Patterns of Post-Acquisition Integration in Technological Firms

Creating Value by Integration in High-Tech Medium-Sized Manufacturing Firms

Public Version

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"Alles zelf doen is optellen. Samenwerken is vermenigvuldigen".

E. Th. Fentener van Vlissingen

Keywords: *(post)acquisition, technology, integration, value creation, synergy, management*

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Master Thesis Business Administration

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February – August, 2008

Preface

For succeeding a Master of Science in Business Administration at the University of Twente, the master assignment of Norma on how to succeed post-acquisition integration of their acquisition of tooling operations of Philips IMS has been conducted. The purpose of this research was to explore the post-acquisition integration process of acquiring a larger or even-sized company within a high-tech context.

Considering the acquisition of tooling operations of Philips IMS by Norma in spring 2007, Norma executed a preservation strategy in the first year after acquisition. However, they developed the need for a post-acquisition integration strategy in order to succeed this acquisition, which resulted in this master assignment. By this, the master thesis focuses on the development of patterns for succeeding post-acquisition integration.

I would like to thank all respondents and employees of both Norma and Norma IMS for providing a positive and open working climate, and by making considerable contributions to this thesis by means of participating in semi-structured interviews. Overall, respondents became interested in this master assignment. Without them, it would have been impossible to succeed this master thesis research. Also, I would like to thank Mr. Vlaskamp and Mr. Oude Mulders, general managers of Norma, for giving me the opportunity for conducting this challenging research within an inspiring organization and culture. This provided me all opportunities for fulfilling this master thesis. Further, I would like to thank Dr.Ir. Kraaijenbrink and especially Dr. Faems for their scientific contributions, valuable advices and critical opinions.

Lastly, I would like to thank Mr. Mollema for his time and energy into how to progress this master assignment. Due to his shared thoughts and advices, it became clear what was expected from Norma within this research and how to fill-out these perspectives and insights.

Ing. Bart AA Monnink

August 2008

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Executive Summary

Introduction

The purpose of this research was to explore the post-acquisition integration process of acquiring a larger or even-sized company within a high-tech context. However, a large majority of existing scientific literature only analyzes the acquisition of smaller high-tech companies, and only focuses on preventing post-acquisition integration failure. This master thesis should make a contribution of filling up this literature gap by providing patterns for succeeding post-acquisition integration, which are applicable to this described unique high-tech post-acquisition integration context. Within this context, the post-acquisition integration process after the take-over of tooling operations of Philips IMS in 2007 by Norma has been explored. After preserving and investing in the newly acquired entity (from then on called Norma IMS), Norma's general management needed a post-acquisition integration strategy to extract value from the acquisition. For investigation, two within cases have been analyzed; (1) the acquisition of tooling operations of Philips IMS and (2) the prior acquisition of production of Crown Gear. Afterwards, a cross-case analysis has been conducted in order to provide patterns for Norma to succeed post-acquisition integration. Data in both cases has been gathered by making use of semi-structured interviews and available documentation.

Research Outcomes

The acquisition of production of Crown Gear by Norma (2003) provided Norma a complementary technology in producing patented crown gearwheels. Together with their Swiss partner ASS AG, these crown gearwheels are marketed.

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Norma Cylkro developed to a self-regulating team within the Norma organization, in which both Norma and Norma Cylkro learned from each other by implementing each other's strengths.

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Nowadays (four years after the acquisition) Norma Cylkro holds high growing rates. Norma's acquisition of tooling operations of Philips IMS (2007), however, covers another driver for acquisition. Before the acquisition, Philips IMS was part of Philips DAP, but top management decided to outsource non-core competences. Consequently, Philips IMS has been outsourced because it produced tools and machinery in order to make the production of shavers suitable for mass production. This was not considered a core competence, and tooling operations has been acquired by Norma while this was a core competence for Norma.

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Consequently, post-acquisition integration covers mainly two objectives; (1) cost savings or (2) value creation. In addition, on a lower level, every acquisition covers some drivers for value creation, which can be established by (2a) preservation or (2b) synergy.

Conclusion & Implications

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Samenvatting (DUTCH)

Introductie

De doelstelling van dit onderzoek was om te onderzoeken hoe het integratieproces na de overname verloopt, wanneer een groter of even groot bedrijf in een hightech omgeving, wordt overgenomen. Een beweegreden hiervoor is dat het merendeel van bestaande wetenschappelijke literatuur zich bezighoudt met de analyse van overnames van kleinere hightech bedrijven, en zich focust op het voorkomen van het mislukken van het integratieproces na de overname. Dit onderzoek onderscheidt zich door een bijdrage te leveren aan het opvullen van dit onderbelichtte wetenschappelijke gebied door patronen te ontwikkelen welke toepasbaar zijn binnen deze unieke hightech context. Hiervoor is het integratieproces na de overname van de gereedschapsmakerij van Philips IMS door Norma onderzocht. De aanleiding voor dit onderzoek is de behoefte van de directie van Norma om, na een periode van investeringen in de overgenomen organisatie (Norma IMS) waarin de autonomie van Norma IMS behouden is gebleven, een integratiestrategie te ontwikkelen om waarde te kunnen creëren. Voor deze analyse is gebruik gemaakt van twee 'within-cases'; (1) de overname van de gereedschapsmakerij van Philips IMS en (2) een eerdere overname van de productie van Crown Gear. Nadien is een 'cross-case' analyse uitgevoerd om beide cases analyserend te vergelijken, en om patronen te definiëren die moeten leiden tot een succesvolle integratie. Onderzoeksinformatie is verzameld door gebruik te maken van semigestructureerde interviews en beschikbare documentatie.

Onderzoeksresultaten

De overname van de productie van Crown Gear door Norma (2003) heeft Norma aanvullende technologie geboden in het produceren van gepatenteerde tandwieloplossingen. Samen met haar Zwitserse partner ASS AG worden deze tandwielen op de markt gebracht.

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Norma Cylkro heeft zich ontwikkeld tot een zelfsturend team binnen Norma's organisatie, waarin zowel Norma Cylkro als Norma van elkaar leren door elkaars sterkten over te nemen.

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Op dit moment groeit Norma Cylkro snel. Wanneer naar de overname van de gereedschapsmakerij van Philips IMS gekeken wordt, dan heeft deze overname een andere oorzaak. Als interne afdeling van Philips DAP wordt Philips IMS niet als kernactiviteit beschouwd. Het produceren van gereedschappen en machines om de productie van scheerapparaten geschikt te maken voor massaproductie wordt door Philips niet als kernactiviteit gezien. Norma beschouwt het maken van gereedschappen (dat binnen de gereedschapsmakerij van Philips IMS plaatsvond) echter wel als kernactiviteit.

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Uiteindelijk vertegenwoordigt het integratieproces uit twee hoofddoelen, te weten (1) kostenbesparingen en (2) waardecreatie. Het creëren van waarde kan hierbij worden gecreëerd door (2a) het behouden van factoren of (2b) het creëren van synergie.

Conclusie en Implicaties

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1. General Introduction

In this chapter, a general introduction will be provided in which the drivers for research, an overview of scientific literature on the subject, and an overview of the research question and purpose will be provided. Also, the expected contributions and thesis outline will be given.

1.1. Introduction

Several emerging and continuing trends point to a variety of fundamental changes central to manufacturing strategy. Many of these changes are technologically driven, and in some cases today's firms are struggling with their effects. Realized or not, however, these developments likely will result in order-of-magnitude increases in the uncertainty and complexity of manufacturing strategy formulation and implementation (St. John et al., 2001: 143). However, one of the most consistent patterns in business is the failure of leading companies to stay at the top of their industries when technologies or markets change (Bower & Christensen, 1995: 43).

1.1.1. Acquiring External Technology

According to Chesbrough (2003a: 35), companies are increasingly rethinking fundamental ways in which they generate ideas and bring them to market. Indeed, many companies have been defining new strategies for exploiting the principles of open innovation, exploring ways in which external technologies can fill gaps in their current businesses and looking at how their internal technologies can spawn the seeds of new businesses outside the current organization. As stated by Chesbrough (2003b), there is a change in the innovation paradigm: it is shifting from closed to open innovation. Closed innovation is recognized by a strong internal focus, while open innovation combines external technologies. As a form of open innovation, acquisitions can contribute to improving technological performance in high-tech environments. Further, technological acquisition has been viewed as an important method to achieve higher economic returns and overall performances in an era of intensive competition and increasing technological complexity (Tsai & Wang, 2008).

1.2. Literature Gap

Challenging the changes to manufacturing strategy acquisitions are a well-known phenomenon in reducing uncertainty and complexity. Also, a major reason for carrying out an acquisition is to gain access to technological knowledge and to increase new product development (NPD) capabilities (Grimpe, 2007: 614). In addition, rapid technological change, growing technological complexity and shortening product life cycles increasingly force companies to source technologies externally. One means of building up competences and fostering innovation on external resources such as knowledge, is through the acquisition of technology-based companies (Bannert & Tschirky, 2004: 481). Derived from usual acquisitions, technology acquisitions (in scientific literature often described as acquisitions of small, technology-based firms by large, established firms) made so that the larger firms can 'graft' acquired technological capabilities onto their own resource bases, which are an important external source of innovation streams (Puranam et al., 2006: 263). However, as stated by Ranft & Lord (2002: 421-422), literature highlights that many acquisitions fail to achieve their objectives and instead result in organizational difficulties and poor performance. It is not enough for an acquirer to simply 'buy' a technology or capability and keep it in stasis. To create value, it must be nurtured and integrated throughout the process of acquisition implementation, long after the deal is done. However, literature only describes the take-over of relatively small companies by large companies. Much less attention

has been paid to the analysis of the acquisition and integration process of relatively small or medium-sized organizations as acquirer taking-over even-sized[1] or larger companies. In addition, most of the academic research on acquisitions focuses on the financial impact or the effect of acquisitions on the people or communities involved. While these issues are clearly complex, many acquisitions fail to accomplish their purpose (Haspeslagh & Jemison, 1991: 5). But the factors associated with these disappointing experiences are not addressed. Considering this literature gap, it can be stated that successfully integrating a technological acquisition is a formidable task (Ranft & Lord, 2002), especially when a high-tech company is taking-over an even-sized or larger company within a high-tech context.

1.3. Purpose

This research investigates the post-acquisition integration process in which a company (Norma Hengelo) acquires an even-sized company. Norma Hengelo recently (2007) took-over tooling operations of Philips IMS, an internal department of Philips DAP. The overall purpose of this research is to make a considerable contribution in solving the literature gap by exploring the (post)acquisition integration process within this described high-tech context. The research should provide patterns for value creation as a result of succeeding post-acquisition integration when even-sized or larger entities have been acquired within a high-tech context. As a result, these patterns should present positive value creating mechanisms by integration in high-tech manufacturing firms.

1.4. Contributions

By providing patterns of succeeding post-acquisition integration in a field not (fully) covered by literature, this research should provide a considerable contribution to this literature gap and body of knowledge on post-acquisition integration.

1.4.1. Scientific Contribution

The main contribution of this research is to make a considerable contribution for filling up the described literature gap on post-acquisition integration. By conducting a multiple case study, a considerable contribution to the literature gap will be made. However, this multiple case study will not be fully valid for providing the 'total solution' to the literature gap. As a consequence, existing literature on post-acquisition integration will be used as a basis for this particular research. This existing literature will be analyzed and applied to a multiple case study, in which the applicability of existing post-acquisition integration will be analyzed. When not fully applicable, a solution has to be found in order to create successful post-acquisition integration in these cases. These research outcomes should have a considerable contribution in solving the challenge of post-acquisition integration of acquiring even-sized or larger companies within a high-tech context by eventually providing applicable patterns for succeeding post-acquisition integration within these unique contexts by creating value.

