

University of Tilburg, MSc Information Management

Thesis, July 2017, Tilburg NL

Malta Anthoula, anr: 287002

Researched company: Kraft Heinz Company

University supervisor: M. T. Smits

Integration of enterprise information systems after a Merger and Acquisition; evaluating the benefits for the company

August 2017



Table of Contents

Abstract.....	4
1 Introduction.....	5
1.1 Problem statement	5
1.2 Theoretical Framework.....	6
1.3 Practical relevance	7
1.4 Research method	8
2 Literature Review.....	9
2.1 Definitions.....	9
2.2 Successful IS integration in a Merger.....	9
2.2.1 Wijnhoven et. al (2005): the alignment theory	10
2.2.2 E.W. Baker and F. Niederman (2013): business & IT alignment	13
2.2.3 Stylianou et al. (1996): IT integration success.....	13
2.2.4 S.S. Robbins & A.C. Stylianou (1999): IS integration factors	14
2.3 Benefits for the company from IS integration	15
2.3.1 S.S. Robbins and A.C. Stylianou (1999): measures of IS success.....	16
2.3.2 D&M IS Success Model	18
2.3.3 IS user satisfaction	19
2.4 Research Model and Hypothesis.....	20
2.5 Case description	21
2.5.1 Kraft Heinz: the company	21
2.5.2 Integration issues of Kraft and Heinz	22
2.5.3 Integration of systems in KHC: the cases of Ariba and SRM	22
3 Methodology	24
3.1 Research Design.....	24
3.2 Research Strategy	25
3.3 Data Collection.....	26
3.3.1 Interviews	26
3.3.2 Documentation	29
3.3.3 Participant-observation	29
4 Results.....	31

4.1	Analysis of Ariba contract management system	31
4.1.1	Success of integration	32
4.1.2	Ariba vs EsO	33
4.1.3	Benefits for the Kraft Heinz Company	35
4.2	Analysis of SRM, indirect purchasing system.....	36
4.2.1	Success of system integration	36
4.2.2	Benefits for the company.....	37
4.3	Validity	38
4.4	Reliability.....	39
5	Discussion	40
5.1	Prominent findings of the research	40
5.2	Integration process	40
5.3	Benefits from the integration	42
6	Conclusion.....	45
6.1	Research question.....	45
6.2	Limitations.....	46
6.3	Further research	46
	References.....	47

Abstract

The aim of this paper is to identify the various strategies a company can follow to integrate the technologies and Information Systems after a merger, and the benefits for the company from the systems integration. Mergers are become more popular as companies try to leverage their capabilities and survive in the competitive Marketspace of the contemporary economies conducting strategic partnerships; mergers and acquisitions are the most drastic and popular strategies. As two companies combine their functions, IT and systems should be a main concern in the integration planning and implementation. Technology connects the disparate business units and facilitates a fast and safe flow of information among the units and other organizations, to achieve best quality of products and services. In order to empirically investigate this issue, I have conducted a literature review on the IS integration strategies and success factors, and the derived benefits. Furthermore, I studied a case of a recently formed company from the merged of two big organizations in the food industry, to identify the benefits that the company gained from the integration of the systems in contract management, and indirect purchasing.

Keywords: information systems; IS integration; merger; procurement; compliance; standardization; data integration.

1 Introduction

As the global marketplace is becoming more competitive with the emergence of new companies and products, each corporation is trying to keep its market share intact and even expand into new markets. A challenging but rewarding way to dominate in a Market is a Merger and Acquisition (M&A). During the last decade and after the economic crisis of 2008 this trend has become more frequent.

There are several reasons that lead companies to create this partnerships willing to receive several benefits. But they also face several challenges and many issues need to be solved and taken into account in order to efficiently complete a merger and enjoy the derived benefits. An issue that needs to be taken care of, but very often is being neglected, is the integration of the information systems, and IT in general, of the companies.

According to E.W. Baker (2014) there are three reasons that underline the importance of IT integration during a M&A: supporting Information Systems (IS) are closely related to business processes; IS provide important data, necessary for decision making; and integration of computing, among human assets, can lead to cost savings as IT assets are very valuable.

A merger will eventually fail if the systems and the IT infrastructure of the combined companies are not integrated properly. Though, there is little literature available on this subject. This research paper was conducted in order to identify the factors that lead to a successful IT integration after a merger, the means to measure the success of IS integration and the derived benefits for the company. Furthermore, this Thesis will focus on the merger of Kraft Foods Company by Heinz J.H. (2015), and analyzing the benefits derived from the integration of two critical systems used in the procurement of goods.

1.1 Problem statement

The analysis will focus on the benefits derived from the integration of the systems used in the procurement processes of the supply chain department. As companies create strong synergies through mergers, the integration of their processes and organizational units, rise as the greatest challenge that need to be solved methodically in order to allow the pragmatism of the desired

benefits. However, the managers and project coordinators of the post-merger implementation, usually focus on financial issues and neglect the importance of the integration of the different technological infrastructures and information systems of the merged companies. The neglecting of these issues can result to failure of the integration process, and consequently to the merger.

The purpose of the paper is to identify the features that show the success of IS integration after a merger, and specifically in the purchasing process. The scope of the research can be identified in the following schema:



Figure 1. Research model

Furthermore, I will focus more on the second part of the research model and will investigate the following problem:

“How can we identify the benefits derived from the post-merger integration of IS?”

Figure 2. Hypothesis of the study

The next section includes the theoretical background that has supported identifying the IS integration methods that are most common after a merger, and the practical case study that provides an answer to my Hypothesis.

1.2 Theoretical Framework

Through literature research I came across several articles referring to a particular Information System Success Model; the “DeLone and McLean Model”. The authors created a theoretical structure around the depended variable “IS success”, and identify the factors that influence the IS integration

success, and the measures of success. I decided to base my research and case study analysis on this framework as it has been tested through hundreds of papers and is based on extensive theoretical and empirical IS research. DeLone and McLean based their framework on a theory defined by Shannon and Weaver (1949). According to these authors, there are three enterprise levels where the success of IS can be identified: the technical level, the semantic level and the effectiveness level. DeLone and McLean further extended this theory by adding measures of IS success on each level: on the technical level we measure the accuracy and efficiency of the system by “systems quality”; on the semantic level, the success of the information in transferring the intended meaning is measured by “information quality”; and finally on the effectiveness level the effect of the information on the receiver is measured by “use, user satisfaction, individual impacts” and “organizational impacts”. This framework has been set the theoretical background in testing my Hypothesis.

1.3 Practical relevance

In order to evaluate the research question, and identify the received benefits from the post-merger IS integration, I used the data received from the “Kraft Heinz Company” merger case study. The company was created on July 2015 after the merger of Kraft Foods by H.J. Heinz and it is the 5th largest food and beverage company in the world ([Kraft Heinz Annual Report](#)). The merger followed a series of organizational changes, and the company continues to integrate its operations in order to be fully incorporated and receive the anticipated benefits of the merger. Part of the post-merger actions are: combining the companies’ operations and corporate functions, integrating their technologies, harmonizing their operating practices, integrating their financial reporting and internal control systems, integrating and consolidating their administrative and information technology infrastructure and computer systems. In 2016 the company integrated the purchasing processes for indirect materials under one system, SRM, and the management of contracts and their suppliers under Ariba.

Data was collected through interviews with four employees of the company, who played a key role in the implementation and management of the systems.

1.4 Research method

For the conduction of this paper I followed a qualitative research method. A literature review was conducted on the field of Merger and Acquisitions (M&A), the methods to succeed in integration of information systems (IS) after M&A, and the measures of success of IS integration. Lastly, data was collected through the following means: interviews with 4 key participants of the integration of two systems within Kraft Heinz; related documents; and daily observations and interaction within the company to gain a more spherical overview of the issue.

In the following section lays the literature review that was conducted to give the theoretical background on the components of my research model.

2 Literature Review

This chapter includes reviews of the methods others have used to explore topics similar to mine, and discuss how they inform the perspective and the research of my project.

2.1 Definitions

In order to fully comprehend the content of the research, I provide simple definitions for important keywords.

- ❖ **Information systems (IS):** Information systems are complementary networks of hardware and software that people and organizations use to collect, filter, process, create and distribute data. Their aim is to support the company's operations, management, and decision-making, and it is the information and communication technology (ICT) that the people of the organization use to interact with the technology in support of business processes.
- ❖ **Merger:** A merger is a deal to combine two existing companies into one new one. In a merger, the acquiring corporation retains the assets and liabilities of the merged company (www.investopedia.com). This type of corporate transaction is very often called "statutory merger".
- ❖ **Integration of IS:** It is the process of bringing together different computing systems and software applications physically or functionally, to act as a coordinated whole. System integration involves integrating existing inter and intra organizational systems, and is also about adding value to the system, capabilities that are possible because of interactions between subsystems (Moore, 1982).
- ❖ **Procurement:** Procurement is a relatively new term that derived from the internet-enabled evolvement of the purchasing activities and their transition to a strategic function (Williams, Alvin, Dukes 1993). It is defined as the sourcing and acquiring of goods and services for an organization, at the lowest price (G. Kauffman, Kauffman, and Cavinato 2000).

