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# Role of IT Specialists in the Information System Integration Process: The Case of Mergers and Acquisitions



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## Abstract

**Purpose:** The purpose of this study is explore the role of IT specialists in systems integration during M&A processes including the issues faced during the process and provide suggestions based on experience from top management staff and IT specialists about improving the merger-IT integration process.

**Methods:** In-depth interviews with open-ended questions were conducted on ten individuals belonging to the senior management of the companies under the study. The collected data were transcribed and analyzed and coded using qualitative thematic analysis to derive categories and themes.

**Results:** The analysis resulted in 5 themes and 14 categories from a total of 39 codes. The analysis revealed the implications of "Underestimating the importance of IT" and analyzed the "Preferred IT integration approach" methods followed by the participants. The coded data also revealed the "Perception of management toward including IT and IT experts" and the "Issues faced in the M&A process due to the delay/non-involvement of IT experts". The results of the analysis conclude with the "Perceptions of managers toward the timing of IT integration" and suggestions from the participants based on their experiences.

**Conclusion:** The five themes obtained from the qualitative thematic analysis from the interviews of ten participants suggest that IT and IT specialists were a necessary and core function of the M&A process. The analysis also recommends senior management responsible for the merger or acquisition engage IT, specialists, during the early stages of the process to enable better IT integration and follow a centralized approach towards merging the IT systems.

## Keywords

IT integration, IT integration approach, M&A process, pre-merger, post-merger, IT specialists

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## Abbreviations

M&A: Mergers and Acquisitions

IT: Information Technology

IS: Information Systems

# 1. Introduction

*This research is based on the concept of IT integration during the M&A process and the role of IT specialists to facilitate the process. This chapter introduces the M&A process, and IT integration approaches. This chapter also goes on to explain the purpose of the aims and objectives, scope, and limitations of the study.*

## 1.1 Introduction and Research Setting

At some point in its life, a company will find itself coveting other enterprises in an effort to improve physical assets, intellectual property, legalities, pay, benefits, and culture. Corporate mergers and acquisitions (M&As) are a prominent means for corporate strategy. Mergers and Acquisitions (M&A) process is a key part of business growth, often seen as a regular part of the expansion of businesses and to a considerable extent determines a firm's operations and activities, especially among larger companies (Renneboog and Vansteenkiste, 2019). For any company intending to undergo an M&A process, information systems (IS) integration is critical for achieving the intended goals because it ensures a seamless transition of the IT systems between the organizations leading to increased efficiency (Buck-Lew et al., 1992; McKiernan and Merali, 1995). However, IT integration in M&Ss is not an easy transition and involves its share of issues. "Companies may face integration challenges as they seek to bundle software and service acquisitions with their customer offerings and face pressures to invest in new infrastructure capabilities and transitions to new revenue streams and sales models. (Deloitte, 2014).

Despite the complication's, companies continue to pursue M&As due to the advantages and benefits achieved with the process (Weber, Tarba and Öberg, 2013; Renneboog and Vansteenkiste, 2019). The main reason a company decides to merge is to reconfigure the business by increasing the resources and productive capacity (Ferreira et al., 2014). A merger initiative is mostly to maximize revenue and create additional value for the acquiring organization. (Anuku and Walter, 2020). Another reason is seen as per a study by Deng (2010) to take over some assets that favor technical and productive development. Some of the other reasons include trying to achieve better economies of scale, diversifying, defending the market position and eliminating competition (Masculis, Wang and Xie, 2007) Others seek operating value from the merger or acquisition. Often in this scenario, the acquiring or larger entity wants to acquire knowledge or capabilities that it does not have. Other reasons for pursuing M&A process can include trying to enter a foreign market or accessing new customers, and others (Weber, Tarba and Öberg, 2013). The overall objective is to increase profitability for both companies, leverage on cost, and mutually take advantage of advanced technologies (Maiga et al., 2015). Mergers and acquisitions also help firms in building and maintaining market leadership (Lukas, Pereira and Rodrigues, 2019). Tax advantages, cheap labor, and important technological expertise of target companies are exceptional qualities that acquirers seek (Vecchi, 2016). Whatever the reason, maybe it is increasing revenue or imbibing a company's technology, a smooth and effective IT integration plays an important role (Lohrke, Frownfelter-Lohrke and Ketchen, 2016).

IT integration, or systems integration, is the connection of data, applications, APIs, and devices across the organization. IT integration enables any company to be more efficient, productive, and agile and is critical when discussing business transformation. IT integration can be a decisive factor behind M&A success by assuring synergies are realized and ultimately increasing the deal-making capacity of acquirers" (Lohrke, Frownfelter-Lohrke and Ketchen, 2016). While IT is, of course, not the primary driver of M&A integration success, its importance in business integration is critical. Existing research and data support the

importance of closely aligning IT and M&A processes to maintain post-transaction momentum and to increase the potential of achieving the defined business goals of the transaction. For example, one study shows that getting IT involved at the beginning of the M&A lifecycle itself can be critical for effective execution and realization of benefits from a merger, acquisition, or divestiture. (Roehl-Anderson, 2013). In a 2015 based research by Cognizant, it was stated that when IT specialists understand the business drivers behind mergers and acquisitions (M&A) and are included in the initial stages of the process, they can contribute significantly to the success of these endeavors (Cognizant, 2015). Researchers point out that companies need to leverage more efficiently on IS integration to strengthen the advantages of their cost and quality performance (Maiga et al., 2015).

M&As can prove to be incredibly beneficial for the success of businesses – at least in the short term – if implemented correctly otherwise they can also lead to severe issues and thereby lead into failure (Tichy, 2001). Whatever is the agenda for mergers or acquisitions, due diligence, especially concerning information systems compatibility and integration issues, is absolutely critical. Many mergers do not reach business expectations because they stumble on the integration of technology and operations. However, a well-planned strategy for IT integration can help mergers succeed (Lohrke, Frownfelter-Lohrke and Ketchen, 2016). Lack of IS integration has been cited as the third most crucial reason for M&A failure. 45% of the expected benefits of M&As are directly dependent on the IS being integrated (King, Bauer and Schriber, 2018). Existing literature suggests that lack of efficient IT departments and skilled IT specialists could be a reason behind the failure of integration systems which are necessary for the success of M&As. Most of the companies that went through M&A without involving IT specialists continue facing issues with their information systems (Hedman and Sarker, 2015). Therefore, it is essential to investigate such cases and define the reasons that cause barriers to sustainable daily practice. On the contrary, companies that have failed to achieve this point in information system integration face significant issues. In a survey by Accenture, only about 40% of 400 interviewed enterprises reported that their last M&A related IS integration had been successful (Accenture, 2006). It is therefore hard to deny the emerging recognition of IS in the M&A process, which brings interest from research to explore alignment between M&A strategy and IS strategy (Hedman and Sarker, 2015).

Despite the growing importance of IS integration, the number of researches on this topic is not significant with regards to issues faced by IT specialists during IT integration with M&A. There is a gap where the existing literature does not dig deep enough into the issues that spring up during M&A - IT integration. Needless to say, this topic requires further exploration, also studying the role that an IT specialist plays in its dispensation. Of particular significance to the current dispensation is whether the companies would have achieved better system integration results if they had given greater attention to IT specialists at a higher level. These questions are not exceptional or surprising; instead, they are directly related to the realization that IS integration is a multidimensional issue, which demands the attention of multidisciplinary teams. It is because, from a professional perspective, a top-notch integration process should always engage IT specialists to maximize the returns. The reason as to why then they are not involved is a baffling realization worth exploring in a sound scientific manner.

This research was conducted within the Nordics and dealt with the importance of IT integration and the role of IT specialists during the merger and acquisition process of an aviation ground handling company. This thesis further explores the issues faced by IT specialists during the process of system integration in the company during their recent M&A process. The company that is under study operates in Norway, Sweden, Denmark and provides a wide range of aviation services for fifteen airports within this region. The selected

company is considered appropriate for the current inquiry as it provides essential information for this research covering three significant aspects. The first reason being – the company has recently undergone an M&A process as part of its business growth. Secondly, amongst all acquisitions, a UK based company, in particular, was acquired without any IT system, while the rest of the acquired companies had existing IT systems acquired with them. Thirdly, businesses within the aviation field and are digitalized and highly dependent on technology making the findings of this study critical to those in that field.

## **1.2 Purpose Statement and Research Questions**

Thesis goal is defined as performing explanatory research dealing on the IT specialists' involvement in the M&A process in organizations in order to succeed the system's integration and cooperation.

The main aims and objectives of the thesis include:

- To explore the role of IT specialists in systems integration during M&A processes including the issues faced during the process and provide suggestions based on experience from top management staff and IT specialists about improving the merger-IT integration process.

Within the defined topic, this thesis is focused on the following Research Questions:

- Which are the issues that IT specialists deal with during system integration as part of the M&A process.
- How and at which stage of the M&A process should IT specialists be involved?

## **1.3 Topic Justification**

The conversation on the role of IS in the success of M&A has gained traction in recent times; however, there remains a paucity of empirical evidence on the discourse. There are very few qualitative studies that aptly and holistically address the role of IT specialists in the system integration during M&A (Chang, Chang and Wang, 2014). Quantitative studies on the dispensation also appear to be scarce whether they are carried out in North America, Europe or in the Nordic countries (Allen, Ramlogan and Randles, 2002). Overall, a majority of the existing studies have explored the importance of IS strategy in M&A while ignoring the complexity of the issue.

The other main challenge with the existing studies is the dire lack of comprehensiveness. The majority of the qualitative studies which are conducted appear to be broad-based. Benitez, Ray and Henseler (2018) article is among the few seminal studies which attempt to address the implication of IS strategy in M&As directly. However, it fails to highlight the importance of IT specialists in ensuring the success of the process. Lukas, Pereira and Rodrigues (2019), also aptly address the importance of IS in M&A but also like Benitez, Ray and Henseler (2018) fails to address the importance of IT teams in the process. A similar pattern is also witnessed in Henningsson, Yetton and Wynne (2018), who in their qualitative article, failed to address the role of IT specialists in IS integration during the M&A process. The study is primarily dedicated to understanding the challenges which are faced in M&A integration.

Existing literature aptly addresses the impacts of IS on M&A. The author's findings on the topic are intellectually provocative because they managed to highlight the significance of IS strategy. These scholars, however, do not address the importance of the key stakeholders, which in this case, are the IT specialists who have the vital and necessary knowledge for ensuring the success of the process. For M&A planning, the IT team needs to study the

current state of affairs at the company, point out problem areas and devise a workable solution. Most of the companies that went through M&A without involving IT continue to face issues with their information systems (Alaranta and Mathiassen, 2015). It is imperative to investigate such cases and find the reasons that cause barriers for sustainable daily practices, as well as proof importance of an IT department into the M&A process. Involvement of IT specialists into M&A process is an essential thing for the company because if the cost of IT systems mergers is not calculated, it can lead to nullifying the savings intended out of M&A (Alaranta and Mathiassen, 2015). If IS integration is performed effectively, it can lead to the realization of the economic benefits in M&A (Hedman and Sarker, 2015). The research also indicates that 45% of expected benefits during M&A directly depend on the usage of the right IS integration. The article is, however, considerably broad and does not directly and succinctly address a specific industry.

As seen in the previous study, views that highlight the importance of IT integration, are also echoed in a study by De la Harpe and Thurner (2019), who states that system integration is an ignored issue during M&A. However, these scholars do not elaborate on the role of IT specialists in the process. Their study focuses on a financial institution in South Africa. These studies also try to introduce a conception of different integration strategies while at the same time exploring the alignment between M&A and IS process (Hedman and Sarker, 2015). Findings show that IS integration success can depend on organizational knowledge (that includes expertise building, routine, refinement, related expertise, sub-activity refinement, superstitions learning). Research also showed that IS integration directly influences the results of M&A synergy. However, IT resources are not easily transferred from one organization to another at low cost, and administrative knowledge building can be an explanation of IS integration fail during M&A (Hedman and Sarker, 2015). Evidence also shows that IS integration success can be contextually dependent. Similar findings are echoed in a study by (Henningsson and Kettinger, 2016) that explores the significant deficiencies in system integration during an M&A process. It is observed that the authors appear unconcerned with the importance of engaging IT specialists during the process of system integration which according to the authors occurs after the merger (Lohrke, Frownfelter-Lohrke and Ketchen, 2016). Therefore, there is a further need to contextually study these finding with a specific aim of identifying whether it is applicable across all industries. The scholars suggest that the lack of experienced and professional experts to manage the process is a significant impediment. The study is, however, generalized and cannot be applied to a specific industry.