1.4.2. Managerial Contribution

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1.5. Setting

Norma Hengelo is an innovative manufacturer and specialized in high-tech engineering and production of sophisticated fine mechanic precisions parts and integrated modules for prominent and leading worldwide

[1] Measured by FTE and direct working hours.

industrial OEM'ers (e.g. ASML and Carl Zeiss). Its strategy (resulting in a sustainable firm foundation) can be named innovative and progressive, and is considered Norma's key to success. It currently consists of three separated plants; (1) Norma Hengelo, (2) Norma IMS, and (3) Norma Asia. Further, Norma is processing the acquisition of Thales MPM, which provides Norma access to the defense- and aerospace industry. When this acquisition is confirmed, Norma employs approximately 400 FTE, which should be further forced up by autonomous growth. Norma holds one of the most state-of-the-art machinery workshops in Europe and is regularly selected as manufacturer for pilot projects. Through acquisitions and longstanding relationships with their partners, Norma will be able to provide a total solution for their clients.

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The acquisition of tooling operations of Philips IMS[2] Drachten in 2007, now processing in the stage-setting phase[3], provides Norma a sustainable fundament in serving clients needs and high demands.

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However, not all growth is generated by acquisition, because also autonomous growth is pushed. By starting-up operations in Indonesia (2005), Norma is able to combine high-tech manufacturing with the advantages of cost reduction and operational effectiveness.

1.6. Central Question

As already cited, Puranam et al. (2006: 267) define technology acquisitions as "the acquisition of small, technology-based firms by large firms". Again, within this definition, no attention has been paid to the role of acquiring a larger or even-sized company in post-acquisition integration. As a fundamental framework to explore differences between these two acquisition integration contexts, it is expected that differences in the integration process occur within these different contextual environments. Further, it is expected that the acquisition process of an even-sized or larger company and the technological context these companies are acting in, are influencing the post-acquisition integration approach and eventually the acquisition success. Consequently, following central question will be answered:

How is the post-acquisition integration process of acquired entities functioning at Norma, and how can this process be further optimized in terms of realizing value creating advantages?

The research question provides insights into the way how companies acquiring even-sized or larger companies, are performing post-acquisition integration.

[2] Philips IMS was the tool making division of Philips DAP Drachten. Philips DAP Drachten is producer of Philishave dry shaving devices.
[3] Every acquisition, after the agreement, involves a transition period before the actual integration of the two companies begins. Haspeslagh & Jemison (1991: 169) call this the stage-setting phase.

1.7. Research Approach

As stated above, this research should provide insights into the way how acquisition post-integration processes can be further optimized in terms of realizing value creation. By investigating the phenomenon of a take-over of an even-sized company (tooling operations of Philips IMS) and a prior acquisition (production of Crown Gear) by Norma Hengelo, the central question and additional research questions will be answered. Next, the Theoretical Framework will be based on existing scientific literature on post-acquisition integration. In addition, a multiple case study of these two acquisitions executed by Norma Hengelo will have a sophisticated and more applied character to the context of the research purpose by making use of a cross-case analysis.

1.7.1. Intended Outcome

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1.8. Thesis Outline

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2. Theoretical Framework

An Overview of Post-Acquisition Integration

In this chapter, the outcome of a study on scientific literature is provided, resulting in a Theoretical Framework. At first, an introduction of the external technological context will be presented. In addition, definitions and typologies will be helpful for understanding the post-acquisition integration process which will be handled afterwards. Then, the application of scientific literature will be provided, which consists of three main pillars; (1) the post-acquisition integration process, (2) challenges in post-acquisition, and (3) post-acquisition integration strategies. Lastly, a conclusion and linkage with provided research questions will be made.

2.1. Introduction

Over time, managerial motivations for acquisitions have included horizontal and vertical integration, market power gains, geographic expansion, efficiency gains, empire building, resource sharing, and diversification (Schweizer, 2005). Moreover, rapid technological change, growing technological complexity and shortening product life cycles has been functioning as a driver, and increasingly force companies to source technologies externally. Due to the companies' limited resources in terms of time and skills, they cannot develop their competences fully on their own (Bannert & Tschirky, 2004: 481). According to Cloodt (2005), companies source externally to obtain value creating advantages from technological complexity and an improvement of the flexibility of both organizations, rather than relying on internal development or other mechanisms such as alliances (Ranft & Lord, 2002: 420) in order to avoid time-consuming, path-dependent, and uncertain processes of internally accumulating capabilities for producing streams of innovation (Puranam et al., 2006). Moreover, Hagedoorn & Duysters (2002) showed that companies prefer acquisitions. This is supported by the increased number of acquisitions in high-tech industries and the growing importance of technologically motivated acquisitions. However, technology driven acquisitions are associated with difficulties in transferring and integrating knowledge (Cloodt, 2005) and are vulnerable to failure (Bannert & Tschirky, 2004: 481). Despite the popularity of acquiring, 60 – 80 percent of all acquisitions fails to create value (Swaminathan et al., 2008) and is not successful. In addition, management poses an organizational paradox. Acquirers must integrate acquired firms in order to commercialize their technologies in a coordinated manner. At the same time, they must preserve organizational autonomy in order to avoid disrupting their capacity for continued innovation (Puranam et al., 2006: 263). As they continue, acquisitions are at the center of controversy among managers and academics about their purpose, motives and contributions. However, there is very little knowledge about what makes acquisitions succeed or fail in a high-tech context when larger or even-sized companies are acquired. Within this, strategic, technological, financial and organizational considerations in the context of integration will determine the success or failure of post-acquisition integration. In addition, caution is required because performing integration is much more complex (Haspeslagh & Jemison, 1991) and every context is a unique one.

2.2. Definitions & Typologies

Before the existing scientific literature on acquisition integration will be discussed, first the most important definitions linking the concept of post-acquisition integration will be studied. In this paragraph, detailed definitions of these most important elements will be presented.

Technology Acquisition

Puranam et al. (2006: 267) define technology acquisitions as the acquisition of small, technology-based firms by large, established firms to gain access to the target firms' technologies and capabilities. However, this definition does not cover the context of this research. As a consequence, in this research, technology acquisitions will be described as the acquisition of technology-based firms to gain access to the target firms' technologies and capabilities, which corresponds with the more general definition provided by Ahuja & Katila (2001) who state that technological acquisition cover a technology component, not naming an organizational size. Thus, according to Puranam et al. (2006) they potentially expand the acquirer's knowledge base and provide scale, scope, and recombination benefits. However, technological acquisitions can also entail a disruption in organizational routines. This disruption is most likely in the set of routines that are closest to the innovation arena, the technological subsystem of the firm. Thus, technological acquisitions can also have negative impacts on the innovation output of the acquired firm. On balance, assessing whether technological acquisitions will have a positive or negative impact on post-acquisition innovation output is likely to depend upon the quantity and nature of knowledge elements that they bring to the acquiring firm (Ahuja & Katila, 2001: 199).

Value Creation

As stated by Haspeslagh & Jemison (1991), integration is a source of value creation. However, according to Cloodt (2005), a substantial part of scientific literature argues that value creation only can be established in acquisitions of a related business, because economies of scale will result in higher synergies than within unrelated businesses. In addition, Meyer (2008: 197) argues that the potential to create value in acquisitions rests on the premise that a firm can supplement or complement its core competences through synergistic or value-creating combinations with other firms. Cloodt (2005) argues that there is a positive relationship between the relatedness of the acquisition and the level of innovation of the acquirer after the acquisition. However, if companies fail to create value, acquisitions force negative impacts on both employees and managers of acquired firms (Pablo, 1994). Further, it is not enough for an acquirer to simply 'buy' a technology, because, to create value, this technology must be nurtured and integrated throughout the post-acquisition integration process (Larsson & Finkelstein, 1999). Thus, it is necessary to handle such a complex integration process carefully and to respect the local context of the acquired company in order to make such an acquisition successful (Schweizer, 1999: 1054).

Synergy

The term synergy will be described as the phenomenon in which two or more discrete influences acting together create a greater beneficial effect than the sum of their individual contributions. Applied to the post-acquisition process, synergy is created if the profit of the acquired entity can exceed the profits of the independent entity (acquirer) through the reduction of average costs or the enhancement of revenues (Myles Shaver, 2006), or combination potential (which also can be called 'value creation' as a source of synergy). Within this, synergy should be considered a positive result of (post) acquisition integration. According to Cloodt (2005), synergistic advantages can be established when companies are able to integrate related means. Considering synergy realization, Larsson & Finkelstein (1999) argue that this value creation is not only conceptualized in terms of present similarities, but also in terms of the production and marketing complementarities between the two organizations. As a consequence, Larsson & Finkelstein (1999) describe four kinds of synergies, partly based on Chatterjee (1986); operational synergies (efficiency) in production, marketing, R&D and administration achieved through (1) economies of scale, (2) collusive synergies from the class of scarce resources leading to market and purchasing power, (3) managerial synergies from applying

complementary competences or replacing incompetent managers and (4) financial synergies from risk diversification and coinsurance leading to reductions in the cost of capital. These various sources define a combination's potential, affecting the extent to which value creating advantages could be realized. According to Chatterjee (1986: 125), any synergy that is generated is limited by the size of the target firm. For example, any operational synergy is limited by the economies of scale / scope that the target firm is capable of generating. The various sources of synergy define a combination's potential which, in turn, is expected to affect the extent to which synergies will be realized. That expectation reflects that acquisitions with very low value creation are not likely to realize much significant efficiencies, whereas high-potential value creation provides greater opportunity for synergy realization (Larsson & Finkelstein, 1999).

2.3. Situating the Post-Acquisition Integration Process

The first main pillar will describe the post-acquisition process, which is divided into several important stages, of which the post-acquisition integration phase is considered most important. After analyzing the acquisition process as a whole, the post-acquisition integration process and its importance will be described and declared.

2.3.1. The Acquisition Process

Acquisitions are a form of hybrid in which integration is the challenge by which inter-firm coordination and control are achieved (Pablo, 1994: 805). Before the start of the post-acquisition integration phase, the acquisition process already processed. The role of the acquisition process itself should not be underestimated; the decision-making and integration processes have a substantial impact on the source of ideas, the quality of justification, the integration approach, and the results. Subsequently, Figure I makes clear that post-acquisition integration only is one part of a broader system of phases. Adopting a process perspective shifts the focus from an acquisition's results to the drivers that cause these results: the post-acquisition integration process that will lead to competitive advantage.

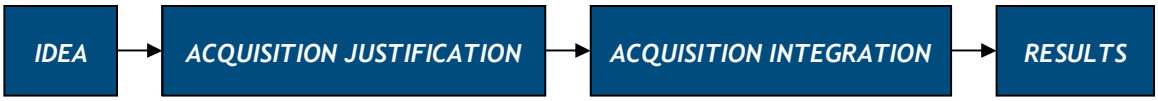

Figure I: The Acquisition Process (Haspeslagh & Jemison, 1991: 12)

Within the acquisition process, the problems firms experience with acquisitions are not always due to individuals or due to a lack of insight into what should be done. Instead, they are embedded in the organizational processes by which managers tackle those issues. Acquisitions are a severe test of a company's organizational capabilities, one of which many firms do not achieve a passing grade (Haspeslagh & Jemison, 1991: 13-14). However, post-acquisition integration is considered most important when value has to be created. In addition, integration is influenced by the other stages of the acquisition process, as there are (1) idea, (2) acquisition justification, (3) acquisition integration and (4) results. Eventually, successful post-acquisition integration should lead to positive and profit increasing results.

2.3.2. The Post-Acquisition Integration Process

The post-acquisition integration process is the key to making acquisitions successful (Haspeslagh & Jemison, 1991). Subsequently, Figure II visualizes the process of post-acquisition integration. An important part within this process is the integration design decision of whether changes should be made in one or both organizations. Integration may involve a complex and interactive mutual adjustment process between both organizations, however change is primarily occurring within the acquired organization (Pablo, 1994: 806). Although managers acknowledge the importance of the integration process, negotiators often bypass detailed discussion of

integration because of its uncertainty, its complexity, and because of other pressures during the decision process. Subsequently, all phases of the post-acquisition integration process will be presented in Figure II, except the challenges within the post-acquisition integration process. These challenges in post-acquisition integration will be presented in Paragraph 2.4, while this is considered the most important phase.