2.2 Successful IS integration in a Merger

Successful IS integration is not an easy process. There are many aspects that CIOs and Business leaders need to take into account during the design and implementation of the IT planning for the

merged company. Technology leaders have to balance the risks and benefits of their resources between three priorities. First, both IT departments have to assure that business continues as usual, with no interruptions in the everyday operations during the integration process. Second, they should focus on combining the IT departments, often emphasizing in cost reductions, or identifying other synergies. Third, they should provide IT support to every business unit, while also providing an architecture plan depicting the long-term objectives of the company.

According to Batelaan and van Essen (2000): “IT integration during a merger, often proves unsuccessful”. They also claim that the high rate of failure is mainly caused by: “the overestimation of the expected synergies and the underestimation of the post-merger integration processes”. The post-merger integration processes include, among others, the integration of IT between organizations, with their own IT processes, IT systems, IT infrastructures and IT personnel, and involve many strategies and procedures. The strategies should be translated into tactical considerations (such as concrete plans e.g. a roadmap), so the management team can get an overview of the necessary steps to take, during the post-merger IT integration process.

Roehl et. al., (2008) described that: “an integration roadmap is needed to provide an executable plan for the overall integration and that the final roadmap should outline how to proceed through the IT integration process”, defining in that way the post-merger IT integration process. Finally they have also stated that: “an effective IT integration roadmap is a critical enabler of an effective merger integration”.

It is obvious from the above information that two companies cannot initiate the integration of their processes, and specifically the IS infrastructure, without a concrete plan. For this reason I have reviewed related articles in order to define and map strategies and methods for a successful IT integration after a merger. Furthermore, the same importance is enclosed in critical factors, which provide the guidelines for the integration. The findings of this research lay in the following sections, divided per authors.

2.2.1 Wijnhoven et. al (2005): the alignment theory

Wijnhoven et al. (2005) developed a theory based on the IT alignment theory by Henderson and

Venkatraman (1992) that could assist merger and IT managers to select a proper post-merger IT integration strategy. The IT alignment model consists of the business strategy, organizational infrastructure and processes, IT strategy and IT infrastructure and processes, of the merged companies. These elements have direct relations with each other. As the available literature that addresses the issue of integrating IT after a merger is limited, the authors conducted a research based on three case studies of different hospitals with different merger and IT integration ambitions. Through a literature review, the authors identify three merger objectives: absorption, symbiosis and preservation (Haspeslagh; Jemison, 1991). Furthermore, they identify 3 IT integration ambition levels: complete integration, partial integration and marginal integration (co-existence). Complete integration can be realized by 4 methods (Harrell; Higgins, 2002): renewal, take-over, standardization, periodic synchronization).

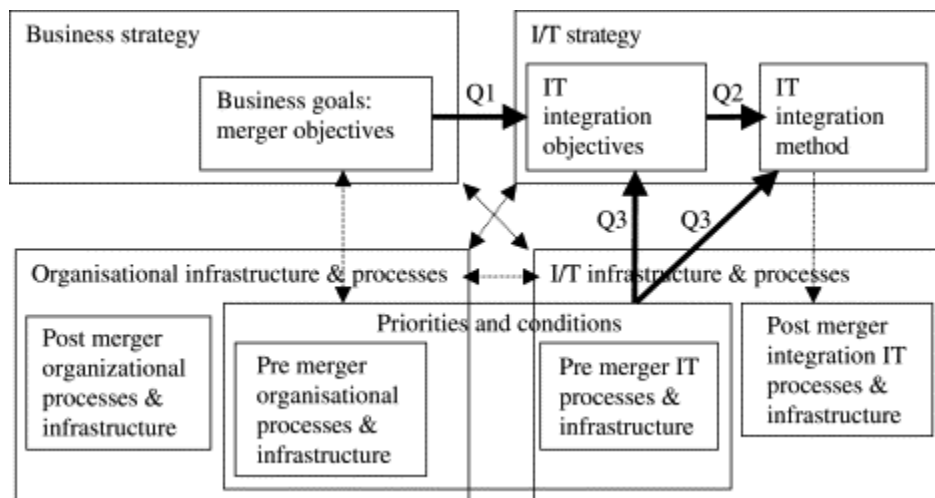


Figure 3. Post-merger IT integration alignment model. Fields in bold and thick arrows denote the research topics

More specifically the authors defined the three merger objectives as followed: absorption when the target company is completely absorbed by the acquirer, symbiosis when the companies combine their strongest processes, and preservation when the companies maintain their operations independently. In this model, each type of merger depends on the degree of integration of the merged operations, IT, resource sharing, and business functions of the companies. Each type establishes the

route towards the desired IT integration level. Complete integration of IT occurs during absorption, partial integration occurs during symbiosis, and finally coexistence of IT occurs in the preservation of both companies' operations.

MA integration ambition	MA objectives	IT integration objective
High	Absorption	Complete IT integration
Moderate	Symbiosis	Partial IT integration
Low	Preservation	IT co-existence

Figure 4. MA and integration objectives (Wijnhoven et. al, 2005)

Conditions	Priorities
❖ Business plan, structure and working processes should be defined prior the IT integration	❖ Complete the merger activities and have the required results as soon as possible
❖ Integrate first the most critical and strategic systems in order to keep the organizations working	❖ Preserve the resources that are closely related to the merger
❖ Dependent on the IT integration systems should function correctly	❖ Be aware of operating and technical incompatibilities, as they are often hard to change and combine
❖ IT policy, budget and time frame must be set	❖ Overcome the differences between the different management and use levels of IT
❖ The existing IT must support the desired processes and procedures	

Table 1. Conditions and priorities in post-merger IT integration (Wijnhoven et al, 2005)

Moreover, they identify organizational and IT contextual factors that affect the post-merger IT integration, based on a study by Stylianou et al., (1996). Conditions are the non-controllable factors and priorities are controllable. It is important to examine and apply these factors prior and during the IS integration. These guidelines provide a solid roadmap to structurally align the processes of the

merged companies, and have the most certain outcome of the integration.

2.2.2 E.W. Baker and F. Niederman (2013): business & IT alignment

In their article, E.W. Baker and F. Niederman (2013) examined a case study to explore the importance of strategic alignment of IT and Business during a merger, and how this alignment can lead to a successful merger. The authors based their research on the alignment theory, concluding that business and IT strategies of the merged firms should be aligned in order to have a successful M&A. Furthermore, they studied the framework created by Wijnhoven et al. (2006) to identify the different levels of merger and IT integration in their cases. They concluded that successful mergers are created when there are high levels of alignment among information systems and company-level business strategies.

The results of their case studies show that most of the cases followed aligned strategies: half of them reinvented their business model through symbiosis and combination of their resources (data and business processes). This conclusion proves that companies have to determine which assets to eliminate, which to combine, and which to absorb; and in half of cases they chose the “Leverage my business model” roadmap through absorption and consolidation, eliminating all or almost all the systems of the acquired company. The rest of the cases did not follow aligned strategies; the integration of their systems was greater than that of the firm strategy, and vice versa, causing several post-integration issues. Finally, in only one case a firm chose to completely transform the IS, making the most suitable choice among the available systems of the market. However, they conclude that alignment may be helpful in mergers, but it is not necessary nor sufficient element for successful integration.

2.2.3 Stylianou et al. (1996): IT integration success

A survey submitted to CIOs of firms who had recently completed a merger revealed four factors that seem to influence IT integration success: a) IS-assessment of the success of the integration process and integrated systems; b) the ability to exploit opportunities arising from the merger; c) the ability to avoid problems stemming from the merger; and, d) the end-user satisfaction with the integration process and integrated systems. Furthermore, they identify four conditions that affect the mentioned success factors: organizational attributes (company size, industry type, etc.), Organizational merger

management (merger experience, IS participation, planning quality), IS attributes (number of IS employees, skill levels, structure), and IS integration management (degree of integration, status of integration, etc.). The authors created a research model to be used as a framework for empirical evaluation of the successful integration of IS in merged organizations.

2.2.4 S.S. Robbins & A.C. Stylianou (1999): IS integration factors

S.S. Robbins and A.C. Stylianou (1999) made an extended research to identify factors that influence the success of IS integration. They divided the factors into two categories, depending on the degree of influence the business has on them: controllable and uncontrollable variables. The factors can be seen in the table below.

These factors were found to have the greatest correlation to IS ability to generate positive outcomes by improving IS capabilities, during the post-merger IS integration. The table includes both organizational and IS factors. The most important controllable organizational factors are: the level of executive (non-IS) management support in the IS integration process; the quality of merger planning; and the quality of communication between the IS and user areas regarding the merger activities. Lastly, the most important IS factors are the following: the quality of IS integration planning and the quality of communication between the IS and user areas regarding the process of integration of IS.

