UNIVERSITY OF TAMPERE
Faculty of Management

SMALL FIRM PERSPECTIVE IN
CUSTOMER RELATIONSHIP MANAGEMENT
IMPLEMENTATION

Business Competence
Master's thesis
November 2017
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ABSTRACT

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Title:	SMALL FIRM PERSPECTIVE IN CUSTOMER RELATIONSHIP MANAGEMENT IMPLEMENTATION
Master's Thesis:	70 pages
Date:	November 2017
Key words:	*Small firm, customer relationship management (CRM), CRM process*

CRM has been a popular topic since the 90s and several of studies have been conducted by academic scholars from diverse multidisciplinary fields of study. CRM implementation have always been focused in large organizations and not that much attention given has been to smaller size organization. However, with the emerging small size firms in the market CRM software providers shifted the attention from larger firms to smaller size firms. The ready to use software, lower cost and features functions attract small size firms to implement CRM for their business. Furthermore, the demand to implement CRM in firms is to achieve competitive advantage and survival in the global market.

The objective of this study is to gain an understanding from a small firm perspective in implementing CRM. To achieve this, both benefits and challenges related to CRM framework processes were identified and discussed. The study also aims to identify the challenges as well as the benefits encounter during the implementation process. Customer Relationship Management (CRM) term have been around since 1990s. Many CRM implementation studies have been conducted in a large organization however there is limited study conducted from a small firm perspective.

The studies begin with exploring CRM definitions. However, there is no one define definition found in literature. CRM concepts: process, data, customer knowledge and technology are being introduced. Next, concept of small firm being introduced. The connection between small firm and CRM are being explored in three perspectives: drivers to implement CRM, potential benefits and challenges of CRM. Those perspectives are based on previous studies found in existing literature reviews.

The empirical study is based on qualitative methodology and conducted as a single case study. The single case is built on a small firm operating in Finland. The research data was gathered as a combination of semi-structured interviews and author's observations. The findings verified the importance of having a similar CRM definition among the employees in order to achieve a successful CRM implementation. Based on the result of the study, challenges and benefits of CRM have been identified, reflected and discussed related to previous academic studies. The result showed that CRM is commonly viewed as a technological tool or project rather than cross-functional long-term business process. The finding of this thesis may assist future small firms in having more effective strategy and less frustration during the implementation process.

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1. INTRODUCTION

1.1 Background

During the manufacturing era, the business paradigm used to be product-centric. However, as customers are getting more knowledgeable and educated on the products, along with a rapid increase from competitors in the market, companies realized that they need to change their business operation mode. Thus in the 1970's, a new direction has emerged emphasizing the interaction between the buyer and seller (Grönroos, 2000, p. 21). According to Sheth, Sisodia and Sharma (2000, p. 58) that companies start to evolve toward a customer focus rather than a product-focused or segment-focused strategy due to the emergence of customer-centric marketing. At the same time, Nordic School emerged focusing on service in its marketing context that later on shape the marketing literature into a new direction (Gummesson & Grönroos, 2012). It forces firms to change the way of doing business to be more service-oriented direction (Boulding, Staelin, Ehret, & Johnston, 2005). Hence, studies of services and customer relationships in the academic fields emerged in a rapid speed.

Then in the early 1990's, along with the development of technology has enable more opportunities for the customer and companies to interact, gaining more information about the customers, creating databases to analyze customer information and creating value between company and customers. Many firms believe that this is the beginning of the development of Customer Relationship Management (CRM) theory. CRM provides large organizations with opportunities to explore the unseen potential of customer satisfaction and market opportunities. The drive to attract existing and acquire new customers and expand their market shares have motivated small firms to follow the step of large organization to invest in CRM itself. In many cases, the purposes of implementing CRM in the organization are driven by the need to track and pull information of customers through a platform and building a long-term relationship with existing and new customers.

Researchers and scholars have since begun to study the CRM concept, nature and scope from various field of study; marketing, services, technology and software system. Few authors have mentioned that successful CRM was considered as one of the criteria for a firm's competitive

advantage (Nykamp, 2001; Parvatiyar & Sheth, 2001). Back then in the 90s, most of the CRM implementation is associated with major organizations. This is particularly related to the availability of new technology, cost of implementation and vendor's market target in trying to sell their companies' customized CRM program to big companies or organizations. However, the focus of attention slowly widens to include small and medium-sized enterprise happened approximately more than a decade later.

In Finland, due to the downfall of Nokia has led to increasing number of small firms. There are few small firms that have well known successful stories such as Rovio and SuperCell indicating a promising growth of small firms around the country. Most of the customers are not based in Finland thus, strong commitment to engage with the customers around the world. One of the important factor that drive the small firm in Finland to be actively engaging with the customer is the competitiveness in the market. According to the Organization for Economic Cooperation and Development (OECD), Small and Medium Enterprises (SME) represent more than 95% of enterprises and ensure sixty to seventy percent of the jobs (Robu, 2013). With the emergence and reputation of several CRM software packages such as SalesForce.com, Base CRM, Zoho CRM and Pipedrive these customized software packages has encouraged small firms to consider implementing CRM as part of their business process.

CRM adoption by the small firms is different from large organizations due to the organization structure and financial capability. Generally, small firms are owned by the owner who also working in the firm themselves and the hierarchy structure is not as complex as large organization. With the ready-to-use software package offered by the CRM vendors, the cost of implementation is not as expensive as previous due to the competitive offers by the CRM software provider. Comparing with large organization, small firms prefer to employ simple CRM functions and tools rather than a complex system. However, benefits of CRM are still broadly undiscovered even by the larger organization and those opportunities able to contribute to the competitiveness of small firms in the global market (Alshawi, Missi, & Irani, 2011, p. 376).

After a thorough reading, research studies primarily focus on implementation of CRM in large organizations. Several studies suggested different approaches in implementing a successful CRM (Goodhue, Wixom, & Watson, 2002; Wilson, Daniel, & McDonald, 2002). Few studies have been conducted on quality factors, knowledge management approaches and information

technology strategies in adoption of CRM in SMEs (Alshawi et al., 2011; Koh & Maguire, 2004; Mazurencu, Mihaescu, & Niculescu- Aron, 2007). However, many studies by academic scholars and industry experts analyze key reason for CRM failure are due to poor planning and lack of clear objectives (Foss, Stone, & Ekinci, 2008; Kale, 2004; Missi, Alshawi, & Fitzgerald, 2005), while support from management and proper strategies are few of the key CRM success factors (Q. Chen & Chen, 2004; Croteau & Li, 2003; Nelson & Hagemeyer, 2003).

Apart from CRM failure or success, research identifies other strategic issues such as data, technology and knowledge management influencing CRM in implementation (Baumeister, 2002; Bull, 2003; Campbell, 2003). In addition, most studies conducted on CRM strategies focus on the implementation of CRM in large organization (Alok Mishra & Deepti Mishra, 2009; Finnegan & Currie, 2010; Lambert, 2009; Özgener & İraz, 2006; Piskar & Faganel, 2009). However, there is not many studies conducted in CRM implementation process in small firm. Thus, this thesis aims to fill this research gap by further studying the benefits and challenges faced by small companies when implementing CRM.

1.2 Research purpose

The overall aim of this research is to build and understand small firms' perspective into CRM implementation. This paper will be achieved through the research questions by answering the two following research questions:

1. What are the challenges related to small firm CRM implementation?

2. What are the small firms' CRM benefits?

This paper will address the research questions as follows:

The thesis first starts by exploring customer relationship management in a small firm as a research phenomenon and identifying the current research gap to position the research topic. The second chapter takes a review of existing insight and knowledge of the customer relationship management, the processes, data, customer knowledge and, technology through few sub-chapters. Chapter three discusses small firm concept and relationship between CRM and small firm. Then, chapter four will explain on the methodology being used in this thesis.