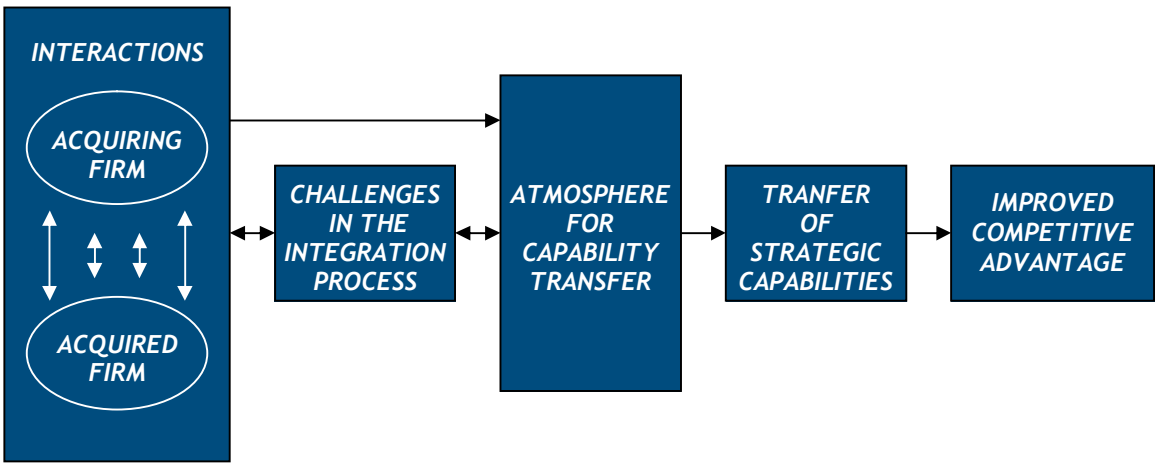

Figure II: The Post-Acquisition Integration Process (Haspeslagh & Jemison, 1991: 107)

Difficulties in managing the post-acquisition integration process, however, are not just difficulties in bringing about the capability itself. Creating an atmosphere that can support this is the real challenge. Shaping such an atmosphere is especially difficult because problems in the post-acquisition integration process itself tend to subvert its creation. To minimize this and to integrate two organizations successfully, the acquiring company must give attention to interactions between the firms that create an atmosphere needed for capability transfer and successful integration (Haspeslagh & Jemison, 1991: 106-107).

Interactions

Ultimately, the atmosphere necessary for capability transfer results from the stream of interactions between employees and managers of the two firms. Haspeslagh & Jemison (1991: 117-118) mention three types of interactions; (1) substantive, (2) administrative and (3) symbolic. Substantive interactions involve efforts to transfer capabilities, administrative interactions focus on developing information and control systems to bring the acquired firm into the overall corporate condition, and symbolic interactions are attempts to promote or influence certain beliefs.

Atmosphere

Before any capabilities can be transferred between firms, regardless of the method of capability transfer, the right atmosphere must be created. Haspeslagh & Jemison (1991) describe this atmosphere in terms of five key ingredients; (1) a reciprocal understanding of each firm's organization and culture, (2) the willingness of people in both firms to work together after the acquisition, (3) the capacity to transfer and receive the capability, (4) discretionary resources to help foster the atmosphere needed to support the transfer and (5) a cause-effect understanding of the benefits expected from the acquisition. Following, an overview of all types of strategic capability transfers will be provided.

Transfer of Strategic Capabilities

The main pillar of the integration process is the transfer and application of strategic capabilities, which may be transferred in several ways; (1) they may be given to the acquired firm, (2) they may be shared for common

use or (3) they may be taught to people in the acquiring firm. Three types of capability transfer can be named; (1) operational resource sharing, (2) functional skill transfer and (3) general management skill transfer, which all involve different organizational challenges and often are combined to force a combination of benefits.

Combining Phases of Post-Acquisition Integration

Size-related benefits, such as market power, transfer of financial resources and purchasing power require little coordination to put in practice (Haspeslagh & Jemison, 1991). In summary, each type of capability transfer involves different challenges. The process of capability transfer is complex because beyond simply giving or sharing resources or assets, it necessitates complex learning by both the acquiring as the acquired firm. Because of the complexity of learning, the context and atmosphere in which this strategic capability transfer is to take place becomes so important.

2.3.3. The Importance of Post-Acquisition Integration

Literature on post-acquisition integration clearly indicates that integration is one of the most important and difficult aspects of acquisition management in general, and particularly in technology-based acquisitions (Bannert & Tschirky, 2004). According to Shrivastava (1986), integration serves as a condition to coordinate and control the activities of the acquired and acquiring organization, allowing the realization of potential interdependencies that motivated the acquisition. Within this, integration is an interactive and continuous process in which individuals from two organizations learn to work together and cooperate in the transfer of strategic capabilities (Haspeslagh & Jemison, 1991: 106). Based on the multidimensional integration strategy, integration projects and their value drivers can be defined in the following fields: sales and marketing, technology, manufacturing, supply chain management, organizations and structures, human resources, communications, IT, finance, legal, etc. Integration projects implement the integration strategy and thus allow the achievement of the acquisition strategy (Bannert & Tschirky, 2004: 488).

Further, the task of post-acquisition integration is to focus on the bought business, to internalize the external knowledge and to reap synergies. This is done by means of value driven projects. Value driven projects cover all measures necessary to realize synergies and to manage the acquired business. Whereas acquirers usually focus quickly on value capitalization in terms of financial or value capturing in terms of market synergies, value creation measures, such as the internalization or development of competences, are not always addressed during integration. This leads to an incorrect assessment of post-acquisition integration success. Furthermore, acquirers often jump on the expected synergies, absorbing resources from the target and neglecting the investment in the natural growth of the acquired unit. This might lead to a loss of the whole technology base and thus the business itself (Haspeslagh & Jemison, 1991).

According to Meyer (2008), the degree of integration is one of the most important strategic decisions in post-acquisition integration, and resource configuration may be necessary to realize synergies between the acquiring and acquired organizations. Further, acquisitions often fail to achieve their objectives and instead result in organizational difficulties and poor performance (Ranft & Lord, 2002). The post-acquisition integration relevance is without question, but its specific role in technology intensive acquisitions remains unclear. However, researchers regard post-acquisition integration in general and in particular in technology intensive acquisition as the decisive factor and challenge determining success or failure (Bannert & Tschirky, 2004: 482).

2.4. Challenges in Post-Acquisition Integration

Subsequently, as already stated before, the challenges of the post-acquisition integration process as a second main pillar will be discussed. These challenges can be divided into three major challenges; (1) the need for preservation of competences, (2) the need for the creation of synergies and (3) the challenge of balancing

these both challenges. Overall, the balancing process should be considered of major importance, while this process determines the success of post-acquisition integration. Subsequently, these three major challenges will be presented, while, within the field of organizational dynamics of acquisitions, acquisition failure is often attributed to the many difficulties of post-acquisition integration.

Many of these difficulties stem from organizational issues such as cultural clashes and human resource conflicts. Post-acquisition integration, then, is likely to be problematic when valuable knowledge-based resources reside in human and social capital that is difficult to measure, manage, and extract value from (Ranft & Lord, 2002). While there are some commonalities in integration, the precise post-acquisition integration context involved differs substantially. This is what makes post-acquisition integration a huge challenge. High potential acquisitions are most challenging because they require effective interaction and coordination to realize their potential. When an acquisition affords fewer potential synergies, the problem of realizing them is reduced because cooperation is less important and coordination costs are less severe. Although not unimportant when value creation is low, the potential value added is somewhat muted when acquisitions have little synergy potential (Larsson & Finkelstein, 1999). Therefore, in addition, a trade-off between (1) preservation and (2) synergy creation has to be made in order to extract value from acquisition.

Every acquisition, after the agreement, involves a transition period before the actual integration of the two companies begins. Haspeslagh & Jemison (1991: 169-171) call this the stage-setting phase. This phase should be used to underpin integration dynamics and facilitate upcoming capability transfer in which one theme runs through all of them; communicate and then communicate again. In practice, fulfilling the stage-setting phase is complex because each dimension is important and interactive. Solutions in one might create problems in another. In some situations, the need to strengthen the acquired firm before starting integration is critical. It should be clear that each stage-setting task is dependable on the type of integration applied. According to Haspeslagh & Jemison (1991), the stage-setting phase duration and importance also vary with the acquired company's condition.

2.4.1. Challenge I: The Need for Preservation

The need for preservation of knowledge, competences and specialism requires a certain organizational condition to manage these preserved competences within both entities. Within this, (1) the quality of the acquired company and its management capability and (2) the acquisition size is of major importance.

Quality of the Acquired Company & Management Capability

The quality of the acquired company is an important challenge, especially with respect to the quality of its general management team. Haspeslagh & Jemison (1991: 150) define quality in relative terms as the ability of the acquired company's management to bring about the strategic purpose of the acquisition. The real difficulty with a lack of quality in the acquired firm is that it makes it difficult to preserve the autonomy that the integration may strategically require. It is considered that if the management quality and capability is sufficient or strengthened, a preservation of organizational autonomy can be established. Consequently, one major challenge then is tackled, namely the preservation of organizational autonomy. Eventually, preservation of critical knowledge, competences and specialism can be established and preserved. However, also other conditions for preservation have to be considered and fulfilled.

Acquisition Size

The issue of acquisition size involves both absolute and relative sizes of the firms involved. However, the relative size of the acquired unit in relation to the acquiring unit presents the greatest challenge to integration (e.g. the 'make them like us syndrome' because of the de facto power balance). In addition, according to

Pablo (1994), mismatches in size can lead to a lack of management attention within the acquiring company. They have to make use of extra management attention to complete all stages of the integration process (Cloodt, 2005) which consequently will extract attention on other (internal) managerial and organizational issues. Ranft & Lord (2002: 433) state that the relative size and performance of the acquired firm has two apparently conflicting effects; a greater relative size and performance of the acquired firm appeared to (1) enhance its post-acquisition autonomy as well as (2) the retention of key employees. However, greater relative size and performance at the same time appeared to (1) impair communications across organizational boundaries between the both organizations and (2) differences in the organizational maturity and the business' development stages of development or complexity of both companies also can cause integration problems.

As stated by Hagedoorn & Duysters (2002), there is a positive relationship between the degree of size similarity of companies involved, and the post-acquisition technological performance of companies. In addition, Larsson & Finkelstein (1999) found that organizational integration was not affected by acquisition size, which is due to a certain level of critical mass rather than the amount of managerial attention. The critical mass argument holds that the target must be of sufficient size in relation to the bidder for it to generate substantial value creation by preservation. Eventually, the challenge of preserving critical competences only can be tackled if the acquisition size covers a certain 'critical mass' which makes it possible to establish autonomy in order to preserve critical competences within a (by growth developed) organizational critical mass.

2.4.2. Challenge II: The Need for Creating Synergies

For creating synergies, co-operation between both entities (acquired and acquiring companies) is needed. Consequently, this will jeopardize the level of preservation. In addition, synergy creation requires other conditions than preservation. A certain level of organizational fit is needed for integration and synergy creation. Further, by creating synergies, value leakages can occur, which makes it difficult to keep control of both entities.

Organizational & Strategic Fit

According to Cassiman et al. (2005: 198), an important factor driving the potential synergies that can be realized within an acquisition is whether or not both entities strategically fit. This is determined by their relatedness. According to Hagedoorn & Duysters (2002: 67), strategic and organizational fit seem to play an important role in improving companies' technological performance because of synergetic effects through economies of scale and scope. Cloodt (2005) argues that, from an organizational perspective, a company is better suited to integrate related knowledge than unrelated knowledge in relevant technological disciplines. So, when the body of knowledge of the acquirer insufficiently matches the acquired knowledge, it will be difficult to transfer, combine and integrate these bodies of knowledge. However, it has to be stressed that both organizational and strategic fit of companies involved in high-tech acquisitions are crucial for the technological success of acquisitions. Swaminathan et al. (2008: 44) name that acquisitions with a high degree of strategic similarity have been shown to outperform firms with a low degree of similarity. Developing organizational and strategic fit, then, is the real challenge for creating synergies.