It is therefore clear that there is a considerable gap in the existing studies, for reasons such as they are too broad, lack elements of multidimensionality and many if not all do not directly address the significance of IT specialists in the M&A process. There is a need to explain the importance, conditions, and complexity of involvement of IT specialists to present cases that are highly essential to stakeholders in M&A. The findings from this study are both theoretically and practically significant. Theoretically, they serve to build on existing knowledge concerning the topic of concern, besides serving as a premise for future studies. Practically, the findings will serve to enlighten stakeholders about the M&A process intellectually.

This thesis will explore the role of IT specialists during the process of system integration in a ground handling company within Nordics. The company operates in Norway, Sweden, Denmark, and Finland and provides a wide range of aviation ground services, including taking care of passengers and equipment at 15 airports. The selected company is the most appropriate for the current inquiry because it can provide the needed information for this research as it underwent M&A processes as a part of its business growth and businesses within aviation are more digitalized and highly dependent on technology.

## **1.4 Scope and Limitations**

The scope of the study is delimited to a ground handling company in the aviation industry in Europe. As a result, the findings of the study are essentially limited to this industry and cannot be used to make sense of other industries.

As most of the companies that went through an M&A process without having involved an IT team during the planning stage continue to face issues with their IT systems, it is essential to study such cases and define the reasons that cause barriers for sustainable daily practice. This need was taken into account and is what dictated the scope of the work:

- Investigate the current state of companies IS and how previously conducted M&A processes effected the IS and its integration.
- Investigate the issues faced by IT specialists during the company IS integration during their M&A processes.

## **1.5 Thesis Organization**

The current thesis is organized systematically into seven chapters in order to facilitate clear and detailed research.

The current chapter gives an introductory analysis of the problem addressed in this thesis and leads us into the rest of the research.

The second chapter includes a review of existing and relevant literature on the role of information systems in M&As and the issues faced by IT specialists when integrating IT into the merging process. This chapter allows an overall view and holistic understanding of the contexts in existing research and identifies the gaps.

The third chapter explains the methodological approach that is adapted in the current study, methods of data collection, and also explains the significance of those methods. This chapter further covers the ethical considerations that were respected during this study.

The results of collected data and findings are represented in a clear and understandable format in the fourth chapter.

The fifth chapter includes a detailed discussion of the data represented in the previous chapter. It examines the results and findings and makes inferences. The chapter describes the significance of the findings in light of the research problem and explains the insights observed.

The sixth chapter summarizes and reflects fundamental research. It concludes by listing out meaningful inferences and contributions of this research. This chapter further offers valid suggestions and recommendations against the research problem.

The final chapter will include all references used in the main body of the thesis.



## 2. Review of the Literature

*This chapter provides a comprehensive summary of previous research related to the role of IT experts and hurdles faced by them during Mergers and Acquisitions. This literature review investigates peer-reviewed scholarly articles, books, and other relevant sources in order to produce the relationship and contribution of this study to the context and reveal any gaps that exist in the existing literature.*

Business environments today have become increasingly complex and competitive due to rapid advances in technology. In order to survive and compete on a global scale, organisations experience a need to increase their market share through mergers and acquisitions. The estimated number of M&A worldwide in the year 2015 was around 48,553 (Statista, 2016). In 2016 alone, around the world, there were 96,665 M&A deals completed with a total deal value of US \$4,734 billion (Statistica, 2020). So, we see that IS integration has become a crucial part of the M&A process in light of the rapid advantages in technology. Many mergers do not reach business expectations because they of the lack of proper integration of technology and operations. However, a well-planned strategy for IT integration can help mergers succeed (Lohrke, Frownfelter-Lohrke and Ketchen, 2016). This crucial role that IS is playing in the M&A process has brought it into the focus of many researchers. The number of emerging studies on this discourse mainly concentrates on the significance of a coherent, holistic, and comprehensive IT integration for the success of an M&A process. On reviewing existing literature, we realize that researchers have concentrated on investigating the outcome of IT involvement. However, the studies on the role of IT specialists in system integration and the appropriate time to involve IT during M&A are relatively scanty. The current research recognizes this limitation after extensively reviewing relevant peer-reviewed journals. The literature for review is sourced from reputable databases using keywords such as Information system in M&A, the impact of IS in M&A, the role of IT specialists in M&A among other possible combination of the dependent and independent variables. However, before delving on the critical concerns' subsidiary issues such as critical definitions of key concepts shall first be resolved.

### 2.1 Mergers and Acquisitions

There is still a lack of a succinct and precise explanation of the concept of M&A, even though the concept is not newly founded, and business scholars have been debating and providing competing and complementary meanings for decades. According to Lukas, Pereira and Rodrigues (2019), M&A involves the coming together of two or multiple companies for the purpose of building a competitive advantage. Such a definition, despite being popular, however, does not accommodate the multidimensionality of the concepts. Mergers are when the company willingly enters into an agreement while an acquisition is when a dominant company takes up another one. A business owner may consider an M&A for various reasons such as the creation of market value, financial stability improved strategic position, organisational strength, enhanced brand, improved processes etcetera (Bruner, 2016). The Deloitte M&A Index 2017 by Deloitte (2018) showed companies increasingly turning to M&A and corporate venturing as a means of tapping into the growth potential of disruptive technologies, with M&A spend in this area quadrupling in just four years to \$291 billion in 2016.

Tetenbaum (1999) describing the process of a merger and acquisition as the following steps: The merger and acquisition process begins with the identification of an opportunity and, if there is interest by both parties, moves to negotiation. Once a tentative agreement is reached, the process moves to due diligence during which time the acquirer ensures that assumptions

made and information attained earlier were, in fact, correct. Only then does the focus shift from the financial, strategic arena to planning for the integration of both companies' policies, systems, structures, people, and culture. Due diligence (DD) is, according to (Delak and Bajec, 2013) and (Howson, 2017), one of the essential processes before an M&A focusing on the investment, liquidity, and risk management. The complex M&A process then moves into stages such as planning, research, announcement, closure, and implementation. The existing literature has diverse ways of explaining the steps of the M&A process.

The planning phase usually begins with an approval process from the board of each merging organisation, including all necessary legal and governmental agencies (Hsu and Chen, 2006). Weber, Tarba and Öberg (2013), in an article, explore these factors such as negotiations and cultural differences and their impact on M&As. Other factors that need to be decided during M&A planning include the type of products or services adopted, the distribution channels required, whether there is scope for new products and if yes, their marketing. Planning will also require an approach that enables the M&A to maximize profit and achieve economies of scale and cost reduction. Planning the integration of policies and systems is extremely important for any M&A. Planning can help and sure that the process runs smoothly and should outline the list of deal milestones and expected completion dates (Sherman, 2010). Furthermore, the need for new technology or other resources would have to be considered. Also, the matters of integration will also need to be taken into account, including the control of markets and supply sources.

King (2013), in his paper, has described factors that have to be considered before announcing an M&A. These include government regulators, competitors, customers, and employees. All this comes under the research phase of an M&A. King (2013) writes that target selection is a process by which the firm decides and approaches the firm it wants to merge with and offers them a deal. This selection process has to be well researched, or it would cause failure for the M&A. Harrell and Higgins (2002) identified the specific goals of the evaluation phase. The goals identified were mainly costs, staffing, operational issues and most importantly, the detailed analysis of the computing infrastructure. Resource management is a crucial goal of M&A where firms manage and combine their resources to overcome their weaknesses and focus on their strengths. Understanding Government regulations is essential because if government policies are not favorable and too complex, then an M&A may become too complicated. The customer base should be well-researched so that the products that the M&A is selling are profitable for both firms. Considering the environment of the firm being merged is also crucial, and firms should study whether their work environments are compatible and adaptable for the employees since they will be working together (King, 2013).

The third step of an M&A process is the announcement. In a review, (Calipha, Tarba and Brock, 2010) have described the process of the announcement as being made up of different stages. The pre-announcement stage or "The courtship phase" is when both merging parties discuss and familiarize themselves with their goals, objectives and mutual benefits. All other legal information is placed on the table before any deal can be signed. This step is also a part of due diligence. Then follows the main announcement or "The marriage ceremony" which is a legal step where one company announces its merger/acquisition of the other company and the reasons behind it. This announcement is directed towards the employees of both companies and the public. The "the honeymoon" and "the post-honeymoon" stages follow wherein the deal is sealed, and new management and integration begin. (Calipha, Tarba and Brock, 2010). The latter stage is the adjustment period of the merger. This would also include evaluating efforts taken toward achieving the target goals and what is required in the future.

The fourth step in the M&A process is called closure. It implies the settlement of the deal between the two companies. The "the honeymoon" stage mentioned in the last paragraph

overlaps with this stage because this is when the deal is signed (Calipha, Tarba and Brock, 2010). At this point, both companies are satisfied with their research on each other, and they have reached an agreement. Now, all that remains is the legal paperwork to get done. Approval from authorities, especially the government, is also essential as it impacts the potential success of the M&A. Government is responsible for analyzing the market share each company has, and ensure their ability to generate more value, becoming a single entity. Finally, the deal is settled, and the companies move towards the integration process where they adjust with each other (Varma and Tiwari, 2012).

The last step in the M&A process is implementation. Once again, (King, 2013) has described this well in his paper. The implementation process is the ultimate test for all the research conducted by the firms and their M&A processes. It is no doubt a challenging task and must be handled efficiently. All such theoretical initiatives recognize that merger and acquisition "involve organizational change, integrating some or all parts of the original organizations, functions and activities" (Seo and Hill, 2005). Experiments are conducted, and evaluation of the results is done during this phase until the established goals are met. Since two or more firms are combined, many internal barriers are encountered, and the integration process may take years of adjustments. Therefore, robust management approach is essential to make M&A implementation work and ensure desired performance (King, 2013).

Despite all the complexities mergers and acquisitions remain the best and realistic way of surviving and thriving in a changing world. Mergers and acquisitions are a dominant theme in global corporate news, and big names of the IT industries are absorbing smaller suppliers in many sectors (Hadfield, 2006). They make possible the combination of strategies and the positing of new business direction that was not anticipated before. One thing that is crucial to such a process is knowledge management, and it is a way of navigating uncertainties during the transition (Kongpichayanond, 2009). In practice, unfortunately, many M&As' processes fail, and there are pieces of evidence that demonstrate this in the existing literature. For example, it was found that only around 30-40% of M&As in the private sector bring financial benefits for their stakeholders (Hedman and Sarker, 2015). While all businesses may hope for sustainable boosts in profits, return on shareholders and access to exceptional technology, from M&A deals, unfortunately, not all end up in success (Benitez, Ray and Henseler, 2018). There is poor management of the integration process involved in current M&As (Walsh and Ellwood, 1991). This becomes a cause for the failure of the M&A. Benitez, Ray and Henseler (2018) showed that M&A could have a positive impact on a corporation only in the short term. This shows that the medium and long-term effects of M&A may not be as fruitful. It was observed that there were not greater impacts in the medium run, and the impact was negative in the long run. This raises significant questions on the success rate, and potential M&As have in a business. Although there are numerous reasons as to why M&As fail to deliver the anticipated result, some of the common ones include inappropriate management of the process; lack of due diligence and a culture of resistance that is found within an organization (Alaranta and Mathiassen, 2015).

The most crucial factor of corporate M&As failure is an IS-related issue; in particular, it could be seen as the lack of effective information systems integration (Hedman and Sarker, 2015). One of the critical integration processes is ensuring seamless absorption, integration, and collaboration between information systems. Due to growing digitalization and day to day revolutions that are witnessed in the sector of Information Technology (IT) many, more companies are relying heavily on information technology systems to run critical business processes (Srinivasan, Lilien and Rangaswamy, 2002). As times are progressing, technology, especially IT, has become a huge part of all businesses. When companies merge, their system software must integrate too. Lukas, Pereira and Rodrigues (2019) has further emphasized the

importance of strong IT in an M&A. Unfortunately, despite its importance, many firms ignore the need for a proper IT department that could handle system integration for the M&As.

