

# **The Impact of Fit, Resources and Culture on Mergers and Acquisitions in the Offshore Industry**

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This Master thesis is written as a final assignment for the Master track Financial Management of the Business Administration study program at the University of Twente.

**FULL TITLE**

The Impact of Fit, Resources and Culture on Mergers and Acquisitions in the Offshore Industry

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*"When it comes to mergers, hope triumphs over experience."*

Irwin Stelzer (1932–), US economist and writer.

# Abstract

Since most mergers and acquisitions (M&A) fail, this study examines 36 M&A deals and emphasizes the source of M&A failure by looking at those firm characteristics within the pre-formation process that seem to play a role when selecting a partner. Results show a significant relation between strategic and organizational fit and post-acquisition performance. Additionally the results also indicate that cultural compatibility acts as moderator between strategic fit, organizational fit and post-acquisition performance. The interaction effect shows that only if the values for cultural compatibility and strategic or organizational fit are similar post-acquisition performance will increase.

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# Introduction

It is believed that when two companies merge their assets and resources a distinct competitive advantage can be gained. The most frequently mentioned benefits are “economies of scale” and “synergy”. However, while in theory integration should result in either of the above mentioned benefits, in reality this often does not materialize as more than half of all M&A deals even destroy value and lower profitability in the long term (Galpin & Herndon, 2007). Financial analysts, media and scholars all report that most mergers and acquisitions (M&As) fail. Billions of dollars and loads of valuable knowledge are being destroyed in M&A deals between companies who for example lack strategic or organizational fit (Cartwright & Schoenberg, 2006). In addition, there seem to be significant challenges in the post-integration process of both the technical and human aspects in order to make M&As a success (Epstein, 2004).

Studies have shown that the moment of announcing an M&A can have a powerful impact on the personnel of the acquiring firm (Sinetar, 1981). Reactions can vary from small to extreme shocks and in specific industries like the IT-industry it was even found that employees feared a loss of control, layoffs, identity and reputation (Marks & Mirvis, 1992). Not surprisingly, as a result, M&As do have a label as “trigger events” (Isabella, 1992). General studies by Jemison & Sitkin (1986), Porter (1987) and Barkema & Schrijven (2008) demonstrated that many M&As have been unsuccessful due to a lack of understanding M&A practices. Barkema & Schrijven (2008) suggest that the pre-formation process plays a significant role and is essential for enhancing post-acquisition performance.

## SCOPE AND RESEARCH QUESTION

This research paper deals with the M&As done by IHC Merwede – the largest producer of dredgers worldwide – that took place during the period 1993-2011. The data lends itself to the execution of the inquiry of the present study: how do different pre-formation characteristics between two firms affect post-acquisition performance? Specifically it focuses on (1) the impact of strategic- and organizational fit and (2) the moderating effects cultural comparability, resource similarity and resources complementarity on post-acquisition performance. Additionally this study hopes to identify how IHC Merwede’s capability to successfully acquire has developed over time.

## **RELEVANCE**

M&As are critical for sustainable and profitable growth and to refocus corporate portfolios on core business and value-generating activities, especially in a world of global, deregulated and highly competitive markets. Since the meta-analytic review of M&A performance by Datta (1991) trillions of dollars have been spent in the acquisition of tens of thousands of firms. As empirical evidence (Galpin & Herndon, 2007) shows that only a few companies reach their stated growth and value generation targets in M&A deals and more than half of all deals even destroy value and lower profitability in the long term, it seems to be that in many cases firms overestimate the attractiveness of engaging in an M&A. Examining the pre-formation characteristics therefore seems necessary in order to truly understand the fit and the value of prospective targets in order to enter an M&A in a successful way.

## **STRUCTURE**

This study is structured as follows: the next chapter describes the practical setting in which the research took place. The second chapter contains the theoretical background. In this chapter all relevant pre-formation characteristics are reviewed based on prior literature accompanied with theoretical arguments. Next, in the third chapter, the research method is described. In chapter four I analyze the gathered data and show the results of various statistical tests. The last chapter contains the conclusion, theoretical and practical implications, limitations and a future research agenda.

# Company Background

The purpose of this chapter is to give a broad overview practical setting in which the research has taken place. This includes the historic events leading up to the research, the actual problem at hand and the goal this research ought to achieve.

## HISTORY

IHC Merwede has been at the forefront of dredging since the mid-16th Century. At that time a large part of The Netherlands was submerged and the first steps were taken to control the water by the people who had moved from the flooded areas. The Dutch knew how to handle the problems caused by the water and mud and had practical experience of dealing with water currents. IHC Merwede's predecessors created polders – low-lying tracts of land enclosed by dikes – and laid the foundations for dredging as it is known today.

At the end of the 19th Century, industrialisation was the catalyst for a new era of dredging and shipbuilding. The first steam bucket dredgers and hopper dredgers were developed for the New Waterway (1872) and the Barrier Dam (1927-32) – prime examples of the innovation and engineering expertise at that time. The scale of these projects propelled The Netherlands to the top of the international shipbuilding and dredging industries.

During the Second World War, a number of shipyards decided to combine forces and concentrate primarily on dredging equipment. The companies retained their independence, but the partnership was so successful that it resulted in the founding of the Industriële Handels Combinatie (IHC) Holland NV in 1965.

As a result of the global recession in the 1970s, IHC Holland was restructured with the offshore activities moving under the banner of IHC Caland, while the shipbuilding remained under the IHC Holland flag. In 1987, IHC Caland regained control of IHC Holland and acquired De Merwede (founded in 1902) six years later (1993).

Despite some rough years in the early nineties, IHC remained stable and continued to strengthen its position within the maritime industry. This 'strengthening' took place by organic growth, by expanding business in South America and Asia, but also by acquiring over thirty small and medium enterprises (SMEs). In 2005 the IHC Holland and De Merwede placed all assets under one new holding: IHC Holland Merwede. In 2007 the organization adapted its current name IHC Merwede. An historic overview can be found in figure 1.



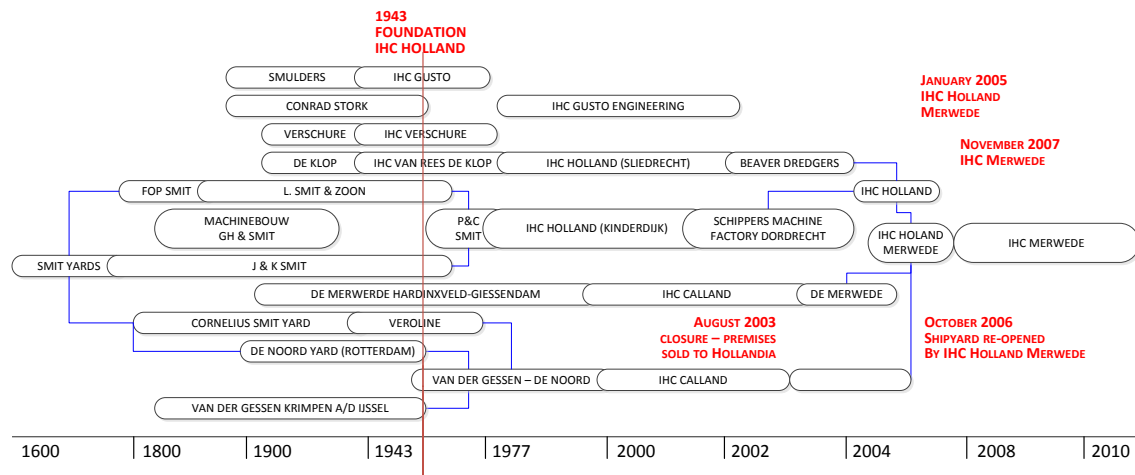


Figure 1 – Schematic overview of IHC Merwede’s major mergers, de-mergers and acquisitions throughout the years.