The fifth chapter presents the key findings of the benefits and challenges from the data analysis. The final chapter presents the conclusion of the study and the research limitation. The benefits and challenges encountered during the implementation period will provide a solid proposition comparing to the existing academic literature.

2. CUSTOMER RELATIONSHIP MANAGEMENT

The objective of this chapter is to review the theory of customer relationship management (CRM) in order to have a better understanding of it from different perspectives e.g. as process, and technology in the business and literature point of view. The chapter will begin by exploring the definition of CRM as an overview. Next, an overview of CRM as a process itself, follow by Data in CRM, Customer Knowledge, and relation between Technology and CRM. The following sub-chapters are the potentials and failures of CRM and lastly, the summary of the CRM.

2.1 Approaching the definition of CRM

Literature research on the term CRM search, consist of multiple definitions. Based on Saarijärvi, Karjaluoto, & Kuusela (2013, p. 142) study, there are more than 2,500 scientific articles suggested in the search to articles that consist of the search term in the article title, keywords, or abstract. The popular term has become a buzzword (Luck & Lancaster, 2003, p. 214) that appears to be inconsistent and highly fragmented with unclear definition of itself as it lacks of common conceptualization from academicians in the growing academic CRM literature (Zablah, Bellenger, & Johnston, 2004, p. 476) and according to Winer (2001, p. 91), the concept is poorly defined as he stated:

"A problem is that CRM means different things to different people. For some, CRM means direct e-mails. For others, it is mass customization or developing products that fit individual customers' needs. For IT consultants, CRM translates into complicated technical jargon related to terms such as OLAP (on-line analytical processing) and CICs (customer interaction centers)."

It is generally believed that CRM term become popular in the 1990s due to technology advancement in technology based solution (SFA) and the growth of customer base (I. Chen & Popovich, 2003, p. 675; Garrido-Moreno & Padilla-Meléndez, 2011, p. 438; Payne & Frow, 2005, p. 167). The term is also being associated as part of marketing sub-discipline (Roberts, Liu, & Hazard, 2005) as some academician indicated CRM is about co-value creation between

firm and customer (Payne & Frow, 2005, p. 170; Vargo & Lusch, 2004, p. 10). According to Zablah et al. (2004, p. 478), the collective goal is to enable firms to build and maintain a profit-maximizing portfolio of customer relationships. Few suggested that CRM and relationship marketing are not distinguished from each other in the marketing literature (Parvatiyar & Sheth, 2001, p. 3; Payne & Frow, 2006; Zablah et al., 2004, p. 480).

Meanwhile, several studies from other fields such as by Xu and Walton (2005), Nguyen, Sherif, and Newby (2007), and Bose (2002) describe CRM as "integration using technology and process developing and retaining customers through information's stored in data warehouse website and staff knowledge towards their customers to achieve, aimed at retaining customers and to gain a strategic advantage." CRM tools companies to collect customer data, identify the most valuable customers over time, and increase customer loyalty by providing customized products and services (Rigby, Reichheld, & Schefter, 2002).

CRM term can be seen an outcome of the continuing evolution and integration of marketing ideas and newly available data, technologies and organizational forms (I. Chen & Popovich, 2003, p. 156) and according Payne and Frow (2005, p. 168), their definition of CRM layout various point of views related to CRM's definition:

"CRM is a strategic approach that is concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments. CRM unites the potential of relationship marketing strategies and IT to create profitable, long-term relationships with customers and other key stakeholders. CRM provides enhanced opportunities to use data and information to both understand customers and co-create value with them. This requires a cross functional integration of processes, people, operations, and marketing capabilities that is enabled through information, technology and applications."

Despite different interpretation by academicians from various disciplines of studies, it generally has similar perspective about the description of CRM. Phrases such as "mutual benefits" (Parvatiyar & Sheth, 2001), "customer relationship" (Nguyen & Waring, 2013; Xu & Walton, 2005), "strategy" (Reinartz, Krafft, & Hoyer, 2004; Rigby et al., 2002) and "technology" (Bose, 2002) appear with a high result when searching the definitions of CRM. As mentioned earlier

by Winer that CRM definition means differently depending on the perspective of individual, thus in this thesis, above mentioned are consider as part of CRM characteristics in the emerging study of the multi-disciplinary field. The CRM definition for this thesis will be based on Payne and Frow's CRM definition as their CRM concept integrated with combination of strategy, customer relationship, customer and technology. Rather than limiting CRM on certain subject such as technology or relation marketing, CRM should also incorporate business strategy, goal, and customer knowledge as part of the definition.

2.2 CRM implementation and process

2.2.1 CRM implementation

There are many factors contributing to the success of CRM implementation. However, the most crucial step is the perception towards CRM as a strategy rather than as a solution. First of all, CRM project must be considered as comprehensive project throughout the company and not being regarded as departmental project. Secondly, commitment and involvement from the top management and senior managerial level is important in order to have successful CRM implementation (Kotorov, 2003).

According to Piskar and Faganel (2009, p. 201), CRM implementation starts with a strategic decision to change or improve the business process in the firm, and to invest into a better technological system. In the initial stage of implementation, support from top management plays a major role in the firm as a sign of change. Smith (2006, p. 88) mentions that lesson from past failure project need to be learnt in order to understand CRM better. These past failures include: over stressing the functionality of CRM; not having a front-to-back CRM solution for customer service (this includes employee education on the benefits of CRM solutions and procedures on front line follow-up); and not having the corporate culture to support the implementation of CRM (Smith, 2006, p. 88).

Study conducted by Xu and Walton (2005) in implementation of CRM system in practice, focusing on strategic application i.e. to gain customer knowledge, and to explore the ways of embracing CRM technology for strategic customer information provision. In their study,

organizations have been using CRM systems in operational applications e.g. contact centres, sales and marketing solutions with limited customer knowledge gained thru the CRM system. Xu and Walton (2005) suggested that CRM implementation should enhance organization's ability to interact, attract, building relationships and the ability to gain customer knowledge. In their study, top management support plays a crucial role for a successful CRM implementation.

Meanwhile, Chen and Popovich (2003, p. 675) propose a CRM implementation model that integrates the three key dimensions of people, process, and technology within the context of an enterprise-wide customer-driven, technology-integrated, cross-functional organization. According to Chen and Popovich (2003), as the trend shift from product oriented to people oriented era, firms need to rebuild the business around customers, employees need to accept the changing business process, organizational culture and, the ways they view their customers and how they treat them.

2.2.1.1 Challenges of CRM implementation

Although there are many literature articles and companies CRM success stories being published, there are also increasingly significant number of articles and reports documenting the failure of CRM found. According to Bligh and Turk (2004), the common reason of CRM failures are categorize based on the following:

- Poor objective setting,
- Lack of senior leadership,
- Inadequate planning and scope setting,
- Implementation missteps,
- Lack of change management and,
- Inadequate post-implementation operation.

Firstly, it is important to set an objective prior the CRM implementation and CRM should not be misunderstood to a software solution implementation project (Parvatiyar & Sheth, 2001, p. 28). This was complied with CRM often incorrectly equated as CRM technology (Reinartz et al., 2004; Rigby et al., 2002) for the firm's marketing strategies and goals. According to Rigby

et al. (2002, p. 102), their ten years of research identified one of the biggest failure of CRM implementation is that most executives doesn't not understand what they are implementing, the cost of implementation and the time needed. Rigby et al. (2002) and Kale (2004, p. 44) both disagree that CRM has to be technology intensive as CRM objective can be achieved by trying to understand the customer needs. Therefore, many CRM projects are stalled, failed and even being scrapped off (Reinartz et al., 2004) as the result of failure to understand the CRM initiatives entail (I. Chen & Popovich, 2003, p. 675). With technology assistance, firms are able to capture and analyze customer data however for the long run, firm need to depend more on strategy rather than rely 100% on technology to retain existing customers and capture new customers. According to Garner report, there is a large proportion of CRM technology deployments that do not perform up to expectations (Reinartz et al., 2004, p. 9).