## **2.2 System Integration/Information Technology Integration**

System integration refers to the seamless amalgamation of two distinctive systems, previously performing different or distinguished functions (Hedman and Sarker, 2015). The definition is, however, not comprehensive enough. A more robust and holistic definition appreciates the fact that there are several facets of system integration. These are described as follows:

There were proposed four integration approaches (Hedman and Sarker, 2015):

- IS absorption or complete integration (the target's systems are replaced by the acquirer's systems)
- IS coexistence or mixed integration (a part of the target's IS is maintained for different reasons. It requires a form of technical linkage between the acquirer's IS and the target's IS)
- IS renewal (a new in-house IS development or buying on the market)
- IS non-integration or leave-as-is integration (It is applicable in cases of acquisitions where the acquirer has no intention to integrate the target firm).

According to Giacomazzi et al. (1997), the starting point for an M&A is the integration of all the necessary systems. Many challenges are faced in an M&A during the IS integration and are according to Harrell and Higgins (2002), one of the most critical processes.

## **2.3 M&A and IT Integration**

The rationale behind merger and acquisition (M&A) transactions is attaining specific business benefits such as increased market share, reduced joint operating costs, and a more integrated value chain. Lukas, Pereira and Rodrigues (2019) are among the few thinkers who argue and prove that IT has an immense influence on M&A outcome. The scholars state that HR, finance, customer service and IT departments should integrate seamlessly for the needed results of an M&A to be practically seen. Research about M&A in general, and IS integration in particular, suggest that managers need to decide early on how the integration operations should be done (Wijnhoven et al., 2006).

## **2.4 Importance of IT integration in M&A's**

Business owners tend to overlook/underestimate the crucial importance of effective information technology (IT) integration in achieving the anticipated benefits. Research shows that a frequent cause of failure to achieve expected M&A-related benefits is poor IT integration in the merger project. In the words of (Roehl-Anderson, 2013) Poor IT integration, especially the integration of disparate IT architectures, can be extremely detrimental. Henningsson, Yetton and Wynne (2018) also state that IT integration, when poorly done, poses a significant risk to the post-merger organization. These studies explain the importance of Integration in M&A's. However, scholars do not discuss how and when the IT integration process should begin.

A study by Benitez, Ray and Henseler (2018) gives a clear depiction that IT integration is important for any company considering an M&A process. This research examines how information technology (IT) infrastructure affects M&A. The study used a combination of secondary as well as matched-pair survey data from various firms in Spain to investigate this relationship. On conducting statistical analysis of the collected data, they were able to infer

that IT infrastructure management indeed affects M&A. They conclude that a flexible IT infrastructure enables the development of IT integration capability in a post-merger that facilitates the control to integrate the IT and business resources of the acquired firm and in turn realize the economic benefits from a merger. This proves that proper IT integration is directly associated with the economic benefits realized by an M&A.

In a research study done in 2019, the authors state "Information system integration during M&As is one of the most critical processes when two companies are joining together" (Åhlström & Waldau, 2019). For the purpose of this study, several interviews were conducted with employees to identify critical Success Factors challenges and various integration methods do identify the critical aspects for a successful IS integration through an M&A process. The investigated process extends throughout the Merger process into the actual integration of the two organizations IT systems. The authors identified that one of the crucial factors necessary for IT integration in the merger process was IT infrastructure and its integration. Though this study goes deep into the factors that contribute to IT integration in an M&A process, it fails to mention integration timing and the role played by IT specialists for its success.

## **2.5 Importance of IT Specialists and Integration Timing for Efficient M&A's**

Alaranta and Mathiassen (2015) express that during a merger between two companies, information systems require careful management. Issues arise since there is a lack of experience, communication, and knowledge among the staff. The scholars also highlight that IT infrastructure and process differences stop synergies. Alaranta and Mathiassen (2015) further argue that such issues can negate the benefits of M&A processes. Key issues arise with the need to integrate personnel, business processes, with the information systems, and information technologies across the merging organizations (Zhao and Jun, 2006). The linkages and connection of the IT with other support functions is therefore crucial in an M&A. A common understanding of each organization's functions, interactions with or dependencies on their functions may change the traditional measures upward and downward. It is important not only to discrete process segments, but also to focus on the full process. Only this approach can help to identify and implement the best practices. Although the two scholars do a good job identifying the importance of expert management of IT integration, they fail to explain the importance of individuals with required expertise/IT specialists in information systems integration and management.

Most of the companies during M&A are proud of the processes and information system that they have previously established. They tend to believe that their system is efficient enough and are not prepared for issues that may arise. The authors Alaranta and Mathiassen (2015) state that 50% of M&As do not achieve their business goals due to issues arising from poor information systems' integration. The findings are also echoed by Henningsson and Kettinger (2016) who suggest that the major source of deficiency in M&As is the lack of coherent system integration. Frequently IT integration cost is not calculated in the M&A process, which can be a reason companies are not receiving that much profit as they have planned in the beginning. Systems integrations and merger can cost a lot for companies that explain why companies need to include systems integration into M&A strategy at the beginning (Renneboog and Vansteenkiste, 2019). The high costs may also be a discouraging factor for merging companies to consider integrating their IS. This is why IT specialists are important as they can help the upper management understand that IT is more than just a cost center (Santinelli, 2000). The above studies express the need for IT specialists and their expertise but do not explore the roles they play in various phases of an M&A IT integration process.

A study in 2004 examines the integration process that occurred within an existing organisation that is a global telecommunications company which grew primarily through mergers and acquisitions. The findings of the study implicate that the predisposition of individual managers towards business strategies has a profound impact on IT integration and structure. The study also finds that the CEO of the company had the full support of the top management team, which enable him to implement his vision for the integrated IT Department for all territories of the company. The others conclude that an effective IT governance structure involving IT specialists provides the organisation with the ability to capitalise on benefits and take full advantage of opportunities (Chin, 2004). This study highlights the importance of having an IT governance team comprising IT specialists. However, it fails to highlight the importance of the specific roles that an IT specialist plays in the M&A process.

IS integration has always been considered a crucial part of any M&A strategy. De la Harpe and Thurner (2019) reinforces this view and argue that system integration is indeed one of the most critical factors to consider for the success of M&A. Integrating two or more organizations after a merger presents a major challenge as the blending of information systems, business processes, facilities and organizational structure requires IT personnel to accept a new role (Reed and William, 1998). Therefore, these processes require the expertise of IT specialists. The author also states that even after integration is complete, operations of the new entity continue to offer challenges to IT specialists. The author further expresses the need to define the technical IT team and understand the preferences of the IT professionals or issues that may arise (Reed and William, 1998). Although the M&A integration process is intricate, some companies routinely achieve more success with it than others, and a large part of this has to do with their IT systems integration expertise (Botchkova, 2017). Some researchers (Cognizant, 2015) say that the IT specialists need to be involved at the beginning of the planning process as IT specialists play a huge role in the process of integration, adaptation and in establishing the path in which the organization is going to embark on. By understanding the business drivers behind mergers and acquisitions (M&A) and being included in the initial stages of the process, IT leaders can contribute significantly to the success of these endeavors (Cognizant, 2015). This will help them decide what type of infrastructure needs to be instituted. Today CEOs realize that their business goals cannot be met without technology and appropriate skills sets (Reed and William, 1998). If such specialists are not involved, then there is a high risk for a company to nullify savings and bring additional investments (Alaranta and Mathiassen, 2015). From the above, we see that existing literature points out that IT specialists are an important part of the M&A process. However, there is not enough research on the exact role IT specialists play in an M&A process. The current research digs deeper into this topic by interviewing some IT specialists that have played important roles in M&A processes.

Research by (Botchkova, 2017) was conducted on several companies by interviewing representatives of varying levels of IT expertise. All the representatives were in management positions and integral parts of M&A processes. However, there were significant variations among respondents on how essential IT systems integration was, and how quickly to do it. Some had a strong preference to proceed as soon as possible with integration, while others preferred to analyze each M&A on a case-by-case basis. Interviewees that did not strongly believe in the priority of IT systems integration were typically open to reexamining the integration at a later time. All of the people interviewed cited "Early IT involvement" in the M&A as a critical factor for successful integration: six listed it as second most important, one as third, and one fourth. The general recommendation was to involve IT no later than the time of doing due diligence, but interviewees from serial acquirers expressed a desire to see IT

involved earlier still, at the deal screening stages. The reasoning here was to give IT the ability to understand the strategic rationale behind the M&A fully, and to build a business case that included system integration considerations so that management could make a fully informed decision on if and when to integrate. Overall, companies believed that the typical timeline for systems integration was six months to three years, with serial acquirers showing both an ability to do fast by-the-playbook integration and showing higher tolerance for a long-planned timeline where it was supported by the company's M&A strategic rationale.

James, Georghiou and Melcalfe (1998) in their study, state that given the growing importance of technology and innovation in a firm's competitiveness and merger/acquisition activity, acquirers have much to gain from better-integrating technology into their M&A decision-making. Based on a three-year study of M&As involving some of the UK's leading companies, this article evaluates the technology issues that commonly arise in the M&A process. The authors realize that technology evaluation is problematic, and therefore, it is difficult to make assessments in an M&A in the early stages. However, the authors stress that despite the initial issues, there are immense gains to be made from earlier involvement of IT specialists during the due diligence phase. This early involvement helps to avoid costly errors, reduce failures, and for better realization of value from the acquired technology assets.

We see that currently, the focus on growth and technology involves "the management of knowledge, technology, and market/industry infrastructure" (Miller, 2001). As mentioned previously, Alaranta and Mathiassen (2015) found that more than 50% of M&As do not achieve their business goals; one of the major problems being the need to integrate information systems efficiently. If there is no integration in the M&A strategic plan, firms will experience an increased chance of failure in their M&A. At the post-merger IS integration stage due to the systems and context integration, it leads to the direct influence of systems to each other (Alaranta and Mathiassen, 2015). The IT team could face problems in reference to finding a midpoint and a common platform through which the data from the two companies could merge. The study that is carried out demonstrated that there is an intimate relationship between the M&A process and information systems during a merger/acquisition. An important reason for the downfall of M&A is the ignorance of the management of merger organization regarding the information systems. Thus, they fail to account for IT integration costs of the merger project during the planning phase. The author found that it gets difficult to successfully merge the integration system in later phases as the organization will be deprived of a good IT department with skilled specialists. The main aim of M&A is increasing profit and decreasing the cost and IS merge may have a strong impact on that.

However, from all the above literature, it still remains unclear: when is the right moment to involve IT, when should be the system merge plan created as various views collide with each other. These views need to be explored further. The thesis is focused on the investigation of the role of IT in Information Systems integration during M&A, the role that IT team of experts could play in the entire process, and timing of when to involve them.

### 3. Methodology

*This chapter provides information as to how this study was conducted and what type of analysis was done in order to understand in-depth the role of IT specialists during the M&A-IT integration process and the issues they face during the process. This methodology chapter first outlines the methodological tradition, approach, techniques for collecting data, analysis, as well as critically evaluates the study's overall validity and reliability.*

#### 3.1 Methodological Tradition

The methodological tradition outlines the philosophy that guides the research process. Saunders, Lewis and Thornhill (2015) argue that usually, a researcher will opt between a positivist approach and an interpretive approach. The positivist approach is a methodological tradition that favors the use of empirical evidence. However, Positivists acknowledge that only factual knowledge which has been collected through observations and the senses, as well as measurement, is admissible, plausible, and tenable. In the positivist approach, scientific methods are used to discover knowledge while the theory is used to develop hypotheses which are further confirmed using inductive or deductive methods; furthermore, relationships among variables are examined through experimental methods and involves the analysis of numerical data (Imel et al., 2002). This approach is not suitable for the study as it is not based on hypothesis but instead on reality and perceptions of the participants.