## PROBLEM STATEMENT

From the overview it can be concluded that IHC Merwede has a rich history of mergers, de-mergers and acquisitions. Although senior and top management have been actively integrating and streamlining the (recently) acquired organizations into their core business not always are the desired results of the M&A achieved. IHC Merwede is well aware of this fact, yet no thorough analysis has been done on what pre-formation characteristics have a significant impact post-acquisition performance. Insight into these characteristics would enable the organization to make a better pre-formation assessment and will hopefully lead to more successful M&As in the future. This is essential as the company is sticking to its strategy of expanding by acquisition:

*“IHC Merwede anticipates continued growth on all fronts over the next few years. The strategy of a second core market, concentrating strongly on the development and construction of both systems and ships and offering customers full life cycle support fits in with the developments in the market. It gives ample opportunities for synergy and for differentiation. The Group will strengthen its position in the coming period with appropriate acquisitions.” (Annual Report 2011)*

Therefore this research paper hopes to make a strong contribution to the body of knowledge on M&As by identifying the factors that are critical for success or failure in the dredging, mining, offshore and marine industry.

# Literature Review and Hypotheses

The pre-formation process is regarded as a crucial part of any M&A deal and starts from the first step of intent or research into an acquisition target till the point where the final contract is signed (Galpin & Herndon, 2007). Understanding of this phase and the factors that affect post-acquisition performance is of great importance as selecting the right target/partner prevents all sorts of trouble down the road. After the signing of the contract the post-integration process starts. The primary objective here is to make as much effective use of existing capabilities such as reduced costs for producing, marketing, advertising and distributing (Rappaport, 1987). However, in practice this often does not materialize.

One major reason for post-acquisition integration failure is that acquiring firms often are not able to manage the integration of the target firm effectively (Haspeslagh & Jemison, 1987). In many cases pre-formation and post-integration M&A processes fail through bad decision making and problems within the partnership. Early findings concerning the importance of organizational fit indicated that for example differences in top management styles between the acquirer and target firm have a negative impact on post-acquisition performance in acquisitions characterized by high and low levels of post-acquisition integration (Datta, 1991). Regarding the strategic fit and cultural compatibility, studies showed that a corporate culture can make a significant contribution to the creation and maintenance of strategic fit (Scholtz, 1987).

Although both organizational and strategic fit have been studied extensively in relation to the outcome of M&A deals (Jemison & Sitkin, 1986; Schreader & Self, 2003), no study to date has combined these factors into one model to test their joint effect on post-acquisition performance. Therefore this paper suggests that both organizational and strategic fit are important factors for enhancing post-acquisition performance.

Regarding the examination of other antecedent variables on post-acquisition performance, King et al. (2004) investigated that on average and across the most commonly studied variables; acquiring firm's performance does not positively change as a function of their acquisition activity, and is negatively affected to a modest extent. However, due to the prevalence of other evidence on cultural compatibility and resources (Schoenberg, 2000; Teerikangas & Very, 2003; Cartwright & Schoenberg, 2006; Wang & Zajac, 2007; Zollo & Meier, 2008) I also suggest that resource similarity, resource complementarity and cultural compatibility between the acquirer and target firm play a significant role in enhancing post-acquisition performance.

The following paragraphs provide an overview of more in depth literature and theoretical arguments on different pre-formation characteristics and their relation to post-acquisition performance.

## **STRATEGIC FIT**

Literature on M&As partly focuses on the importance of good strategic fit between the acquirer and target firm. Strategic fit was defined by Schreader & Self (2003) as “the similarity between both organizations’ strategies is what sets the stage for potential strategic synergy” (pp. 511). Jamison & Sitkin (1986) defined strategic fit as “the degree to which the target firm augments or complements the parent’s strategy and thus makes an identifiable contribution to the financial and nonfinancial goals of the parent” (pp. 146). As this definition is more comprehensive this study adopts the latter definition. In either way a perfect strategic fit seems to exist if two firms are perfectly in line with one another and have highly similar corporate strategies.

In M&A literature the main focus is on the link between strategic and performance aspects of the acquirer and target firm. In other words, literature seeks to understand the extent to which business of the target firm should be related to the acquirer firm’s business (Schoenberg, 2000). It appears that the consensus is that more closely related firms outperform related ones. Studies by Salter & Weinhold (1979) and Rappaport (1979) find that if the acquiring firm has a well developed corporate strategy, customer base, market and industry financial analysts can provide clear and definitive guidance for acquisition decision makers which make it easier to integrate both companies. In line with this successful M&As are frequently referred to superior analysis of economical and strategic aspects which are related to the strategic fit of the target company. This also includes how to separate competencies of the target and acquiring firm in order to combine additional value.

Additionally, studies measuring performance implications of strategic fit found a relation between acquisitions and superior performance (Lubatkin, 1983). Moreover, research by Chatterjee (1986), Singh & Montgomery (1987), Shelton (1988), and Seth (1990) found that strategic fit positively is related to value creation in acquisitions.

Based on these prior findings I expect strategic fit to have a positive influence on post-acquisition performance because in such a situation potential strategic synergy is likely to be achieved. I expect these synergies to enhance post-acquisition performance of the acquirer firm, leading to the following proposition:

*H1: Strategic fit between the target and acquiring firm is positively related to post-acquisition performance*

## **ORGANIZATIONAL FIT**

Jemison & Sitkin (1986) state that strategic fit while important is not the only and sufficient condition for explaining (superior) post-acquisition performance. Another major factor is the organizational fit between the target and acquiring firm. Where *strategic* fit deals with company goals, objectives, vision, market/customer approach and general strategic direction, *organizational* fit takes a different perspective and focuses on operational issues such as accounting systems, management processes and human resource management. Datta (1991) defines organizational fit as “the ease with which two firms can assimilate after an acquisition” (pp. 281), this includes a match between for example cultural and administrative practices as well as personnel characteristics between the acquirer and target firm. A study on organizational fit (Leighton & Tod, 1968) emphasizes the fact that most acquisition guidelines neglect the costs and feasibility of integrating the target firm based on organizational fit. These aspects include management control systems (Mace & Montgomery, 1962), the strike of M&As on individual productivity and motivation (Graves, 1981; Marks, 1982) and also the matching firm operating styles (Barrett, 1973).

Regarding the post-acquisition perspective, two aspects on organizational fit between the acquirer and target firm seem to be important: (1) similarities in organizational systems, and (2) similarities in management styles. The first aspect can be described as “those systems which are composed of individual firms interacting with each other within an overall institutional framework” (Garud & Kumaraswamy, 1995, pp. 93). The second aspects deals with “elements of the managerial or subjective culture of an organization (Sathe, 1985, pp. 36) and can be conceptualized as a number of factors such as communication and control patterns, a firm’s approach and attitude towards risk taking and the way of decision making.

Prior studies on organizational fit (Datta, 1991; Corvellec, 1997; Epstein, 2005) found that compatibility of management styles is essential for superior acquisition performance and that differences in top management styles between the acquirer and target firm can have a negative impact on post-acquisition performance in acquisitions characterized by high and low levels of post-acquisition integration. Scholtz (1997) investigated a number of cases where the acquiring firms try to impose their management style on the management of the target firm and concluded that this practice leads to lower corporate performance.

The second important aspect is the choice for reward and evaluation systems as Datta (1991) found that this factor greatly influences post-acquisition performance. Changing the reward system after the acquisition usually leads to strong reactions and conflicts, which have their impact on post-acquisition performance. These findings suggest that differences in reward and evaluation systems always have the same negative impact on post-acquisition performance as the differences in management styles. However, problems that arise from differences in management styles usually have a stronger long-term impact on organizational performance and are embedded deeper in organizational culture.

Based on these prior findings I expect that clear organizational fit between an acquirer and target firm in an M&A contributes to enhanced post-acquisition performance.