Besides, Kale (2004) research suggested that another reason for CRM to fail is lack of adequate change management. The issue with changes resistance arise from the employee's lack of understanding and training, existing firm's culture, business process and company's direction in the CRM implementation (Koh & Maguire, 2004). Besides, support and commitment from the top management is needed in order for CRM to be successful (Kale, 2004, p, 45; Rigby et al., 2002). The initiative should be driven by the top management in the company as the guidance of change and showing involvement during the process. In an executive survey conducted by Gartner, more than 55% of all CRM projects have difficulties to achieve the desired expectation. Freeland (2003) suggested two main reasons for the failure:

1) *The disconnection of CRM vision and execution*. Common mistake done by most companies focusing on technology area such as tools and systems rather than business strategy to increase value of the customer relationship.

2) *The rising standard for CRM excellence*. Business environment changes rapidly due to the technology advancement resulting customers to be more knowledgeable. In order to compete in the market, firms need to be equipped and outdo each other more than relying on CRM programs.

In summary, the issue of CRM failures appeared mostly to be in people's perspective toward CRM. While the technology plays an important role in the CRM process but this led to one of the major issues based on assumption that CRM is technology driven. The assumption has leads many firms to forget that customer strategy and business process are vital for the longer run alongside with the technology. In addition, the failure to connect the objective between CRM capabilities causing the change management from the top to bottom level of employees being affected in a negative direction.

2.2.1.2 Criteria for successful CRM implementation

In Mitussis, O'Malley and Patterson (2006) study, they found that CRM implementation has not been unproblematic. In order to have a successful and effective CRM implementation, Nguyen et al. (2007) discuss several approaches for successful CRM implementation. They suggested that organization should evaluate how CRM fits into their overall business strategy, current CRM capabilities and a reason for implementing CRM. In Nguyen et al. (2007) study, they have given suggestion that CRM implementation is a mandatory step in consumer goods industry because the industry has a closer connection with end customers but lesser value to industries that are further away from the end customers. Meanwhile for financial services and telecommunication industry that have major customer contact, CRM implementation is highly recommended step. However, possibility of lack of knowledge and research, lack of project management skills, and lack of commitment from the executive management could result a failure in the implementation (Nguyen et al., 2007, p. 113).

Meanwhile, according to Xu and Walton (2005) in order to have a success CRM implementation, organization need to change to create a knowledge centric organization in addition with support and awareness from top management and solution provided by IT industry. Bohling et al. (2006, p. 193) surveyed 101 U.S.A firms' experiences on CRM implementation to identify the successful factors associated with the implementation. According to their finding, they suggested that by linking CRM strategy and implementation more tightly with the overall marketing strategy of a business will lead to greater CRM implementation effectiveness. In Goodhue, Wixom and Watson (2002, p. 93) finding, a successful CRM implementation require implementing strategically beneficial applications, improving the underlying data infrastructure, and changing the way the business is run. In

addition, committed support from top management is needed in order for change in business culture. Crocket and Reed (2003) suggested that firm should be able to recognize how CRM adjust into the overall business strategy by assessing capability of the CRM. Rather than viewing CRM as another new technology system, firm need to rationalize the purpose of having a CRM in the business and prepare a proper plan of implementation in order to achieve the main objectives.

2.2.2 CRM process

To describe business process, Hammer (1996, p. 12) said that "the essence of a process is its input and it outputs, what it starts with and what it ends with. Everything else is details". It is difficult to identify the input and output of CRM process as it is different from manufacturing or physical development of products as most of the time CRM process involves intangible asset (Zablah et al., 2004, p. 479). Thus, CRM is described as a macro-level process (Lambert, 2009, p. 5) is highly aggregated which comprised of numerous sub-processes that can be separated into micro-level processes (Srivastava, Shervani, & Fahey, 1999, p. 169).

Marketing scholars have long believed that the main objective of marketing is to attract and retain customer and to achieve that objective, organizations must implement business plan or process (Srivastava et al., 1999, p. 168). In the first part of Parvatiyar and Sheth (2001, p. 5) definition, it is stated that "*CRM is an overall strategy and process of acquiring, retaining, and partnering with selective customers to create superior value for the company and the customer*" in line with Swift (2000, p. 36) description that CRM provides enhanced opportunities to use data and information to both understand customers and co-create value with them. Zablah et al. (2004, p. 480) developed a concept to define CRM process as "an ongoing process that involves the development and leveraging of market intelligence for the purpose of building and maintaining a profit-maximizing portfolio of customer relationships". Hammer (1996, p. 12) indicated that the most important word in the definition of process is "customer" fit perfectly based on the above three journals' description of CRM process.

In Reinartz et al. (2004) study, there are three different possible levels of CRM: the functional level, the customer-facing level, and the company-wide level. CRM has become an important business measurement as an outcome of aggressive competition based from the need to achieve

cost efficiency with high-quality supplier and a recognition of the fact that customers are not equal in terms of their profitability; and, knowledge that customer retention can significantly affect profitability (Lambert, 2009, p. 5).

There are various perspectives of CRM implementations and processes. However, for the purpose of this paper, Payne and Frow's CRM process will be use as a guideline for implementation process. The cross functional processes identified by them are more comprehensive with more details explaining the nature of the processes and how each process interacts with each other. In addition, both CRM implementation and success criteria highlighted the importance of identifying and aligning the CRM strategy into the business strategy.

2.2.2.1 CRM process according to Payne and Frow (2005, 2006)

In the previous discussion, it is important to understand CRM and its related aspects such as the definition, objective, aim and strategy before implementing the CRM. Payne and Frow (2005, p. 86) used an expert panel of executives with extensive experience within the CRM and IT sectors to develop and identify five CRM processes including: (1) strategy development, (2) value creation, (3) multi-channel integration, (4) information management and, (5) performance assessment. These five CRM processes are known as cross functional processes in the framework. Table 1 below summarized the descriptions for each process.

Process	Description
Strategy Development Process	There are dual focus in this process: *1) Organization's business strategy:* Business strategy need to be developed and objective of the customer strategy and CRM activities be defined. *2) Customer strategy* An appropriate customer strategy need to be planned starting with examine and then analyzing customer base in order to be able to form customer segmentation

Value Creation Process	The three key elements during process identified as;
	1) Value deliver to customer
	2) Value receive from customer
	3) Value co-creation or co-production with customer
	Firm should conduct a value assessment in order to find out if value proposition is a factor link to superior customer experience. The customer value is the outcome after extensive of strategies and marketing planning being deployed.
Multi-channel Integration Process	The multi-channel integration process focuses on the right communication channel choices in delivering the desire messages to the targeted group.
	Firm need to maintain the same standards across multiple, different channels in order to create a great customer experience as it serve as the point of co-creation of customer value in the CRM process.
Information Management Process	The main objective in this process are gathering, analyzing and utilizing customer information to gain an insight and create marketing responses to enhance customer experience.
Performance Assessment Process	The main objective is to ensure that strategic CRM objectives are being achieved within the pre-set business goal and target.

Table 1: The CRM Process (Payne & Frow, 2005, p. 170; Payne & Frow, 2006, p. 88, summarized).

2.2.2.2 Other CRM processes

Besides Payne and Frow's CRM process model, the author also selected four other CRM processes, shown in Table 2 that are commonly being used as references in the academic literature. The four CRM processes reflected another perspective in term of the process flow itself and the main purpose of CRM in the context.