Controllable variables	Uncontrollable variables
Executive management support of IS integration activities	System size/ complexity as a criterion for setting integration priorities
Quality of merger planning	Level of data sharing across applications in combined organizations
Communication of merger activities of IS	Quality of IS planning
Quality of IS integration planning	Geographical distribution of applications development
Quality of communication of IS integration activities to user areas	Level of data sharing across applications in acquirer organization
User committee responsible for strategic IS decision making	Distribution of acquirer's hardware
Degree of end-user involvement in IS integration activities	Prior post-merger IS integration experience
Decline in IS employee morale as a result of a merger	Organizational structure of the target
Quality of technical support to users during integration	Geographic distribution of systems operation
IS planning approach	Importance of standardization in IS function of acquirer
	Acquirer's outsourcing of application development

*Table 2. Table showing the controllable and uncontrollable variables that define IS integration success
(S.S. Robbins et A.C. Stylianou, 1999)*

2.3 Benefits for the company from IS integration

As it has been described earlier in this paper, IS are of the greatest importance in the operation of global companies, and a merger may result to failure if IS planning is inadequate. Post- merger IS integration is a challenging process, and even though there is much literature available describing best practices for IS integration after a merger, there are not many articles that define IS integration

success or measures of it. Hence, the measures used are often ambiguous and lack solid theoretical background. Nevertheless, in the sections below I have collected some of the available theories discussing measures of success and benefits for the company from the integration of IS.

2.3.1 S.S. Robbins and A.C. Stylianou (1999): measures of IS success

Planning and realization the IS integration is a long process and requires strong relations among the contributing parts. There are several things that can go wrong in the process. According to S.S. Robbins and A.C. Stylianou (1999), companies usually focus much more on the financial aspect of the integration plan than in issues related to the enterprise architecture and the infrastructure of the two merged companies. This attitude often results in integration failure. The authors created a research model to evaluate the successful IS integration after a merger, and consists of five measures:

Measures for IS integration success	
I.	The ability to exploit opportunities arising from the merger
II.	The ability to avoid problems stemming from the merger
III.	The end user satisfaction with the integration process and integrated systems
IV.	Improved IS capabilities that help support the underlying motives for a merger
V.	Efficiency and effectiveness of resource utilization during the integration process

Table 3. Measures for IS integration success

Furthermore, the authors examined the concept of “improved IS capabilities”, concluding that a merged company can generate several positive outcomes from the successful IS integration:

Improved IS capability outcomes	
I.	Enhancing the organization's competitive position
II.	Shaping or enabling critical business strategies
III.	Integrating IS planning with organizational planning
IV.	Contributing to overall organizational financial performance
V.	Providing integration of related technologies across organizational units
VI.	Providing corporate-wide information accessibility
VII.	Providing good quality (accurate, useful, timely, etc.) information
VIII.	Managing its own financial performance
IX.	Operating systems efficiently by ensuring system availability, reliability, and responsiveness
X.	Developing systems efficiently and effectively
XI.	Providing adequate end-user support
XII.	Recruiting and maintaining a technically and managerially competent staff
XIII.	Identifying and assimilating new technologies

Table 4. Improved IS capability outcomes

Even though the authors have provided a useful model that can help in the evaluation of IS integration, it cannot give a complete view of the positive impact of IS integration in the company after the merger. The measures are not multidimensional and consequently cannot measure specifically their impact on the integration.

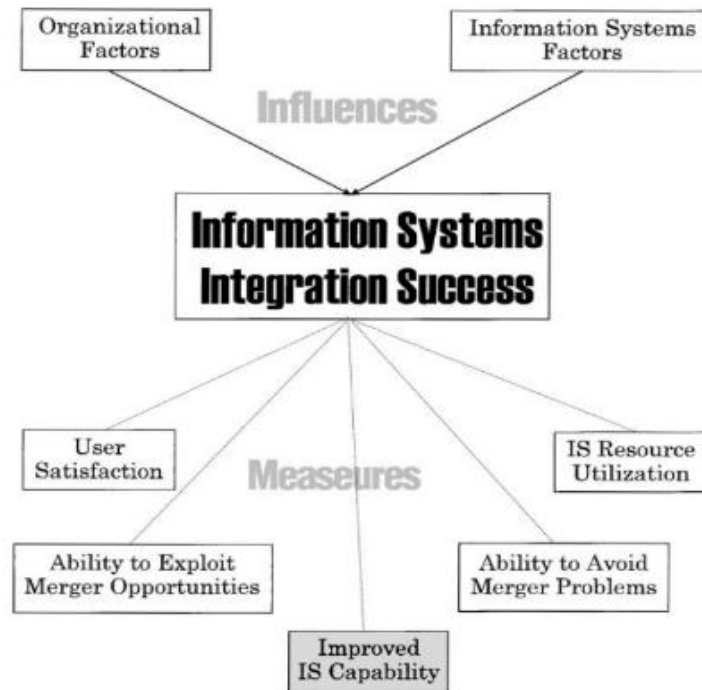


Figure 5. Influences and measures of information systems integration success (S.S. Robbins and A.C. Stylianou, 1999)

2.3.2 D&M IS Success Model

DeLone and McLean (2003) created a model to measure the IS success based on the quality of IS, and the end user's interaction with with them. They conducted a research to identify the ways various researches adapted their "D& M IS Success Model", and based on this review they updated their initial model to fit in the new technological era that is dominated by e-commerce activities. They created the initial model based on the communications research of Shannon and Weaver (1949), the information "influence" theory of Mason (1978), and on empirical management information systems research (1981-1987). Their model consists of six dimensions of success, interrelated to each other: system quality which measures technical success; information quality that measures semantic success; and use-user satisfaction, individual impacts and organizational impacts that measure effectiveness success. The Updated D&M IS Success Model has three main dimensions: information quality, systems quality, and service quality. The authors suggest that each dimension is measured separately because otherwise they will affect the use/ user satisfaction. Each dimension is connected

to “use/ intention to use” and to “user satisfaction”, and they affect these features either negatively or positively. A user’s satisfaction of an IS precedes the actual use of it, and so these features are interrelated. Furthermore, the D&M Model directly relates IS use and user satisfaction with the company’s net benefits. In the model, the success dimensions are connected with arrows that show the suggested relations among them, but not the positive or negative impact to each other. The use of this model by an integration researcher creates a challenge on how to measure the derived net benefits.

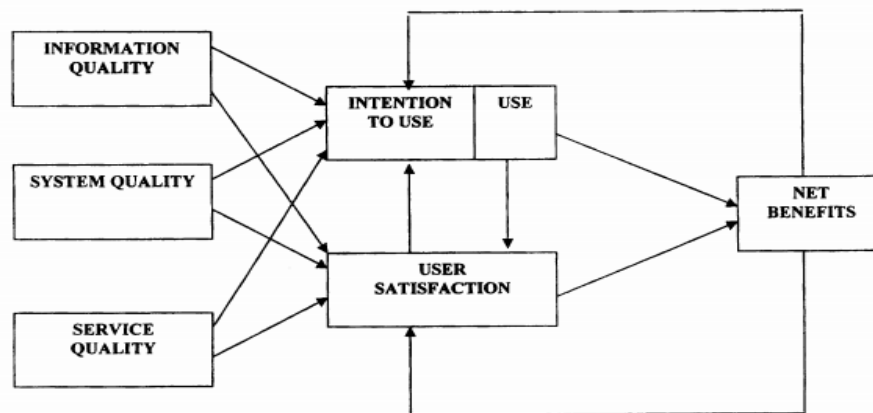


Figure 4. Updated D&M IS Success Model (W. H. DeLone et E. McLean, 2003)

2.3.3 IS user satisfaction

Most of the authors consider user satisfaction as the most common IS success measure. Smithson and Hirschheim (1998) provided a framework to help identify and develop IS evaluation measures. However, it is difficult to apply the framework in practice and measure the successful impact of IS in a business, as it does not provide directions to success nor related measures. However, it does provide the researcher with theoretical guidelines to create IS evaluation plans.

A. Molla and P.S. Licker (2001) proposed an extension model of D&M IS Success Model to develop, test, and apply e-commerce IS success measures. Their intention was to identify whether traditional IS success models could be applied in the evaluation of e-commerce systems. The authors evaluated the success of e-commerce systems at the following levels: system, individual and organizational. The

final e-commerce success model they created consists of the following elements: the dependent variable is customer e-commerce satisfaction (CES). Depending on the nature, purpose and type model of the system, user satisfaction derives either from the user interaction with the core product and service, or from the interaction with the process and system used to deliver the core product or service. Though, it is underlined that this model is affected by e-commerce system quality, content quality, use trust and the extent of support provided, and consequently the concept of CES refers to the evaluation of customer's satisfaction with the attributes of the system itself.

2.4 Research Model and Hypothesis

The literature review provided great insights in various models and theories regarding the successful IS integration and its evaluation, focusing on the benefits for the company. Consequently, it provided guidelines to support the investigation of the benefits received by Kraft Heinz Company from the use of the post-merger integrated systems in procurement. For this purpose I designed a theoretical framework that will guide the investigation of the case study, and support the analysis of the results. The framework shows that the IS integration success depends on defining the IT integration level based on the merger strategy; plan strategically the alignment of IT and business; and apply some controllable and uncontrollable factors throughout the integration process.