Technological Fit & Innovation

After organizational and strategic fit, also technological fit is an important factor. According to Puranam et al. (2006), acquirers must balance the acquired and existing technology in order to improve organizational (in-) flexibility. Cassiman et al. (2005) make a distinction between firms active in the same technology fields (STF) versus firms active in complementary technology fields (CTF). Especially for high-tech companies, it is important for the acquirer to not only focus on related technologies for improving flexibility. In this way,

organizations face an important paradox; the tension between strategic- and organizational fit, and the required flexibility. To solve this paradox, organizations need a high level of innovation in order to make a maximal profit out of the contribution of the acquired company. However, acquirers should be aware that highly specific knowledge is harder to transmit because few firms can benefit from its application (Schweizer, 2005: 1069). Finally, Larsson & Finkelstein (1999) conclude that complementary operations increase the probability of success by fostering synergy creating advantages. When applied to organizational and technological fit, this consequently can solve the challenge of creating synergies by combining STF's and CTF's within a high level of organizational relatedness.

Further, the extent to which a technological acquisition results in synergistic benefits is related to the strategic and technological potential, the degree of organizational integration after the deal was completed, and the lack of employee resistance to the integration of the joining firms (Larsson & Finkelstein, 1999).

2.4.3. Challenge III: Tensions in Balancing both Challenges for Value Creation

Within the trade-off between preservation and the creation of synergies, tensions are influencing the type and intensification of post-acquisition integration. The primary objective in post-acquisition integration is to make more effective use of competences (Datta, 1991) and covers mainly two objectives; (1) cost savings or (2) value creation. In addition, on a lower level, every acquisition covers some drivers for value creation, which can be established by challenging the need for (2a) preservation and (2b) synergy. Within the process of post-acquisition integration, trade-offs constantly have to be made to solve tensions between preservation and synergy objectives for creating value. Consequently, balancing challenges of post-acquisition integration can be divided into three tensions; (1) the intensification of post-acquisition integration by the contagion and capacity effect, (2) socio-psychological aspects, and (3) the velocity of the post-acquisition integration process. Subsequently, Table I provides a focused overview on value creation, visualizing the linkage between the objectives, challenges and tensions of post-acquisition integration.

<table>
<tr><th>Objectives</th><th colspan="2">Challenges</th><th>Tensions</th></tr>
<tr><td>Cost Savings</td><td>---</td><td>---</td><td>---</td></tr>
<tr><td rowspan="3">Value Creation</td><td rowspan="3">Need for Preservation (1)

Need for Creating Synergy (2)</td><td rowspan="3">Balancing both Challenges for Value Creation (3)</td><td>Intensification of Post-Acquisition Integration by the Contagion and Capacity Effect</td></tr>
<tr><td>Socio-Psychological Aspects</td></tr>
<tr><td>Velocity of the Post-Acquisition Integration Process</td></tr>
</table>

Table I: Overview of the Linkage between Objectives, Challenges and Tensions

Subsequently, the tensions within the challenges of preservation and synergy will be discussed.

Intensification

The intensification of post-acquisition integration is established by two potentially occurring effects; (1) the contagion effect and (2) the capacity effect which occur if under integration or over integration takes place. According the Myles Shaver (2006), creating or strengthening transfers between the acquired and acquiring organization opens a potential channel for negative spillovers (i.e. contagion). Myles Shaver (2006) mentions three common examples of synergy sources highlighting the contagion effect; (1) allocating production to one facility from two facilities that are running with excess capacity (product rationalization), (2) implementing

managerial systems or deploying managerial talent to an acquired company that lacks such resources, and (3) cross-selling or umbrella branding products to increase buyer acceptance and sales. It shows how the contagion effect is relevant, whether the basis of synergy is reducing average costs or enhancing revenues. Consequences of the contagion effect[4] are a reduced spread of risk by combining both entities into one organization and production plant or the combination of same resources and infrastructure which is considered risk-bearing. Because the negative events would have affected only one entity if the acquisition not occurred (preservation of two autonomous entities) and because contagion causes the negative events to affect the acquired entity, contagion eventually reduces the value of the acquisition, which can be considered a value leakage.

Another way in which opening or strengthening a transfer between both organizations affecting the distribution of potential outcomes is through a capacity constraint, named the capacity effect (Myles Shaver, 2006). The capacity effect[5] is occurring when all technology and competences of the acquired entity have been absorbed and leaned in order to accomplish more standardized production. The danger herewith is that organizational flexibility to adapt to changes of the acquired (and the acquiring) entity will decrease dramatically. Depending on the nature of how the synergy is generated, there might not be a capacity constraint in the underlying resource. Nevertheless, under such conditions, there are often organizational capacity constraints that become binding. For example, workload increases to more than what the current set of managers or employees can effectively handle. The capacity effect is not necessarily binding on long term because of the firm's ability to increase capacity, but, under certain conditions, increasing capacity is virtually impossible, even on long term (Myles Shaver, 2006: 966).

In implementing synergy-based acquisition strategies, firms share resources across both organizations. However, opening up such a transfer also increases the possibility that negative outcomes can develop, which is the contagion and capacity effect. Further, as already stated, these effects occur if (1) under or (2) over integration takes place. Myles Shaver (2006) argues that if a firm over integrates it has the potential to reap the rewards of integrating both firms. Nevertheless, it also expends effort and resources to integrate activities that do not render any benefits. This reduces the return of integrating both firms. In addition, by integrating additional activities, the firm opens or strengthens additional transfers across the businesses that magnify the contagion and capacity effects. Therefore, relaxing the assumption in this manner strengthens the contagion and capacity effects. On the other hand, if a firm under integrates, it does not build or strengthen the transferring that it should across the integrated businesses. Under this condition, synergies cannot be captured. Moreover, because integration is what drives the contagion and capacity effects, these effects will be dampened. At the extreme, if both organizations do not undertake any integration, it will not realize any benefits and it will not be subject to contagion or capacity effects. However, it will have incurred transactions costs with no corresponding benefits, making the acquisition destroy value (Myles Shaver, 2006: 971). Moreover, synergy-based acquisitions often result in the more intensive use of firm resources with limited capacity. However, this integration can amplify threats and can inhibit the firms' ability to respond to favorable conditions in the business environment.

Socio-Psychological Aspects

According to Vaara (2003), many studies have focused on rationalistic explanations for challenges encountered in post-acquisition integration. There remains little knowledge of how socio-psychological features of post-acquisition decision-making may influence (organizational) integration. Vaara's (2003: 862) sense making

[4] An example of the contagion effect is converting two production plants into one, which is risk-bearing when if fires occur at the production plant.
[5] An example of the capacity effect is stripping and leaning the acquired entity for only producing standardized parts, making the organization unsuitable for more challenging order intakes (e.g. pilots).

perspective highlights complex socio-psychological processes, in which several socio-psychological factors are considered playing an important role in post-acquisition integration. A focus on socio-psychological processes should be considered important, because acquisitions are likely to create many tensions concerning organizational changes within post-acquisition integration, which can not be solved within a modeled approach. Vaara (2003) considers four characteristics hindering post-acquisition integration; (1) inherent ambiguity surrounding integration issues, (2) cultural confusion in social interaction and communication, (3) organizational hypocrisy in integration decision making and (4) political integration issues (power games). Ambiguity and cultural confusion may produce organizational hypocrisy if and when the integration approach is not consequent with actions in the post-acquisition organization. This is likely to happen in circumstances where there is no pressure for organizational changes in particular parts of the post-acquisition organization as in conditions of (relatively) satisfactory organizational performance. Ambiguity and confusion may also develop into circumstances where changes are seen as politically significant. Consequently, key actors should not be content with superficial signs of success. They must be prepared for tough decisions when their aim is organizational integration (Vaara, 2003: 890). Consequently, neglecting socio-psychological influences certainly can lead to value leakages in post-acquisition integration.

Velocity

As stated by Ranft & Lord (2002: 423), several scholars have stressed the need to rapidly integrate to avoid 'post-merger drift'. Post-merger drift is a decline in organizational and individual productivity during the period following an acquisition. During this time, integration-related tasks may distract management attention away from the firm's operations, important decisions and investments may be delayed, and competitors may take advantage of these distractions and delays. As Meyer (2008: 211) noticed, the best time to attack a competitor is when he is in the middle of a complex acquisition process. Further, employees in the acquired firm may be uncertain about their future roles, which may erode their job satisfaction, commitment, and motivation. Therefore, rapid acquisition integration is viewed as a means of minimizing post merger drift.

However, other scholars have stressed that rapid integration may be harmful in its own way for reasons of creating dissatisfaction among the acquired firm's employees and blocking the acquiring firm's ability to learn about the acquired firm's operations and processes. Overall, integrating an acquisition may be problematic because of organizational 'fit' issues. Dissimilarities in organizational cultures, systems, and practices may lead to tensions and conflicts. Employees from both organizations may not work together productively because of different norms, values, and attitudes. These dimensions of organizational culture are deeply ingrained and resistant to change. Integration also may be difficult because of different reward and incentive systems, IT systems, production technologies, distribution channels, and marketing. Issues related to a lack of organizational fit may result in a number of HR and organizational dysfunctions, including diminished individual productivity, reduced organizational efficiency, and a loss of competitive strength (Ranft & Lord, 2002: 423).

According to Grimpe (2007), a higher level of integration of acquirer and target offers greater chances to exploit value creation. However, a lower level of integration and, thus, a higher level of autonomy for the target imply a lower potential for conflicts leading to higher commitment and creativity. The lack of skills in order to learn from the target, high internal resistance, and slower decision-making could furthermore damage the (innovation) potential of the acquisition (Cassiman et al., 2005: 201).

2.5. Post-Acquisition Integration Strategies

The third main pillar is about post-acquisition strategies. To understand the post-acquisition process, and to work to a certain integration strategy, several scholars developed frameworks in which integration typologies

force decisions in post-acquisition integration. These decisions can be forced by providing post-acquisition integration typologies in which the trade-off between preservation and integration is modeled and challenges in post-acquisition integration can be solved. Several scholars stressed different approaches within different contexts to force successful post-acquisition integration in which often a trade-off between preservation and synergy creation has to be established. Next, these different typologies are provided and analyzed.

2.5.1. A Standard Approach

For understanding the integration approach a firm applies, Haspeslagh & Jemison (1991) consider two central dimensions of the acquisition; (1) its relationship to the acquiring firm and (2) the way in which value is expected to be created. The first dimension relates to strategic interdependence that needs to be established between both firms to realize a strategic capability transfer. The other dimension is associated with the need to preserve the acquired strategic capabilities after the acquisition.

The Need for Strategic Interdependence & Organizational Autonomy

The essential task in any acquisition is to create the value that becomes possible when two organizations are combined and which would not exist if the firms operated separately. Haspeslagh & Jemison (1991) and Pablo (1994: 807-808) define the strategic task as the successful transfer of critical skills, strategic capabilities and resources that form the foundation for value creation. Such capability transfer requires creating and managing interdependencies between both organizations. These interdependencies disturb the 'boundary' of the acquired company, and this disturbance is likely to be presented, if not resisted, by managers who want to keep their way of doing things. Therefore interdependence should be carefully managed (Haspeslagh & Jemison, 1991). Yet one of the paradoxes in acquisitions is that the pursuit of capability transfer itself may lead to the destruction of the capability being transferred. The preservation of capabilities requires boundary protection and organizational autonomy. Dealing with the perceived need for autonomy after an acquisition is one of the most important challenges management will face. The organizational task, therefore, is the preservation of any unique characteristics which are a source of key strategic capabilities (Pablo, 1994). However, both strategic and organizational tasks have implications for integration activities. The strategic task requires that the development between the combining firms' value activities and the organizational context is appropriate, while the organizational task reflects a need to maintain some level of structural differentiation between both organizations to protect capabilities that are causally related to a specific organizational context (Haspeslagh & Jemison, 1991). However, there remains a tension in the integration design decision (Pablo, 1994: 808).