Author(s)	CRM Process	Short Descriptions
Parvatiyar and Sheth	(1) Customer Relationship Formation Process,	The objectives of engaging in CRM; 1) To increase marketing productivity,

(2001, p. 8)	(2) Relationship Management and Governance Process, (3) Relational Performance Evaluation Process, and (4) CRM Evolution or Enhancement Process.	2) To enhance mutual value. Involves in the operation, development, and execution aspects depending on the nature of the CRM programs itself. CRM programs are evaluated from time to time in order to ensure programs are meeting expectation and sustainable in long run. Customer relationship and CRM programs are expected to go through a cycle of evolution pre-planned or evolved naturally.
Swift (2000, p. 36)	(1) Knowledge Discovery, (2) Market Planning, (3) Customer Interaction, and (4) Analysis and Refinement	Constant learning and generating knowledge of customers to achieve objectives and gain higher profitability in long term are the important factors during the CRM process.
Nykamp (2001, p. 5)	(1) Understand and Differentiate, (2) Develop and Customize, (3) Interact and Deliver, and (4) Acquire and Retain	The initiatives and infrastructure are linked to the core cycle of activity in an ongoing continuous series of interactions in the relationships. Moreover, the stages in the cycle are interdependent with one another.
Zablah et al. (2004, p. 481)	(1) Knowledge Management Process (2) Interaction Management Process	The CRM process sections are built on the various authors work based on their expertise in their respective fields. They proposed that CRM is interested in creating market intelligence with the purpose of firms being able to generate and retain series of long run profit-maximizing from customer relationships.

Table 2: The CRM Processes

2.3 Data in CRM

Referring to the previous sub-topic of CRM Process, phrases such as "customer information", "data", "target group", "database" and "segmentation" are linked to the information collected from customer, either from existing or potential customer of the firm. In recent years, the increasing interaction between customer and firms have generated a lot of information with one another creating opportunities and challenges for firm to understand the customer's need and pattern. As a result, many firms invested in technologies to collect, store and analyze these information in a database. The database of the customers discloses information such as what kind of product that have been purchased and through that information, company able to forecast the next purchase directly acknowledge the importance of the database which capture customer information (Winer, 2001, p. 102). Acknowledging the importance on how powerful customer information can aid the firm, most of firms established a place to organize the data by creating databases, commonly referring as data warehouse.

2.3.1 Data warehouse

Data warehouse term might differ from one organization to another as it is commonly customized to suit the need of each firm. In general, Inmon (1995) describes data warehouse *as a subject oriented, integrated, time variant, non-volatile collection of data in support of management's decision needs* which is similar with Hüsemann, Lechtenbörger, and Vossen (2000, p. 1)'s explanation of data warehouse that "it is an integrated and time-varying collection of data primarily used in strategic decision making". Data warehouse is considered as an important part in analytical CRM due to the capability to track customer behavior from over period of time (Berry & Linoff, 1997, p. 5) with database storing data from multiple information sources such as historical to present information which can be segregated into categories and summarized to be circulate for marketing purposes (Hüsemann et al., 2000, p. 1; Inmon, 1995, p. 18). Chen and Popovich (2003, p. 678) provided a brief summary of the data warehouse's benefit in the bullet point below:

- *"accurate and faster access to information to facilitate responses to customer questions;"*

- *"data quality and filtering to eliminate bad and duplicate data;"*
- *"extract, manipulate and drill-down data quickly for profitability analysis, customer profiling, and retention modeling;"*
- *"advanced data consolidation and data analysis tools for higher level summary as well as detailed reports; and"*
- *"calculate total present value and estimate future value of each and every customer."*

2.3.2 Data mining

The term data mining (DM) has appeared as a result to the growth of database, technology advancement and to achieve competitive advantage. According to Fayyad, Piatetsky-Shapiro and Smyth (1996, p. 39), the term has been used mostly by statisticians, data analysts, and the management information systems (MIS) communities. DM is part of the process in discovering pattern, trend or relationship thru exploring and analyzing data to gain new perspective towards customer behavior (Berry & Linoff, 1997; Fayyad et al., 1996; Rygielski, Wang, & Yen, 2002).

The key objective of data mining is to identify valid, novel and useful patterns, and associations in existing data in order to gain insights that add to organizational knowledge (Spiegler, 2003, p. 536). Thus, Berry and Linoff (1997, p. 19) defined six common data mining tasks: classification, estimation, prediction, affinity grouping, clustering, and profiling. The benefits from the DM tasks includes identification of potential customers, gain new information e.g. customer life cycle, credit history, cross-selling and creating the suitable communication channel to specific target group. To outline Swift (2000, p. 98) summary on roles of data mining, firstly data need to be converted into information and knowledge for the right decision to be made and secondly, providing right mechanisms to deploy knowledge into operational for right action to be occurred.

2.3.3 Impact of data's quality

Recognize as the foundation of CRM process, customer data plays an important role for the business (Alshawi et al., 2011, p. 377; Even, Shankaranarayanan, & Berger, 2010; Zahay, Peltier, & Krishen, 2012, p. 6). Hence, a poor data quality can cause a firm to invest more extra time and human resources as not all customers in the list are active or still exist in the market (Mulhern, 1999, p. 28). Based on Gartner study (2003), 75% of organizations surveyed admitted that flawed data contributed to negative financial impact on their business and 50% incurred extra cost to reconcile data. According to The Data Warehousing Institute report, data quality issues cost U.S. businesses approximately more than $600 billion a year (Eckerson, 2002). Marsh (2005, p. 106-107) summarized the finding based from research and reports by industry experts in the following bullet points:

- *"88 per cent of all data integration projects either fail completely or significantly over-run their budgets;"*
- *"33 per cent of organizations have delayed or cancelled new IT systems because of poor data;"*
- *"$611bn per year is lost in the US in poorly targeted mailings and staff overheads alone;"*
- *"According to Gartner, bad data is the number one cause of CRM system failure;"*
- *"Business processes, customer expectations, source systems and compliance rules are constantly changing. Data quality management systems must reflect this;"*
- *"Vast amounts of time and money are spent on custom coding and traditional methods usually firefighting to dampen an immediate crisis rather than dealing with the long-term problem".*

2.4 Customer knowledge

As customer data are being collected and analyzed through marketing platforms, it indirectly creates opportunity for firms to learn about the customer. According to Sheth, Sisodia, and Sharma (2000, p. 62), customer knowledge is capable to help firm to improve in product creation, pricing, distribution and fulfillment, and communication while enhancing customer

loyalty. Rowley (2002, p. 501) defines customer knowledge as *knowledge about customers* and *knowledge possessed by customers.* It is further elaborated by Dous, Salamann, Kolbe, and Brenner (2005, p. 167) papers as part of the three knowledge flows identified in addition with *knowledge for customers.* Firstly, knowledge about the customer is obtained thru customer's data and past transaction that enable firm to identify the preference and future purchase activity. For example, firm have information on customer service interaction such as account status, frequent purchase products and feedback that can help them to understand better of the customer purchase's pattern. Secondly, knowledge possessed by customer involving information provided by customer about products, services, pricing, and current trend of the company's product and services as well as competitors information. Lastly, knowledge for the customer is shown and distribute through product information, marketing communication, services based from the customer research conducted by the firm internally in order to achieve customer retention and attracting new customers.

2.5 Technology and CRM

The development of technology has encouraged many companies to adapt CRM into their companies as business need to accommodate to the changes of customer's habit and behaviour. In the Information Technology industry, CRM is incorporated with technology, database and a tool while in business context, CRM usually associated as a tool or system that contains customer database. The technology and system solution are often combined with other support systems such as enterprise resource planning system, executive information systems, supply chain management system, and product life-cycle management systems (Nguyen et al., 2007, p. 103). According to Chen and Popovich (2003, p. 673) few companies view CRM as a technology solution that separate databases and sales force automation tools to bridge sales and marketing functions. This akin to view CRM as "technological perspective" (Santouridis & Tsachtani, 2015, p. 306). For this section, technology term in CRM will be focused as Enterprise Resource Planning (ERP) system.