*H2: Organizational fit between the target and acquiring firm is positively related to post-acquisition performance*

## **RESOURCES**

An important motive for engaging in a merger or acquisition is that firms are interested in combining their resources to achieve similar strategic goals (McConnell & Nantell, 1985). What we see more recently is that firms constantly assess their own portfolios or resources and capabilities and are open to the environment's opportunities in order to combine resources with other firms (Eisenhardt & Bingham, 2004). One important reason for combining these resources is the advantage of potential synergies. Synergy refers to the fact that in theory the combination of the resources of firm A and B is more efficient than in case both firms operate independently (John & Harrison, 1999).

In line it is safe to assume that two firms engaging in an M&A first identify each other as potential partners with whom to combine resources with, and then, based on the characteristics of both the acquirer and target firm, decide whether the combination will benefit in an M&A. These mutual characteristics between the acquirer and target firm not only play an important role in M&As but also in the choice between using an alliance or an acquisition in order to combine resources.

Wang & Zajac (2007) stated that there are two types of resource combinations between firms: similar and complementary resources. They defined resource similarity as "the extent to which the two firms' resources are similar" (pp. 1291). Resource complementarity was defined as "the extent to which the two firms' resources are different, yet interdependent and mutually supportive" (Tanriverdi & Venkatraman, 2005, pp. 97). M&A literature provides a host of

variables that have been suggested to moderate post-acquisition performance. Among those variables are whether the target and acquirer firm have complementary or similar resources (King et al., 2004). Milgrom and Roberts (1995) found that complementary resources imply that a positive interaction effect between the target and acquirer firms' resources exists. Although complementarity and similarity of resources between a pair of firms may be promising theoretical foundation for M&A research, both are recognized as an under-researched topic (Harrison et al., 1991; King, Covin and Hegarty, 2003). For this reason I try to explore whether increased post-acquisition performance requires complementarity or similarity of resources between a target and acquirer firm.

Wang and Zajac (2007) found that resource similarity has the advantage of potential synergies, which suggests that firms with similar resources can benefit from each other in acquisitions. On the other hand they found that resource complementarity can turn out negatively in acquisitions since firms cannot benefit from exploiting each other's expertise in complementary areas.

Summing up, the discussion above pinpoints the underlying logic that resource similarity and resource complementarity affect the outcome of an acquisition. Based on the above, I expect resource similarity to act as a positive moderator and resource complementarity to act as a negative moderator, leading to the following four propositions:

*H3 (A): The positive relation between strategic fit and post-acquisition performance becomes stronger if there is resource similarity*

*H3 (B): The positive relation between strategic fit and post-acquisition performance becomes weaker if there is resource complementarity*

*H3 (C): The positive relation between organizational fit and post-acquisition performance becomes stronger if there is resource similarity*

*H3 (D): The positive relation between organizational fit and post-acquisition performance becomes weaker if there is resource complementarity*

## **CULTURAL COMPATIBILITY**

Organizational culture can be seen as an integral part of the organization which is not easy to change: researchers suggest that culture is to an organization what personality is to an individual (Cartwright & Cooper, 1993). Cultural compatibility therefore was described as "the degree in which the culture of the target and the acquirer firm complement and fit to each other"

(Teerikangas & Very, 2003, pp. 35). Where cultural compatibility has been frequently acknowledged to be potentially important in M&As, it has been ill-defined though. In many cases researchers fail to make a clear distinction between the two levels of culture in M&As, namely the corporate and the national level with its implications for cultural fit and thus M&A integration and performance (Weber et al., 1996). In the same study it was found that merely half of all M&As meet initial financial expectations accompanied with failure rate between 50 and 60 percent and mentioned a lack of cultural fit as one of the most important factors of M&A failure. This cultural incompatibility is more precisely studied by Buono, Bowditch & Lewis (1985), who call it 'cultural ambiguity'. Cultural ambiguity is the situation in which there is uncertainty concerning the fact whether the style or culture by the target firm or by the acquirer firm will dominate. As a result a loss of identity could arise among the target firm management as the acquirer firm management ends up imposing their own style on the management on the target firm (Hirsch & Andrews, 1983). Expanding on these findings, Haspeslagh & Jemison (1991) stated that the key to manage post-acquisition integration is to create an atmosphere that supports capability transfer. In line with this they mentioned that the critical factor here is the cultural differences between the acquirer and the target firm. These findings certainly show the importance of cultural compatibility. Cultural differences can also reinforce the problem when the acquirer firm doesn't tolerate cultural diversity and own culture and organizational practices; this makes cultural compatibility to act as a moderator between organizational practices and M&A outcome (Chatterjee et al., 1992). Moreover, Stahl and Voigt (2008) found that cultural relatedness acts as a moderator between organizational fit and M&A outcomes because of its impact on the level of integration. Therefore I expect cultural compatibility to serve as a moderator, resulting in the following two propositions:

*H4: The positive relation between strategic fit and post-acquisition performance becomes stronger if there is cultural compatibility between the acquirer and target firm*

*H4: The positive relation between organizational fit and post-acquisition performance becomes stronger if there is cultural compatibility between the acquirer and target firm*

## **THEORETICAL FRAMEWORK**

The hypotheses mentioned in the previous paragraphs are summed up in the conceptual model on the next page (figure 2).

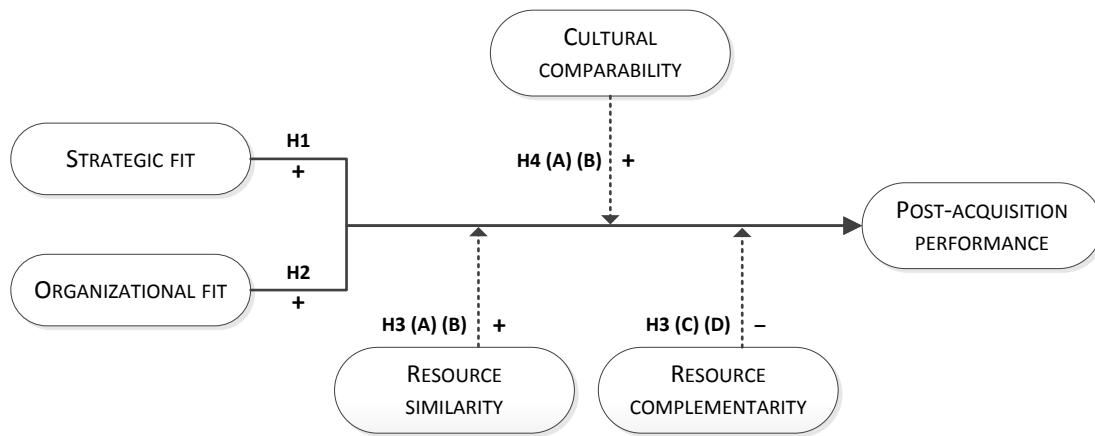


Figure 2 – Conceptual model of factors influencing post-acquisition performance.



# Methodology

In order to test the previously mentioned hypotheses this study will adopt the following research methodology.

## **SAMPLE AND DATA GATHERING**

One of the major challenges for any study is the collection of objective, reliable and nonbiased data. According to Cartwright & Schoenberg (2006) most prior studies in the field of mergers and acquisitions use a questionnaire as the preferred means of data collection. Since the aforementioned constructs are best measured through means of a questionnaire this study will adopt the same method. In total IHC Merwede has acquired or merged with 36 firms between 1993 and 2011. For each of these cases a questionnaire was sent to the individual that has had a pivotal role in the M&A; this can be the Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Operational Officer (COO) or a Top Manager of either the target or acquiring firm. IHC Merwede has provided a complete list of M&As and relevant contacts (see Appendix 1). All 36 questionnaires were filled in completely and turned to the author for data processing. Per respondent the Likert-scores of the questionnaire were (1) standardized into Z-scores and then (2) summed up for each construct and divided by the number of items in order to calculate the average score of each variable. All calculations are based on these averaged z-scores.