Typologies

According to Haspeslagh & Jemison (1991: 145-147), some acquisitions have a high need for strategic interdependence and a low need for organizational autonomy. These acquisitions call for what is labeled an (1) absorption approach to integration. Other acquisitions present a low need for strategic interdependence, but a high need for organizational autonomy. This integration approach is called (2) preservation. Other acquisitions are characterized by high needs for interdependence and high needs for organizational autonomy. The term (3) symbiosis is used to describe this integration approach. These approaches represent metaphors to guide the integration challenge (Haspeslagh & Jemison, 1991: 146). It is stated that the usefulness of choosing an overall metaphor for post-acquisition integration does not change the fact that acquisitions bring with them many positions and capabilities and might be best served by a different approach. The fourth quadrant is labeled (4) 'holding acquisitions' in which firms pay no attention to integration and creating value through anything except financial transfers, risk sharing, or general management capability within a sort of holding activity. This approach needs no further attention due to its less occurring character. The need for strategic

interdependence and organizational autonomy should be considered in a combined fashion, which resulted into more specific approaches (typologies) to integration, visualized in Figure III.

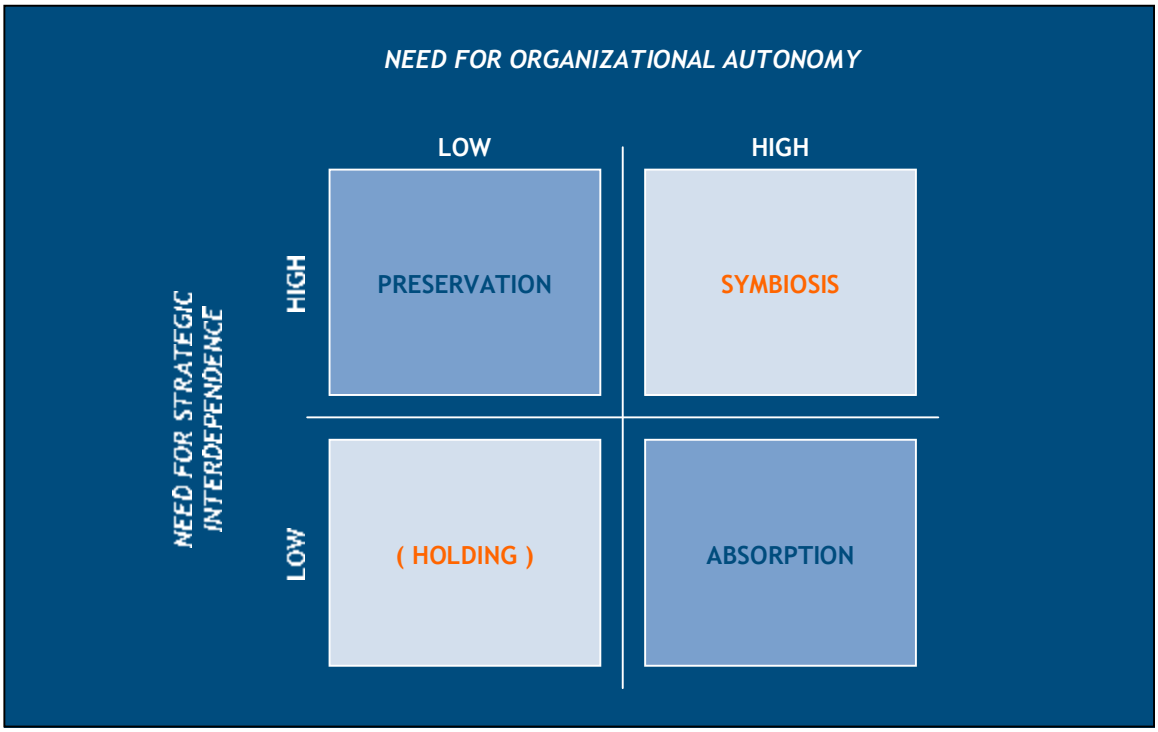

Figure III: Typologies of Acquisition Integration Approaches (Haspeslagh & Jemison, 1991: 145)

Subsequently, these typologies, with exemption of the 'holding' typology will be described and analyzed.

Absorption Acquisitions

Absorption acquisitions are those in which the strategic task requires a high degree of interdependence to create the value expected, but has a low need for organizational autonomy to achieve that interdependence. The integration implies a full consolidation over time of the operations, organization, and culture of both organizations. To eliminate all differences between both original companies may take a very long time indeed, especially if one is combining two comparable even-sized companies. According to Haspeslagh & Jemison (1991), the distinction that matters is one of intent at the outset. In absorption acquisitions the objective is ultimately to dissolve the boundary between both firms. In absorption acquisitions the acquiring company needs to ensure that its vision for the acquisition is carried out. Wavering because of extreme sensitivity to cultural issues is likely to limit the firm's ability to get the value expected, because the management task is to bring about the interdependence of the firms.

Preservation Acquisitions

In preservation acquisitions there is a high need for autonomy and a low need for interdependence among the combining firms. In such situations the primary task of management is to keep the source of the acquired benefits intact, because deterioration in the acquired (and sometimes acquiring) company's ways of managing, practices, or even motivation would endanger a successful acquisition. Despite that the need for interdependence is rather low within the preservation typology, this sort of autonomy and the protection it implies are often difficult to provide. Acquired operations are managed at arm's length beyond specific areas in which interdependence is to be pursued. According to Haspeslagh & Jemison (1991), value was created

through a series of interactions that brought about positive changes in the ambition, risk-taking, and professionalism of the acquired company's management group. The metaphor capturing this value creation in preservation acquisitions is nurturing. Nurturing the acquired firm represents only one part of the value-creation potential that may be realized through preservation. Another important source of value creation is the learning that for the acquiring company might derive, both in terms of making further acquisitions in the newly explored area and in terms of learning for its base businesses.

Symbiotic Acquisitions

The third type of an acquisition integration approach presents the most complex managerial challenge, since these two requirements have equal importance (Koenig & Meier, 2001: 26). Symbiotic acquisitions involve high needs for both strategic interdependence (because substantial capability transfer must take place) and organizational autonomy (because acquired capabilities need to be preserved in an organizational context that is different from the acquirer's). In addition, in symbiotic acquisitions both organizations first coexist (preservation) and then gradually become increasingly interdependent. Within the period of preservation, members of both firms learn from each other before making strategic changes necessary to gradually amalgamate both firms (Schweizer, 2005: 1068). This coexistence and mutual dependency is slowly achieved, because of the tension arising from conflicting needs for strategic capability transfer and preservation of autonomy and culture. Symbiotic acquisitions need simultaneous boundary preservation and boundary permeability in which the acquired company itself changes its organizational practices to adapt to the new situation. To succeed in amalgamating organizations symbiotically, each firm must take on the original qualities of the other (Haspeslagh & Jemison, 1991). Despite the advantages for a symbiosis approach, Koenig & Meier (2001) argue that a rational approach is unsuitable for managing symbiotic acquisitions. Koenig & Meier (2001) present a more organic model within the symbiosis typology. They state that post-acquisition integration failure is associated with a rational approach, and success with an organic approach. This organic (and less rational) approach considers that organizations are above all human communities that are endeavoring to adapt and survive. This means that they are more actively constructing their future, instead of the distinction and trade-off between strategic interdependency and organizational autonomy. Furthermore, all post-acquisition integration contexts are too different and complex to fit in one rational model of four typologies.

A Technology-Driven Application

In addition to the integration typologies of Haspeslagh & Jemison (1991), a more technology-driven application of these integration typologies is provided by Grimpe (2007). Grimpe (2007) states that achieving the desired effect of improving a firm's capacity for innovation, technological knowledge must be combined with the acquired resources. The research of Grimpe (2007) provides a more sophisticated view on these integration typologies applied to a technological context. It turns out that technological success benefits most from a symbiosis and an absorption strategy. To achieve economic success or high integration quality, a preservation strategy appears to be the best choice as reorganization efforts are rather limited. Further, it seems less important whether changes are made in both companies or only within the target as long as both organizations can be harmonized. At the same time, the effects of symbiosis and absorption have to be balanced with negative impacts on economic success and integration quality. Especially for absorption, in which significant negative effects could be substantiated, there appears to be both economic and employee-related reasons for these effects. Such an approach raises fears, stress, and anxiety among the target's employees. To achieve economic success or high integration quality, an adjustment (preservation) strategy would possibly be the best choice as reorganization efforts are rather limited. In contrast, when it comes to improving NPD capabilities, an adjustment approach does not seem to be useful. With respect to the integration instruments, it was shown

that the structural linking exhibits a great impact on technological and economic success but no effect on integration quality (Grimpe, 2007: 625-626).

2.5.2. A Model of Dynamic Integration

Based on the trade-off between the need for strategic interdependence and the need for organizational autonomy, it is previously discussed that Haspeslagh & Jemison (1991) defined four different integration typologies. In addition, Grimpe (2007) pays more attention to the technological context and their consequences on these four different typologies. Subsequently, a more dynamic approach is provided by Birkinshaw et al. (2000) which is not focused on a technological context, which makes this model more dynamic.

Combining Human & Task Integration

Based on the integration typologies of Haspeslagh & Jemison (1991) and the technology-based approach of Grimpe (2007), Birkinshaw et al. (2000) provide a more dynamic model of integration in which the success of the integration type is analyzed and visualized in Figure IV.

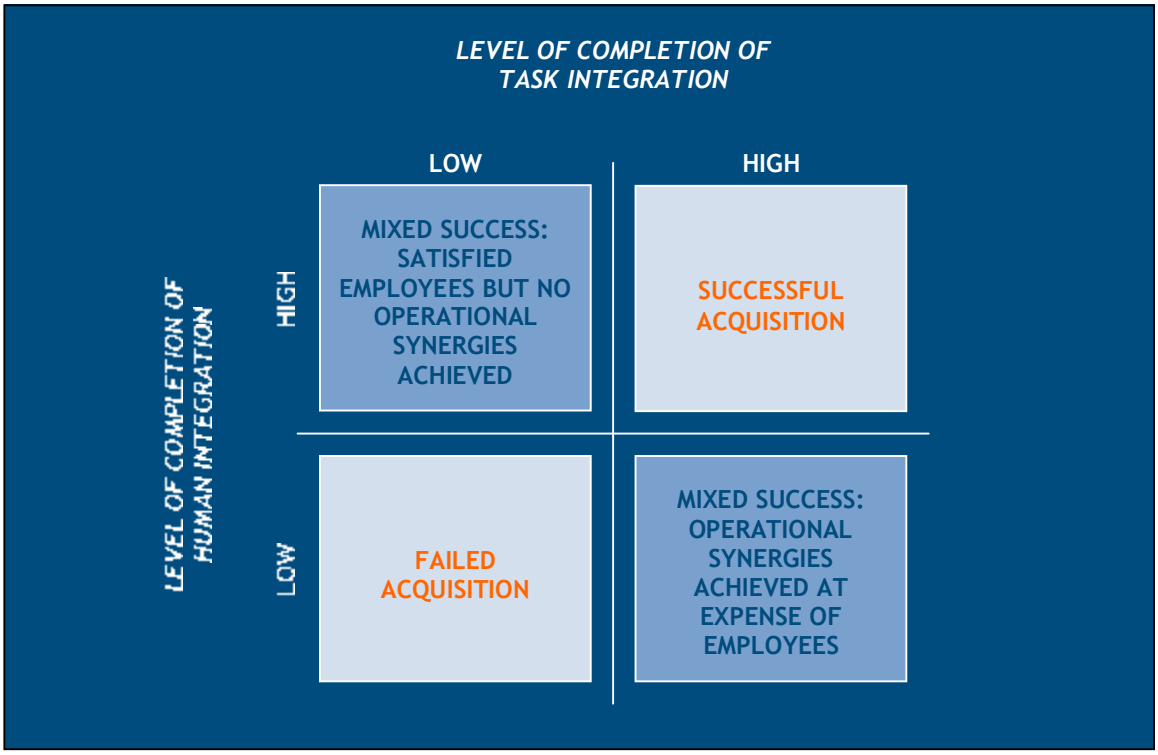

Figure IV: Impact of Task and Human Integration Processes on Acquisition Outcome (Birkinshaw et al. (2000: 399)

Birkinshaw et al. (2000) distinguish two types of integration instead of the four typologies Haspeslagh & Jemison (1991) and Grimpe (2007) applied. According to Birkinshaw et al. (2000), first a post-acquisition strategy has to be developed, which is more or less comparable with the acquisition justification phase (Haspeslagh & Jemison, 12). This strategy provides task- and human integration processes which eventually should result in acquisition success. Applying these two typologies Birkinshaw et al. (2000) suggested ((1) task integration and (2) human integration), should result in successful post-acquisition integration. Within this, task integration is defined as the identification and realization of operational synergies and human integration is defined as the creation of positive attitudes towards the integration among employees on both sides. Overall acquisition success is thus contingent on the effective management of both sub processes (Birkinshaw et al.,

2000: 400). However, the two dimensions of the integration process do not necessarily occur to the same extent, and a relative emphasis on either task or human integration can potentially have a significant negative impact on the outcome of the acquisition (Birkinshaw et al. 2000: 399). In addition, also cultural and political characteristics should be considered because of their suspected importance of how these characters influence the chosen approach to integration (Pablo, 1994: 824). An emphasis on human integration may result in satisfied employees but no operational synergies, while an emphasis on task integration can lead to the achievement of synergies but with a loss of employee motivation. For the process to be entirely successful, both task and human integration have to be effective (Birkinshaw et al., 2000: 399). According to Koenig & Meier (2001), the process can be named successful if the premium paid is lower compared with the advantages that are established.