Interpretivist approaches, on the other hand, start with the observation that reality is not independent of the actor, and hence accommodates the researcher views in the process of analyzing data. An interpretive analysis is applied to narrative data where meanings are sorted out in specific contexts, relations found among phenomena and inductively discovers theory out of categories that emerge from the research (Brewer, 2001; Coll and Chapman, 2000; Cousins, 2002). Therefore, the central principles of "Interpretivist Theoretical Approach" align with the aim of this study. This can be said because the current study is formulated in terms of the participants' perception of things and how the participants deal with things as described by (O'Donoghue, 2007). The interpretivist tradition is preferable for the study because it involves the interpretation of how actors in the IT department interpret events. Furthermore, the type of data that the study deals with is non-statistical in nature and involves to a considerable level the subjective experiences of the participants.

Therefore, the current study undertakes an interpretivist approach that **inductively** studies the data in depth. The interpretivist approach uses an inductive study of the data which will give the research a realistic though flexible qualitative theoretical support (Liu, 2016). The inductive approach is a part of the qualitative interpretivist research approach identified recently in the past decade. This novel approach has, therefore, not been discussed extensively in the relevant literature, although in recent times, some scholars have described it (Maxwell, 2005; Silverman, 2005). Today we see that it has become a growing trend in qualitative scholarship (Caelli, Ray and Mill, 2003). The characteristic feature of the inductive approach is methodological "flexibility". A methodological tradition such as the generic inductive approach was chosen for this research as it is not guided by pre-established qualitative methodologies, such as the grounded theory, phenomenology, narrative research, ethnography, or case study (Creswell, 2009)

The inductive study approach implies beginning the research by highlighting the questions and gradually reaching towards a conclusion by answering them. While the deductive approach, on the other hand, begins with a hypothesis or "intelligent guesses". These hypotheses are then tested to reach a result and give the conclusion accordingly. In this study,



the approach that is employed is an inductive one as we devised our research questions in the beginning. It is also the most applicable with the interpretivist tradition. To summarize, while following the principles of qualitative inquiry in the current research, the generic inductive approach was included to allow new research findings and perspectives to emerge without the restraints of a tradition-specified qualitative approach (Thomas, 2006).

### **3.2 Methodological Approach**

The principal objective of the current research is to explore the role played by IT specialists during systems integration as a part of M&A processes and to provide suggestions from various IT specialists themselves about improving IT integration during the merger process. In order to achieve this, a qualitative research methodology was chosen. By employing a qualitative approach, this study allowed the interviewees to construct an accurate and, in-depth account of the events during and after the merger (Mohuba and Govender, 2016). The researcher will then be able to identify, process, as well as select and analyse the qualitative data. (Saunders, Lewis and Thornhill, 2015).

This methodological approach highlights a researcher's means of collecting, analyzing, and measuring data. The study approach answers to the concern such as the research approach and strategy, research choices and research time horizon. These are critical concerns that affect both the collection and analysis of data. Saunders, Lewis and Thornhill (2015) state that it is imperative for a researcher to begin by questioning how the progress of the study should be, what type of data they need to be collected, and how should the collected data be analyzed. These questions, according to the scholars, yield invaluable responses that will enable the researcher to go forward with the study efficiently. Saunders, Lewis and Thornhill (2015) state that such questions can be resolved through first deciding on a suitable research approach.

#### **Qualitative, quantitative or mix**

There are three main approaches that a researcher can use for research. These are the qualitative method, the quantitative method, and the mixed method that includes both the qualitative and quantitative approaches together. Qualitative research uses non-statistical data, and hence the analysis of data does not yield statistical results (Recker, 2012). The quantitative method, on the other hand, collects data that is statistical in nature and hence the analysis yields results that are numerical. The mixed method uses both qualitative and quantitative methods of research for one study.

The preferred methodological approach for the current study is the qualitative approach. This study considers the qualitative method to be the most effective method to answer the research questions. According to Recker (2012), the qualitative method focuses on non-numerical data such as what people have done, seen, experienced and said. Qualitative research is based on a constructivist or naturalist approach (Creswell, 2009). The primary reason the qualitative method is preferred is that the study seeks to collect mainly opinions and perspectives of the actors in the M&A process, preferably the IT experts in the ground handling company. Educational scholars frequently adopt a qualitative research strategy in order to improve the quality of their empirical studies (Liu, 2016). In a qualitative approach, "reality" is subjective and gives the researcher a view through the eyes of the participants in the study. The researcher interacts with the subjects and conducts in-depth interviews for the research project. The process is inductive in nature, and patterns or theories are developed through the research process, and it is not guided by pre-established qualitative methodologies (Creswell, 2009).

Secondly, the quantitative method would hinder the ability to collect more in-depth information as a form of interviews as time would be spent in collecting raw data for mathematical analysis. Thirdly, the nature of our study, as discussed earlier, involves the inductive approach and hence, does not have any hypotheses that would need to be tested via statistical methods. The inductive approach gives the research realistic though flexible qualitative theoretical support, as seen in a study by (Liu, 2016).

Furthermore, as Saunder, Lewis and Thornhill (2015) show us, one of the primary benefits of the qualitative method over the quantitative method is that the approach enables a researcher to dig deeper, thus harnessing the collection of as much information from the participant as possible. It also allows the researcher a great room of flexibility and is critical when dealing with a participant whose total openness is crucial to the value of collected data. Understanding that the quantitative approach is not at all required directly implies that the mixed method will not be used.

### **Longitudinal or cross-sectional**

Saunder, Lewis and Thornhill (2015) highlight that it is critical for a researcher always to consider the implication of time on their study. Time has an impact on several aspects of a study. In the present inquiry, the preferred design is cross-sectional. A cross-sectional design is when a researcher collects data during the same period for all participants while a longitudinal study is when data is collected at a different time period (Mayer, 2015). Both designs have their merits and demerits.

In the present inquiry, a cross-sectional study was considered best suited to the research purpose similar to the study by Botchkova (2017). Moreover, the cross-sectional design infers several advantages, such as ensuring that data collected from the IT experts are not affected by the maturation of the company culture as well as the research participants changed perceptions. It is possible that during the process of collecting data over a long time that the experiences of IT experts during another possible M&A dramatically shifts from one end to the other.

### **Research strategy**

Saunder, Lewis and Thornhill (2015) note that it is also crucial for a researcher to consider how they intend to answer the research questions.

Extensive Interviews with open-ended questions were chosen as the research strategy for this study in order to gain as much information as possible in order to facilitate a valid analysis of the data. Saunder, Lewis and Thornhill (2015) state that the main benefit of in-depth interviews is that it enables a researcher to collect as much information as possible from the participants. Extensive interviews are an appropriate method of collecting information in qualitative research to understand the research problem in-depth in order to make an accurate analysis and inference (Myers and Newman, 2007).

The main reason an in-depth interview is preferred for the study is that the sample size is essentially small. The method of collecting data is also suitable for the study because it is extremely critical to collect as much detailed information as possible from the participants and enable the researcher to capture the bigger picture.

### **Sampling strategy**

The overarching framework for identifying the case companies is purposive sampling strategy because it provides the needed flexibility when conducting a qualitative inquiry.

The company was identified from an initial sample of seven companies in the aviation and finance industry. However, it is sometimes tough to access the leadership of some of the companies, and response is often not provided. Due to this issue, the company selected for this study was later picked from amongst three companies that were cooperative to the study. One of them was from the finance sector and the other two in the aviation sector. The company from the aviation sector seemed of higher relevant since the sector was highly dependent on digitalization and had recently undergone M&As. This was in line with the objective of the study that is the evaluation of the link between IT departments and success of M&As via effective integration of information systems; the company selected was from the aviation sector. Grounds of convenience that are needed to conduct the study were also taken under consideration. The aviation sector is salient to understanding the benefits of seamless integration in the presence of IT experts; for there is no doubt that the sector is highly reliant on IS to drive all the critical business functions.

Further, this study shall utilize the **purposive sampling method** to identify participants in the company. The initial sample size was decided to be 50 members of the top management. However, due to the present pandemic situation (COVID-19), the researcher had to zero down on ten members of the top management who were most invaluable to the study. This implies that the ten participants that have been recruited for the research were selected based on their role in the integration process and ability to provide the researcher with the needed information. The interviewees, therefore, were selected by purposive sampling from three diverse groups/departments of the company. The departments chosen were the finance and operations departments as they play a critical role during the M&A process. The other group of participants were IT experts responsible for carrying out IT integration during the M&A process. Although there are no age or gender barrier for the study, it is also assumed that those who are working in the IT department are of legal age and have experience with the company's IS after the merger process.

### 3.3 Methods for Data Collection

Data collection is the process of gathering and inferring from the research participants or other relevant sources (Mayer, 2015). This study utilizes in-depth **interviews** as the data collection method to collect information from the research participants interviews and narratives as done by Sun (2018) in a similar study. Interviews are a good fit as a more natural and less structured data collection tool in order to elicit views, opinions and to understand the research problem in detail (Holland and Salama, 2010; Sun, 2018; Myers and Newman, 2007). Interviews are, according to Recker (2012), the most commonly used method for data collection. Furthermore, interviews can prove to be the most valid source of information for a qualitative -inductive study done by the mentioned scholars such as (Thomas, 2006) & (Mohuba and Govender, 2016).

Interviews were conducted on ten individuals belonging to the senior management of the company under study. The interviewees were selected by purposive sampling based on their importance in the merger and acquisition process and their role in its continuing success. The various participants belonged to the operations, finance, and IT departments of the company as they were directly involved in the processes that are under research in the current study.

The participants were

1. Business Improvement Director
2. Business Improvement Manager
3. Ex-Communications Manager

4. Ex-Chief Executive Officer of a Swedish Acquired Company
5. Ex-Chief Executive Officer of a Norwegian Acquired Company
6. Chief Finance Officer
7. Commercial Director
8. Local IT Denmark
9. IT Manager Norway
10. Local IT Finland

The interviews were initially intended to be face-to-face, but in lieu of the COVID-19 pandemic regulations, the researcher conducted digital interviews using Microsoft Teams which lasted around one hour each. All the interviews were conducted in a quiet environment to avoid disturbance and having the recordings infected by surrounding noise as done by (Bryman and Cassell, 2006) in a similar study.

The interview was conducted through the overarching guidance of an interview guide (Appendix A). This predetermines the instrument that is used in qualitative studies to guide the process of interview. Open-ended questions were chosen for these interviews as a part of qualitative research that allows studying the research problem in depth. Extensive and in-depth questions were used to create a balance between the various questions, and if time permitted, the researcher would have a chance to dig deeper into specific areas that facilitates the creation of themes (Bryman and Bell, 2015) which is discussed further in the data analysis section of this study. The interviews and interview questions are semi-structured with some predesigned open-ended questions focusing on the topics listed below to answer the current study, research questions.

- The M&A approach and process
- Importance of IT involvement and role of IT experts in M&A processes
- Issues faced during the process in relation to IT
- Suggestions from top management of the company to facilitate an efficient IT integration during an M&A

The data collection process was aided by portable electronic media, which was used to record the interview for the transcription process after obtaining written consent from the participants (Appendix B).

In order to ensure that the questions included in the interview guide are comprehensive with both content and face validity, piloting was necessary. The piloting process was done with close peers, and the questions were reviewed with them as well.

### **3.4 Methods/Techniques for Data Analysis**

Saunders, Lewis and Thornhill (2015) state that data analysis is the process of cleaning, ordering, transforming, and processing data with the intention of inferring meanings. This being a qualitative interview, the preferred method of data analysis is thematic analysis. It is a qualitative research method of data analysis that extrapolates significant themes from a specific set of data. Thematic analysis is preferred because the transcription process will yield a varied amount of texts (Mayer, 2015).

This study then involves an inductive exploration of the data to identify recurring themes, patterns, or concepts and then describing and interpreting those categories such as their experience and the role they played during the mergers. It also enquires about their opinions

on how and when IT integration and IT specialists should be involved in an M&A process. This approach enables the researcher to investigate and answer questions on the above.