ERP system have experienced a phenomenal growth (Mabert, Soni, & Venkataramanan, 2003) as it increases operational efficiency by integrating the different activities across the organization thus streamlining the flow of information (Ali & Cullinane, 2014, p. 542). This

have lead dominant ERP system vendors such as Oracle, SalesForce.com, SAP and Passport Software to form alliance with smaller software companies to meet and capture the growing demand of CRM market (I. Chen & Popovich, 2003, p. 679). For example Salesforce.com (2014) form a strategic alliance with Philips to deliver a cloud-based healthcare platform.

2.6 Summary on CRM

The CRM term has several of meaning from different perspectives and aspects; economic approach, business context, technology perspective and marketing viewpoint. It appears to be unpractical to narrow down the concept into specific form for this thesis. In a broader angle, from the strategic point of view, CRM is stated as "a *comprehensive strategy and process of acquiring, retaining, and partnering with selective customers to create superior value for the company and the customer*" (Parvatiyar & Sheth, 2001, p. 5) which Payne and Frow (2005, p. 168) also consider CRM as strategic view in their statement, "*CRM is a strategic approach that is concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments*". Lack of strategic framework is one of the reasons causing disappointing result in CRM initiatives (Grabner-Kraeuter & Moedritscher, 2002, p. 1).

There is also no common unified CRM process found in the literatures. Most of the processes are written and developed based on the phases and different approach for specific case study. Based on Goodhue et al. (2002) findings, there are mixed outcome on success factors in CRM implementation because starting with a complete solution requires a clear vision is hard to begin with. The CRM implementation and successful factors are highly depending on fitting CRM strategy into the business, support from top management and change in firm's culture. The implementation is in line with Payne and Frow's CRM process framework which also known as cross functional processes, highlighting the importance of setting business strategy in the start of the process. In addition to Payne and Frow's CRM process, four other CRM processes are presented as well and overall, the most common points are about the purpose of engaging CRM, importance of understanding customers including gathering and analyzing data gained through interaction, customer knowledge and fostering the relationship.

As customer data is recognized being part of the important resources, companies need to sort the data into relevant information based on requirement and segmentation. Subsequently, data warehouse is created to store database of the past, current and relevant customer's information. As technology advance, huge load of database need to be sorted and analyze in order to identify similar pattern and trend among the customers for marketing purposes (Spiegler, 2003). However, not all data are useful and relevant. Bad data quality has been proven to cause a big impact in term of cost, human resources and time delay for companies. From the customer data, companies are learning and gaining additional information from the database. This have been elaborated by scholars such as Sheth et al. (2000), Rowley (2002) and Dous et al. (2005) in their respective articles, categorizing customer knowledge from three perspectives: 1) *knowledge about customers,* 2) *knowledge possessed by customers,* and 3) *knowledge for customers.* CRM implementation does not rely solely on technology to make it successful but it is a cross function process involving human resources (employees), commitment, business process, training and ability to accept changes.

To sum up, the overall objective to implement CRM is not limited to achieve competitive advantage in the industry. Firm need to have a long-term relationship with the customers in order for both parties being able to create value with each other. This enable firms to acquire and retain customers based from the knowledge collected from customers and customers achieve high level of satisfaction. However, it is important to have a strategy and aim before implementing CRM into the business.

3. SMALL FIRM AND CRM

The chapter will begin with justifying 'small firm' context as an overview. Companies in different sizes have their own way of defining an implementing CRM into their business. The differences include (1) the driver to adopt CRM, (2) the challenges in the implementation and lastly, (3) the potential benefits and failures from the CRM implementation. These perspectives' will be discussed in the following sub-chapters associating the relationship between Small Firm and CRM. The chapter will conclude with a theoretical synthesis design for this thesis.

3.1 Defining small firm

Defining small firm is not easy as it is consistently tied up with medium firm/enterprise in most of the economic, marketing or business terminology forming the international abbreviation: SME (Small and Medium Enterprise). In Osteryoung and Newman (1992)'s paper, they explained a chronological order from 19th centuries to 1990s on the historical definition of small firm being defined. It is important for the researchers and government entities to have definition scope for research purposes and same interpretation.

Company Category	Staff headcount	Turnover (or)	Balance sheet total
Medium-sized	< 250	≤ € 50 m	≤ € 43 m
Small	<50	≤ € 10 m	≤ € 10 m
Micro	<10	≤ € 2 m	≤ € 2 m

Table 3: Criteria of SME (EUR-Lax)

According to Ward and Rhodes (2014), the usual definition of SME is any business with fewer than 250 employees. Based from Union Commission, mostly companies are being classified based on the number of employees, the annual turnover and the active balance. Table 3 shows the criteria of small firm defined by European Union (EU) Commission. Number of employees in a small firm should not be more than 50 employees with annual turnover or balance sheet

not more than 10 million euro. This definition became effective on 1 January 2005 (EUR-Lax). The small firm definition falls under the Small and Medium Enterprise (SME) category.

These variables are commonly used by government entities to categorize firm; large, medium or small firm. Regularly these variables are also used to indicate on the monetary fund support e.g. loan or funding and to measure company growth in the country. According to Eurostat, SME often referred to as the backbone of the European economy (Eurostat, 2017). These companies are essential for the growth of the countries as it provides job opportunities, competitiveness in the industry, promoting creatives and developing a new working nature (Robu, 2013, p. 86). For the study of this paper, the focus of SME's country will be in Finland.

In Finland, small firm's criteria provided by Statistic Finland is similar to the criteria's set by EU Commission; total number of employees not more than 50 with either annual turnover or balance sheet not more than 10 million euro (Statistics Finland). However, there is some additional criteria under the Finnish Law that differentiate small firm and medium sized firm; independent enterprises are enterprises of whose equity or voting stock 25 per cent or more are not held by one enterprise (Statistics Finland). SME plays an important role towards the Finnish employment and its economy as the sector generate about 50% of the combined turnover of all Finnish businesses (Federation of Finnish Enterprises, 2012).

3.2 Small firms potential CRM benefits

The acceptance and scope of benefits achieved from CRM implementation varies between firms depending on the firm's objective and aim of the CRM activities. Numerous articles and journals have been written about CRM as a potential opportunity to increase the customer acquisition and achieving competitive advantage (Rigby et al., 2002; Tinnsten, 2014; Zineldin, 2006) in the company over its competitors. For example, using different set of activities which have not been used or implement by competitors is able to deliver unique mix of value to the customers (Sahaf, Qureshi, & Khan, 2011, p. 5061).

By implementing a successful CRM, it enhances cross selling/up-selling (I. Chen & Popovich, 2003; Parvatiyar & Sheth, 2001), improvement in customer attraction, customer conversion, and customer retention (Winer, 2001, p. 91). This is further supported by Swift (2000, p. 42) that categorizes the benefits of CRM into three groups: customer acquisition, customer retention and customer profitability. Chen and Chen (2004, p. 338) categorized electronic customer relationship Management (eCRM) benefits into tangible and intangible benefits based from their surveys on 180 companies in 12 industries during the eCRM implementation as shown in Table 4. Although Chen and Chen (2004) research focused on benefits from eCRM, the findings can also be regarded as general view of CRM benefits.

Tangible Benefits	Intangible Benefits
Increased revenues and profitability	Increased customer satisfaction
Quicker turnaround time	Positive word-of-mouth
Reduced internal costs	Improved customer service
Higher employee productivity	Streamlined business process
Reduced marketing (e.g. direct mailing) costs	Closer contact management
Higher customer retention rates	Increased depth and effectiveness of customer segmentation
Protected marketing investment with maximized returns	Acute targeting and profiling of customers
	Better understanding/addressing of customer requirements

Table 4: eCRM benefits (Q. Chen & Chen, 2004, p. 338).