## **DEPENDENT VARIABLE**

*Post-acquisition performance* of an M&A was used as the dependent variable for testing the hypotheses related to organizational fit, strategic fit, similar and complementary resources and cultural compatibility. According to Rau and Vermaelen (1998) most studies in M&A literature use financial measures; such as return on equity, return on assets or book-to-market ratio's to measure post acquisition performance. In this particular case these measures cannot be used since this kind of financial data, after the M&A, is mostly unavailable. In addition IHC Merwede is not publicly traded therefore it is not possible to analyse variations in stock returns. Moreover King (2004) finds that financial measures only partly explain the variations in post-acquisition performance since it cannot express strategic or intangible benefits. Because of the aforementioned reasons this study adopts a different definition of post acquisition performance based on Delaney and Huselid (1996). It encompasses not only the organizations financial

performance in terms of profitability but also sales growth, market share and overall company performance (including intangible benefits). All items were measured using a 5-point Likert Scale. Since the last acquisition dates from September 2011, post-acquisition performance was measured at least half a year after the completion of each individual acquisition.

## INDEPENDENT VARIABLES

*Strategic fit* defined as “the degree to which the target firm augments or complements the parent's strategy and thus makes an identifiable contribution to the financial and nonfinancial goals of the parent” and as “the similarity between an organizations strategy – or complementary strategy – setting the stage for potential strategic synergy”. The extent of strategic fit was measured using an 8-item questionnaire by Clarke (1987) and Shelton (1988) on various types of strategic fit between the acquirer and target firm. In his theory there are two types of analysis which can be used to measure the degree of strategic fit. These are the ‘hard’ and the ‘soft’ concepts. Hard concepts seek to measure the direct impact of putting the acquirer and target firm together. Soft concepts are more like less tangible elements of fit, for example, the degree to which the corporate cultures interact after the M&A and the degree to which the acquire and target firm have complementary strategies on corporate, division and functional level. Respondents were asked to indicate the extent of strategic fit through a questionnaire measuring both the soft and the hard aspects of strategic fit. The hard concepts were measured by the first five questions of the questionnaire whereas the soft concepts were measured by the last three questions of the questionnaire (see Appendix 2).

*Organizational fit* was measured by using a 9-item questionnaire from Datta (1991) in which he defines organizational fit as “the ease with which two firms can assimilate after an acquisition”. Respondents were asked to indicate the extent of organizational fit through a questionnaire along each item of the scale, for example, the ease of integrating the target and acquirer firms’ compensation and reward system with 1 = very hard integration to 5 = very easy integration. Also concepts like differences in accounting system, management style, management processes and organizational structure were measured in order to investigate the extent of organizational fit between IHC Merwede and the target firms. In addition it should be noted that this construct measures the ease of integrating the target and acquiring firm after the M&A; this makes it an indirect measure as it assumes that there is organizational fit between both parties prior to the M&A. Studies by Datta (1991), Corvellec (1997) and (Epstein, 2005) used and validated this measure as a good predictor of post-acquisition performance; therefore this study will adopt the same questionnaire. All items were measured using a 5-point Likert Scale.

*Resources and capabilities.* Whether firms who are engaging in an M&A benefit from previously acquired assets hinges partly on the combination of resources (Wang & Zajac, 2007). The question that should be asked is; under what conditions will the combination of resources between the acquirer and target firm benefits for the new firm after the M&A. As independent variable I therefore use resource similarity and resource complementarity between the acquirer and target firm. In order to measure this degree of resource similarity and complementarity I used a 6-item questionnaire based on Barney's Resource-based view (1991) and Newbert (2008) who defines resources and capabilities as:

Resources: the tangible or intangible assets a firm possesses or has access to. Important classes of resources are as follows:

1. Financial resources: capital, cash, equity and retained earnings.
2. Human resources: training, experience, judgment, intelligence and relationships of individual employees.
3. Intellectual resources: patents, copyrights, trademarks and trade secrets.
4. Organizational resources: relationships with other firms (such as partners, suppliers, buyers, creditors), channels of distribution and corporate culture.
5. Physical resources: physical technology, plant and equipment, location and raw materials.

Capabilities: the intangible processes (such as skills, abilities, know-how, expertise, designs and management) with which a firm exploits resources in the execution of its day-to-day operations.

In line with Barney's and Newbert's research I asked the respondents to which extent the target and acquirer firm had similar and complementary financial-, human-, intellectual-, organizational-, and physical resources as well as capabilities. Again, all items were measured using a 5-point Likert Scale.

*Cultural compatibility*, defined as the degree in which the culture of the target and the acquirer firm complement and fit to each other, was measured using an 8-item questionnaire by Denison (1990). Ideally, cultural compatibility, as a pre-formation characteristic, is investigated or measured before an M&A takes place. However, the problem with determining the culture of target is that it is difficult to gain access to such data during the negotiation process (partly because many of these negotiations do not result in M&As). This problem is compounded by another difficulty associated with the measure of cultural compatibility since many elements of culture are unclear to its members, because people take them for granted (Schoenberg, 2000). Despite these difficulties, cultural compatibility was measured by using the Denison's (1990)

model of measuring cultural compatibility. The respondents were asked to indicate the extent to which, for example, the acquirer firm manage the same core values and level of empowerment as the target firm. Also aspects such as focus, vision and team orientation were measured, all using a 5-point Likert Scale.

## CONTROL VARIABLES

Based on the work of King et al. (2004) a number of control variables were added tot the questionnaire to control for any influence of latent factors on the dependent variable (post-acquisition performance). These are: Capital investment in Euro's, Scale in Full Time Equivalents and the type of merger or acquisition (Strategic, Growth, Technology or Financial Distress).

## RELIABILITY TEST

In order to analyze the gathered data the internal consistency of the variables needs to be tested. Table 1 gives an overview of Cronbach's Alpha. It was used in order to measure the internal consistency and shows how closely related the items of the different scales are as a group. High values of Cronbach's Alpha imply that the items as a group measure an underlying construct. Nunnally (1978) offered a rule of thumb of 0.7. More recently, one tends to see 0.8 cited as a minimum alpha (Kline, 1999). One thing to keep in mind is that alpha is heavily dependent on the number of items composing the scale. Since the number of items in the scales is relatively low, I deal with a Cronbach's Alpha of 0.7 as a rule of thumb.

**Table 1. Chronbach's Alpha**

	Number of items in scale	Chronbach's Alpha
Strategic fit	8	.864
Organizational fit	9	.735
Cultural compatibility	8	.727
Resource similarity	6	.738
Resource complementarity	6	.701
Post-acquisition performance	4	.854

All constructs meet the value requirement of ( $\alpha > 0.7$ ), the construct of resource complementarity has the lowest score ( $\alpha = 0.701$ ). Since the results show that all constructs meet the value requirements of Cronbach's Alpha, I decided not to delete any items from the scales. Therefore it can be concluded that all constructs are internally consistent and reliable.

## **METHOD OF ANALYSIS**

All data is processed and analyzed by using Statistical Package for Social Studies (SPSS) version 20. To test the relationship between independent variables (strategic fit, organizational fit, cultural compatibility, resource similarity and resource complementarity) and outcome variable (post-acquisition performance) linear regression analysis (ANOVA) will be used. Moderated regression analysis is used in order to examine the degree to which resource similarity (H3A; H3B), resource complementarity (H3C; H3D) and cultural compatibility (H4A; H4B) interact with the independent variables to predict the outcome score. Both these analyses are based on bivariate (Pearson) correlation coefficients.

# Analysis and Results

## DESCRIPTIVE STATISTICS

In total 36 questionnaires ( $N=36$ ) regarding past mergers or acquisitions were filled in by (former) employees of IHC Merwede or the target firms. The descriptive statistics can be found in Table 2 and a complete list of the individual M&As can be found in Appendix 1.