For this purpose, after the interviews were conducted, the recordings were carefully transcribed. The researcher then carefully studied the information. The analysis involved comparing the results of the interviews against each other and looking for similarities or differences in opinions, experiences, and views of the participants.

### **Qualitative Thematic Analysis:**

Analyzing qualitative data from interviews, focus groups, and open-ended survey questions involve a systematic, iterative process of identifying and making meaning from common themes, as well as from unique or dissenting perspectives. The goal of this study was to identify the different themes in the literature review and to compare it with the perspectives of the participants as done by (Schultze and Avital, 2011).

The first step in conducting a thematic analysis involves closely examining the data to establish recurrent themes, subthemes, ideas, and topics. The key themes were based on the findings in the literature and the research question (Myers and Newman, 2007).

It follows a six-step process, mainly

1. Transcribing the verbal interview into written format
2. Familiarizing with the data
3. Coding the data
4. Significant categories and themes are generated
5. Review the themes
6. Present the result.

The specific justification for the techniques is the fact that it is easy to use. By flexibility, it is also implying that it can be applied lots of ways, and as a result, does not require professional experience in data analysis skills. It is, hence, likely to be less costly despite the fact that several qualitative researchers hail it as exceptionally reliable, according to Saunder, Lewis and Thornhill (2015). The authors state that it is a commendable method among a cluster of data analysis methods whose purpose is to identify meaningful patterns across a qualitative dataset that provide answers to the research questions being addressed. Patterns will be identified through a rigorous process of data familiarization, data coding, and theme development and revision.

### **Step 1: Transcribing the verbal interview into written for the format**

The interview recordings were carefully transcribed into a written format, and care was taken to transcribe accurately. The text was then sent to participants for review and validation in an effort to improve accuracy.

### **Step 2: Familiarization**

This step involves reading the text carefully and understanding the context. This crucial first step enables the researcher to get a thorough overview of all the data collected analyzing individual items.

### **Step 3: Coding**

This step involves reading the text carefully and finding meaningful codes which are relevant to the study. To be able to answer the research question of this thesis, the researchers needed

to find patterns in the empirical data, in order to identify essential elements in the answers given during the interviews. Coding is a method to organize the data so that underlying messages portrayed by the data may become more evident to the researcher. (Smith and Davies, 2010)

Coding data involves highlighting sections of the text – usually phrases or sentences – and producing shorthand labels or "codes" to describe their content. For example, one of the participants said that "*Focus was not very much into the detail of IT*" which was coded as failed to realize the importance of IT (Appendix C).

#### **Step 4: Generating themes**

The data collected was then studied closely to identify patterns among them and start producing categories and compiling them into relevant themes. An inductive approach was followed, allowing the collected data to determine the categories and themes. Themes are generally broader than categories which are broader than codes. Most of the time, several codes are combined into a single theme.

#### **Step 4: Reviewing and defining the themes**

This step involves making sure that our themes are useful and correct representations of the data. The researcher has then studied if the tentative themes were relevant to the research questions. The data set and themes were then compared against each other to answer questions like: Is anything missing? Are these themes present in the data? Can the data be represented by better themes? The researcher was satisfied with themes and went forward with the next steps.

After arriving at a final list of themes, each theme was defined carefully. The selected themes were defined to depict the various aspects they covered, which were relevant to the study.

#### **Step 6: Writing up**

Finally, the researcher analyzed the data, which is further explained in the next chapter.

### **3.5 Reliability and Validity**

This is a practical/empirical study, supporting the existing theories on this subject in the relevant literature. The research approach was innovative, as it collected relevant data from senior members of the management team, explored their own views on IS integration during the M&A process.

Schurink, Fouché and De Vos (2012) refer to the traditional criteria for good qualitative research, namely internal and external validity, reliability, and objectivity, but qualitative researchers Lincoln and Guba (2000) propose that credibility, transferability, and dependability are better indicators of good qualitative research. Of these four criteria, they consider credibility to be the most important one. Credibility refers to the fact that researchers portray accurately what the participants conveyed. One way to increase this is by means of member checks.

The credibility test applies to both reliability and validity in qualitative studies (Mayer, 2015). Credibility refers to the fact that researchers portray accurately what the participants conveyed (Theron, 2015). This implies that as much extent as possible, similar questions were used while interviewing the different participants. After transcribing the interviews, the participants were contacted again to confirm whether the statements, they provided represent the actual statement as given by the participant. This allowed the researcher to be sure that there was no misunderstanding of the context or misrepresentation of the participant's thoughts. The

researcher mailed the transcription files to the respective participant for them to review. Once the participants went through their file and confirmed they were correct only then did the researcher go forward with analysis of the data. Also, careful coding of the data enhances the clarity of the information provided by the interviewees. (Smith and Davies, 2010). Therefore, it is clear that the data was tested for reliability and credibility according to the definition by Theron (2015) mentioned in the previous paragraph.

### **3.6 Ethical Considerations**

This research was not expected to face any potential resource issues, such as access to the documentation as it was based on the primary data sourced from the interviews. The researcher was granted permission to access any documents if needed and to contact the participants.

The participants were informed in advance that the conversation during the interview would be recorded. The participants were free to accept or reject this interview proposal prior-to, in between or after the interview. Fortunately, all the participants agreed to the voice recording of the interview. The participants were then provided with an "informed consent form" which was duly signed by all the participants. Informed consent is an important ethical consideration to be followed when conducting interviews (DuBois, 2002).

The thesis has followed the main vital principles related to the ethical considerations that must be employed in carrying out research:

- a. Any type of misleading information will be avoided, as well as the representation of primary data in a biased way.
- b. The highest level of objectivity in discussions and analyses throughout the research will be maintained (Elswick, 2016).
- c. The anonymity of organization and research participants will be ensured for security reasons. The names of the participants will not be published, and only their positions in the organization will be mentioned (Husband, 2020).
- d. The research participants signed a letter of consent and signed off with their initials alone for privacy and confidentiality purpose (DuBois, 2002).
- e. Confidentiality of the research data will be ensured at an adequate level.
- f. Participation of respondents in the interviews and the research process will be entirely voluntary, and they will be provided with sufficient information about the aim of the research to understand their role and provide reliable information (Husband, 2020).
- g. Interview participants will not be harmed in any way, and their dignity will be prioritized (DuBois, 2002).
- h. The use of offensive, discriminatory, or another unacceptable language will be avoided in the formulation of interview questions.
- i. Works of other authors used in any part of this thesis during the literature review will be used according to the Harvard referencing system.
- j. For reliability, validity and confirmation of data retrieved from the interview, the recorded and transcribed all interview data was shared with the participants to obtain everyone's consent. The participants were further allowed to make any addition, modification, or deletion in their interview data. This was done to ensure that the

information obtained was correct, and there was no misrepresentation of their thoughts.

- k. The research will be carried out with the spirit of an intellectual, ethical commitment that accounts for the interlocutors' (research subjects') consent, privacy, confidentiality/anonymity, and human dignity (Elswick, 2016).



## 4. Empirical Findings

*This chapter presents the findings of the conducted inductive thematic analysis, which are most relevant to the research. The individual themes have been presented and summarised, with excerpts from the interviews provided to illustrate each of the themes along with their categories and subcategories.*

From the data collected from the interviews, the researcher was able to gather the following findings which are based on the perspectives of the top management belonging to the operations, finance, and IT departments of the company. After analysing the data, the interviewer was able to derive 39 codes from the collected data. The codes were then compared with each other and generated into 14 categories. These categories were further classified into five themes which are further discussed in this chapter. The data also contained valuable suggestions from the senior management based on their experience in M&A projects.

For this study, the researcher has inductively generated a list of five themes which cover the two research questions which are depicted in the table (Appendix C)

- Underestimating the importance of IT
- Perception of management toward the timing of IT integration
- Perception of management toward including IT and IT experts
- Preferred IT Integration approach
- Issues due to delay/non-involvement of IT experts

The themes and categories generated from the codes in the inductive thematic analysis are elaborated below:

### **Underestimating the importance of IT:**

From the data obtained from the interviews, we see that the senior management of the company under study underestimated the importance of IT integration during the M&A processes. These two perceptions of the respondents regarding this issue were as follows:

- **Failed to realise the importance of IT:** The data shows that the participants highly underestimated the importance of IT integration where one participant said, *“it wasn’t much of an IT job.”* They seemed to be more focused on administrative tasks which they perceived as more important *“I was more focused on organisational support.”* And even if IT was involved, it was to a very small extent *“IT was involved, but it was very little involvement”* as quoted by another participant.
- **Saw IT as only as a support function:** The participants considered IT to be only a support function to all the other managerial and core functions taking place during the M&A *“it’s more of a support function”* ~ participant. They focused their time resources and energy towards the core business functions *“I still think that the core business will have larger attention”* ~participant and since the IT integration was considered as just a support function, it was neglected *“focus was not very much into detail of IT”* ~participant.

### **Preferred IT Integration approach**

From the data obtained from the interviews, we see that the participants did not have a clear idea on which integration approach was the best at the time of the M&A projects.

- **Mixed approach:** Most of the participants had chosen to go for mixed or partial integration approaches during their IT integration processes. Where one participant

quoted “*in that case, I will prefer a mixed solution.*” They chose to install new systems while the old ones were still running and tried to manage with that.

- **Complete approach:** Few of the respondents who were from the IT department advocated that the complete IT integration approach was the best option for the successful transition and M&A efficiency “*I will say new system, i.e. complete replacing approach*” ~participant.

### **Perception of management toward including IT and IT experts**

Involvement of IT experts during an IT systems migration during a merger or acquisition is dependent of the type of systems being integrated (same/different environments) which decides the when the IT experts are needed to be involved. The perception of the participants towards the inclusion of IT experts has been categorised as below based on their responses.

- **IT not involved:** A few participants have informed that IT experts were not involved neither during pre or post stages of the merger and they “*had more business and operational staff involved in the M&A and not the IT staff*” ~ participant.
- **Involved in later stages:** Some of the participants chose to involve management at the later stages of the merger and stated that “*IT-experts was not involved from the very beginning*” and that “*I was involved in the later stage*” preferably due to nature of the IT environment being migrated or merged.
- **Both pre- and post-M&A:** A few organisations chose to involve IT during pre and post stages of the merger as another participant suggested that “*IT should be involved little in pre-M&A and then full involvement post-M&A.*” These decisions by the management were made based on their perception of the nature of the merger/acquisition at hand.

### **Issues due to delay/non-involvement of IT experts:**

Non-involvement of IT experts or the integration of IT in M&A can have many implications of the due process and data excerpts from the interviews reveal many issues caused due to delay or non-involvement of IT experts. These issues have been categorised further below:

- **Failure to predict cost:** Cost is a critical factor to any merger or acquisition and the failure to predict it can result in expensive failures. One of the participants reveals that “*IT non-involvement leads to high cost incurred by the Company.*” IT system integrations are often elaborative and complex in nature, and thus the costs associated with them tend to be expensive as experienced by on the participants and according to his experience says “*If we (IT-Experts) have been part of it from the beginning then we could see that this might be much more expensive.*”
- **Technical integration issues:** Integrating two independent systems is a complex task for any IT expert and many organizations through the integration face technical issues during the integration. One of the participants has found that it was “*Not easy to link all the stations*” for the M&A process. Issues can arise out the complex nature of integrating systems of varied environments and making them work together
- **Management misjudgement:** The decisions made by management during a merger or acquisition can make or break many due processes associated with such programs. Such decisions are critical to the success of the merger/acquisition. One participant reveals that “*Management saw an enormous IT cost*” and the decisions made through it directly impacted the involvement of IT experts in the project. It is thus imperative for management to make timely and accurate decisions while considering the

involvement of IT in an M&A process and making the right decisions can lead to a successful merger/acquisition.