The growth of small firms has influenced the swift of attention that used to be heavily focused on large organization by software providers. Existing articles and academic research papers written on the CRM benefits mostly were based on large organizations and not many on small firms. According to Ko, Kim, Kim and Woo (2008) study, they highlighted that organizations size played an important factor in benefits of CRM. Yet, Peltier, Schibrowsky and Zhao (2009) proposed that the size of organizations does not have influence in increasing CRM perceived benefits. However, both authors findings were based on different industries; Korean fashion industry and hardware retailers. Reijonen and Laukkanen (2010) mentioned that due to the different requirement of industries, the perceived benefits also vary depending on the business

strategies. Even though Ko et al. (2008) highlighted CRM benefits that have been analyzed in others' academic studies, there is not much focus on small firms' perspective.

CRM helps small firms to understand their customer's needs better while improving their business process as they have superior knowledge about their customers from the information sharing across the company (Nguyen et al., 2007, p. 103). In small firms, there is a higher possibility in knowing the customer better in term of products purchase and previous interaction compare to bigger firm (Baumeister, 2002). With the knowledge of the existing customer, company able to meet the growing demands and at the same time draw the attention of new customer through the upfront knowledge of the customer satisfaction data (Sahaf et al., 2011, p. 5063). CRM is also reported to give an impact on the customer satisfaction (Boulding et al., 2005). Therefore, CRM benefits from existing literature studies mentioned above can be applied in small firms' perspective.

3.3 Drivers to implement CRM

For many small firms, implementing CRM has been viewed as a strategy to enhance their business, gain stronger customer base and able to compete with bigger player in the market. The rapid growth of technology advancement and internet has enabled the small firm to be able to reach and approach wider range of customers and networks. For the purpose of this paper, CRM implementation will be focused as ERP system implementation.

The rapid changing business environment in the present day has been pushing organization in adopting a holistic approach towards their customer (Finnegan & Currie, 2010, p. 154). In Özgener and Iraz (2006, p. 1362) research on SME tourism enterprise in Cappadocia, major factors influencing CRM in those enterprises were communication-distribution infrastructure, business dynamics, customer relations and innovation quality. To improve companies' performance and efficiency, many companies' business strategy started to incorporate technology tools and programs such as ERP system into their business (Ali & Cullinane, 2014). According to Koh and Maguire (2004, p. 339), one of the main drivers for SME to implement CRM in their business is due to the pressure from business competitors. Many big firms have

implemented ERP system into the business strategy using various module provided by vendors in the market.

Many ERP vendors are supporting and targeting big firms for their ERP products and services as the system have become more multifunction but less attention is given towards small firms and SMEs (Özgener & İraz, 2006, p. 1358). This is mainly due to the expensive price of the ERP products and system itself. As most small firms have limitation on their financial and budget, they are incline to spend huge amount on technology tools and system. However Koh and Maguire (2004, p. 339), argued that in current business environment there are many leading ERP vendors have penetrated the SMEs market with the development of mid-range ERP systems. For example, Salesforce.com's CRM Sales Cloud software is according to the firm size, scopes of software and functions with different pricing scale (Salesforce.com Inc., 2014). Alshawi et al. (2011, p. 378) categorize factors influencing CRM in SME into three major groups in Table 5:

Factor (s)	
Organizational factors	*Relate directly or indirectly to the structural, operational, human, and managerial sides of the business entity of the SME*
Technical factors	*Relate to the soft and hard aspects of the ICT/CRM technology being adopted*
Data quality factors	*Relate directly to the concept of data quality and how it is being conducted in the context of CRM adoption*

Table 5: Three major factors influencing CRM in SME (Alshawi et al., 2011, p. 378).

In most countries such as Ireland, funding and support from the government towards small firm seem to be a barrier to implement CRM as the firms do not have sufficient resources and fund (Harrigan, Ramsey, & Ibbotson, 2009, p. 448). Based on Alshawi et al. (2011, p. 380) study, government support and initiatives play an indirect role of CRM system implementation. However small and medium size firms in Finland, EIB Group (European Investment Bank and European Investment Fund) has concluded an agreement with the Government of the Republic of Finland and the European Commission for the implementation of the SME Initiative in

Finland (Finnish Government). The initiative is to boost the competitiveness of Finland's micro, small and medium-sized businesses through increased access to finance (Finnish Government).

3.4 Challenges in CRM implementation in small firm

Several studies have shown that many small firms lack understanding, knowledge, capabilities in CRM process (Özgener & İraz, 2006; Reijonen & Laukkanen, 2010). This is due to the size difference between small and large companies, contributing to limitation on certain areas such as resources, time, finance, marketing knowledge and expertise when comparing to bigger firm (Gilmore, Carson, & Grant, 2001). For example, Özgener and Iraz (2006, p. 1362) stated in their finding that the most crucial challenges to CRM for SMEs in the tourism sector were inadequate supporting budgets, lack of senior management commitment to CRM, and poor communication.

Technology is able to assist firm in managing business's operation. However, small firms lack in term of IT abilities when implementing CRM process. This is the most common issue for most SME (Nguyen & Waring, 2013, p. 828). The IT issues includes the lack of ICT-based knowledge, shortage of resources in finances, lack of necessary operating skill and lack of management support (Alshawi et al., 2011, p. 377). Some firms find it hard to adjust financial commitment in certain area that is not recognized as the core element of the business (Koh & Maguire, 2004, p. 341).

With lacking of in-house specialist for the CRM implementation, small firms tend to rely on external expertise such as consultants or vendors that provide consultancy services (Thong, Yap, & Raman, 1994). Ramsey (2003, p. 14) cited that insufficient help from vendors that only provided specific challenges involving highlighting specific aspects of their products and challenges neglecting to outline the bigger perspective of the implication for many areas of the business. Mazurencu, Mihaescu and Niculescu- Aron (2007) suggest that firm should ensure selection of vendors and partners are based on CRM form that is appropriate with the business strategy and future goal.

Dixit and Yadav (2011, p. 59) listed few challenges faced by SMEs when implementing CRM;

- lack of awareness in term of the CRM capabilities,
- perception that CRM is not suitable due to high cost of implementation and complexity,
- CRM is waste of time and money due to much-publicized failures in CRM implementation,
- unsuitable business process approach provided by vendor and,
- inability to view CRM as change management but an automation project.

3.5 Theoretical synthesis

Based on the literature study above, the following theoretical synthesis is created in order to reflect between the empirical part of study and the theories. The two-main focuses of this study are CRM and small firm. First of all, CRM definition is discussed in the beginning of the thesis before expanding to smaller sub-topics. The related sub-topics in CRM is categorized based on the theme: implementation and processes, data, knowledge and, technology in CRM. Next focus of the study is about small firm, potential benefits of CRM in a small firm, the driver to have CRM and lastly, challenges encountered during the process.

Again, the purpose of the thesis is to build and understand small firms' perspective in CRM implementation as it has not been studied much. The discussed literature reviews above can be used as reference to understand the topic of this study. Thus, the following findings are considered relevant and consistent for the research purposes of this thesis and will be used as the approach for this thesis. The theoretical framework of this study is illustrated on Figure 1.