## CORRELATIONS

Table 3 gives an overview of all the correlations between the different variables significant correlations have been flagged red. Both strategic and organizational fit show high correlations ( $r = .857$  and  $.812$ ) with post-acquisition performance this is a strong indication that there might be a (linear) relationship among the variables. Furthermore cultural compatibility has strong correlations with both strategic and organizational fit ( $r = .782$  and  $.805$ ) as well as post-acquisition performance ( $r = .652$ ). Resource similarity shows similar results ( $r = 0.774, .711$  and  $.709$ ) this indicates that cultural compatibility and resource similarity might moderate the relation of strategic and organizational fit to post-acquisition performance. No significant negative relation was found between resource complementarity and post-acquisition performance ( $r = -.251, p = .140$ ). In addition only weak (and non significant) negative correlations were found between resource complementarity and strategic fit ( $r = -.169, p = .325$ ) and organizational fit ( $r = -.146, p = .325$ ). Since correlation does not mean causation further investigation of the variables is needed to discover any (linear) relationships.

**Table 2. Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Scale	36	9	562	101.97	121.513
Capital	36	250	25787	3734.11	5436.589
Strategic fit	36	-1.43	.88	.0000	.71557
Organizational fit	36	-1.01	.87	.0000	.56586
Cultural compatibility	36	-1.41	.76	.0000	.58630
Resource similarity	36	-1.59	1.17	.0000	.65766
Resource complementarity	36	-1.47	.86	.0000	.63222
Post-acquisition performance	36	-1.68	1.83	.0000	.83369

**Table 3. Correlations**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Date	-								
(2) Scale	.241	-							
(3) Capital	<b>.393*</b>	<b>.955**</b>	-						
(4) Strategic fit	-.103	.173	.056	-					
(5) Organizational fit	-.153	.154	.040	<b>.916**</b>	-				
(6) Cultural compatibility	-.116	.076	-.023	<b>.782**</b>	<b>.805**</b>	-			
(7) Resource similarity)	.069	.272	.200	<b>.774**</b>	<b>.711**</b>	<b>.671**</b>	-		
(8) Resource complementarity	.056	.078	.160	-.169	-.146	-.056	-.111	-	
(9) Post-acquisition performance	.031	.179	.089	<b>.857**</b>	<b>.812**</b>	<b>.652**</b>	<b>.709**</b>	-.251	-

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

### CONTROL VARIABLES

Results were checked for any influence of other factors on the dependent variable. No significant variance was found in the scores of post-acquisition performance between the type of M&A ( $F = .316$ ,  $p = .814$ ) of the M&A's. In addition no significant correlations were found between the date ( $r = 0.31$ ,  $p = .859$ ) scale ( $r = 0.179$ ,  $p = .295$ ) and capital ( $r = .089$ ,  $p = .607$ ) and post-acquisition performance. The correlation between date and capital was significant ( $r = .393$ ,  $p = .018$ ) this seems to suggest that the capital involved in the M&As has grown substantially over time. However no significant relation was found between the date of the M&A and post-acquisition performance ( $r = -.031$ ,  $p = .140$ ). Since neither of the control variables correlates with the independent variable none were taken into account in the regression analysis.

### LINEAR REGRESSION ANALYSIS

To test the relationship between the independent variables a linear regression analysis was performed. Tables 3 and 4 summarize the results of the test. The Adjusted R Square ( $R^2$ ) is important as it tells us how much of the variance in the dependent variable (post-acquisition performance) is explained by the independent variables (strategic and organizational fit) adjusted for the number of factors. The model shows that roughly 72% of the variance of post-acquisition performance can be predicted by the independent variables. This indicates that strategic fit, organizational fit, cultural compatibility, resource similarity and resource complementarity are relevant predictors of post-acquisition performance. Since the data of all constructs is summarized in this percentage it is useful to look at the coefficients that make up the model.

**Table 4. Linear Regression Analysis**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873 <sup>a</sup>	.763	.723	.43865

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-9.204 x 10 <sup>-16</sup>	.073		.000	1.000
Strategic fit (H1)	.678	.291	.582	2.326	.027
Organizational fit (H2)	.366	.350	.249	1.046	.304
Cultural compatibility	.128	.223	.090	.572	.571
Resource similarity	.164	.182	.130	.904	.373
Resource complementarity	-.147	.120	-.111	-1.227	.229

a. Dependent Variable: Post-acquisition performance

**Table 5. Moderated Regression Analysis**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.940 <sup>a</sup>	.883	.830	.22640

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.331	.108		-3.056	.005
Strategic fit (SF) (H1)	.789	.372	.677	2.122	.044
Organizational fit (OF) (H2)	.284	.377	.193	.753	.005
Cultural compatibility (CC)	.169	.260	.119	.649	.523
Resource similarity (RS)	.103	.186	.081	.556	.583
Resource complementarity (RC)	-.193	.110	-.146	-1.753	.092
SF * CC (H4A)	1.398	.825	.568	1.695	.103
SF * RS (H3A)	.511	.752	.336	.680	.503
SF * RC (H3B)	-.201	.415	-.106	-.486	.632
OF * CC (H4B)	3.140	1.082	.840	2.902	.008
OF * RS (H3C)	.833	.919	.348	.907	.373
OF * RC (H3D)	-.146	.423	-.068	-.344	.734

a. Dependent Variable: Post-acquisition performance



The coefficients are useful as they can predict the outcome variable by filling in the unstandardized numbers into a formula. If the score of strategic fit increases by one unit, post-acquisition performance will increase by 0.678 – this score significant ( $p < 0.05$ ). Therefore we can accept hypothesis 1. The same cannot be said for organizational fit as an increase of one unit makes that post-acquisition performance increases by 0.366 units – this relation is not significant ( $p > 0.05$ ) and hypothesis 2 must be rejected.

## MODERATED REGRESSION ANALYSIS

Moderated regression analysis was used in order to examine the degree to which resource similarity (H3A), resource complementarity (H3B) and cultural compatibility (H4) interact with the independent variables to predict the outcome score. Table 5 summarize the results of the regression analysis.

One of the first things to notice is that in the model as a whole explains the variance in post-acquisition performance better when the interaction effects are taken into account as the Adjusted R Square ( $R^2$ ) is higher in model 2 (.830) than in model 1 (.723). When we take a look at the coefficients some interesting things stand out. First of strategic fit is still positively related ( $B = .789$ ) to post-acquisition performance and is statistically significant ( $p < 0.05$ ). Secondly the where in the first model (1) the coefficient of organizational fit was not significant, it now is ( $B = .284$ ,  $p < 0.05$ ). Under these conditions hypothesis 1 and 2 should both be accepted. Third no significant interaction effects were found for resource similarity and resource complementarity, therefore hypothesis 3A, 3B, 3C and 3D must be rejected. Finally, by multiplying the independent variables one significant ( $p < 0.05$ ) interaction effect was found between organizational fit and cultural compatibility. In other words, hypothesis 4B should be accepted (and H4A rejected) as cultural compatibility only positively enhances ( $B = 3.140$ ) the relation between organizational fit and post-acquisition performance.

## MULTICOLLINEARITY

Since the results of the moderated regression analysis (model 2) differ from the original findings in the linear regression analysis (model 1) it is worthwhile to take a second look at the variables. Table 2 summarizes the correlations between the different variables. One thing that stands out is the high correlation between strategic fit and the other constructs, particularly organizational fit and cultural compatibility. This is an indication that the change in coefficients and significance could be due to multicollinearity; a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated. In this situation the coefficient

estimates may change erratically in response to small changes in the model or the data. Multicollinearity does not reduce the predictive power or reliability of the model as a whole; it only affects calculations regarding individual predictors. That is, a multiple regression model with correlated predictors can indicate how well the entire bundle of predictors predicts the outcome variable, but it *may not* give valid results about any individual predictor, or about which predictors are redundant with respect to others.