- **Employee resistance to change:** Integrations of IT systems often bring changes in the software working environment for employees affected by the merger, and this can cause employees to resist change in adoption as quoted by one of the participants who suggest “*People were afraid of using something new.*”

### **Perception of management toward the timing of IT integration**

From the data obtained through the interviews, it can be realised that the management’s perception towards the involvement of IT during a merger or acquisition is varied. The perceptions fall into two categories as below:

- **Post-merger:** The data reveals that management often considers involving IT post the merger process. One of the participants commented, “*IT is usually involved in the later stages*” showing us that this was the choice of the management. The participants also admitted that involvement of IT in post-merger stage created complications “*IT became a complicated part of the post-merger operation.*”
- **Pre-merger:** One of the participants did, however, go with integrating IT at the beginning of the merger process as it proved to be beneficial in tying up the integration of these systems ahead of the merger “*actually at the very beginning*” (Pre M&A),

### **Suggestions were given by the senior management based on their experiences:**

1. **IT is not just a support function but a core function:** The participants, based on their experience with the past mergers/acquisition realized that IT is a core function of a merger and not just a support function as suggested by a participant who says that “*IT integration was needed not only as an operations function but also as a strategic function.*”. The common takeaway from the interview was, as quoted by one of the interviewees that “*the management knows the importance of IT, and they know that IT is not only a support function anymore*”.
2. **IT integration is not just a cost but an investment:** Integrating IT between two different organizations being merges can incur costs. However, the benefits are realized as the integration gets centralized as a unified system as suggested by this participant who has “*underestimated the actual cost or the loss of income due to having several systems compare to one system*”. The costs incurred with integrating IT must be considered early on to ensure an efficient budget allocation for IT integration. Ignore the costs for IT can result in budget inefficiencies as one participant puts it, “*we should also know that it will demand more investment and more internal IT resources and external consultants and so on*”. Another participant suggests that “*IT is not only a cost but can be a profit if used with a value perspective*”. If IT costs are “*not involved from the beginning, and that can be a problem because the profit that was calculated out of M&A can be reduced or totally removed*”.
3. **The best IT integration approach is the complete integration approach where you have a single centralized information system:** IT integration can be done in various ways as described in the discussion section, however, the best approach is the “complete integration approach” because as one participant, according to his experience puts it, “*the best solution will be if everything is located in one station and run through secure VPN lines*” and another participant suggests “*we should have shut down all the old systems and brought in new (our own) systems*”.

4. **It is extremely important to begin IT integration and involve IT experts early in the M&A process:** Involving internal and external IT specialists early in the M&A process will result in smoother and easier integration because “*Internal IT experts who really know the current system are involved in the discussion and comparison processes*”. Since these IT experts have a good understanding of the complexity and the nature of the IT environments involved, they will be able to suggest a roadmap and layout any complexities or hurdles early on which can result in a smoother integration as realized by one of the participants who “*realized that we needed an IT expert on top-level that could help out with all system that has to be integrated and find one common system for everything*”. A similar thought was suggested by another participant who suggests “*involve super users and people who really use the system to tell you what they need*”.

## 5. Discussion

*This chapter interprets and discusses the significance of the above empirical findings in light of existing literature and the research problem under study. It attempts to explain any new understanding or fresh insights about the problem based on the findings of this study.*

This research aimed to explore the role of IT specialists in systems integration during M&A processes and the issues faced by them during the process. This study also provides suggestions based on experience by senior management staff and IT specialists about improving the merger-IT integration process. Within the defined topic, this thesis is focused on the research questions, How and at which stage of the M&A process should IT specialists be involved? What are the issues that IT specialists have to deal with during system integration as part of the M&A process?

This research was brought about by carefully and extensively reviewing relevant literature and conducting in-depth interviews of senior management of a selected company that recently undertook quite a few M&A projects. The data thus obtained has led the researcher to gain a deeper understanding of the situation, which can be elaborated under the following themes:

- Underestimating the importance of IT
- Perception of management toward the timing of IT integration
- Perception of management toward including IT and IT experts
- Preferred IT Integration approach
- Issues due to delay/non-involvement of IT experts

### **Underestimating the importance of IT**

The literature review proves that Information Technology/Information Systems have now become an integral part of any business process (Botchkova, 2017). In recent times companies are relying heavily on information technology systems to run critical business processes (Srinivasan, Lilien and Rangaswamy, 2002). Studies show that the most important factor of corporate M&As failure is an IS-related issue; in particular, it could be seen as the lack of effective information systems integration (Hedman and Sarker, 2015; Harrell and Higgins, 2002; Roehl-Anderson, 2013). In the current study, we see a similar scenario where the majority of the participants in the interview have admitted to underestimating the importance of IT integration in their M&As. They expressed that in future going forward that they would not consider IT integration as just a support function but an integral part of the M&A. Therefore, in these digital times, it is highly important to keep in mind the information systems of both the merging companies as it has become a critical factor in any M&A process (Lukas, Pereira and Rodrigues, 2019). So it can be concluded from the findings of this research that IT integration is a crucial part of any M&A process in recent times due to the current dependence on technology and not acknowledging this would prove to be detrimental to the companies.

### **Perception of management toward the timing of IT integration**

Previous studies show that integrating IT early in the M&A process is essential for a smooth transition (Renneboog and Vansteenkiste, 2019). James, Georghiou and Melcalfe (1998) in their study, state that given the growing importance of technology and innovation in a firms competitiveness and merger/acquisition activity, acquirers have much to gain from better-integrating technology into their M&A decision-making stages.

Studies also show that getting IT involved at the beginning of the M&A lifecycle itself can be critical for effective execution and realization of benefits from a merger, acquisition, or divestiture. (Roehl-Anderson, 2013). Research about M&A in general, and IS integration in particular, suggest that managers need to include consider IT in the decision phases itself (Wijnhoven et al., 2006). One reason for this is systems integrations, and merger can cost a lot, and therefore companies need to include systems integration into M&A strategy at the beginning (Renneboog and Vansteenkiste, 2019). The data from the interviews show that the participants initially neglected IT integration until the later phases of the post-merger stage. However, after experiencing various complications with the transition, they realised that IT integration should be implemented from the planning and pre-merger stages itself.

### **Perception of management toward including IT and IT experts**

In recent times we see the growing importance of technology and innovation in a firms competitiveness and merger/acquisition activity, it can be noted that acquirers have much to gain from better-integrating technology into their M&A decision-making (James, Georgiou and Melcalfe, 1998). Review of existing literature shows that 50% of M&As do not achieve their business goals due to issues arising from poor information systems' integration (Alaranta and Mathiassen, 2015). The major source of deficiency in M&As in recent times is the lack of coherent system integration (Henningsson and Kettinger, 2016). Moreover, the existing literature shows that having an IT expert on board the team is indeed beneficial to the M&A process as business goals cannot be met without appropriate skills sets (Reed and William, 1998). The literature shows that IT specialists can be extremely helpful in making decisions regarding the IT integration approach and judge what is best for the company (Wijnhoven et al., 2006). They have also help to estimate the cost of IT infrastructure that will be required and facilitate a better planning system and avoid future crunches in the resources (Alaranta and Mathiassen, 2015). Some of the participants also admitted that they realised that they needed an expert on board when the IT integration process got complicated. So, we see that an IT expert can help the company be better prepared for the integration process in terms of awareness as well as resources. Their expertise can be well appreciated when they analyse what kind of IT infrastructure would suit the chosen type of integration process to benefit the organisation in the long run. The literature review depicts that a majority of the M&A failures was due to underestimating the importance of IT integration and IT experts. The existing literature shows that most managements delayed the involvement of IT experts until the later stages of post-merger integration. This creates situations where the IT specialist had to understand the operations of both companies and their information systems at the last minute, which resulted in not having enough knowledge to make the best decisions for the company. The data given by the participants show that the decision to involve IT experts in the later stages of the post-merger process resulted in the merger not yielding up to its expected potential. Therefore, it can be said that it is best to consult an IT expert from the initial and planning stages of the M&A process itself to the post-merger stages. This way, they can ensure that the company is prepared for the IT integration process in advance. Moreover, when they are more involved and understand the operations of both companies engaging in M&A, they can make better decisions and follow the best approach that would produce maximum returns and benefits.

### **Preferred IT Integration approach**

The fourth theme delved into the IS integration approaches that the management preferred for the M&A processes. The literature review shows varying perceptions as to which integration approach is best (Seo and Hill, 2005; Hedman and Sarker, 2015). Majority of the Top Management participants in the interviews preferred to go with a partial/mixed integration approach. They did admit that the sudden transition was difficult and experience resistance to

change from the employees. However, after experiencing complications with such approaches, the participants realised that having a single centralised IS was the best option. Studies show that a well-planned approach for IT integration can help mergers succeed (Sarazzin and West, 2011). Participants who belonged to the IT department expressed that having one central system can help the organisation to function more efficiently compared to a situation where they would have to keep referring to several systems, causing confusion. However, they also were open to making decisions based on the situation and operations of the organisation.

### **Issues due to delay/non-involvement of IT experts**

Studies show that it is important to include IT experts in the decision phases itself (Wijnhoven et al., 2006). IT integration is a complicated process and issues arise with the need to integrate personnel, business processes, with the information systems, and information technologies across the merging organizations (Zhao and Jun, 2006). By understanding the business drivers behind mergers and acquisitions (M&A) and being included in the initial stages of the process, IT leaders can contribute significantly to the success of these endeavors (Cognizant, 2015). At the post-merger stage, due to the systems and lack of context integration, it leads to the direct influence of systems to each other (Alaranta and Mathiassen, 2015). This early involvement helps to avoid costly errors, reduce failures, and for better realization of value from the acquired technology assets (Alaranta and Mathiassen, 2015). If such specialists are not involved, then there is a high risk for a company to nullify savings and bring additional investments (Alaranta and Mathiassen, 2015). In the current study, the IT experts who participated in the interview express that the major issue faced by them during M&As is not being involved from the earlier stages of the merger, especially the planning stages. It was also revealed that this resulted in the management failing to plan for the cost involved in IT integration. It also resulted in them not being sufficiently exposed to the stages of the M&A to get a thorough understanding of the company's operations. This results in them having to make decisions and carry out the integration with limited information. Integrating two or more organizations in the later or post-merger stages present a major challenge as the blending of information systems, business processes, facilities and organizational structure requires IT personnel to accept a new role (Reed and William, 1998). Moreover, the sudden changes would not go well with the staff or end-users leading to resistance to change. It is obvious that they will be able to make a proper decision only when they are involved and understand the operations of the companies involved in the merger/acquisition. Therefore, an effective IT governance structure involving IT specialists provides the organisation with the ability to capitalise on benefits and take full advantage of opportunities and avoid complications during the integration (Chin, 2004). The results of the current study also coincide with the literature and further stresses the importance of involving IT specialist in the earlier planning stages of the merger.

### **Lessons learnt through experience by senior managers involved in M&A and IT integration**

The top management members who participated in this research admitted that in the future, they would definitely

- ✓ Consider IT integration among the core functions when involved in an M&A process
- ✓ Consult and involve an IT expert during the early stages of planning for an M&A
- ✓ Involving IT & IT experts in the early phases of the pre-merger can go a long way in avoiding major integration complications
- ✓ Initial investments in IT integration leads to long-term benefits

- ✓ Complete integration and a centralised IS allows more efficient business operations



## 6. Conclusion

*This chapter aims to give an overall view and a clear summary of the current study and present the answers to the research questions. It further justifies the study by presenting the contributions of the present study to the existing literature and paves the way for future research.*

### 6.1 Conclusions

The present study was conducted in order to understand the importance of IT integration and the role of IT experts in mergers and acquisitions. Mergers and acquisitions play an important role in today's business organizations as they attempt to keep up with the competition. M&As are pursued with the goal of gaining benefits such as value, talent, better economies of scale, transferring resources or diversifying. However, all these benefits can only add up if the M&A is carried out efficiently. Previous studies showed that improper IT integration was a major cause of M&A failures. Therefore, the importance of IT integration during M&A processes was brought into focus and has become the basis of the current research. This brings us to the aim and objectives of this thesis which is to “Explore the role played by IT specialists in systems integration during M&A processes and issues faced by them” additionally this study also provides suggestions from IT specialists about improving the merger-IT integration process. The current research was carried out on a company based within Nordics which had recently undergone M&A processes. In-depth, interviews were then conducted on the top management to gain insights into their perceptions regarding the research topic in order to answer the research questions of this study which deals with the issues that IT specialists have to deal with during system integration as part of the M&A process? and how and at which stage of the M&A process should IT specialists be involved?