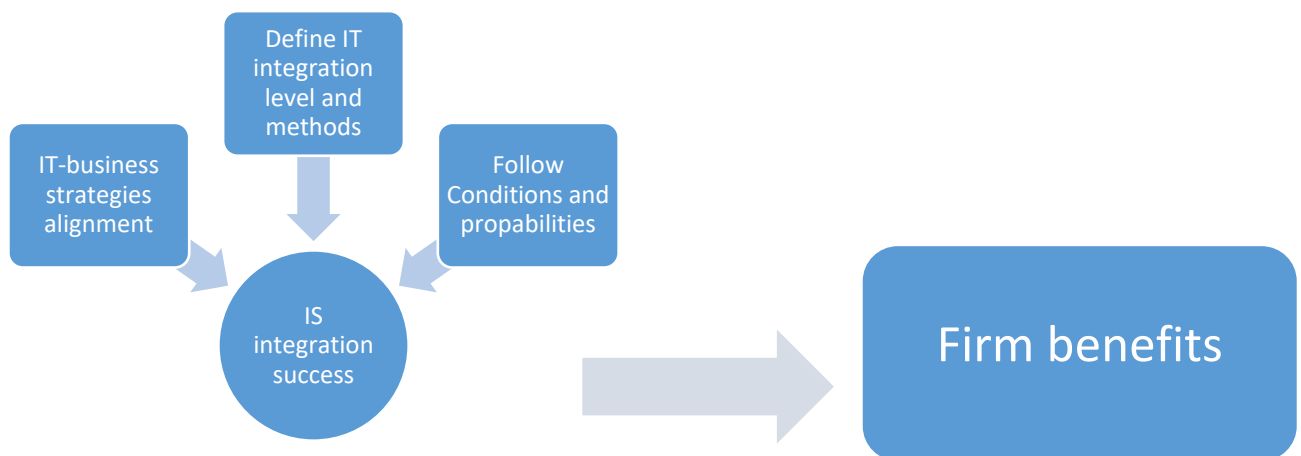


Figure 5. Proposed theoretical framework

2.5 Case description

In this subsection I present the investigated study I used to identify the benefits for the company after the post-merger integration of the IS. It provides the reader with an insight into the company's background, and a brief description of the integrated systems under research.

2.5.1 Kraft Heinz: the company

Kraft Heinz (KHC) is the 5th largest food and beverage company in the world, and 3rd in North America, with sales in approximately 190 countries and territories. It manufactures and markets food and beverage products, including condiments and sauces, cheese and dairy, meals, meats, refreshment beverages, coffee, and other grocery products, throughout the world, under a host of iconic brands including Heinz, Kraft, Oscar Mayer, Philadelphia, Planters, Velveeta, Lunchables, Maxwell House, Capri Sun, and Ore-Ida. As of December 31, 2016 the assets were \$120.5 billion, and \$18.338 million revenues. Its common stock is listed on The NASDAQ Global Select Market under the symbol "KHC".

On July 2, 2015 through a series of transactions, the company proceeded to the merger of Kraft Foods with and into a subsidiary of H.J. Heinz. Like in many deals in past mergers, the combination of the two firms was driven by a desire to obtain market expansion and synergistic gains. Prior to the merger of Kraft - Heinz, Heinz had been controlled by Berkshire Hathaway and 3G Global Food Holdings, following their acquisition of Heinz Company ([Kraft Heinz Annual Report](#)).

The company is co-headquartered in Pittsburgh Pennsylvania and Chicago, Illinois and have local units operating in Europe, Russia, Latin America (Brazil, Costa Rica, Venezuela and Mexico), South Africa, Nigeria, Australia, Japan, New Zealand, Papua New Guinea, China, India, Egypt, United Arab Emirates and Indonesia. It employees 42000 people. The Global Supply Chain Hub at Zeist, Netherlands, hosts many of the procurement operations of the company.

Through the examination of the Kraft and Heinz merger, I aim to identify the benefits the company receives from the integration of the two merged companies systems. More specifically, I focused my research on two important Interorganisational systems that the companies uses to improve the procurement functions.

2.5.2 Integration issues of Kraft and Heinz

The failure to integrate successfully the business and operations of Kraft and Heinz in the expected time frame may adversely affect the future results. While no material disruptions occurred during the first full year of integration, there can be no assurances that the Kraft and Heinz businesses can be integrated successfully. It is possible that the integration process could result in the loss of customers, the disruption of ongoing businesses, unexpected integration issues, or higher than expected integration costs. It is also possible that the overall post-merger integration process will take longer than originally anticipated. Specifically, some of the issues that must be addressed are shown below:

- combining the companies' operations and corporate functions;
- integrating the companies' technologies;
- identifying and eliminating redundant and underperforming functions and assets;
- harmonizing the companies' operating practices, employee development and compensation programs, internal controls and other policies, procedures and processes;
- integrating the companies' financial reporting and internal control systems, including the ability to maintain compliance with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002
- integrating and consolidating the companies' administrative and information technology infrastructure and computer systems;
- coordinating geographically dispersed organizations

As the company continues to integrate the operations of Kraft and Heinz in order to realize the anticipated benefits of the merger. The management of the company may be focused on the integration of the businesses of Kraft and Heinz and diverted from day-to-day business operations, which may disrupt the business. While the managers focus more on the alignment of the two businesses, they often neglect the importance of aligning the information systems after the merger.

2.5.3 Integration of systems in KHC: the cases of Ariba and SRM

Each had been using different systems to coordinate the procurement processes and manage the

suppliers, the contracts, integrate data between different business units and standardize routine processes. A new to-be plan had to be made in order to lead the integration of the different systems and guide the implementation of new solutions where the legacy systems proved to be insufficient. After the merger, the integration of the purchasing, and contract management systems, became unavoidable. In the analysis of the KHC case I focused on the integration of the contract management systems and the implementation of Ariba as one global cloud solution. Furthermore, I included the case of SRM, the system used in every region and business unit of KHC for purchasing of indirect materials.

3 Methodology

This chapter discusses the rationale underlying my methodological choices. It seeks to provide the reader with an understanding of how my methodological approaches have been supportive in answering the Hypothesis. This chapter is structured in the following manner: research design, research strategy, data collection, data analysis, validity and lastly, reliability.

3.1 Research Design

There are two main research methods in literature: qualitative and quantitative research design. These two methods are often considered as completely opposites, but that is not completely true. According to C. Creswell (1999) research may be more quantitative than qualitative, or the other way round. Furthermore, he underlines that a researcher can even use a mixed method of these two designs. The three different research methods are illustrated as follows:

- Qualitative method: it is a means to understand the impact individuals have in a social or human issue. This research design is based on: emerging questions and procedures, data collection in the participant's setting, data analysis that inductively built from participants to general subjects, and an interpretation of the meaning of the data by investigator.
- Quantitative method: it is a way to test objective theories through the examination of the relationship among variables. The variables are finally measured in order to analyze the numbered data using mathematical (e.g. statistical) procedures.
- Mixed research method: this method involves both the methods mentioned above, and incorporates the strengths of each method in the study.

As Creswell (1999) states that a research can be either quantitative, qualitative, or a mix of both methods, I have chosen to rely only on qualitative design to support my arguments. The reason for this decision lays on the desire to gain a deep and practical understating of the study area, as a way to respond to the research questions. Under these circumstances, a quantitative research method is inadequate as the numerical data analysis would not support describe phenomena in the area of study, and would consequently provide minimum to no support in providing answers to the research questions.

3.2 Research Strategy

Yin 2003: five research strategies in the field of social sciences: experiments, surveys, archival analysis, history, case studies

According to Yin (2014) there are five disparate research strategies in the field of social sciences. These strategies are: experiments, surveys, archival analysis, history, and case studies. He states that each strategy has its advantages and disadvantages which depend on three conditions: the control an investigator has over the actual behavioral events, the nature of the research question and the focus on recent versus to historical phenomena. The table below shows the features of each strategy:

Strategy	Form of research question	Requires control of behavioral events?	Focuses on contemporary events
Experiment	How, why?	Yes	Yes
Survey	Who, what, where, how many, how much?	No	Yes
Archival analysis	Who, what, where, how many, how much?	No	Yes/ No
History	How, why?	No	No
Case study	How, why?	No	Yes

Table 5. Relevant Situations for Different Research Strategies (R. K. Yin, 2014)

Following the information of the table, we can focus on the most adequate strategy for this research. On this paper investigate research question to answer mainly “how” is it identified in the contemporary scenery, over which me as investigator, have little or no control. Consequently, a case study proves to be the most suitable strategy to follow in the conduction of this thesis.

Yin (2014) states that there are three different categories of case study research: exploratory, descriptive, and explanatory. Exploratory case study is carried to define research questions and hypothesis. The most popular ways to conduct exploratory research are literature search, or conducting focus group interviews. Descriptive case study is mostly used to depict events and their

unique content. This means that it looks to find an accurate way to describe the observations of an event.

Consequently and taking into account the above definitions, this case study is considered to be exploratory, as the topic and research questions refer to the investigation of specific relationships within the sphere of benefits from IT integration and Mergers / Acquisitions.

