluated from different perspectives and viewpoints. When people from different cultures come together and can freely give their arguments and opinions it leads to more powerful solutions. He admitted that cross-border M&As could be harder and slower, but this will be compensated by the stronger solutions and ideas. People think within their own frameworks and when people from different frameworks are put together, this broadens the glance. It gives other insights and encourages critical views on your own business.

From the interviews it appeared that the integration of two companies takes a lot of time and is dependent on many factors. Connecting the financial systems is the easiest and is finished within the first year. The cultural integration takes more time. 80% of the integration is done within the first year, however the other 20%, which is the cultural integration takes approximately 2.5 year.

4.2.7. Recommendations Interviews
The managing directors of NXP, Aluca and T-systems can be seen as experts by experience. The manager of NXP’s strongest recommendation was to get insight into cultural differences in the very early stage of the merger. It is important to get insight into the differences in communication because this could easily cause frustrations among employees. Thereafter the integration plan can be built upon these cultural differences, which shows in which way to deal with these differences. The leading manager needs to be prepared for the cultural differences which can be done by hiring local consultants. The senior executive of T-systems emphasized the importance of physically going to the other firm and really experience the other culture and practices. It is of course easier and cheaper to do M&As within one country, but when cultural differences are taken into account and an extensive integration plan is build, cross-border mergers could result in even greater outcomes argued the senior executive. The managing director of PON highlighted the importance of acceptance of the other culture. “While it is your first reaction to change everything to your own practices, it is doomed to fail if you do not take into account the values of the other culture”. Another firm is acquired because of the qualities and not because it needed changes everywhere. A critical look is needed to distinguish the good
things, and only change the things that are poorly structured. It is necessary to give employees insight into the processes and strategy. By communicating, they will understand why changes are needed and will not get frustrated. Communication results in trust and understanding, and so willingness to work. Culture is very powerful and can be used very well, but it can also break the merger or acquisition. The outcome of a merger or acquisition is dependent upon the establishment of the integration processes stated the managing director of PON.

The leader of the integration management office of NXP emphasized that there are companies which grow by buying companies. All processes, strategies and culture are converted to the practices of the acquirer. These companies manage everything very rigidly. Very qualified people can be taken over, but the desired outcomes will not be reached if people do not feel the same identity and prefer to work somewhere else. Pushing will result in frustrated people. The interest for these takeovers is however, much higher, because people who perform the acquisition are assured of their jobs, even if the highest possible value of the company would not be attained.

5. Conclusion

Only half of all M&As meet the initial financial expectations and many researches blame cultural differences for this high failure rate. This mixed-method research investigated the impact of cultural differences on the performance of M&As. Thereby the impact of cultural differences within the integration process on the performances of M&As was investigated. The research provided empirical support for the notion that cultural differences have a negative impact on the performances of M&A. The quantitative analysis showed significant and economically meaningful negative effects of the impact of cultural differences on the performance of M&As. A comprehensive sample of 5 096 mergers and acquisitions in 81 different countries over 1985 – 2016 was used. In particular, the greater the cross-country cultural differences between the dimensions of Hofstede: Individualism, Power Distance, Masculinity and Uncertainty avoidance, the lower the performance of M&A. These findings are consistent with the hypothesis that cultural differences impose costly frictions between firms leading to lower performances of M&A. This was estimated by multilevel analyses. Quite different results are obtained by using multilevel analyses for each industry apart. Almost all significant effects of cultural differences on M&A performances disappeared. Industries have their own characteristics, and these characteristics influence the way the industry can handle cultural differences.
The qualitative analysis, has shed light on the fact that the outcome of a merger or acquisition is dependent upon the steps taken during the integration process. The pre-merger phase is mostly influenced by financial issues, but the cultural differences are most important during the integration process. When cultural differences are large and employees are forced to give up their identity they will openly resist. Higher levels of integration will in this case lead to further conflict because it underscores the cultural differences and lowers commitment and cooperation. When the level of integration is low, differences in cultures could result in beneficial outcomes. This is because the acquiring firm itself can in this way select and implement practices that are considered to be attractive and useful. It gives access to country specific practices. Hence, because different levels of cultural distance require different integration plans, it is most important to get insight into the cultural differences by conducting surveys among your employees before the merger. This analysis showed that the impact of cultural differences on the performances of M&A is dependent upon the way the integration process is established. The degree of integration is an important aspect here.

By combining qualitative and quantitative analyses this study is one of the first comprehensive studies on the impact of national cultural differences on the performances of M&As. The study has also led to some implications for managers of multinational companies which will be discussed below.

5.1 Recommendations

The impact of cultural differences is large and should not be underestimated. Recommendations about the best way to deal with cultural difference is discussed in this section. The first thing managers should do, is getting insight into the major cultural differences by, for example conducting surveys. When insight is obtained into the major cultural differences, an integration plan can be developed. The main managerial recommendation is that managing directors of acquiring firms should not unilaterally impose their firm’s culture and way of working into the other firm when cultural differences are large. Pushing could result in frustration, misunderstandings and negative attitudes. It is important to have support of the employees because otherwise they are not willing to work for the ‘new’ company.