2.5.3. A Multilayered Hybrid Approach

According to Schweizer (2005), the multileveled and multistage complexity of acquisitions makes it necessary to apply a hybrid post-acquisition integration approach with simultaneous short- and long-term motives and orientations, and segmentation at a different pace across different value chain components and lenses. As already mentioned, Bannert & Tschirky (2004) argue that technology integration needs to be consistent with other integration dimensions and proceeds more slowly than financial and structural integration. Taking a broad perspective, however, makes it possible to integrate multidimensional issues into a comprehensive model that views acquisition performance as a function of post-acquisition integration and value creation (Larsson & Finkelstein, 1999).

Multilayered Insights of Post-Acquisition Integration Challenges

As stated by Schweizer (2005: 1067), the need to treat acquisitions as multidimensional and multifaceted phenomena (Javidan et al., 2004) is driven by different motives, while companies pursue different motives within their desire to acquire specific technological know-how and technologies (Ahuja & Katila, 2001). Schweizer (2005) makes a considerable contribution in the development of a post-acquisition integration pattern that calls for a hybrid integration approach with simultaneous short- and long-term orientations and preservation of specialism across different functions and value chain components.

Applying only one integration approach, then, is not sufficient. Different motives may call for completely different integration approaches. To correctly decide what kind of integration approach to apply, an acquirer needs to compare the core competences of its acquired company with its own core competencies along the value chain (Schweizer, 2005: 1068). Core competences are superior in use, hard to imitate, difficult to substitute for, and more valuable within their original firms than outside them. After the acquisition, a company is no longer a small and dynamic company because it has become part of the structure of a large, multiproduct, integrated, and more hierarchical company. Acquisition initiates a change in culture as well as in the determinants of the rate and direction of firm-level innovation (Schweizer, 2005: 1069). The acquirer tries to set structures in place that grant the company a high degree of autonomy, so that it becomes an independent center of excellence within the structures of the company while at the same time integrating those value chain activities that do not depend on critical culture and know-how. Based on this, one could argue for as much autonomy for acquired organizations as possible because they may otherwise lose the qualities that made them interesting to the acquirer in the first place. Schweizer (2005) also indicates that post-acquisition integration can be a very long process and can be affected by key managerial decisions on the speed and extent of the post-acquisition integration process.

Schweizer's (2005) hybrid approach makes it possible to combine all important challenges of post-acquisition integration; (1) preserving critical competences and (2) creating synergies by solving the main challenge of

post-acquisition integration, namely (3) successfully balancing these two challenges. The hybrid approach (visualized in Figure V) covers a solution for the fragmentation of several theoretical lenses.

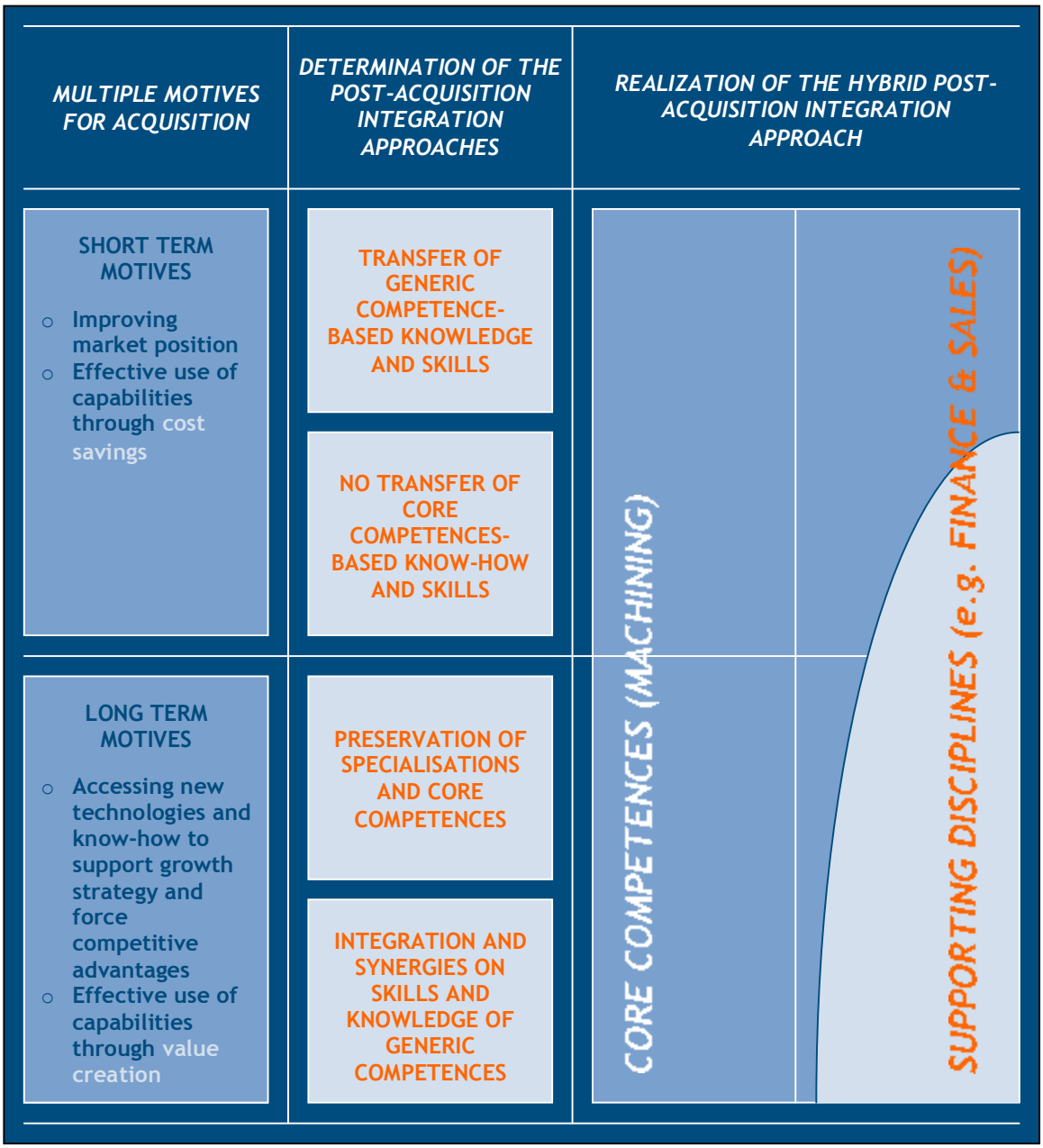

Figure V: Post-Acquisition Integration; a Hybrid Approach (based on: Schweizer, 2005: 1067).

Larsson & Finkelstein (1999) mention that acquisitions have been studied through (1) strategic management, (2) strategic combination, (3) economics, (4) financial performance, (5) organizational integration and (6) HRM. This fragmentation has resulted in several barriers to the development of more integrative research on acquisitions. In addition, Schweizer (2005) mentioned that this multileveled fragmentation is a fundamental problem of acquiring companies searching for optimal integration strategies. Bannert & Tschirky (2004) argue that researchers in the fields of acquisition and integration, technology and knowledge management lack an understanding of the individual aspects determining integration success and subsequently an understanding of success in technology driven acquisitions. That many, if not most, acquisitions do not succeed can be seen as

indicators that the integration approaches and typologies of both Haspeslagh & Jemison (1991) and Birkinshaw et al. (2000) fail to address the complexity of the post-acquisition integration process (Schweizer, 2005). Moreover, it becomes obvious that these post-acquisition integration typologies do not work in unique high-tech contexts as they only propose single stage approaches that do not explain and cover the complexity as a whole (Schweizer, 2005: 1060).

2.6. Conclusion

Technology driven post-acquisition integration is associated with high risks and failures. Despite all attention that has been paid to acquisition integration, there is very little known about how acquisitions succeed or fail in a high tech context when a company acquires an even-sized or larger company. The post-acquisition integration process faces many (managerial) challenges in different contextual and organizational configurations. By modeling integration typologies, several scholars tried to develop suitable integration approaches to manage the integration process. However, every high-tech acquisition holds a unique case in which also less rational issues are influencing the post-acquisition integration process. This makes it very difficult to apply for a certain integration approach. Consequently, each integration process is one of the most challenging subjects in business administration, especially when a company is acquiring an even-sized or larger company in a high-tech context. It is expected that this configuration is different from the already described contexts in scientific literature. By studying the acquisition of Philips IMS and Crown Gear by Norma, this particular and not fully covered field of literature will be investigated. Based on existing general literature on acquisition integration, patterns of succeeding in post-acquisition integration will be provided. These patterns should contribute to the body of knowledge, and should provide managerial implications to the post-acquisition process at Norma. By investigating the post-acquisition integration process of this acquisition and a prior acquisition of Norma, patterns for succeeding post-acquisition integration will be provided.

2.7. Research Questions

In order to complete this research, the following research questions are formulated, which are based on the central question and together provide the answer to this central question.

1. ***How is Norma managing post-acquisition integration of tooling operations of Philips IMS?***

   The first research question should provide insights into the way how Norma developed its management capability to perform post-acquisition integration of tooling operations of Philips IMS, which is a larger (or even-sized) company than Norma itself. By answering this first research question, it will be split in two sub research questions:

   1a. Which challenges and tensions of post-acquisition integration occurred within the post-acquisition process at Norma?

   By answering this sub question, Norma's drivers for preserving knowledge, competences and specialism should be made clear. In addition, also Norma's management objectives and capabilities will be analyzed. After preservation of knowledge, competences and specialism, it is considered that value should be created from post-acquisition integration by means of synergies. Within this sub question, it will be analyzed how Norma manages the creation of value by both preservation and synergy.

   1b. Which post-acquisition integration strategy is suitable for Norma in order to manage and succeed post-acquisition integration?

   Based on this sub question about preservation, it is considered that on different organizational and technological aspects, a trade-off between preservation and creation

of synergy has to be made. Within this, a post-acquisition integration strategy has to be applied to the Norma IMS case.

2. ***To what extent does the post-acquisition integration process of acquired tooling operations of Philips IMS differ from the post-acquisition integration process of production of Crown Gear?***
   The second research question should provide insights into the way how Norma performed the post-acquisition integration process of acquired production of Crown Gear, which was a smaller entity than Norma itself. It is expected that there are differences between both post-acquisition integration approaches because the acquisition of tooling operations of Norma IMS means a take-over of an even-sized company by Norma. By comparing both acquisitions, insights and lessons learned should be provided in how to manage the post-acquisition integration process of tooling operations of Philips IMS at Norma and eventually the post-acquisition integration process of Thales MPM.

Both research questions provide insights for answering the central question. The first research question and sub question describes the challenges of post-acquisition integration (main pillar 2 of the Theoretical Framework) within the post-acquisition process (main pillar 1 of the Theoretical Framework). Further, main pillar 3 of the Theoretical Framework (post-acquisition integration strategy) will be used for answered the second sub question of the first research question. The second research question analyzes all main pillars by comparing the acquisition of both production of Crown gear and tooling operations of Norma IMS. Subsequently, Table II makes clear how the research questions and scientific literature are interrelated.