3.3 Data Collection

Data collection is divided in two categories; primary or secondary data (Hox & Boeije, 2005). Primary data is considered the original data that has been collected for an exact research purpose, whether secondary data is defined as the data that is initially collected for a different research goal and reused for a different research question. According to Yin (2014) there are many types of data collection. It can either be in the form of documents, archival records, interviews, direct observation and physical artifacts. He also underlines that no single data source is more effective than the others. Consequently, the use of as many data sources as possible build a strong case study. This is defined as triangulation. Yin (2014) recognizes that triangulation is a great advantage of case studies, as it means that numerous sources of evidence were added to create an accurate study. Triangulation is evident in this paper, as I have collected used both primary (interviews) and secondary (documents) data.

3.3.1 Interviews

First, primary data was collected through shorter case study interviews. According to Yin (2014) an interview is the most valuable source for collecting evidence of a case study. The main trait of case study interviews is that they resemble guided conversations rather than structured queries. Furthermore, Yin (2014) underlines that there are three types of case study interviews: prolonged case study interviews, shorter case study interviews, and survey interviews in a case study. For the investigation of the KHC, the second option was chosen, and I conducted shorter interviews with four people within the company. Each interview lasted 21-42 minutes, and their scope was quite focused, so there was no need to have more sessions with each participant. The purpose of the interviews was to corroborate specific findings that have already been observed during my involvement as an intern

in the daily activities of the procurement department of KHC, and through literature research. There was an effort to ask specific questions in a genuinely naïve way regarding the topic, in order to receive a crisp review about it.

3.3.1.1 Introduction to case study interviews

The interviewees were selected because they were involved in the integration process of the systems in various stages of the project. Three of the interviews were conducted at the Kraft Heinz Supply Chain Hub in Zeist, Netherlands, and one through Skype. I carried out all the interviews in English, and recorded them through a recording application on my smartphone.

The first interviewee had been working in the company for four years and is the Global SRM manager. He coordinates the activities of the SRM team, organizes user trainings in SRM, and communicates with the SRM teams that are located in other regions in order to align their processes, and provide the best support to end users. The purpose of this interview was to gain information about the pre-SRM systems that were in use in both Kraft and Heinz for the purchasing of indirect goods, the positive features of the new system compared to the one it replaced, and the benefits of the integration of SRM in every business unit.

The second interviewee was the Global IT Lead of KHC, and was conducted through Skype due to geographical constraints. This person is responsible for the implementation of new systems in the company, and the questions were focused on the implementation of Ariba. They were more technical oriented as the interviewee had a technical background, and I gained an understanding on the planning of Ariba implementation, the challenges, and the positive points of using such a clouding system for contract management.

The third interviewee is the manager of the Global Systems, SRM and Reporting team, based in Zeist, Netherlands. She was the project manager for the SRM implementation in Russia during 2012-2014, and for Ariba since August 2016. Due to this fact the interview was divided in two parts: first we discussed about the Ariba project, and then about SRM, and collected information regarding the legacy systems Ariba and SRM replaced, the benefits for using these systems in every region, the ways procurement was enhanced due to the integrated systems, and user satisfaction.

The last interview was conducted with a system analyst that works mainly with Ariba. He was part

of the Ariba implementation team, and participated to sessions with key users, buyers, managers and other interested parties, assuring that everyone is properly informed about the project, and that they align regarding the implementing process. The questions were very focused on pulling detailed information about the management of contracts for all the regions, the way Ariba enhances the ability of the company to being compliant towards auditing, and the end user satisfaction.

Below I have created two tables presenting the questions made to the interviewees, for the two systems. As the interviews were semi-structured, I have not made the same questions to all the respondents.

	IT lead	Systems analyst	Project manager
Why is Ariba better than EsO?	X	X	X
What are the benefits from using one system in every region and BU?	X	X	
What are the benefits in general for the overall performance of the company, by using Ariba?		X	X
What are the benefits for procurement?	X	X	X
How does it help in meeting compliance?			X
What is compliance for the procurement department?		X	
How can we tell if the integration was successful? Are there ways to measure success?	X	X	
What were critical factors that contributed to a successful integration/ implementation of Ariba in every region and unit?		X	
How did users react to the integration of Ariba?	X	X	X
How did they make the transition from EsO to Ariba?	X		X
What challenges did you face during the transition from EsO to Ariba?	X		X
What were the cons with using EsO?		X	

Table 6. "Ariba" interview questions

	Systems Analyst	Project Manager
What is your role with SRM/ SRM implementation?	X	X
Why is SRM better than Smartcart?	X	X
What benefits does SRM provide that Smartcart didn't?	X	
How did they make the transition from Smartcart to SRM?	X	X
What was the reaction of the users?	X	
What was the purchasing process in the Smartcart?	X	
Are the benefits of SRM evident in the procurement processes?	X	X
How did the users react to SRM?	X	X
Why did they implement SRM in every region?		X
How can we tell if the implementation was successful?		X
What are the benefits for the company performance?		X

Table 7. "SRM" interview questions

3.3.2 Documentation

Secondary data was collected through analysis of documents found mainly through the Internet, and also inside the company. According to Yin (2014) documentary information is quite relevant to every case study topic. In order to provide a more accurate rendition of the interviews (Yin 2014), I decided to record the discussions with "Voice Recorder" utility on smartphone device. As the interviews did not last long, I transcribed them entirely, spending much time and effort on listening to the contents of the recordings as a way to extract all the relevant statements of the respondents. In order to understand the purpose and functions of the systems investigated in the case study, I based my initial analysis on browsing through the system provider's website, and various IT related forums and journals. Furthermore, I studied training materials and manuals within the company to gain a more detailed and focused overview of the purpose and specific functions of them in KHC.

3.3.3 Participant-observation

Data was also collected and validated through participation and observation in the organizational

setting. Serving as a staff member in the investigated company, I was involved as an active observer in the case study. This data collection method provided opportunities in collecting case study data, but also great challenges. The greatest advantage is having the opportunity to interact with events and groups that otherwise would have been inaccessible to study (Yin 2014). Another advantage is the opportunity to be involved in the reality of the case from the inside rather than as an external observer. The greatest challenge arising from participant-observation method is the risk of producing bias. For example, as a participant it could be easy to follow a known phenomenon and become a supporter of the organization under investigation.

4 Results

For the support of my Hypothesis, I focused on the investigation of two systems used in procurement: Ariba and SRM. The merger brought organizational, functional and process changes in The Kraft Heinz Company. Each of the companies had been using different systems in its supply chain in order to manage the suppliers, the contracts, integrate data between different business units and standardize routine processes.

4.1 Analysis of Ariba contract management system

SAP Ariba is a B2B cloud network. It offers various options to optimize and standardize the procurement functions. KHC uses SAP Ariba for E-sourcing, and Contract Management. The platform provides sellers with the ability to manage catalogs, bids, purchases and invoices and it provides buyers with the ability to search for suppliers, negotiate savings, procure goods and services and track spend.

Ariba CM was implemented in Kraft Heinz after the merger of the two companies in 2015. Prior to Ariba the companies were managing the contracts manually on excel based platforms, such as EsO. The implementation of Ariba CM started in North America (USA and Canada) in August 2016, and continued further with the implementation across the business units in Europe in September 2016, and across the rest of the regions by October 2016. Trainings to key users and end-users started immediately after the implementation and lasted 3 months (October-December 2016). Refreshing training and trouble-shooting sessions occur periodically since January, to assure that the users are affiliate with the system and to solve problems any upcoming issue.

Furthermore, Ariba provides support with RFQs, RFPs, RFOs, compliance and other policy related business concerns. Using Ariba Contract Management, KHC diminishes mismanaged paper contract, and the risks and lost savings that come along with them, as the creation, execution and management of any type of contractual agreement happens electronically through the system. The management of various paperwork, like procurement and sales contracts, IP licenses, and internal agreements, becomes easier. Additionally, it automates and accelerates the whole lifecycle of a contract, standardizes and controls the development of the contract, makes easier the collaboration among the stakeholders, and strengthens the operational, contractual, and regulatory compliance. Among

others, Ariba helps keeping track of the week by week progress of the approval flow of the contracts. The extracted reports show information about the contract, such as the name of the contract and the validity dates, details about the purchased items like the supplier, the buyer and the total value of the order, the region in which it was conducted, and the approval steps until it is finally published.

Lastly, it offers complete visibility of every action occurring during the contract cycle, and integrates the Ariba CM with other solutions and the company's ERP (www.ariba.com). The main focus of this paper is on the use of Ariba as Contract Management solution.

4.1.1 Success of integration

The first step for the Ariba implementation is project schedule. "One cannot just pull the old systems and replace them with the new one. We needed to make sure that the new system makes perfect fit in the place of the previous ones" claims the Global IT Lead. Ariba had to be configured and set-up in order to fit in KHC requirements. The integration team arranged kick-off meetings to discuss the necessary steps for bringing Ariba to the company. The project was initiated in North America (US and Canada) with a demo for Ariba. They set the requirements in the system, like placing the correct approval flow, and started the configuration, assigning users' testing. Once the configuration was finalized, they applied the changes in the production site and migrated the contracts from EsO to Ariba. This step-by-step process was planned carefully by the Global IT Lead to reassure that no mistakes are made.