To understand small firm's perspective in CRM implementation:

1. What are the challenges surface during the CRM implementation?

2. What are the small firms' CRM benefits?

Small Firm

Customer Relationship Management

CRM Processes

Strategy Development
Value Creation
Mutli-chanel Integration
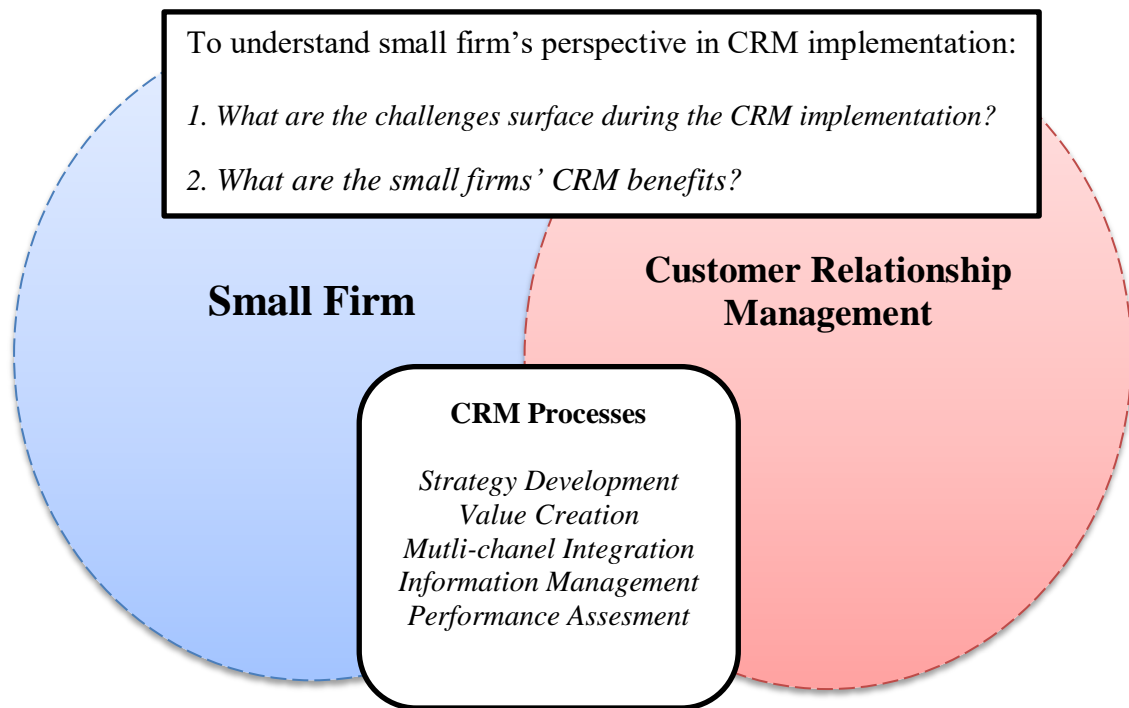*Information Management*
Performance Assesment

Figure 1: Synthesis of the theoretical framework

The framework is built upon two main focus of this thesis and integrating Payne and Frow's CRM framework and other CRM process based on sub-chapter 2.1.3.2. This framework is able to show the co-relation of the CRM Process with the combination of the two-main focus of the study, directly or indirectly studies related to them. As most previous studies focusing on big companies, there is little attention given to small size companies. According to Rigby et al. (2002, p. 102) research, the main reason of CRM implementation failure is the lack of understanding the objectives and strategies in implementation. The first research question is on the challenges related during the implementation. The challenges were observed throughout the entire implementation process which will be categorized based on the previous studies. Then, the second research question is the benefits related by having CRM. By using Payne and Frow's framework: strategy development, value creation, multi-channel integration, information management and performance assessment will be applied in small firm's point of view, in order to understand and answer the two research questions.

4. RESEARCH METHODOLOGY

Each study has its own objectives and research questions to drive the selection of appropriate research methodologies to be applied into the study (Crotty, 1998; Kothari, 2004). For this paper, a qualitative research has been conducted in order to gain data for this empirical study to understand the CRM implementation process in a small firm perspective. In the first section 4.1 Qualitative Methodology, three chosen methods will be introduced. Further on, section 4.2 the company for this study will be introduced. In section 4.3, the tools to gather data will be described. For section 4.4, Ethical Consideration will be discussed. Finally, in section 4.5 Data Analysis is the summary of the research process for this study.

4.1 Qualitative methodology

In the beginning of the research for this paper, the author chose qualitative method over quantitative method as the focus of this study is on data collection, observation and analysis. Qualitative method is often used particularly for case studies that involves process, data collection for business research (Eriksson & Kovalainen, 2008; Gummesson, 2000). The main reason in choosing qualitative method is due to qualitative methodologies can be divided into several approaches that allow researcher to understand more of the issues compare to quantitative method that focus on structured and standardized result with less interpretation approach (Eriksson & Kovalainen, 2008, p. 5).

4.1.1 Action research

Action research is different from other research methods as it involves with participants in term of collaboration together to solve problem, rather than to study the situation without any interference (Myers, 2009). The main objective in active research methodology is about developing knowledge that occurred during the process with the people who have experienced it and utilizing the information as a references, knowledge or guideline along the process and also for the future references (Somekh, 2006). According to Myers (2009, p. 61), there are several types of approach in action research that can be associated with depending on the author or research theoretical perspective and the research's aim. Schmuck (2006, p. 29) suggested

that action research required an outline of a continuous plan of queries for information, observation, and knowledge to find and develop a better result.

Much of the action research approaches focus in education and socio-psychology, less being practice in business and management. One of the reason is that business school often practiced positivist survey methodology in conducting research and obtaining overall results emphasizing in theory testing rather than trying to improve situation in a particular environment (Perry & Gummesson, 2004, p. 313). The common characteristic of action research is that researchers involve directly in the same period of time of the research or study as collaboration, partnership or participation with participants (Myers, 2009, p. 57). Gummesson (2000) identified four types of action research for management which he terms it as *action science*: societal action science, management action science, real-time action science and retrospective action science. Societal action science is considered as classical action research form whereby researcher is trying to improve the social system normally in third world country that may lead to changes in value and pattern during the process. Management action science focus on company in which researcher cooperate with employees in solving problems, learning and developing competences from each other. Real-time action science requires researcher to involve in project precisely for action research study and retrospective action science is living through the processes that will be reflected in the future as data and information for research project based on the experience and action (Gummesson, 2000, p. 116-122).

However, there are three different levels of researcher's participation in a project: technical, practical and emancipatory (Carr & Kemmis, 1986, p. 202-203). Technical action research level requires researcher to provide advice and suggestion with less participation, for example as a role of consultant providing assistance to the firm in a project when needed. Practical action research level involves researcher as Socratic role as to guide participant involving into the project and learn more through self-reflection rather than merely doing it. Lastly, emancipatory research action level involves both researcher and participant in the development of their project and taking responsibility together with the aim of changing the situation into a better progress (Carr & Kemmis, 1986, p. 202-204).

The author focuses on the management action science approach due to three reasons. Firstly, the approach itself reflects the nature of the study in which the author is involved in the processes with the employees to study and solve problems arising from the project and

exchanging and learning new knowledge with each other. Secondly, the level of action research participant of the author is emancipatory participant level. The author collaborates with the participants to solve problems and take responsibility together to improve the current process to a better flow for the business. Lastly, based on the two main criteria to justify action research study are: study must show input towards the business process or in an organization and secondly, establish a solid contribution that must be accepted as research contribution for example a Master thesis, PhD dissertation, peer-reviewed or journal (Myers, 2009, p. 64). Therefore, due to research setting and research purpose, action research approach is an appropriate strategy to study CRM implementation process in small firm.

The main objective of this research is to understand the challenges and benefits throughout the CRM implementation from the small firm perspective. The action research approach is chosen in order to understand the situation and uncover the hidden issues throughout the CRM implementation in the firm. O'Leary, Rao and Perry (2004) considered their study in improving CRM through database/Internet marketing as the first to pay attention under action research approach in business context. Aside from that, there is not much academic literature written to explore action research and project implementation, in this case CRM implementation, making it more challenging to adopt the approach in this study. For this paper, the focus will be to the aim of business, implementation process, the driver and the benefits and pitfall within the firm itself.