Main Pillar of TF	*Research Question*	
The Post-Acquisition Process (1)	Research Question 1	Research Question 2
Challenges of Post-Acquisition Integration (2)	Research Question 1a	
Post-Acquisition Integration Strategies (3)	Research Question 1b	

Table II: Overview of the Linkage between Objectives, Challenges and Tensions

Eventually, the central question should provide a pattern of how to further improve the post-acquisition integration process of the acquisition of tooling operations of Philips IMS by Norma. Within this, the extension of differences and lessons learned from the take-over of production of Crown Gear (research question 2) should be taken in consideration.

The research questions will provide insights into how Norma's integration process in the post-acquisition phase should be managed. All sub questions will be answered in separated chapters as a component of the second part of this report (analysis of the recent take-over of Philips IMS by Norma resulting in Norma IMS and analysis of the prior Crown Gear / Cylkro® acquisition conducted by Norma). In the third part (Discussion & Conclusion), the research outcomes and conclusions will be combined in order to answer the main research question. As a final result, managerial implications should provide practical recommendations (patterns) for improving and succeeding the (post) acquisition integration-process.

3. Research Methodology

As Babbie (2007) already stated, science is an enterprise dedicated to 'finding out'. Before analysis can start, a research plan is needed (Babbie, 2007), which is described in this chapter. In addition to the Central Question stated in Chapter 1 (Introduction) and Research Questions stated in Chapter 2 (Theoretical Framework), this chapter describes the methods used to conduct the research objectives- and approach, and research questions already mentioned in Chapter 1.

3.1. Research Strategy

In this section, the research strategy will be provided and explained. The research strategy depends on the research setting and the purpose of the research. In addition, these components of research strategy will lead to the research design, described in the next paragraph.

3.1.1. Setting

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Gaining new technologies and capabilities through acquisition is likely to be a challenging task. Succeeding in post-acquisition integration is a formidable task under any circumstances (Ranft & Lord, 2002: 423). According to Grimpe (2007: 622), technological and economic successes as well as integration quality are interconnected. However, there has been no empirical assessment of how these situational features influence an organization's choice of an approach to integration (Pablo, 1994: 824). As stated by Bannert & Tschirky (2004: 482), the relevance of the integration on the acquisition success is without question. Its specific role in technology intensive acquisitions however remains unclear.

3.1.2. Purpose

The purpose of this research is to explore the post-acquisition integration process of Norma Hengelo and Norma IMS[6]. This research should provide both theoretical and managerial insights into the way Norma manages post-acquisition processes in order to generate value creating advantages. A pattern of post-acquisition integration should be formulated to support and succeed post-acquisition integration.

3.2. Research Design

A research design is the logic that links the data to be collected (and the conclusions to be drawn) to the initial questions of a study (Yin, 1994: 18). As a research design, one retrospective case study and one real-time case study are chosen. Each site might be the subject of an individual case study, and the study as a whole would have used a multiple case study (Yin, 1994: 44). Because of the type of research question posed ('how-question') the extent of control over actual behavioral events (integration process) and the degree of focus on

[6] The integration phase in the acquisition of Thales MPM by Norma at the end of 2007 will not be analyzed, because this acquisition is still processing at the moment of research.

contemporary as opposed to historical events (Yin, 1994), an exploratory case study design[7] will be applied. The use of a 'how-question' is likely to lead to the use of a case study as the preferred research strategy, because such a question deals with operational links needing to be traced over time, rather than mere frequencies or incidence (Yin, 1994). Addressing the research objectives that were brought forward in this research required examining the dynamics of post-acquisition integration processes such as control, structure, coordination, trust building, and learning. In addition, the case study is preferred because of more practical insights. The post-acquisition integration process itself is considered a case. According to Yin (1994) the essence of a case study is that it tries to illuminate a decision or set of decisions; (1) why they are taken, (2) how they were implemented and (3) with what result. Opposite to more static approaches such as survey research, case study research allows examining continuous processes in context and to draw in the significance of various interconnected levels of analysis (Pettigrew, 1990: 271). This case study approach should result in a unique and relevant case study which reduces enough uncertainty about causation to meet stakeholder needs (Shadish et al., 2002: 500).

3.2.1. Case Study Design

Based on the uniqueness of the entire case (Norma's acquisitions of two companies which are even-sized (Norma IMS) and smaller (Crown Gear) than Norma itself), a multiple case study is most plausible to apply (Yin, 1994). Consequently, two within cases (post-acquisition integration of Norma IMS and Crown Gear) are applied to get a good understanding of the post-acquisition integration process in both cases. A cross-case analysis will be conducted for comparing both within-cases. The process of integration will be functioning as unit of analysis in this research. Within this, the unit of analysis will be split in several (organizational) layers in order to analyze all entities at every level (corporate, management, operational). This multiple case study consists of two types of case studies; (1) retrospective and (2) real-time. A retrospective[8] case study will be used to investigate a prior acquisition of Norma; the acquisition of Crown Gear in 2003. A real-time[9] case study will function as the most important case of this research in investigating the integration process of Norma started after the acquisition of Philips IMS in 2007.

Retrospective study: the Cylkro case

In case study research, data can be obtained either by observing the sequence of events as they occur in real time or by relying on historical data to obtain a retrospective account of the process (Faems, 2006: 61). In this case, data will be collected in an exploratory retrospective way for several reasons. First, retrospective studies provided the advantage of knowing the 'big picture', how things developed, and the outcomes that ensued (Poole et al., 2000: 118). First, by analyzing lessons learned, a clear overview of an earlier acquisition of Norma (the take-over of Crown Gear in 2003) is gathered and very helpful. Second, in comparison with real-time (interview) and longitudinal (survey) data collection, retrospective data collection was more efficient; retrospective data collection allowed for a much more focused data gathering process (Leonard-Barton, 1990). Third, by making use of a retrospective study, the Cylkro case can be used as a study and evolutionary process in developing academic skills before conducting the real-time study. Extracted data, overviews and insights can be used in order to better analyze the integration process in a real-time case study.

[7] A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context (1), especially when boundaries between phenomenon and context are not clearly evident (2). The case study method is used because it deliberately covers contextual conditions—believing that they might be highly pertinent to the phenomenon of study (Yin, 1994, pp. 13).
[8] A research study that looks backward in time at events that have already taken place.
[9] A research study which (intensively) focuses on events for a certain and clearly defined period of time. Not the same research study as cross sectional, while a cross sectional study is based on observations representing a single point in time (Babbie, 2007: 102).

Real-time study: the Norma IMS case

Real-time data will be collected in the Norma IMS case. The Norma IMS case (as founded due to the acquisition of the tooling operation of Philips IMS by Norma in March 2007), is functioning as the context in which the unit of analysis (post-acquisition integration) can be analyzed. Applying a real-time case study is the only way to investigate the actual acquisition-process of Norma and Norma IMS. While the post-acquisition integration-process (stage-setting phase) started in spring 2007, a real-time case study provides real-time data and a complete overview of the current situation considering post-acquisition integration. The application of a real-time case is most important in analyzing the post-acquisition integration process of the Norma IMS case.

3.2.2. Research Phases

In order to complete the research, following research model is set up, in which the relation between separate subjects and phases of the research will be visualized in Figure VI.

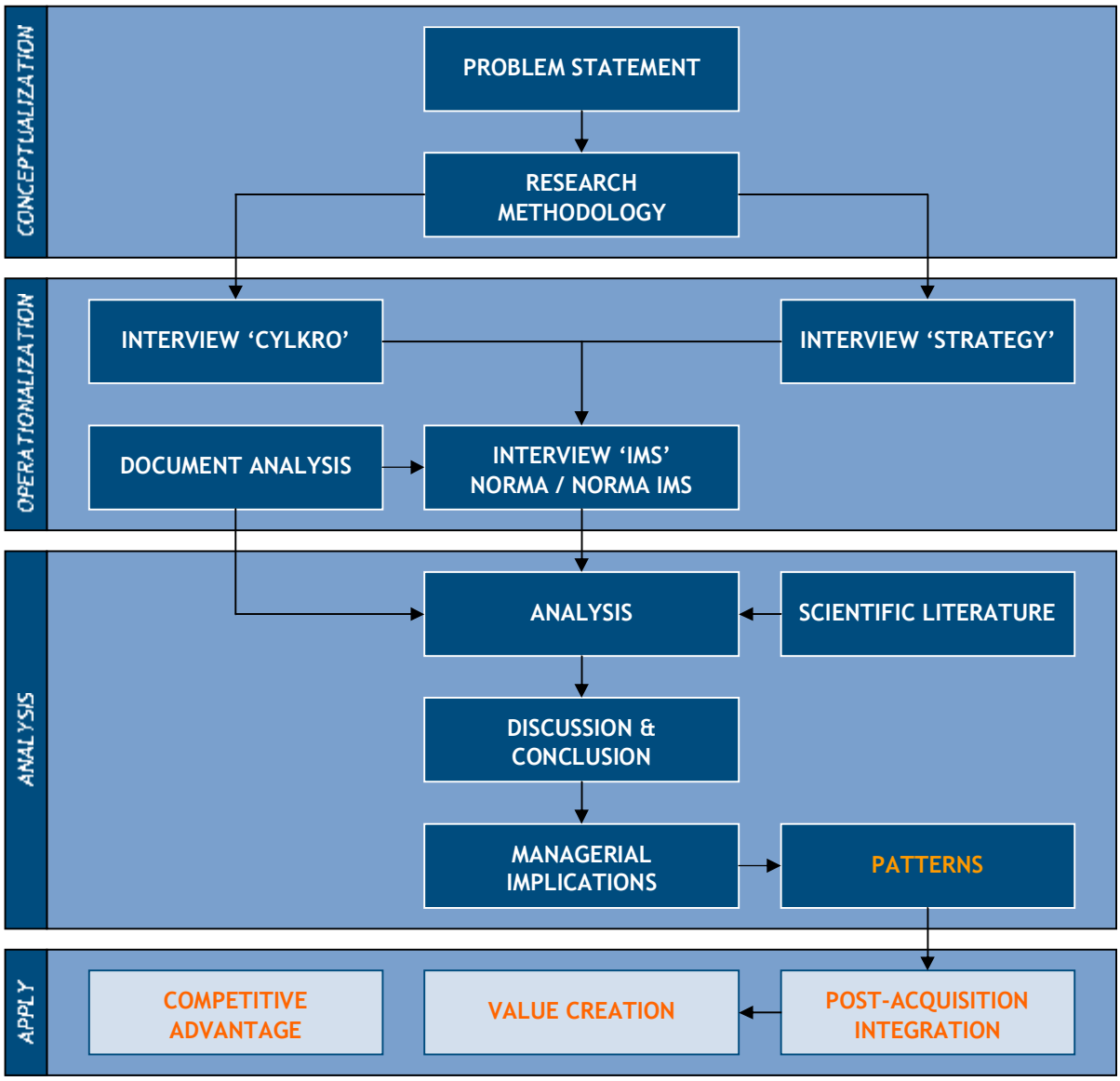

Figure VI: Research Phases

At first, (1) conceptualization of the research objectives should be clear. By making use of the Theoretical Framework, a research methodology approach can be presented, which makes (2) operationalization by means of data collection possible. The (3) analysis phase makes it possible to link scientific literature from the Theoretical Framework with all interview outcomes and collected information. Consequently, a scientific and managerial contribution can be made considering the most applicable post-acquisition integration process approach at Norma and Norma IMS. Eventually, patterns of post-acquisition integration has to be established, based on both the retrospective Cylkro case and real-time Norma IMS case, which provides insights and patterns on how to reach value creation from post-acquisition integration processes.