Moreover, in order to implement the new system, all the procurement stakeholders had to be aligned: buyers, approvers, regional leads, global procurement, legal directors, they all had to align with the implementation purpose in order to avoid any legal or finance gap. The alignment effort was pursued through long meetings with stakeholders separately for each region. They have also conducted cost-analysis for the long-term benefits from the system. The presentation of its results to the stakeholders was part of guaranteeing the approval and alignment of the stakeholders. "We made sure that we provided guidelines that will make everyone understand the direction of the project and agree, otherwise the system would have been rejected." At the beginning this was the result, as a few stakeholders claimed that they never agreed to the system, and hence had not been using it for the past year. They also applied changes in the systems taking into account these discussions.

Lastly, after Ariba production was set-up, the integration team designed and implemented a training schedule for every region. User acceptance tests were conducted for the actual users, approvers, and watchers to ensure that the process goes as planned. Communication was the key in this stage. After the initial training period, refreshing sessions were still held in the following year.

On the contrary, an important factor that was neglected during the Ariba implementation was business leadership. The overall KHC integration project was a success, because key stakeholders like the CEO were fully aligned in the process, joining the monthly project set up meetings and fully engaging with the integration team. But in the Ariba implementation the management support was a major absence.

4.1.2 Ariba vs EsO

Ariba was implemented in Kraft Heinz Company to standardize the contract management function. Prior to this, Kraft was using Emptoris and it was actually a share file that stored the contracts per supplier in subfolders. Heinz was using EsO; it was also a software to service application but it was difficult to update it and lacked many standardized features. “It was difficult to use it (EsO) and the number of licenses was limited. Consequently after the organizational changes of the merger they lost track of who was responsible for EsO and they could not update it on time. That is why it was not considered user-friendly” states the Ariba project manager. On the other hand Ariba CM has a friendly interface as the users become affiliate after one training, and can navigate through it easily. It is also very flexible in terms of approval flow and to operate different tasks (e.g. update a contract).

Furthermore, according to the IT Lead, “Ariba aligns with KHC overall strategy to bring everything under one umbrella”. Ariba is a cloud solution meaning that it is built for global use and requires minimum customization. Through data integration, every business unit has access to the contracts of every country. Even though EsO was the official contract management system in Heinz, a lot of countries were using local solutions to manage their suppliers’ contracts. “There were 3-4 different repositories for every country”, states the Ariba system analyst. The Contract Management Team (CMT) was responsible for calculating the overall contract coverage and ensure that the company is legally covered and that the production can continue as planned. But the CMT did not have access to the local systems and therefore there were many contracts that could not be included in the coverage

report. Consequently the company ran compliance risks because there is high risk that contracts will be lost and not be shown in the report, even though the production continues as planned.

Another benefit from using Ariba is cost efficiency, from the support point of view. The application owner maintains the application, applies changes, provides technical and infrastructure support. KCH only pays for the licenses and sets up the users' accounts.

Additionally, "Ariba allows the minimum human touch" according to the project manager. The contract approval process takes less time than in EsO, as the majority of the functions are automated. A very useful feature is the automation and standardization of the approval flow. When the user creates a contract in Ariba, the system draws the approval flow depending on the contracted amount and the region. Then the user only has to initiate the approval flow, and the first approver receives an e-mail with the approval request, and so on. Ariba even provides the option to sign the contract digitally. In contrast when Heinz used EsO, each country had to arrange the approval in local e-mails or even through paperwork, then the buyer would upload the related documents on the system, and finally the CMT team would manually draw the appropriate approval flow, according to the company's policies. Each document had to be approved separately and this delayed the contract approval. Hence the approval would occur offline, and it was not possible to control if the process followed the right regulations. The CMT team would receive a notification for a new contract, review the policies of the company to verify the appropriate approvers, notify them and direct them to EsO to inspect the contract. But if the approver rejected the contract, then only the buyer would be notified and will create a new contract. The CMT and other users did not have any visibility for such changes, and if the buyer neglected to inform the CMT for the change, then they will lose track of that contract. The whole approval process would take long and it could postpone the production of goods if it would not go through. The offline purchase partnership had already been made with the supplier, but the production sites purchase the ingredients for the production based on the data on EsO. If the approval was not yet finalized on the system, the factory will not proceed to production.

Moreover, in Ariba there is a straightforward way to update a contract and depending on the change (e.g. extend or renew) the new approval flow will be updated automatically. In EsO they could not edit a contract and add new approvers, creating high compliance risk.

4.1.3 Benefits for the Kraft Heinz Company

Ariba was applied in every region across the KHC procurement units as it was the most optimized solution in the Market. "From the IT side, the system offers several benefits in procurement for KHC: better control over contracts and reporting, and it is very user-friendly" supports the IT lead. Furthermore, according to the project manager, the way the system is built reduces compliance risks, as it provides standard legal templates for the contracts, including the regarding Terms & Conditions for each country. More specifically, it helps meet compliance in two different ways, according to the system analyst. Firstly, the company's new policy requires proof that at least 80% of the total purchasing budget is covered by contracts with suppliers. The coverage would have been difficult to be calculated with the previous system because, as it was mentioned in the previous section, the use of disparate local systems made it difficult to track every contract. The project manager underlined that "Ariba was implemented to make sure that there was only one contract management system across the company, assuring that every contract is tracked down, and that the contract coverage of the budget is calculated correctly". The budget is provided every year by the global procurement finance, and this policy reassures that both parties (KHC and supplier) are legally bound to offer their services.

Secondly, it helps meet compliance towards the Sarbanes-Oxley Act (SOX) policies. Under section 404 of the Act, the management of the company is required to produce an internal control report affirming that they have taken the responsibility to establish and maintain the adequate internal control procedures for the financial reporting. The global aspect and standardization of Ariba covers that policy; Ariba ensures that each contract is approved by the authorized people regarding the total amount and the country it is signed, all the legal documents (e.g. contract, pricelist, specification list) are available on the system, with all the necessary signatures. "The greatest benefit established from the system is reduction of compliance and legal risks. The contracts are available directly for every purchase and there is complete transparency due to periodical auditing", adds the system Analyst.

Furthermore, Ariba offers the option to extract customized reports. These reports show the amount of contracts for every region and country. The system analyst claims: "It is now easier to see what is going wrong and where, who are the "showstoppers" for the approval of a contract and it is easier to arrange corrective actions." Also, it is more effortless now to compare the contracted amount to the

budget, and to the actual invoiced amount. This allows a cross-check of whether a spent appears that does not apply to an existing contract, and prevents cash losses.

4.2 Analysis of SRM, indirect purchasing system

SRM (Supplier Relationship Management) is a SAP powered system used in the procurement department of KHC for the purchase of indirect goods. It was implemented in 2010 by Heinz Company. After the merger of Kraft and Heinz in 2015, SRM was further implemented in every region and became a global system. The integration was completed in 2016. As an e-procurement system, SRM digitized the purchasing process of indirect materials, eliminating almost all paperwork. It generates and catalogues all purchase orders. By cataloguing every Purchase Order (PO) and uploaded receipts, managers have easy access to a complete record of indirect procurement spending. The initial goal of KHC for the implementation of SRM was achieving low spend, high volume purchases through SRM catalogues and more controlled indirect spend. But several more benefits derive for the company: reduced costs, transparent spending, increased productivity, standardized buying and reduced errors.

Requisitioners purchase indirect supplies via SRM to run the everyday activities of the company, based on the needs and the requests of the employees. The requisitioner will first raise a shopping cart with the products in need, based on product catalogues of contracted suppliers. Then the PO is created and sent automatically to the supplier, with the name, the description, the quantity and other information on the products. When the supplier receives the PO, it is then sent for confirmation with a receipt to the buyer company, through the system. Finally, if the receipt is accurate, the products are sent to the company along with an invoice.

4.2.1 Success of system integration

SRM had already been in use in Heinz Company prior to the merger. The integration team decided to keep SRM for the indirect purchasing and implement it in the merged company. Kraft was using Smartcart, a system that was performing in the same way as SRM. Smartcart had different design and was not compatible with the new policies of the KHC. According to the SRM analyst “They made a choice between the two systems used in Kraft and in Heinz, and they kept the one that fit the new

cost saving policy". SRM was a company-wide adopted system, and the necessary changes were made in the organizational aspect. No changes were applied in the system itself. The project manager claims that "the integration went smoothly; the whole project took one year for the transition".

Since SRM replaced a system with the same purpose and functionality, the main focus for a smooth integration was on stakeholders' trainings and alignment sessions. Trainings were held for every region, and alignment sessions with the disparate key-users, to reassure that the system functions according to the new policies. After the integration period, refreshing trainings and key-user sessions are held periodically to solve any problems related to the use of SRM and assure that the stakeholders are familiar with using the system.

4.2.2 Benefits for the company

"KHC is a global company. It has one identity and one way of working" states the project manager, adding that "the choice for SRM was based also on practical convenience as the provider offered support in every region and country". Standardization was a major reason for the system's integration, mentioned by both interviewees. According to the SRM analyst "It is the culture that needed to move across to Kraft, by extending SRM from the already known culture of Heinz". The purchase process for indirect materials was standardized; every user in every region are following the same process for the indirect purchases.