According to O'Brien (2007) the way to check for multicollinearity is to calculate the Variance Inflation Factor (VIF) for each predictor variable. Variables that have a variance inflation factor above 10 are strong indicators of multicollinearity (O'Brien, 2007). Analysis of models 1 and 2 both indicate high values in the second model (see Appendix 3). Therefore it can be concluded that the change in the coefficients is due to multicollinearity; this makes the estimates of the second model unreliable.

One of the possible remedies for multicollinearity is to remove one or more 'disruptive' factors from the model and run another regression analysis. I decided to remove resource similarity from the model as it had the highest VIF-scores (30.307 and 50.132 respectively). Results of the third regression analysis can be found in table 6.

**Table 6. Moderated Regression Analysis – Adjusted for Multicollinearity**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3	.936 <sup>a</sup>	.877	.840	.33312

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.315	.096		-3.272	.003
Strategic fit (SF) ( <b>H1</b> )	.641	.237	.550	2.705	.027
Organizational fit (OF) ( <b>H2</b> )	.356	.318	.241	1.120	.007
Cultural compatibility (CC)	.138	.211	.097	.653	.519
Resource complementarity (RC)	-.157	.099	-.119	-1.583	.125
SF * CC ( <b>H4A</b> )	.920	.423	.374	2.177	.038
SF * RC ( <b>H3B</b> )	-.129	.372	-.068	-.347	.731
OF * CC ( <b>H4B</b> )	2.357	.575	.631	4.101	.000
OF * RC ( <b>H3D</b> )	-.100	.397	-.046	-.252	.803

a. Dependent Variable: Post-acquisition performance

## INTERACTIONS

Not only do the results of the third regression analysis (model 3) show us that hypothesis 1 and 2 should be accepted, it also shows two significant ( $p < 0.05$ ) interaction effects of cultural compatibility on both strategic and organizational fit. Therefore we should accept hypothesis 4A and 4B. Figure 3 and 4 graphically display both interaction effects based on Aiken and West's (1991) method.

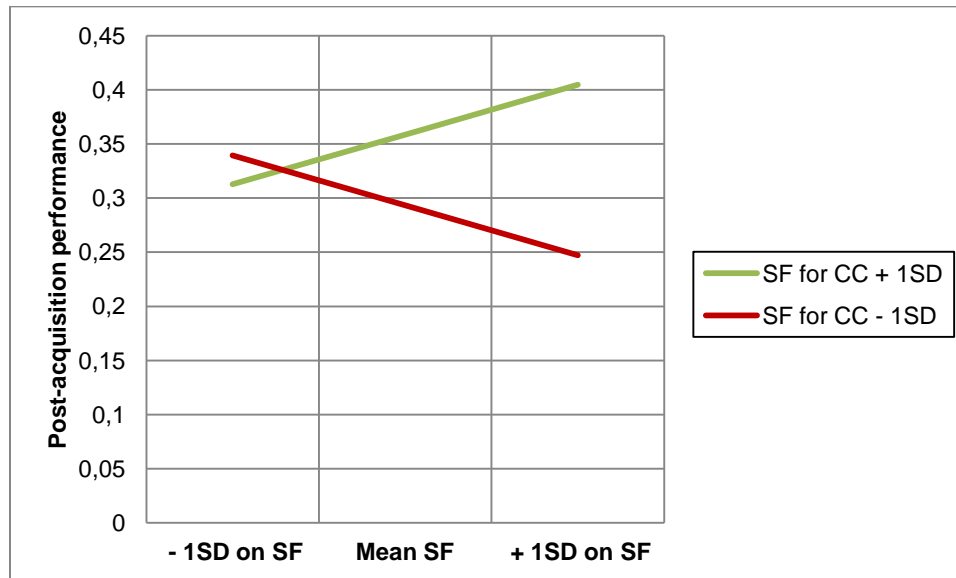


Figure 3 – Interaction effect of cultural compatibility on strategic fit

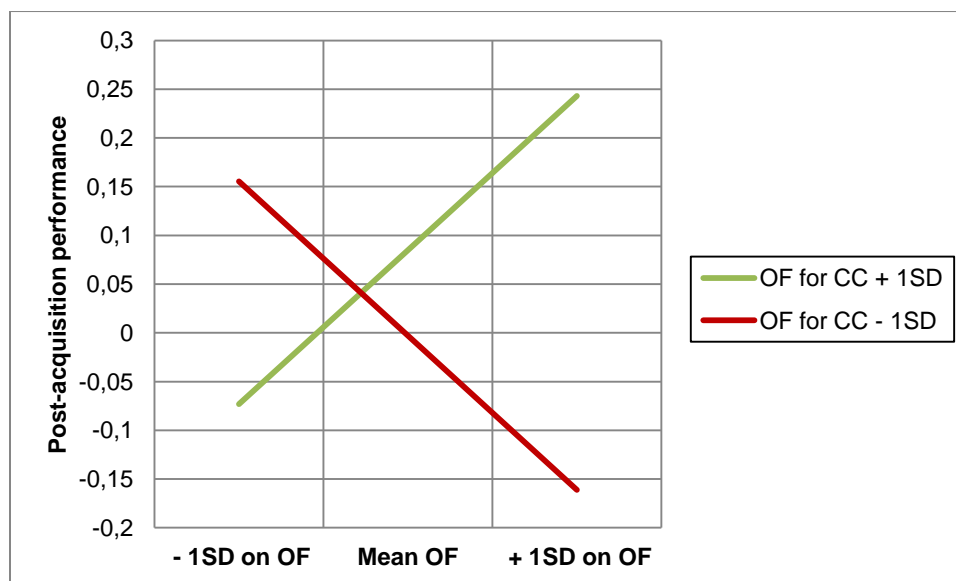


Figure 4 – Interaction effect of cultural compatibility on organizational fit

### *Low cultural compatibility values*

Both interaction plots show that *low* values of cultural compatibility are paired with *low* values of either strategic or organizational fit lead to *high* post-acquisition performance values. The graphs also show that *low* values of cultural compatibility paired with *high* values of either strategic or organizational fit lead to *low* post-acquisition performance values. Both these interaction effects are stronger for organizational fit than strategic fit.

### *High cultural compatibility values*

Additionally the interaction plots shows that *high* values of cultural compatibility are paired with *low* values of either strategic or organizational fit lead to *low* post-acquisition performance values. The graphs also show that *high* values of cultural compatibility paired with *high* values of either strategic or organizational fit lead to *high* post-acquisition performance values. Both these interaction effects are stronger for organizational fit than strategic fit.

## STATISTICAL MODEL

Figure 5 graphically displays the model based on the moderated regression analysis adjusted for multicollinearity.

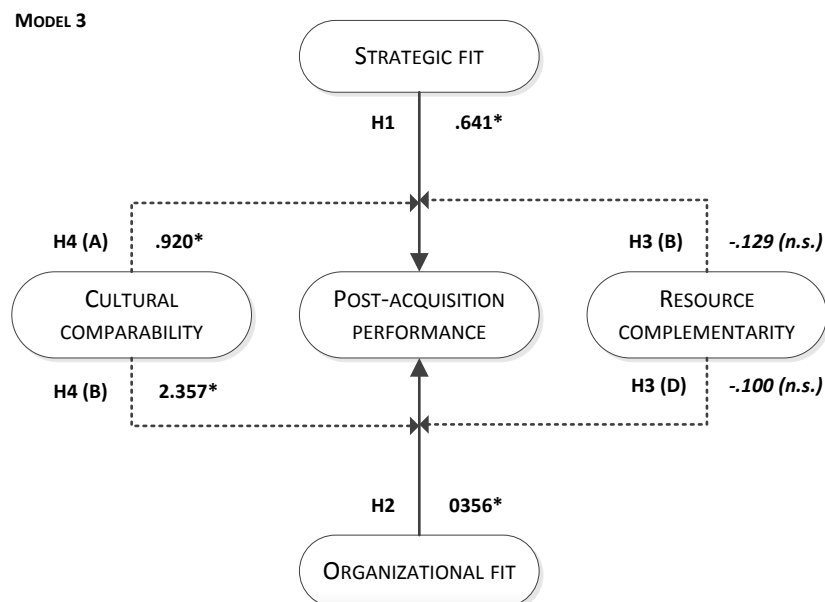


Figure 5 – Model of factors influencing post-acquisition performance. Numbers represent regression coefficients.