3.2.3. Operationalization

The research design is build upon several phases in which the integration in acquisition-processes is analyzed. The design is based on a multiple case study, consisting of both an exploratory (1) retrospective case study and (2) a real-time case study, in which the post-acquisition-integration process of Norma will be examined in-depth[10]. These phases (according to the research model) are formulated as a guideline for design. For operationalizing these theories, subjects on post-acquisition integration will be used within the interview protocol. Within this, a distinction in (1) pre-acquisition, (2) acquisition and (3) post-acquisition integration is made. The described challenges of post-acquisition integration (main pillar two of the Theoretical Framework) are used to identify experiences and developments. However, directly describing these challenges will not be asked in order to receive as much data as possible. More open questions like 'how would you describe the first year after acquisition' and 'does the acquisition cover your expectations' are used. Additional 'why' and 'how' questions will be asked to receive a complete view on post-acquisition challenges and how these progressed. In addition, reliability and validity is covered by different interview protocols and additional documents. Further, these interview protocols are based on a distinction in different organizational layers. More applied questions could be asked in order to receive different perspectives and experiences and more enriched data. Literature and interview protocols are handled the same way for both cases. In this way, both cases can be compared. Consequently, Norma's acquisition policy before, during, and after the acquisition can be analyzed. Based on this, conclusions considering post-acquisition integration processes can be provided.

3.2.4. Sampling

All described layers of both entities will be selected in a purposive (judgmental) sample[11]. Considering the research objective, it is appropriate to select a sample on the basis of knowledge of a population, its elements, and the purpose of the study (Babbie, 2007: 184). The representation of employees of all organizational layers of both entities (Norma and Norma IMS) leads to a wider variety of respondents and better interview outcome.

3.3. Data Collection

Techniques for data collection should provide valid and reliable data. In order to collect this data, multiple sources of evidence (Yin, 1994: 78) will be applied. According to Yin (1994: 92), the use of multiple sources of evidence allows addressing a broader range of historical, attitudinal and behavioral issues. However, the most important advantage presented by using multiple sources of evidence is the development of converging lines of inquiry and the provision of multiple measures of the same phenomenon, addressing the potential problem of construct validity[12] (Yin, 1994: 92).

[10] Such an in-depth examination of a single instance is called a case-study (Babbie, 2007, pp. 298).
[11] A type of non-probability sampling in which the units to be observed are selected on the basis of the researcher's judgment about which ones will be the most useful or representative (Babbie, 2007, pp. 184).
[12] The degree to which inferences are warranted from the observed persons, settings, and cause-and-effect operations sampled within a study to the constructs that these samples represent (Shadish et al., 2002: 506).

3.3.1. Interviews

Overall, interviews are an essential source of case study evidence in which well-informed respondents can provide important insights into a situation (Yin 1994: 85). They also can provide shortcuts to the prior history of the situation, helping to identify other relevant sources of evidence. However, interviews are subject to the common problems of bias, poor recall, and poor or inaccurate articulation. Again, a reasonable approach is to corroborate interview data with information from other sources (Yin 1994: 85). All interviews will be semi-structured[13] and built on open-ended questions, which will result in an in-depth and qualitative interview character. Misrepresentations and biases will be avoided by making use of probes and by making a distinction in organizational layers in order to analyze differences in insights and experiences.

Interview Strategy

As a data collection method, several different interview-protocols will be conducted at the Norma organization. In order to assess the predecessor acquisition of Crown Gear (retrospective case), employees and managers involved will be interviewed on post-acquisition integration subjects (interview 'Cylkro' (1)). Also, Norma's corporate management will be interviewed in order to gain insights into their strategy and drivers for acquisition (interview 'Strategy' (2)). As a result of the first conducted interviews, more evolutionary and in-depth interviews will be conducted for interviews on the take-over of tooling operations of Philips IMS by Norma. In addition, all organizational layers will be interviewed (interview 'IMS' (3)) on post-acquisition integration subjects as strategy, processes and progression for collecting different opinions and experiences. While all employees are Dutch-speaking, interviews are conducted and worked-out in Dutch. These interviews are digitally taped, worked out, and sent back for confirmation. Once confirmed, outcomes are handled with highest confidentiality. Next, an overview of respondents (the number of interviews is expressed in #) and documentation provided by respondents is presented.

Interview 'Cylkro'

All 'Cylkro' interviews (as part of the retrospective case study) are conducted within the same week. All taped recordings are written down, and have been sent to the respondents (see Table III) for approval.

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Table III: Selection and provision of data, interview 'Cylkro'

All three interviews took about one hour in which prepared questions were answered. These prepared questions handled the acquisition of Crown Gear, and the analysis of the post-acquisition integration process and value creating advantages caused by this integration.

Confidential content was removed

All interview outcomes are linked with scientific literature in order to fulfill the Norma Cylkro case analysis.

[13] Semi-structured (or focused interviews) may still remain open-ended and assume a conversational set of questions derived for the case study protocol (Yin, 1994: 84-85).

Interview 'Strategy'

The 'Strategy' interviews (as part of the real-time case study) also are conducted within the same week. Again, all taped recordings are written down, and have been sent for approval. Both interviews (see Table IV) took about one hour, in which all prepared questions were answered. These prepared questions are based on the business strategy of Norma from a managerial viewpoint.

Confidential content was removed

Table IV: Selection and provision of data, interview 'Strategy'

The interview outcomes of both the 'Cylkro' and 'Strategy' interview will be used to answer the first and second question, and to link Norma's strategy with scientific literature.

Interview 'IMS'

The 'IMS' interview (as part of the real-time case study) should be considered the most important research phase, because this research is particularly focusing on this acquisition. See Table V.

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Table V: Selection and provision of data, interview 'IMS'

All data collected should answer the research question on the post-acquisition integration process of Norma and Norma IMS. Within the interview 'IMS', employees of both Norma and Norma IMS from all organizational layers are questioned.

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All 'IMS' interviews are conducted within the same period of a month, in which respondents gave answers to prepared questions. These were based on the existing literature on acquisition integration, as stated in the Theoretical Framework. Again, all interviews are taped, written down, and sent to the respondent for approval. All interviews took about one hour on already stated subjects related to post-acquisition integration. After documented all outcomes, the research has been analyzed, and linked with relevant internal documents and scientific literature.

3.3.2. Documentation

All available newspaper clippings, press releases, articles and (internal) reports will be used and analyzed in order to gain insights into the post-acquisition integration process within the real-time case study. Subsequently, an overview of all documentation is provided in Table VI.

Confidential content was removed

Table VI: Overview of Collected Information

In addition to all conducted interviews and collected documentation, these sources of evidence provide a large database of information. From this point, the information will be linked with the Theoretical Framework.

3.4. Research Analyses

After collecting data and insights, all data will be analyzed and compared with each other. At first, an analysis of both within-cases will be conducted. Afterwards, a cross-case analysis of both cases should result in a reliable and valid view of post-acquisition integration which eventually results in patterns for succeeding post-acquisition integration.

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3.4.1. Structure of Analysis

The main pillars of the Theoretical Framework (post-acquisition integration process, challenges and strategies) correspond with the provision and order of the described cases. Moreover, the post-acquisition process of both cases will be described chronologically (pre-acquisition-, acquisition (stage-setting)-, and post-acquisition integration phases) in which challenges and strategies will be discussed within the post-acquisition phase. The interview protocols are different for each within-case but comparable on headlines. In this way, the within-cases can be analyzed separately, while both cases can be compared by cross-case analysis in order to compare the acquisition of tooling operations of Norma IMS with the acquisition of production of Crown Gear.

3.4.2. Answering the Central Question

As already stated, both cases will be linked by cross-case analysis in order to answer research question one (how is Norma managing post-acquisition integration of tooling operations of Philips IMS). This research question is divided into two sub questions covering all three main pillars of the Theoretical Framework. These main pillars are present in the interview protocols by means of open questions not directly linked to literature, and are integrated within questions about post-acquisition integration. The same chronology will be used by answering research question two (to what extent doest the post-acquisition integration process of acquired tooling operations of Philips IMS differ from the post-acquisition integration process of Crown Gear production). Both research questions together (including the linkage between the Cylkro and Norma IMS case within research question two) provides data for answering the central question ('how is the post-acquisition integration process of acquired entities functioning at Norma, and how can this process be further optimized in terms of realizing value creating advantages).

By further optimizing post-acquisition integration, different contextual aspects (different cases) can lead to different integration strategies. Hereby, patterns for succeeding post-acquisition integration have to be developed for the Norma IMS case. Further, the structure of analysis described above should provide a reliable and valid outcome for providing patterns for succeeding post-acquisition integration in high-tech contexts when even-sized or larger manufacturing firms have been acquired.

4. Norma IMS Case

Acquisition of an Even-Sized High-Tech Entity

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5. Norma Cylkro® case

Description of a Prior Acquisition

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6. Discussion

Conditions for Succeeding Post-Acquisition Integration

This chapter provides the linkage of the described results in previous chapters with the Theoretical Framework provided in the second chapter. This Theoretical Framework consists of three main pillars; (1) the post-acquisition integration process, (2) post-acquisition integration challenges and (3) post-acquisition integration strategies (typologies) for fulfilling post-acquisition challenges and succeeding in post-acquisition integration. After the introduction, the post-acquisition integration process of Norma IMS will be discussed. Consequently, both the Cylkro and Norma IMS case will be linked with each other by cross-case analysis with use of the Theoretical Framework. Further, this chapter will link the research questions with scientific literature and research outcomes. The research questions will be answered in accordance with the central question, which will be applied to Norma in the next chapter.

6.1. Introduction

Considering the linkage with scientific literature, following research questions have to be answered; (1) how is Norma managing post-acquisition integration of tooling operations of Philips IMS. This research question has been further divided in two sub questions; (1a) which challenges and tensions of post-acquisition integration occurred within the post-acquisition process at Norma, and (1b) what post-acquisition integration strategy is suitable for Norma in order to manage and succeed post-acquisition integration. The second research question covers a cross-case analysis (2) to what extent the post-acquisition integration process of acquired tooling operations of Philips IMS differs from the post-acquisition integration process of production of Crown Gear.

6.2. Post-Acquisition Integration of Philips IMS

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6.3. Differences in Post-Acquisition Integration

Confidential content was removed

6.4. Conclusion

Confidential content was removed

7. Managerial Implications

Succeeding Post-Acquisition Integration

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Epilogue

Subsequently, the most important research outcomes and contributions will be described by post-acquisition integration in conclusion. These most important contributions should be considered as a final conclusion. Also, limitations of the executed research, and implications for future research will be described. At first, a reflection on reliability and validity will be provided. This will be followed by a reflection on the scientific contribution and drivers for future research.

Concluding Post-Acquisition Integration

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Limitations & Implications for Future Research

In this paragraph, reflections on the research methods and strategy, as described in the Methodology chapter, will be made.

Reliability & Validity

Next, the reliability and validity of the research outcomes will be evaluated. By describing all phases of methodology, most important tasks are taken to assure a high level of reliability and validity as set out. However, a few aspects should be taken in consideration.

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Further, for both cases, most information is gained from the semi-structured interviews, in which co-workers of all organizational layers have been selected. However, this selection is based on purposive sampling in which employees who knows or experience most from the acquisition have been chosen. Consequently, not all opinions are included.

Confidential content was removed

The excellent communication with all employees of both entities, and their openness in data-provision resulted in an enrichment of research outcomes. The main limitation of this master thesis is that the suggested patterns have been established from research outcomes of two cases with a different context. Further, all research outcomes are based on an in-depth investigation of this limited number of cases. However, this in-depth analysis has been executed within a high-tech field in a specific line-of-industry (machining and metal working). The unique context of both investigated cases provided insights into specific cases, which makes a

generalization of research outcomes hard to proof. Concluding, these cases provide large evidence for succeeding post-acquisition integration within their specific context.

Drivers for Future Research

It is pointed that real-time research is a viable option to further elaborate on the findings that emerged out of empirical studies. In specific, future research that collects real-time observations about events and processes that were identified as critical ones in the empirical study will be encouraged (Faems, 2006: 194). For instance, real-time observations of the integration process in high-technological contexts after the acquisition of an even-sized or larger company would be helpful in further increasing understanding about how the post-acquisition integration process can result in value creating advantages for both firms within fields of organization, technology and innovation. Further, also the choice and application for a particular type of post-acquisition integration should be further investigated within this context. Real-time research provides the opportunity for a micro-level analysis (Faems, 2006: 194) of how and under which boundary conditions the integration process positively affects the dynamics of value creating advantages. In addition, this study should inspire scholars to investigate these phases of post-acquisition integration processes within these unique contexts, in which all named critical points of attention will be analyzed.

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Remarks

INSPIRED BY CHALLENGE