The inductive thematic analysis revealed the following themes which provided answers to the research questions of this paper. The first theme-Underestimating the importance of IT exposed the managements lack understanding toward the importance of IT integration in the M&A process. The senior management initially considered IT to be a support function to facilitate business operations. But these perceptions lead to complications which trickled down the entire M&A process. From there experiences, the staff realised that IT was not just a support function but was, in fact, a necessary core function of the M&A process. The second theme was the perception of management towards the timing of IT integration during the M&A process. This theme revealed that the participants initially chose to begin IT integration only in the later stages of the post-merger. However, we see that it was not the best choice, and this experience led them to realise that the IT integration process should begin during the premerger stages itself. The third theme dealt with the perceptions of the senior management towards involving IT experts during the M&A. It was found that the staff of the business operations department did not consider involving IT specialist on the M&A team from the beginning. This later led them to realise that the integration process was a complicated one which needed the expertise of an IT specialist. The fourth theme delved into the IS integration approaches that the management preferred for the M&A processes. It was observed that senior staff initially preferred mixed or leave-as-is approaches as they were better suited, considering that they chose to involve IT only in the later stages. However, after experiencing complications with such approaches, the participants realised that having a single centralised IS was the best option. They understood from experience that going for a complete IT integration approach was the best option to consider in most M&A cases which can be efficiently done only when IT is involved from the earliest stages of the pre-merger with the help of an IT expert who could make the best choices after analysing the situation. The fifth

theme covers the further issues faced due to delay/non-involvement of IT experts during the M&A process. It was found that due to the late involvement of IT experts, the management failed to consider the costs of IT integration during the planning stages. Further, they realised that IT integration was a complicated process, and further technical integration issues arose due to the late IT integration for which they needed the assistance of IT experts. Therefore, the main issue that IT experts face during an M&A is being involved too late in the M&A process which leads to lesser informed decisions and further issues such as technical, failure to predict costs and employee resistance to change. So, it is clear that these issues can be avoided if IT experts are involved in the planning stages of the M&A process itself. Therefore, a company considering M&A should involve the IT specialists in the earlier stages of the premerger phase to ensure the management can prepare a comprehensive plan for IT integration based on expert advice.

## **6.2 Contribution**

The existing literature tackled the topic of the importance of IT integration in M&As but not the importance of IT experts and the issues they face during post-M&A integration. This gap in the literature was covered by the present research. Moreover, expert advice coming from real experience is also provided in this study.

The results of this research can prove to be extremely beneficial to any company that is considering an M&A process as it contains real experience and advice by top management individuals who have been a part of M&A processes.

By understanding the benefits of proper IT integration and consulting IT experts in the earlier stage of the M&A process itself can go a long way in ensuring that companies make decisions that ensure a successful IT integration process which in turn ensures a successful M&A process.

## **6.3 Future Research**

The current study provides good information with regards to when to consult and involve IT specialists in the IT integration process of an M&A. It also talks about the issues they face and how to tackle them. However, there is very insufficient information regarding which integration approach (complete, partial or leave-as-is approaches) yields the best results.

This gap in the current literature calls for more future research on the topic of which IT integration approach results in a more efficient merger and acquisition.

## 7. References

- Accenture. (2006). Executives report that mergers and acquisitions fail to create adequate value. <https://newsroom.accenture.com/subjects/research-surveys/executives-report-that-mergers-and-acquisitions-fail-to-create-adequate-value.htm>
- Alaranta, M., & Mathiassen, L. (2015). Managing Risks: Post-Merger Integration of Information Systems. *IT Professional*, 16(1), pp. 30-40.
- Allen, P., Ramlogan, R., & Randles, S. (2002). Complex systems and the merger process. *Technology Analysis & Strategic Management*, 14(3), 315-329.
- Anuku, & Walter. (2020). Revenue Optimization in A Business Merger. *Journal of Academic Research In Economics*, 12(1), 1-14.
- Benitez, J., Ray, G., & Henseler, J. (2018). Impact of Information Technology Infrastructure Flexibility on Mergers and Acquisitions. *MIS Quarterly*, 42(1), 25-43. doi:10.25300/misq/2018/13245
- Botchkova, M. E. (2017). Critical success factors in the post- M&A IT integrations [Master's thesis]. 1-79
- Brewer, E.W (2001) *The Future of Adult Educational Research. Research Perspectives in Adult Education*. University Press of America.
- Bruner, R. F. (2016). *Applied mergers and acquisitions*. John Wiley & Sons. eBook: [https://www.academia.edu/25754720/Applied\\_mergers\\_and\\_acquisitions](https://www.academia.edu/25754720/Applied_mergers_and_acquisitions)
- Bryman, A., & Bell, E. (2015). *Business research methods*. Oxford University Press, USA.
- Bryman, A., & Cassell, C. (2006). The researcher interview: A reflexive perspective. *Qualitative Research in Organizations and Management: An International Journal*, 1(1), 41-55. <https://doi.org/10.1108/17465640610666633>
- Buck-Lew, Pliskin, & Shaked. (1992). Corporate acquisitions in the 1990s: Paying attention to information technology. *Journal of General Management*, 18(2), 69-87. <https://doi.org/10.1177/030630709201800205>
- Caelli, K., Ray, L., & Mill, J. (2003). Clear as mud: Toward greater clarity in generic qualitative research. *International Journal of Qualitative Methods*, 2(2), 1-13.
- Calipha, R., Tarba, S., & Brock, D. (2010). Mergers and acquisitions: A review of phases, motives, and success factors. *Advances in Mergers and Acquisitions*, 1-24.
- Chang, S., Chang, I., & Wang, T. (2014). Information systems integration after merger and acquisition. *Industrial Management & Data Systems*, 114(1), 37-52.
- Chin, P. O. (2004). The impact of mergers & acquisitions on IT governance structures. *Journal of Global Information Management*, 12(4), 50-74.
- Cognizant. (2015). *The Role of IT in Supporting Mergers and Acquisitions*. Webpage: <https://www.cognizant.com/whitepapers/the-role-of-IT-in-supporting-mergers-and-acquisitions-codex1042.pdf>
- Coll R.K and Chapman. R (2000) *Choices of Methodology for Co Operative Education*. *Researchers Asia Pacific Journal of Co-Operative Education* 1, No. 1: 1-8
- Cousins, C. (2002) *Getting to The Truth Issues in Contemporary Qualitative Research*. *Australian Journal of Adult Learning*. 42. No. 2. 192-204

- Creswell J.W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches, London: Sage publications, Politeia, 6(12), pp. 191–194.  
Available at: <http://search.ebscohost.com/login.aspx?>
- De la Harpe, A., & Thurner, T. W. (2019). The Critical Role of Information System Integration in a Horizontal Merger. *Journal of Cases on Information Technology (JCIT)*, 21(4), 1-13.
- Delak, B., & Bajec, M. (2013). Framework for the delivery of information system due diligence. *Information systems management*, 30(2), 137-149.
- Deloitte. (2014). Top 10 issues for technology M&A in 2014.  
<https://www.deloitte.com/content/dam/Deloitte/us/Documents/mergers-acquisitions/us-article-page-top-10-issues-for-tech-mna-in-2014-110114.pdf>
- Deloitte. (2018). 'The Deloitte M&A index 2017.' Webpage,  
available at: <https://www2.deloitte.com/bd/en/pages/finance/articles/gx-deloitte-ma-index.html>
- Deng, P. (2010). Absorptive capacity and a failed cross-border M&A. *Management Research Review*, 33(7), 673-682.
- DuBois J. M (2002) 'When Is Informed Consent Appropriate in Educational Research?: Regulatory and Ethical Issues', *IRB: Ethics & Human Research*, 24(1), pp. 1–8.  
doi: 10.2307/3564025
- Elswick, S. E. (2016) *Data Collection: Methods, Ethical Issues and Future Directions*. Hauppauge, New York: Nova Science Publishers, Inc (Ethical Issues in the 21st Century). Available at: <http://search.ebscohost.com/login>.
- Ferreira, Santos, De Almeida, & Reis. (2014). Mergers & acquisitions research: A bibliometric study of top strategy and international business journals, 1980–2010. *Journal of Business Research*, 67(12), 2550-2558.
- Giacomazzi, F., Panella, C., Pernici, B., & Sansoni, M. (1997). Information systems integration in mergers and acquisitions: A normative model. *Information & management*, 32(6), 289-302.
- Hadfield, W. (2006, August 15). IT strategy is key to merger success. *ComputerWeekly.com*.  
<https://www.computerweekly.com/news/2240065884/IT-strategy-is-key-to-merger-success>
- Harrell, H. W., & Higgins, L. (2002). IS integration: Your most critical M&A challenge? *Journal of Corporate Accounting & Finance*, 13(2), 23-31
- Hedman, J., & Sarker, S. (2015). Information system integration in mergers and acquisitions: research ahead. 24(2), pp. 117-120
- Henningsson, S., & Kettinger, W. J. (2016). Understanding information systems integration deficiencies in mergers and acquisitions: A configurational perspective. *Journal of Management Information Systems*, 33(4), 942-977.
- Henningsson, S., Yetton, P. W., & Wynne, P. J. (2018). A review of information system integration in mergers and acquisitions. *Journal of information Technology*, 33(4), 255-303.
- Holland, W., & Salama, A. (2010). Organisational learning through international M&A integration strategies. *The Learning Organization*, 17(3), 268-283.  
doi:10.1108/09696471011034946

- Howson, P. (2017). *Due diligence: The critical stage in mergers and acquisitions* (1st ed.). England: Gower Publishing Limited. Available from: EBSCOhost eBook Collection.
- Hsu, J., & Chen, E. T. (2006). The Impact of Mergers and Acquisitions on Information Systems: A Case of A Software Industry Acquisition. *Communications of the IIMA*, 6(1).
- Husband, G (2020) 'Ethical Data Collection and Recognizing the Impact of Semi-Structured Interviews on Research Respondents', *Education Sciences*, 10(206), p. 206. doi: 10.3390/educsci10080206.
- Imel, Wonacott, Kerka & Michael. E (2002). *Qualitative Research in Adult, Career, and Career - Technical Education*. Columbus, OH: ERIC publications. 1-15.
- James, A. D., Georghiou, L., & Melcalfe, J. S. (1998). Integrating technology into merge and acquisition decision making. *Technovation*, 563-573.
- King, D. R. (2013). A phased approach to merger and acquisition integration: Tapping experiential learning. Iowa State University Digital Repository. [https://lib.dr.iastate.edu/management\\_pubs/20/](https://lib.dr.iastate.edu/management_pubs/20/)
- King, D. R., Bauer, F., & Schriber, S. (2018). *Mergers and acquisitions: A research overview* (1st ed.). Routledge. Database: eBook Collection (EBSCOhost)
- Kongpichayanond, P. (2009). Knowledge Management for Sustained Competitive Advantage in Mergers and Acquisitions. *Advances in Developing Human Resources*, 11(3), 375–387. doi:10.1177/1523422309339725
- Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic controversies, contra-dictions, and emerging confluences. N. K. Denzin & Y. S. Lincoln (Eds.), *The handbook of qualitative research* (2nd ed., pp. 163–188). Beverly Hills, CA: Sage.
- Liu, L. (2016). Using generic inductive approach in qualitative educational research: A case study analysis. *Journal of Education and Learning*, 5(2), 129. doi:10.5539/jel.v5n2p129
- Lohrke, F. T., Frownfelter-Lohrke, C., & Ketchen Jr, D. J. (2016). The role of information technology systems in the performance of mergers and acquisitions. *Business Horizons*, 59(1), 7-12.
- Lukas, E., Pereira, P., & Rodrigues, A. (2019). Designing optimal M&A strategies under uncertainty. *Journal of Economic Dynamics and Control*, vol. 104(C), pp. 1-20.
- Maiga, A., Nilsson, A., & Ax, C. (2015). 'Relationships between internal and external information systems integration, cost and quality performance, and firm profitability.' *International Journal of Production Economics*, 169, pp. 422-434.
- Masculis, R. W., Wang, C., & Xie, F. (2007). Corporate governance and Acquirer returns. *The Journal of Finance*, 62(4), 1851-1889.
- Maxwell, J. (2005). *Qualitative Research Design: An interactive approach*. CA: Thousand Oaks: Sage.
- Mayer, I. (2015). Qualitative research with a focus on qualitative data analysis. *International Journal of Sales, Retailing & Marketing*, 4(9), 53-67.
- McKiernan, & Merali. (1995). Integrating information systems after a merger. *Long Range Planning*, 28(4), 4-62. [https://doi.org/10.1016/0024-6301\(95\)00027-g](https://doi.org/10.1016/0024-6301(95)00027-g)