# Conclusion

Although IHC Merwede's senior and top management have been actively integrating and streamlining the (recently) acquired organizations into their core business not always are the desired results of the M&A achieved. A prior study by Barkema & Schrijven (2008) suggest that the pre-formation process plays a significant role and is essential for enhancing post-acquisition performance. Therefore this study attempts to find out how do different pre-formation characteristics between two firms affect post-acquisition performance.

Based on a conceptual model I examined how different pre-formation characteristics between a pair of firms affect post-acquisition performance. First I analyzed how a certain degree of (1) strategic fit and (2) organizational fit affect post-acquisition performance. Then, I investigated how (3) resource similarity, (4) resource complementarity and (5) cultural compatibility strengthen or weaken the relationship between strategic and organizational fit on post-acquisition performance.

The findings suggest that, as predicted, strategic fit is positively, and significantly, related to post-acquisition performance. In other words, when two firms enter into an acquisition it is likely that post-acquisition performance gets better if there is strategic fit between the acquirer and target firm. Additionally the findings also suggest that organizational fit is positively, and significantly, related to post-acquisition performance. So in a situation where organizational fit between the acquirer and target firm exists, post-acquisition performance is likely to improve.

Furthermore, the results show that cultural compatibility moderates the positive relation between organizational fit and post-acquisition performance. The interaction effect can be explained as follows: when both cultural compatibility and strategic or organization fit scores are low post-acquisition performance increases. Post-acquisition performance also increases if the values of both cultural compatibility and strategic or organizational fit are high. In the situation where the scores on cultural compatibility and strategic or organizational fit are not similar (so either positive cultural compatibility combined with negative strategic or organizational fit and vice-versa) post acquisition performance is likely to decrease. The interaction effect is stronger for organizational fit then for strategic fit.

On the other hand, in contrast to my predictions, I found that the relation between strategic and organizational fit is not affected by resource similarity or resource complementarity. In addition to these findings it can also be concluded that IHC Merwede has not developed the capability to acquire more successfully over time.

## IMPLICATIONS

The main conclusion of the preceding chapters is that, like so many studies (e.g. Leighton & Tod, 1968; Lubatkin, 1983; Jamison & Sitkin, 1986; Datta, 1991; Schoenberg, 2000; Schreader & Self, 2003) already confirmed, strategic fit (H1) and organizational fit (H2) also positively influence post-acquisition performance in the dredging, mining, marine and offshore industry. However it is too easy to assume that strategic and organizational fit are positively related to post-acquisition performance in every industry. Moreover, even though the proposed model explains the variance in post-acquisition performance to a great extent we can safely assume that other unexplored variables play a significant role. Regarding these findings it should also be noted resource similarity (H3A; H3C), resource complementarity (H3B; H3D) and cultural compatibility (H4A; H4B) have been largely presented in the literature as arguments in favor of post-acquisition performance. These variables were tested as moderators and it can be concluded that only cultural compatibility interacts well with the outcome variable.

Summing up, not only do the results show that strategic and organizational fit, while important, are not the only two variables that contribute to post-acquisition performance. The results also demonstrate that not all the arguments raised in the literature in favor of resource similarity, resource complementarity and cultural compatibility (e.g. McConnell & Nantell, 1985; Haspeslagh & Jemison, 1991; Eisenhardt & Bingham, 2004; Tanriverdi & Venkatraman, 2005; Wang & Zajac, 2007) are equally valid in the dredging, mining, marine and offshore industry.

Furthermore, the understanding of the importance of strategic fit, organizational fit and cultural compatibility has practical implications for M&A partnership. By applying the model that is suggested in this paper organizations that encourage growth can reach their stated growth and value generation targets in M&A deals. Firms should take particular interest in the role of cultural compatibility when it comes to acquiring or merging with another firm. In contrast to prior research (e.g. Chatterjee et al., 1992; Stahl and Voigt, 2008) on this topic the results show that only in a situation where there is clear strategic fit, organizational fit and cultural compatibility the firm should try to integrate both cultures into one. This way firms like IHC Merwede can prevent themselves of destroying value and lower profitability in the long term. Additionally if the model is further refined it can assist in developing the capability to acquire more successfully over time.

## LIMITATIONS AND FUTURE RESEARCH

Given the setup of this study, I should note five limitations. First of all the rather low sample size of 36 should be discussed. During the data analysis part of the study a high degree of multicollinearity was found between the independent variables. This was resolved by removing one of the variables from the model, impairing the study, as no statements can be made about the role of resource similarity. Likely this is due to the rather poor sample size which affects the reliability in a negative way. Another important limitation of this study is that only one firm, namely IHC Merwede, was examined based on their M&As. Where it is usual to investigate and compare different M&As by different firms, this study only focuses on one which makes the conclusions hard to generalize. Third, because the surveys were conducted only at one single point of time, the retrospective and cross-sectional nature of this study should be labeled as a limitation. Fourth, I only examined two types of fit (strategic and organizational), and three moderating effects (resource similarity, resource complementarity and cultural compatibility). However, there might be dozens of other variables which affect post-acquisition performance that I have not taken into account. This makes that the conceptual model is likely to be insufficient. Finally the design of the questionnaire could have been better. Respondents were asked to fill in most questions on the same 5-point Linkert-scale, therefore it is possible that similar answers were given to each question, increasing multicollinearity.

Future research could address some of the empirical limitations of this study. First of all, due to overwhelming presence in literature, I selected strategic fit, organizational fit, resource similarity, resource complementarity and cultural compatibility as variables for our conceptual model. Although I believe that these selected variables are appropriate to explore post-acquisition performance, there may be other variables that play a significant role regarding this subject. Therefore, much is left for future research as probably more variables should be added to the conceptual model. Secondly, the respondents of this study were all from the higher management of IHC Merwede. Although the higher management probably knows best how to assess the M&As, we should ask ourselves the question whether the lower management – or even the employees on the work floor – share this view of the higher management. Therefore future research that encompasses the vision of the lower management or employees on the work floor might uncover additional or different information. Moreover, since this study only focuses on one of the mayor shipyards in the industry in general there is a reasonable chance that the results are different in other industries. Hence, in future research one should focus on other industries as well as on other shipyards in order to generalize these findings and to improve the external

validity. Finally, regarding the sample size, the number of M&As by IHC Merwede is relatively small. Strategic fit, organizational fit, resource complementarity and cultural compatibility are powerful determinants of post-acquisition performance in this low sample size study. A large sample size study might have identified a different pattern. Therefore future research should analyze more M&A deals (in different industries) to improve the understanding of how the determinants of the conceptual model interact.