The management should attempt to minimize the damaging effects of cultural differences by properly communicating why the integration is needed and which goals are desired to be achieved. To make employees of two different companies collaborate, goals, strategies and values need to be clear which can be done by giving workshops or meetings This
creates trust and understanding which is needed to make people work for you. Other M&A studies have also emphasized the importance of clear communication during the integration processes (Haspeslagh & Jemison, 1991; Very & Schweiger, 2001), because the human side of a merger or acquisition is at least as important as its strategic side (Very et al., 1997).

Problems caused by cultural differences can be reduced by intercultural workshops specially designed for integration managers. These workshops can be set up by hiring local consultants. This way managers are prepared for the cultural differences and know better which cultural differences will be encountered and in which way they can best deal with it. It is, however impossible to cover all the probable difficulties that could be met. It is therefore very important to physically go to the other country to truly experience the other culture and learn about it.

The outcomes of this research suggest that cultural distance is an important factor for researchers and managers to consider when deciding about M&As. The findings are of particular value to international oriented firms facing the need of managing effectively in an uncertain external environment. Culture is very powerful and this research suggests that managers executing mergers or acquisitions in culturally distant countries should not underestimate the power of specific values, norms and routines embedded in the culture.

6. Discussion

Even though limitations are reduced as far as possible, some limitations regarding this research can be mentioned. The first limitation is regarding the cultural levels. Although national cultures highly influence corporate cultures, it is possible that corporate cultures differ from the national culture in that country. However, this research has only focused on the national culture. Thereby, it is assumed that cultures differentiate between national boundaries. It could be however, that cultures differ within countries. Regions could, for example have different cultures. Potential intra-country variation is excluded and also the exact location of the firm within the country is not measured. Excluding the potential border effects reduces the size of the cultural distance and this could lead to overestimations of cultural distance. Another limitation is that M&A performance is only measured by sales growth. It could be that other measurements result in different outcomes. Other studies could investigate what the effect of cultural differences is on the performance of M&As considering other measurements.

The findings of this research could make firms aware of the importance of cultural differences in M&As and thereby enhance the success and performance of M&As.
a gap in the literature of the impact of cultural differences on the integration process and in which way could to dealt with these cultural differences. This research contains important findings concerning this. This research is part of the growing field of research that connects finance with sociology. A suggestion for further research is to also take the effects of corporate cultures and regional cultural differences into account.
### Appendix

#### A. Definition of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>M&amp;A performance</td>
<td>Merger and acquisition performance</td>
<td>The performance of mergers and acquisitions measured by the 5-year growth sales. <em>(Source: Thomson One Database)</em></td>
</tr>
<tr>
<td>CD-index</td>
<td>Cultural Distance index</td>
<td>The cultural distance between the countries of the two merging countries measured by the Kogut Singh index which is based on the four dimensions of Hofstede. <em>(Source: Hofstede's country comparison database)</em></td>
</tr>
<tr>
<td>Size</td>
<td>Target firm Size</td>
<td>The size of the target firm, measured by the absolute value of the sales. <em>(Source: Thomson One Database)</em></td>
</tr>
<tr>
<td>Rel.</td>
<td>Industry Relatedness</td>
<td>The relatedness of industries measured by the SIC code. <em>(Source: Thomson One Database)</em></td>
</tr>
<tr>
<td>Distance</td>
<td>Geographic Distance</td>
<td>The geographic distance measured as the great circle distance between the most important cities (in terms of population) between a pair of countries in thousand kilometers. <em>(Source: Centre d’Etudes Prospectives et d’Informations Internationales (CEPII))</em></td>
</tr>
<tr>
<td>Time</td>
<td>Time dummy</td>
<td>Dummy variable for the year the merger or acquisitions is established. <em>(Source: Thomson One Database)</em></td>
</tr>
</tbody>
</table>
## B. Tables