- Miller, W. L. (2001). Innovation for Business Growth. *Research-Technology Management*, 44(5), 26–41.
- Mohuba, D. K., & Govender, K. (2016). The merger of historically disadvantaged tertiary institutions in South Africa: A case study of the University of Limpopo. *Cogent Business & Management*, 3(1). doi:10.1080/23311975.2016.1258133
- Myers, M. D., & Newman, M. (2007). The qualitative interview in IS research: Examining the craft. *Information and organization*, 17(1), 2-26.
- O'Donoghue, T. A. (2007). *Interpretivist Research in Education* (1st ed.). London: Routledge.
- Recker, J. (2012). *Scientific research in information systems: A beginner's guide* (1st ed.). Springer Science & Business Media. eBook: Available at [https://www.researchgate.net/publication/258100402\\_Scientific\\_Research\\_in\\_Information\\_Systems\\_A\\_Beginner's\\_Guide](https://www.researchgate.net/publication/258100402_Scientific_Research_in_Information_Systems_A_Beginner's_Guide)
- Reed, & William C. (1998). Coping with merger-mania: IT's new role. *Health management technology*, 19 (6), 38-41.
- Renneboog, L., & Vansteenkiste, C. (2019). 'Failure and Success in Mergers and Acquisitions'. Center for Economic Research. Vol. 26. 650-699. Available at: [https://pure.uvt.nl/ws/portalfiles/portal/30669671/2019\\_026.pdf](https://pure.uvt.nl/ws/portalfiles/portal/30669671/2019_026.pdf)
- Roehl-Anderson, J. M. (2013). *M&A Information Technology Best Practices* (1st ed.) New Jersey: Wiley Publications. eBook Collection (EBSCOhost)
- Santinelli, S. (2000) 'Systems and relationships are key if IT is to play a part in mergers and acquisitions', *InfoWorld*, 22(17), p. 101. Available at: <http://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=b9h&AN=3050294> (Accessed: 28 November 2020).
- Sarazzin, H., & West, A. (2011). 'Understanding the strategic value of IT in M&A' McKinsey & Company. available at: <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/understanding-the-strategic-value-of-it-in-m-and-38a>
- Saunders, M., Lewis, P., & Thornhill, A. (2015). *Research Methodology for Business Students*. England: British Library.
- Schultze, U., & Avital, M. (2011). Designing interviews to generate rich data for information systems research. *Information and Organization*, 21(1), 1-16. <https://doi.org/10.1016/j.infoandorg.2010.11.001>
- Schurink, W., Fouché, C.B. & De Vos, A.S., (2012) 'Qualitative data analysis and interpretations', C.B. Fouché & C.S.L. Delport (eds.), *Research at grass roots: For the social sciences and human service professions*, pp. 397–423, Van Schaik, Pretoria.
- Seo, M.-G., & Hill, N. S. (2005). Understanding the Human Side of Merger and Acquisition. *The Journal of Applied Behavioral Science*, 41(4), 422-443. doi:10.1177/0021886305281902
- Sherman, A. J. (2010) *Mergers and Acquisitions from A to Z*. 3rd Edition. New York; Atlanta; Brussels; Chicago; Mexico City; San Francisco; Shanghai; Tokyo; Toronto; Washington, D.C.: AMACOM. Available at: <http://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edsjvk&AN=edsjvk.j.ctt1d2qzxj>

- Silverman, D. (2005). *Doing Qualitative Research: A practical handbook* (2nd ed.). London: Sage.
- Smith, K. & Davies, J (2010) 'Qualitative data analysis', in L. Dahlberg & C. McCaig (eds.), *Practical researcher and evaluation: A start-to finish guide for practitioners*, pp. 145–158, Sage, London.
- Srinivasan, R., Lilien, G. L., & Rangaswamy, A. (2002). Technological Opportunism and Radical Technology Adoption: An Application to E-Business. *Journal of Marketing*, 66(3), 47–60.
- Statista. (2016). Top M&A deals globally by value 2015. Webpage available at: <https://www.statista.com/statistics/563700/leading-global-manda-deals-insurance-by-value/>
- Statista. (2020). Number of merger and acquisition transactions worldwide from 1985 to 2019. Retrieved 2020, from <https://www.statista.com/statistics/267368/number-of-mergers-and-acquisitions-worldwide-since-2005/>
- Sun, Z. (2018). Chinese reverse M&A: The WU Wei paradigm of post-M&A integration process. *Chinese Management Studies*, 12(4), 774-794. doi:10.1108/cms-12-2017-0338
- Tetenbaum, T. J. (1999). Seven key practices that improve the chance for expected integration and synergies. *Organizational Dynamics*, 28(2), 22-36.
- Theron, P. M. (2015). Coding and data analysis during qualitative empirical research in practical theology. In *die Skriflig/In Luce Verbi*, 49(3). doi:10.4102/ids.v49i3.1880
- Thomas, D. (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American Journal of Evaluation*, 27, 237-246.
- Tichy, G. (2001). What do we know about the Success and Failure of Mergers? *Journal of Industry, Competition and Trade*, 1(4), 347–394. doi:10.1023/a:1019521325295
- Vecchi, A. (2016). An analysis of Chinese acquisitions of Italian firms in the manufacturing sector. *International Journal of Business and Emerging Markets*, 8(3), 276-306.
- Varma A, Tiwari U (2012) "Mergers and Acquisitions in the New Economic Order" *The Management Accountant*, Vol 47, No. 3 March 2012.
- Walsh, J. P., & Ellwood, J. W. (1991). Mergers, acquisitions, and the pruning of managerial deadwood. *Strategic Management Journal*, 12(3), 201–217.
- Weber, Tarba, & Öberg. (2013). *A comprehensive guide to mergers & acquisitions: Managing the critical success factors across every stage of the M&A process* (1st ed.). FT Press. Database: eBook Collection (EBSCOhost)
- Wijnhoven, F., Spil, T., Stegwee, R., & Fa, R. T. (2006). Post-merger IT integration strategies: An IT alignment perspective. *The Journal of Strategic Information Systems*, 15(1), 5-28.
- Zhao, & Jun, S. M. (2006). The IT integration of mergers & acquisitions. Retrieved from <https://dspace.mit.edu/handle/1721.1/35101>
- Åhlström O., & Waldau, F. (2019). Information system integration in merger and acquisition: A single case study of a Swedish telecom merger. Department of Informatics, Lund School of Economics and Management.

## **Appendices**

### **Appendix A.**

#### **Interview Guide**

The open-ended questions that were employed are:

1. To what extent were you involved in the M&A strategic planning?
2. How was systems integration dealt with during the M&A strategic planning?
3. What was the role of IT experts during the M&A strategic planning and implementation?
4. What were the issues faced due to IT integration, and how did you address them?
5. How do you think you could have prevented these problems?

In case any of the interviewees were involved in an M&A process, further predesigned and open questions were asked, which are as follows:

6. How was the merge carried approach followed out?
7. What type of IT was integration implemented during the M&A?
8. How and to what extent were IT experts involved in the M&A process?
9. How did IT integration (or rather the lack of it) impact the success/failure of the M&A processes?
10. Going forward, what changes would you consider during any future M&A projects?



## Appendix B.

# Informed consent Form

**Title of research:** Information System Integration: The Case of Mergers & Acquisitions

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### Aim

This research aims to investigate the role of IT specialists in systems integration during the M&A process and is conducted as part of the researcher's Master Thesis. It will also help organizations to understand the importance of IT Specialists' involvement during the M&A process.

### Procedure

Your participation in this research include:

- An interview which will last for about an hour and will be recorded under your permission.

### Participant Selection

You are being invited to take part in this research because you have been part of the previous M&A process of the ground handling company under exploration.

### Dangers

Participation in this research does not include any danger. The interview materials will be used exclusively by the researcher for his research.

### Confidentiality

The information you are going to provide will be kept confidential by the researcher. Collected data will be accessible by the researcher and his supervisor only. All the data will be held until the completion of the research and will be deleted afterward. Your name will not be shared, and it will not be linked with any of the findings.

### Voluntary participation and the right of withdrawal

Your participation in this research is entirely voluntary. You can refuse to participate or to withdraw at any time, even during the interview. This decision will not affect your relationship with the researcher or the ground handling company under exploration.

### Right to ask questions

You have the right to ask any question you may have by contact with the researcher before, during, and/or after the interview.

## **Consent**

I consent voluntarily to participate in the research: “Information System Integration: The case of Mergers & Acquisitions”, conducted by Mohammad Sangar Ahmadzai.

I agree to be audio-recorded

- ☐ Yes
- ☐ No

I understand the purpose of this research and my rights.

Date

Participant

Researcher

## Appendix C.

Codes	Catagories	Themes
<i>I was more focused on organizational support</i>	Failed to realize the importance of IT	<b>Underestimating the importance of IT:</b>
<i>It was not much of an IT job</i>		
<i>Focus was not very much into the detail of IT</i>		
<i>IT was involved, but It was very little involvement</i>		
<i>At the start, we only involved IT from an operational perspective</i>	Saw IT only as a support function	
<i>It's more of a support function</i>		
<i>I will recommend that IT should be a supporter</i>		
<i>I still think that the core business will have larger attention</i>		
<i>IT became a complicated part of the post-merger operation</i>	Post merger	<b>Perception of management toward timing of IT integration</b>
<i>IT is usually involved in the later stages</i>		
<i>IT and IT-experts were not involved from the very beginning</i>		
<i>I would say that IT was involved very limited in Pre-M&amp;A</i>		
<i>Involved in most of the post-M&amp;A projects</i>		
<i>Actually, at the very beginning (Pre-M&amp;A)</i>	Pre-merger	
<i>I think that is why we had more business and operational staff involved in the M&amp;A and not the IT staff</i>	IT not involved	<b>Perception of management toward including IT and IT experts</b>
<i>IT-experts was not involved from the very beginning</i>	Involved in later stages	
<i>We were involved post-M&amp;A</i>		
<i>IT was involved in the later stage</i>		
<i>IT should be involved little in pre-M&amp;A and then full involvement post-M&amp;A</i>	Both pre and post M&A	
<i>They were mostly involved at the end of Pre-M&amp;A and Post M&amp;A</i>		
<i>Mix of local and online infrastructure which will give us the speed as well as connectivity to the shared system</i>	Mixed approach	<b>Preferred IT Integration approach</b>
<i>Trying to implement the new when the old was still running</i>		
<i>We can still keep some of our local systems</i>		
<i>If we have a common system for those crucial areas</i>		
<i>Many companies don't have these common solutions, and, in that case, I will prefer a mix solution</i>		
<i>Company name* went with mix strategy</i>		
<i>I will say new system i.e. complete replacing approach</i>	Complete approach	
<i>Replacing all the system was the best</i>		
<i>An old stable system is better than a new system which needs constant maintenance and support</i>	Leave-As-Is approach	
<i>IT non-involvement leads to high cost incurred by the Company</i>	Failure to predict cost	<b>Issues due to delay/non-involvement of IT experts</b>
<i>A lot of costs came afterwards</i>		
<i>If we (IT-Experts) have been part of it from the beginning, then we could see that this might be much more expensive</i>		

Struggle of switching it to one common operational system	Technical intergration issues	
Not easy to link all the stations		
It ends up to be very expensive		
Management saw an enormous IT cost	Management misjudgement	
It was always surprising for me, how little they involved IT		
They were not interested in the whole thing beside completion of the project	Employee resistance to change	
People were afraid of using something new		

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