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# Appendix 1 – M&As by IHC Merwede

ACQUIRED FIRM	DATE	SCALE <sup>1</sup>	CAPITAL <sup>2</sup>	TYPE
Merwede Hardinxveld-Giessendam	1/1993	163	3.995	Growth
Hytap	5/1994	32	832	Technology
Sea Steel	8/1994	237	4.782	Strategic
Vlaardingen Oost Scheepsreparatie	4/1995	40	1.350	Growth
Grumman Sperry Marine Shipyard	4/1996	82	2.500	Growth
Breko Tideway	6/1996	13	250	Bankruptcy
Fundex Equipment	8/1996	17	375	Technology
Smit Dredgers	9/1996	107	3.155	Growth
Offshore Technology Institute	11/1998	158	4.450	Technology
Engineering Business	1/1997	21	855	Strategic
Merwede Interior	3/1997	117	2.885	Growth
Transmo Tankservice	5/1997	15	500	Bankruptcy
Dalian Dredging Vessel Technology	4/1999	123	3.669	Technology
Offshore Development Company	6/1999	21	950	Strategic
Handling Systems	10/1999	64	1.440	Strategic
Metalix	11/1999	124	3.555	Technology
Deep Sea Dredging & Mining	5/2000	226	5.960	Strategic
DVB Marine Industries	8/2000	9	250	Bankruptcy
Nautic Newbuilding	9/2000	78	2.000	Technology
Training Institute for Dredging	12/2001	11	450	Strategic
Schippers Machine Factory Dordrecht	4/2001	51	2.750	Growth
Beaver Dredgers	6/2002	153	3.590	Growth
Merwede Repair	12/2002	27	1.150	Strategic
Lagersmit	3/2003	42	2.955	Technology
Scheepswerf Kooiman	6/2003	31	1.250	Growth
Dutch Piping Systems	9/2003	29	1.475	Technology
Hydrohammer	10/2003	11	655	Strategic
MTI Holland	2/2004	13	325	Bankruptcy
Van der Gessen – Noord	1/2005	157	4.755	Growth
Vuyk Engineering	11/2005	26	1.000	Strategic
Krimpen Shipyard	1/2006	281	15.600	Growth
De Merwede Holding	11/2007	56	2.650	Strategic
Vremac Cylinders	7/2008	437	19.575	Technology
Merwede Shipyard	3/2009	562	25.787	Strategic
Marine and Mineral Projects (MMP)	10/2010	44	2.545	Strategic
Hytech	9/2011	93	4.163	Technology

<sup>1</sup> By number of employees in full-time equivalents (FTEs).

<sup>2</sup> Approximate capital investment in thousands (x1000) of Euro's – converted to Euro's for years before 2002.

# Appendix 2 – Questionnaire

Dear Sir / Madam,

In March of this year IHC Merwede (IHC) started an inquiry into their past mergers and acquisitions (M&As). Reason for this being that although IHC overall is performing well over the last couple of years not every M&A has turned out as expected. In order to acquire more successfully in the future IHC wants to identify a number of factors that influence company performance after a merger of acquisition.

In the past you have had a pivotal role in one of the M&A deals, therefore your knowledge of that event is of great insight into the matter. Attached you will find a questionnaire regarding the factors that that will be examined in this study. Note that that there are no 'good' or 'bad' answers. Please try to answer these questions by remembering as many important facts regarding the M&A as possible. All data will be handled with care and results cannot be traced back therefore you are guaranteed anonymity.

If you have any questions regarding the items in the questionnaire you are free to ask for clarification. Completing the questionnaire should take about 10 minutes.

Best regards,

Lennart Bakker

## GENERAL QUESTIONS

1. Date of the merger or acquisition:
2. Capital investment (€):
3. Scale (FTEs):
4. Main reason for merging or acquiring:
  - ☐ Strategic
  - ☐ Market share / growth by volume
  - ☐ Technological gain
  - ☐ Other (specify):

**QUESTIONNAIRE ON STRATEGIC FIT** – *Based on Clarke's (1987) and Shelton's (1988) model of measuring strategic fit*

No, fully disagree    1   2   3   4   5    Yes, fully agree

- |  |                          |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. The target and acquirer firm managed the same strategic direction and intent  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. The target and acquirer firm managed the same goals                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. The target and acquirer firm managed the same objectives and vision           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The target and acquirer firm had the same type of customers                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. The target and acquirer firm had the same products                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. The target and acquirer firm had complementary strategies on corporate level  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. The target and acquirer firm had complementary strategies on division level   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. The target and acquirer firm had complementary strategies on functional level | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**QUESTIONNAIRE ON ORGANIZATIONAL FIT** – *Based on Datta's (1991) model of measuring organizational fit*

	very hard	1	2	3	4	5	very easy
1. Integrating the target and acquirer firms' accounting system was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Integrating the target and acquirer firms' compensation and reward system was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Integrating the target and acquirer firms' management styles was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Integrating the target and acquirer firms' management processes was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Integrating the target and acquirer firms' organizational structure was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Integrating the target and acquirer firms' organizational culture was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Integrating the target and acquirer firms' resources was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Integrating the target and acquirer firms' key staff was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Integrating the target and acquirer firms' knowledge was...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**QUESTIONNAIRE ON CULTURAL COMPATIBILITY** – *Based on Denison's (1990) model of measuring organizational culture*

	No, fully disagree	1	2	3	4	5	Yes, fully agree
1. The target and acquirer firm managed the same core values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. The target and acquirer firm managed the same level of agreement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. The target and acquirer firm had the same degree of empowerment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. The target and acquirer firm had the same degree of team orientation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. The target and acquirer firm managed the same degree of creating change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. The target and acquirer firm managed the same customer focus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. The target and acquirer firm had the same degree of organizational learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. The target and acquirer firm had the same degree of capability development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



**QUESTIONNAIRE ON RESOURCES** – *Based on Barney’s (1991) and Newbert’s (2008) model of measuring firm resources*

RESOURCE SIMILARITY	very dissimilar	1	2	3	4	5	very similar
1. The target and acquirer firm’s financial resources (i.e. cash and capital) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. The target and acquirer firm’s human resources (i.e. intelligence and experience) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. The target and acquirer firm’s intellectual resources (i.e. patents and copyrights) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. The target and acquirer firm’s organizational resources (i.e. distribution channels) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. The target and acquirer firm’s physical resources (i.e. plant and equipment) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. The target and acquirer firm’s capabilities (i.e. skills and abilities) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

RESOURCE COMPLEMENTARITY	very uncomplimentary	1	2	3	4	5	very complementary
1. The target and acquirer firm’s financial resources (i.e. cash and capital) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. The target and acquirer firm’s human resources (i.e. intelligence and experience) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. The target and acquirer firm’s intellectual resources (i.e. patents and copyrights) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. The target and acquirer firm’s organizational resources (i.e. distribution channels) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. The target and acquirer firm’s physical resources (i.e. plant and equipment) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. The target and acquirer firm’s capabilities (i.e. skills and abilities) were...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**QUESTIONNAIRE ON POST-ACQUISITION PERFORMANCE** – *Based on Delaney and Huselid (1996) model of measuring performance*

	No, fully disagree	1	2	3	4	5	Yes, fully agree
1. The realized outcome of this M&A exceeded our expectations in terms of profitability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. The realized outcome of this M&A exceeded our expectations in terms of sales growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. The realized outcome of this M&A exceeded our expectations in terms of market share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. The realized outcome of this M&A exceeded our expectations in terms of overall performance (including intangible benefits)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Appendix 3 – Tables

## VARIANCE INFLATION FACTOR (VIF-SCORES)

Model 2	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Strategic fit (SF) <b>(H1)</b>	.048	20.939
Organizational fit (OF) <b>(H2)</b>	.074	13.486
Cultural compatibility (CC)	.146	6.869
Resource similarity (RS)	.227	4.410
Resource complementarity (RC)	.696	1.436
SF * CC <b>(H4A)</b>	.043	23.102
SF * RS <b>(H3A)</b>	.020	50.132
SF * RC <b>(H3B)</b>	.101	9.888
OF * CC <b>(H4B)</b>	.058	17.240
OF * RS <b>(H3C)</b>	.033	30.307
OF * RC <b>(H3D)</b>	.126	7.922

Model 3	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Strategic fit (SF) <b>(H1)</b>	.110	9.062
Organizational fit (OF) <b>(H2)</b>	.108	8.897
Cultural compatibility (CC)	.208	4.810
Resource complementarity (RC)	.808	1.238
SF * CC <b>(H4A)</b>	.155	6.467
SF * RC <b>(H3B)</b>	.118	8.451
OF * CC <b>(H4B)</b>	.193	5.183
OF * RC <b>(H3D)</b>	.134	7.448