Another benefit is the optimization and automation of the purchase process. Smartcart required a lot of manual work from an external party. When the requisitioner created a shopping cart with a purchase, the assigned external team requested the specifications for the purchase. Then they would select the supplier matching to the purchase request, and initiate the approval flow process. The external team had to match the purchase request to existing contracts, or suppliers. With SRM the matching process is assigned to the requisitioner itself, driven by the ZBB category structure. "It is a procure-to-pay system; it automates the entire cycle of indirect procurement", according to the project manager. The buyer makes the order from catalogues containing items contracted with suppliers. The process might be more complicated now for the buyers as they need to be aware of more requirements prior purchasing, but it runs faster as there is no mediator involved.

Directly derived benefit from the standardization and optimization of indirect procurement is cost-

savings. “The use of catalogues with fixed prices for the items ensures savings only from using SRM across every region”. Cost optimization was achieved also by the reduction of human resources; due to the automation of the purchase process, the need for an external team to coordinate the purchases was eliminated. Manual work was minimized for the same reason, reducing human mistakes and increasing payment accuracy. This in turn increased savings, along with spend and payment control.

Furthermore, SRM choice was also driven by the new ZBB policy. According to this policy, KHC calculates the budget for the following year based on the current needs for every function and not on estimations based on previous years. The purpose is minimum costs for maximum efficiency. As mentioned before, the system is designed in a way to accept orders only based on existing contracts with suppliers, and each spent has to be reviewed and approved by various departments, such as the finance and procurement leads. There is a procurement lead for every indirect product category, and each of them approves based on the budget of their package, up to a pre-defined amount. Then more approvers are added in the approval flow depending on the total contracted amount and the region. More specifically, a purchase approval starts from category approvers that check if the order is within the budget, then the procurement approvers in zone and global range, and finally the finance approvers. Consequently the system prevents unauthorized approvals, preventing violations of the company’s and legal policies, assisting in meeting compliance with policies like SOX. Moreover, the system assures that the buyers purchase within these policies. At the end of the purchase, there is a 3-way check via SRM; the amount of the PO should match with the delivery and the invoice. This crosscheck provides legal assurance to the company and the supplier, creating legal partnerships.

4.3 Validity

According to McMillan & Schumacher (2001) validity in a qualitative research is the degree to which the analysis and conceptions are identified in the same way among the participants and the researcher. In other words, for this research I must ensure that the statements reflect the reality of what is being studied. According to McMillan & Schumacher (2006) there are ten strategies that enhance validity. They suggest that the use of some of the strategies contributes to the increase of validity in qualitative research. For my investigation, I applied the following strategies:

- Multi-method strategies: data was collected based on multiple sources, e.g. interviews,

documentation, participant-observation.

- Participant language and verbatim accounts: literal statements were collected through four interviews and quotations from several on-line journals (documentation).
- Mechanically recorded data: all interviews were recorded via phone recording application.

4.4 Reliability

McMillan & Wergin (2002) define reliability as: “the degree of error that exists when obtaining a measure of a variable. No measure or instrument is perfect; each will contain some degree of error. The error can be because of the individual (general skills, attitudes, motivation) or because of the way the instrument is designed and administered. Reliability is the estimate of the error in the assessment”. It is hard though to provide reliability in qualitative research due to the fact that the data is based in interviews, personal encounters and real-life experience, and they cannot be measured and reported by quantitative means, such as statistical tools. With the use of such qualitative data collection methods, there is higher risk of misconceptions, errors, bias and personal perceptions affecting the reliability of the research. In order to avoid such risks, it is important to ensure their minimization (Yin 2014).

For the conduction of this paper, the following methods were used to minimize errors and misconceptions in the research process:

- Data triangulation: for data collection I used various methods, such as interviews, participant-observation and documentation, to shape a better understanding of examined situations. This permitted controlling and overcoming participants’ bias.
- Audio-recordings: the interviews were recorded, allowing me to double-check the interviewees’ answers. This assisted in identifying misinterpretations by the participants.
- Data transcription: the interviews were then transcribed to allow me to derive the most relevant information and identify patterns. The data was categorized in concepts, ensuring misinterpretations were avoided, and that it would be easier to retrieve data in later steps of the study.

5 Discussion

In this chapter I discuss the findings of the study as well as their importance. To provide perspective, I compare my findings to that of other studies from the literature review, whilst also presenting alternative explanations to my findings.

5.1 Prominent findings of the research

Throughout the investigation of the post-merger IS integration of KHC, I have been able to pinpoint and identify several key factors and events related to my study. By applying the related theories for analyzing the company's IS integration strategies and roadmaps, I have been able to transform the collected data from the company into the findings that will support the basis of this discussion. In the literature section, several articles were examined for IS integration, and the measures of success for the IS integration were examined and analyzed. This provided the paper with the theoretical basis to accordingly divide and analyze the data that has been obtained from the case study.

At the beginning of the analysis, I reviewed the timeline of implementation of the two systems in KHC, providing a background of the post-merger conditions during the time. Each system was implemented in different times and in different ways. Secondly, I identified and analyzed the strategies and factors that the company followed to integrate successfully the legacy systems and apply inter-organizationally one global system for each function. Finally I identified and analyzed the benefits the company gained from using the systems after the integration, also in comparison to the previous systems.

5.2 Integration process

After the formation of the KHC, the integration of the processes was the next step to complete the merger. The main goal of the company was to implement one solution globally for contract management, and for indirect purchasing. They completely integrated the legacy systems for these functions and implemented one system, standardizing the procurement processes. Wijnhoven et al. (2005) defined this integration ambition level as complete integration; the IS of the merged companies were integrated completely, preserving only the most optimal solution, while the realization of the complete integration occurred through standardization. More specifically, they

eliminated every system and share-file platform that was used for contract management across Kraft and Heinz, replacing them with Ariba. According to a case study research by E.W. Baker and F. Niederman (2013), this alignment strategy is the least one in use; the company chose to completely transform the “ordinary course of business” selecting the best option from the market. Ariba was the ideal fit for meeting the business requirements for standardization, compliance and data integration. On the other hand, SRM had already been in use in Heinz. For this reason the integration of the indirect purchasing systems was easier; they followed the “Leverage my business model” roadmap (E.W. Baker and F. Niederman, 2013), eliminating Smartcart and other local systems, and adopting SRM in every procurement unit globally.

In their papers Wijnhoven et al. (2005) and E.W. Baker and F. Niederman (2013) underline the importance of having a roadmap to align the business with the IT strategy, post-merger. KHC goal is having one identity globally, and standardize its processes. The complete integration of the procurement related systems adapt this alignment model.

Additionally, KHC followed a roadmap applying several factors to successfully integrate the systems, aligning the IT and business strategies. For the implementation of Ariba, a project schedule was conducted carefully, setting deadlines and kick-off meetings with the stakeholders. During these meetings there were discussions about the progress of the integration, the next steps, ensuring that the stakeholders were fully engaged through the whole process. One of the crucial factors was to assure that the stakeholders were aligned and understood the purpose of the system and its contribution to the accomplishment of the company’s goal for standardization, automation and data integration. Furthermore, to support the project planning, the integration team presented an analysis with long-term benefits of the system. Finally, trainings were the last piece in the attempt to successfully implement Ariba across the company, and communication was the key element. S.S. Robbins and A.C. Stylianou (1999) identified these factors, among many others, as the controllable and uncontrollable variables with the greatest impact on IS ability to generate positive outcomes by improving the IS capabilities, after the post-merger IS integration. The authors identify the IS integration planning and the efficient communication among the integration team and the users, regarding the IS integration process, as the most important factors for improving the systems capabilities. They also identify another highly controllable factor; top management support in the IS

integration process. Although, this is a factor that was neglected in the implementation of Ariba. The Global IT Lead particularly underlined the importance of executive leadership involvement in the integration process, and commented that the process was left to the project manager's team without any executive supervision. Even though the system was successfully implemented across the global company and roll out for use, the Ariba analyst added that a few regional key-users revealed that they had rejected the system because they did not agree to the use of it. This resistance maybe was a result of the lack of high executive involvement in the integration and alignment effort.

Wijnhoven et al. (2005) based as well their IT integration alignment model on these factors, identifying conditions and priorities, that should be defined prior merger both from organizational and IT side. Finally, the trainings that were held after the integration, and the user alignment sessions, enhanced the quality of communication of the systems integration activities in the user areas, involved the end-users in these activities, and provided technical support to them. These three are defined as controllable variables according to S.S. Robbins and A.C. Stylianou (1999). These were also the only factors that we identified for the integration of indirect purchasing systems into the SRM solution.

The biggest challenge from the IT side in the integration process, was to set-up the new system with the new business requirements on time; this included the new approval flow for Ariba following the new ZBB policy. From the IT side, the greatest challenge was to migrate all the contracts from the old contract management system to Ariba. The integration IT team initially migrated only the valid contracts, ignoring the old and expired ones. But the business team required to have access through the new system to every contract data, including expired contracts. This misconception resulted to periodical migrations of contracts per demand, and could have been avoided with more efficient communication between the IT and business team.

5.3 Benefits from the integration

The focus on IS integration is relatively new in the academic area. The majority, if not all, of the related articles focused on in the post-merger IS integration strategy, and not on the derived benefits (DeLone and McLean 2003). Despite this fact, the literature review provided sufficient information to compare with the data collected through my research, and the discussion was based mainly on the

D&M IS Success Model (2003) and the paper by S.S. Robbins and A.C. Stylianou (1999).