### Table B1
Multilevel analyses per industry without time dummy

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln(CDindex)</td>
<td>-1.131</td>
<td>0.487</td>
<td>-2.899</td>
<td>-0.650</td>
<td>1.910</td>
<td>-3.114</td>
<td>-0.678</td>
<td>0.165</td>
<td>-3.190**</td>
</tr>
<tr>
<td></td>
<td>(-0.21)</td>
<td>(0.21)</td>
<td>(-0.88)</td>
<td>(-1.17)</td>
<td>(1.33)</td>
<td>(-1.80)</td>
<td>(-0.63)</td>
<td>(0.17)</td>
<td>(-3.20)</td>
</tr>
<tr>
<td>Size</td>
<td>-2.854</td>
<td>2.679*</td>
<td>1.295</td>
<td>-0.641</td>
<td>0.170</td>
<td>1.623</td>
<td>-1.933*</td>
<td>1.393</td>
<td>-0.610</td>
</tr>
<tr>
<td></td>
<td>(-0.78)</td>
<td>(2.48)</td>
<td>(0.78)</td>
<td>(-1.29)</td>
<td>(0.19)</td>
<td>(0.90)</td>
<td>(-2.10)</td>
<td>(1.62)</td>
<td>(-0.67)</td>
</tr>
<tr>
<td>Ln(distance)</td>
<td>7.170</td>
<td>10.03***</td>
<td>5.804</td>
<td>1.568**</td>
<td>3.463*</td>
<td>2.003</td>
<td>1.747</td>
<td>1.338</td>
<td>-0.813</td>
</tr>
<tr>
<td></td>
<td>(1.35)</td>
<td>(3.97)</td>
<td>(1.76)</td>
<td>(2.64)</td>
<td>(2.24)</td>
<td>(1.02)</td>
<td>(1.74)</td>
<td>(0.98)</td>
<td>(-0.70)</td>
</tr>
<tr>
<td></td>
<td>(-0.72)</td>
<td>(-2.90)</td>
<td>(-1.01)</td>
<td>(1.04)</td>
<td>(-0.08)</td>
<td>(-0.62)</td>
<td>(1.30)</td>
<td>(-0.09)</td>
<td>(2.77)</td>
</tr>
<tr>
<td>Observations</td>
<td>35</td>
<td>399</td>
<td>85</td>
<td>2135</td>
<td>551</td>
<td>165</td>
<td>144</td>
<td>849</td>
<td>733</td>
</tr>
</tbody>
</table>

t-statistics in parentheses * p<0.05, ** p<0.01, ***p<0.001.
Note: t-statistics are reported in parentheses in the line below the parameter estimates. Standard errors are corrected for by White’s procedure. In column (3) and (4) the coefficients’ standard errors are corrected for clustering by countries. Symbols: ln(.) logarithm; subscript ‘CDindex’, Cultural Distance index; ‘Size’, Size of the target firm measured in absolute sales value; ‘Industry Rel’, industry relatedness; ‘Distance’, geographic distance between countries of the merging organizations.
C. Structured In-depth Interview

Voor fusie/overname

1. Wat was de motivatie voor de fusie/overname?

2. Wat waren de voornaamste culturele verschillen tussen beide bedrijven voorafgaand aan de fusie/overname?

2b. Lagen beide culturen dicht bij elkaar of waren er grote culturele verschillen?

3. In welke mate zijn beide bedrijven geïntegreerd? Hoeveel autonomie heeft het management van het overgenomen bedrijf nog of is er verloren gegaan?

4. Hoe stonden de werknemers voorafgaand tegenover de fusie/overname?

5. Hoe is van te voren het integratieplan opgezet? Wat is er gedaan om beide bedrijven / managementstijlen zo goed mogelijk te kunnen laten integreren?

Tijdens integratieproces

6. Hoe zijn de strategieën van beide bedrijven gemanaged en geïntegreerd tijdens het integratieproces?

7. Was er gedurende het integratie proces weerstand van het personeel? Hoe heeft dit zich geuit?

8. Hebben culturele verschillen geleid tot negatieve houdingen als angst en polarisatie onder de werknemers tegen over de andere partij?

9. Hoe heeft de onderneming de betrokkenheid en inzet van werknemers verbeterd/aangemoedigd?

10. In welk van de twee bedrijven (overgenomen of wie overname deed) zijn de meeste aanpassingen doorgevoerd in de manier van werken, strategie en communicatiemiddelen etc.?

11. Zijn beide aparte (bedrijfs-)culturen nog steeds zichtbaar binnen de fusie/overname of is het samengesmolten tot een bedrijf met één bedrijfsstrategie en één manier van werken?

12. Hoe vond de communicatie plaats onder de werknemers tussen beide bedrijven? Hoe verschilde dit met voor en na de fusie/overname?

13. Vereisten culturele verschillen aanpassingen in strategie, communicatie en de manier van werken?
14. Hoe beïnvloedde culturele verschillen de samenwerking tussen het management van beide bedrijven?

15. Wat zijn de voornaamste culturele verschillen waar tegen aan gelopen is gedurende het integratie proces tussen beide bedrijven?

16. Hebben culturele verschillen geleid tot misverstanden en daardoor misschien tot verminderde prestaties en hoe?

17. Zijn er ook positieve effecten van culturele verschillen zichtbaar geworden tijdens de fusie/overname?


19. Hebben culturele verschillen nog geleid tot andere gevolgen binnen de fusie of overname? En wat is naar u mening het effect van culturele verschillen op het integratie proces

20. Hoe lang heeft het geduurd totdat het integratieproces volledig afgerond was?

Na afronding integratieproces

21. Is de bedrijfsstructuur, het management en/of procedures verbeterd na de fusie? Waar, hoe en waarom?

22. Hoe kan er naar u mening het beste omgegaan worden met culturele verschillen? Kunt u wellicht aanbevelingen doen hoe het makkelijkst een brug gebouwd kan worden tussen culturele verschillen gedurende het integratie proces voor en na de M&A?

23. Zullen fusies/overnames succesvoller zijn tussen bedrijven die dichter of verder van elkaar af liggen qua cultuur, denkt u? Waarom?
8. References