For both systems, Ariba and SRM, the interviewees identified the same derived benefits that improve IS capability outcomes (S.S. Robbins and A.C. Stylianou 1999). More specifically for both Ariba and SRM, standardization of contracting processes and data integration were identified as the greatest benefits by all three interviewees. Standardization means that the procurement processes for creating and approving contracts, and the indirect purchasing, follow the same steps in every procurement unit. These benefits improve the systems' capability by providing integration of the new systems across every procurement unit and corporate-wide information accessibility (S.S. Robbins and A.C. Stylianou 1999). Data integration is very important benefit as the contract and indirect spend information are available to all the systems' users and enhance the reporting, and consequently, financial reporting. More specifically, DeLone & McLean (2003) claim that data integration provides company-wide data accessibility and enhances information quality.

Further benefits identified by two of the participants are: automation of procurement processes, user satisfaction, compliance to external and internal policies, and alignment of IS to business requirements. Both systems had their process automated in a great degree, and were optimized as human mistakes were reduced and costs savings increased, as the contracting and indirect purchasing processes leveraged their capabilities (DeLone & McLean, 2003). Automated systems provide better quality (accurate, useful, timely) information to the stakeholders, which contributes to the overall enhancement of financial performance.

Major benefit from the new systems is their support in meeting compliance towards internal and external auditings, as they provide accurate and transparent information for every transaction and contract (S.S. Robbins and A.C. Stylianou 1999), and hence improves information quality (DeLone and McLean 2003). Moreover, Ariba and SRM are aligned with the ZBB policy, enhancing the organization's competitive position by reducing purchasing costs, contributing to the overall cost-saving strategy, and supports the company's management of its own financial performance (S.S. Robbins and A.C. Stylianou 1999). Furthermore, user satisfaction is also identified as a measure for effectiveness success (DeLone and McLean 2003) and was identified by two interviewees as derived benefit from Ariba implementation. This contrast, however, is not without issues regarding the post-

merger IS integration. For example, in some regions people resisted in the adaptation of Ariba because now they had to redo the approval flow every time they updated a contract. Furthermore, users adopted less easy to SRM because they are responsible now to take more action; they need to search for specific contract for every purchase they raise, and notify people to approve it. Adequate end-user support by the integration and contract management team, along with the alignment sessions, contributed positively to user-satisfaction. Cost-savings was clearly identified only by the Global IT Lead, regarding the low maintenance costs for the system, resulting from the efficient and effective development of the Ariba (S.S. Robbins and A.C. Stylianou 1999).

	IT lead	Project manager		System analyst	System analyst
	Ariba	Ariba	SRM	Ariba	SRM
Automation		X	X	X	X
Standardization	X	X	X	X	X
Data integration	X	X		X	X
Cost-savings	X		X		X
User friendly		X		X	
Compliance		X	X	X	
Align to ZBB		X	X	X	X

Table 8. Results- benefits for the company

6 Conclusion

6.1 Research question

Global companies and organizations are constantly looking for ways to leverage their competitiveness and dominate in their Marketplace. Mergers have become a popular strategic move to achieve such ambitions, and especially during economic crisis, they become major tactic to create global partnerships. Another great feature that companies exploit in order to improve their competitive advantage is technology. Technological developments, especially internet-based solutions, are adopted by global companies and contribute to improved services, products, and consequently improved financial performance. Therefore, technological infrastructure, IT and IS are important components that the merged companies should consider of before, during, and after a merger. As derived from my literature review, companies usually neglect the consideration, planning and integration of the technologies and systems in a merger, leading the merger towards potential disaster.

In this paper, apart from the importance of IS-integration in a post-merger situation, I summed-up factors and strategies to drive a successful IS integration. Furthermore, I investigated a case study and identified the most important benefits for the company, derived from the use of one integrated IS for each function. The observed benefits are: compliance with internal and external policies; standardization, automation and optimization of the processes; integration of data; and user satisfaction. Cost-savings derived from more than one of the mentioned benefits; both automation and optimization of the processes, derived from the resources reduction, lead to reduced spending. Therefore, I conclude that the company successfully integrated the two systems in the procurement functions, for the purchasing of indirect goods and the management of all the contracts with its suppliers. Although the majority of regions where the company operates started immediately using the new systems, there were a few cases where they resisted in this changes and rejected the new way of working. This fact can be blamed to the lack of higher management involvement in the IS integration planning and implementation processes.

6.2 Limitations

There are several factors that limit the results of this study. Even though I consider the findings to be trustworthy and reliable, a few methodological and theoretical constraints can be identified. One of which concerns the small sample of elements under investigation, which consists of two integrated systems in one merged company. It becomes certain that the sample size is not a representative of the population of mergers, and consequently creates doubts of the credibility of the collected data.

Secondly, due to time constraints, the interviews were limited to four people: one from the technical IT side and three from the business side. Consequently, I did not collect more specific feedback from the users on the systems; the information I gathered was through my active participation and interaction with the users inside the company.

Finally, I acknowledge that the scarcity of literature related to the post-merger integration of IS, and especially the benefits derived from the integrated systems, has also limited the conducting research up to a certain degree. Due to the lack of specific literature, my study was narrowed to limited selection of theoretical frameworks.

6.3 Further research

The limitations of the research broaden the way to further research in the subject of post-merger IS integration benefits for the company. As the research was limited to two systems of one case study, it seems logical to suggest the investigation of the derived benefits in more companies from various industries.

Furthermore, user-satisfaction appears very often in the literature as a measure of integration success. In my case study the evaluation of the specific factor was limited in personal observations, and indirect conclusions from the interviewed IT and Business analysts.

References

- Baker, E. W., & Niederman, F. (2014). Integrating the IS functions after mergers and acquisitions: Analyzing business-IT alignment. *The Journal of Strategic Information Systems*, 23(2), 112-127.
- Batelaan M., Essen F. van. (2000) 10 Manieren om fusies te verknoeien, Het inschatten en realiseren van synergie bij fusies en overnames. *Scriptum Management*, 1e druk.
- Creswell, J. W., & Clark, V. L. P. (2007). Designing and conducting mixed methods research.
- Delone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: a ten-year update. *Journal of management information systems*, 19(4), 9-30.
- Harrell, H. W., & Higgins, L. (2002). IS integration: Your most critical M&A challenge?. *Journal of Corporate Accounting & Finance*, 13(2), 23-31.
- Haspeslagh, P. C., & Jemison, D. B. (1991). Making acquisitions work. *INSEAD*.
- Haspeslagh, P. C., & Jemison, D. B. (1991). Managing acquisitions: Creating value through corporate renewal (Vol. 416). *New York: Free Press*.
- Henderson, J. C., & Venkatraman, H. (1993). Strategic alignment: Leveraging information technology for transforming organizations. *IBM systems journal*, 32(1), 472-484.
- Hox, J. J., & Boeijs, H. R. (2005). Data collection, primary versus secondary.
- Joseph L. Cavinato, Ralph G. Kauffman. (2000) *The Purchasing Handbook: A Guide for the Purchasing and Supply Professional*, p. 38.
- Kraft Heinz Company annual report, January-December 2016, <http://ir.kraftheinzcompany.com/secfiling.cfm?filingID=1637459-17-7&CIK=1637459>
- McMillan, J. H., & Schumacher, S. (2014). Research in education: Evidence-based inquiry. *Pearson Higher Ed*.
- McMillan, J. H., & Wergin, J. F. (2002). Understanding and evaluating educational research . *Upper Saddle River, N. J: Pearson Education*.
- Molla, A., & Licker, P. S. (2001). E-commerce systems success: An attempt to extend and respecify the Delone and MacLean model of IS success. *J. Electron. Commerce Res.*, 2(4), 131-141.
- Moore, J. (1982). Software Reviews, Business Master II+, ledger for CP/M systems. *InfoWorld*, 13.
- Robbins, S. S., & Stylianou, A. C. (1999). Post-merger systems integration: the impact on IS capabilities. *Information & management*, 36(4), 205-212.
- Roehl, J., Krumkachev, P., & Nolen, S. (2008). Building an IT integration roadmap; key questions every CIO should ask, Deloitte M&A Consultative Services.

Smithson, S., & Hirschheim, R. (1998). Analysing information systems evaluation: another look at an old problem. *European Journal of Information Systems*, 7(3), 158-174.

Stephanie S. Robbins, Antonis C. Stylianou, (1999). Post-merger systems integration: the impact on IS capabilities. *Information & Management*, 36 205-212.

Stylianou, A. C., Jeffries, C. J., & Robbins, S. S. (1996). Corporate mergers and the problems of IS integration. *Information & Management*, 31(4), 203-213.

Wijnhoven F. Spil T. Stegwee R. Tjang R. (2006) Post-merger IT integration strategies: An IT alignment perspective, *Journal of strategic information systems*, Vol.15, p. 5-28.

Williams, A. J., & Kathleen, A. D.. (1993) The purchasing function. *In the purchasing handbook*. 5th ed. New York: McGraw-Hill

www.investopedia.com

Yin, R. K. (2014). Case study research: Design and methods. *Sage publications*.