4.1.2 Semi-structured interview

Interviews are considered as one of the primary data gathering techniques often practice in qualitative research method as it allows various information and data from different target market with different roles (Myers, 2009, p. 121). Based on Myers's (2009, p. 123) suggestion in Table 6, there are three basic types of interviews that can be applied when conducting interview individually, group or organization depending on the research study.

Type of Interviews	Description
Structured Interviews	Using prepared questions and following closely with regard to the order of the questions and sometimes regulated with regard to the time available.
Semi-structured Interviews	Using prepared questions but not following closely to the orders of questions. New questions might emerge during the interview.
Unstructured Interviews	Few if any prepared questions which allow interviewees to have freedom to say what they want. Often no set time limit.

Table 6: Types of Interviews (Myers, 2009, p. 124).

In order to answer the research question, semi structured interview is another method to be applied as a qualitative tool in data gathering. Although there are questionnaires being prepared ahead of the interviews, semi-structured interview allows the interviewers to address new questions that might be interested to the research topic. The semi-structured interviews type enable interviewer an opportunity to understand the research topic better, at the same time adding new insight throughout the entire interview (Myers, 2009, p. 124). It provides more flexibility to the interviewer during the interview, for example interviewer can ask question depending on the situation instead of strictly following the order of questions and able to change the sequence of questions.

4.1.3 Participant observation

Participant observation is often being associated with anthropological study involving researcher to participate in the process or situation concurrently; observing and recording the activities. Data are collected by researcher during the activities offer an opportunity to gather rare perception into the group, organization or activities (Iacono, Brown, & Holtham, 2009). In Becker and Geer (1957, p. 32) participant observation study among medical students, they noticed that the participant observers are more aware of the problems and readier to face the

situation as they understand the issue better due to the involvement in the process rather than just observing alone.

Evered and Louis (1981) described two paradigms in organization research: inquiry from the outside and inquiry from the inside. Both paradigms are able to assist in research purpose in different ways with various outcomes. 'Inquiry from the outside' refers to researcher's disconnection from the organizational environment whereby the study is not related to the researcher. 'Inquiry from the inside' is contrast with inquiry from outside as researcher is involved throughout the research process. The researcher's role in *inquiry from the outside* can be categorized either as onlooker or speculator as they collect data based on observation without interfering. In contrast, the researcher's role in *inquiry from the inside* requires researcher to participate and involve in the situation, at the same time collecting data for the research (Evered & Louis, 1981, p. 388-389). Lastly, knowledge gained through the inquiry from the inside tends to remain longer in the researcher's mind as they performed the activities themselves.

4.2 Arch Red Oy

The empirical part of study was carried out as a single case study focusing on a small firm based in Finland in order to provide a real-life context for the study. It was partially based on the author's observations, interactions and interviews with the employees during the empirical timeline and the data provided by the employees to the author.

Arch Red Oy is a Finnish internet engineering company based in Tampere and was founded in 2002. The company has a sister company based in Australia, Open System Consultants Pte Ltd, which is fully merged and fully owned by Arch Red Oy on 2016. Their clients are mainly based on three main groups; communication service provider which includes operators and service providers, government and education, and lastly, enterprises and large organizations. In addition, they have approximately 500 active customers from random industries all over the world as the IT departments or internets are using their software.

Their clients are mainly from Europe countries, North America and Australia. With 50 resellers operating in 75 countries and customer presence in more than 180 countries around the globe,

it shows that the company have a strong customer base outside of Finland as the market in their own country is consider rather small for the business. Its services include consultation on network infrastructure designing, both products and services based on Radiator AAA (Authentication, Authorisation and Accounting) software for wired and wireless users. The company is growing rapidly in term of the company size and gaining market share as the result of the growing demand for wireless connection technology and in developing countries that are using fixed internet technology, as the demand is still growing as well.

The company employs 10 employees and a few of the partners are working in the company as part of the management teams. The company is small with indirect hierarchical organization structure exist in the environment. The hierarchical structure of the company allows employees to communicate more openly and enhance collaboration among them, which is opposite with the traditional hierarchy structure that emphasized on positions and layers in organizations. In addition, Finnish working culture that focus on equality, efficiency and employees' opinion are taken into consideration increase the level of positive working environment.

Before CRM implementation, the company has its own home-grown software serving as part of the company customer database system. In addition to that, the system was functioning as part of 'activation' button when customers purchased new product or renewing license of product and services. However, the system could not provide a proper CRM function such as analyzing customer information, sales forecasting and tracking customer updates.

Author chose Arch Red Oy as the main focus in the study for the following reasons. Firstly, Arch Red Oy is one of small firms that play a significant part towards the Finnish employment and economy which is recognized by the Finnish Government. Secondly, the firm have just started the CRM implementation in their company as part of consolidating their data and information into a single site project. Thirdly, author had the opportunity to be involved in the project throughout the implementation phase, which provides much more insight and data, in addition with interviews with the employees.

4.3 Data generation

4.3.1 Choosing interviewee

Interviewees are selected based on two criteria. Firstly, the interviewees are the employees of Arch Red Oy. This is important for the study to avoid sensitive information and customer data to be leaked to external parties. Secondly, the employees who are working in the company must have at least involved in the decision-making level of the company and/or working hand on with the CRM implementation. The scope of the research topic is employees who have been involved pre-CRM implementation stage till the post-CRM implementation stage. However, there is limited data gathered due to the number of employees involved in the implementation stage that fit the two criteria's set by the author.

Based on the two criteria, there are four interviewees in total. All four interviewees have different job functions in the company as well as their involvement in the CRM implementation. Those involved in the interviews are the Managing Director, Lead Architect, Sales and Marketing Director and, Sales Assistant of the company. Less than half of them was completely involved during the implementation process, while most of them were involved based on the stage of the implementation stages.

4.3.2 Conducting interviews

The interviews were conducted on one-to one basis and varied between the length depending on the interviewee's explanations and opinion on the questions being asked. There are two rounds of interview conducted: the first round is conducted based on the below set of questions and the second round is conducted after the data gathered from the first interview has been analyzed. The purpose to conduct another round of interview is to present the initial findings based on their interviews, gathering additional information, if any and to gain mutual agreement on the findings. The author prepared some preset questions that served as guideline for the semi-structured interview.

4.3.3 Author's observation

The author relies mainly on observation as part of data collection. Observation was conducted during the period when author was working in the company as an intern for one year. During that period, the author was involved in the CRM implementation process as it was the main scope of work assigned to the author. The decisions in term of software selection, cost of the software, implementation scope and project plan were decided by the management. The CRM implementation process started few months earlier prior author's involvement but the project was then put on hold. The project resumed once the author has joined the firm. Documented files such as company's description, product and services, presentation slides were used as part of the earlier observation. Further on, communication with the colleagues, senior management during the working period, firm's bonding time e.g. firm's dinner party and sauna, and event exhibitions provides more insight and additional information for data collection.

4.4 Ethical consideration

First of all, the study is conducted with the author participation throughout the project with the participants from the firm. There are few reasons to prompt the ethical consideration decision. Firstly, the study is conducted with the aim to explore the challenges encountered during the process and the benefits gained from the implementation. By conducting interview with the participants and asking permission to record the interview, thus it might cause discomfort feeling and interviewees to be alert on his or her opinion. Furthermore, there is a possibility that there is some information being left out during the interview. For example, some information was deemed as sensitive and confidential, tendency to not speak in particular subject to avoid hard feeling, perception towards the interviewer is bad or find it hard to express in words.

With the author participation in the process, the recorded interview might cause the author to have knowledgeable guess on certain topics even with little explanation provided. Although the author might have a good guess but with unclear statements in certain questions might prompt the author to think whether the question being asked is not clear or simply the interviewee resist to answer honestly.

Participant observation can be influential techniques in discovering new sight in the project but it also come with challenges to the author. For example, the personal relationship between the participants and the author may indirectly influence the observation in a neutral point of view. Besides the role of the author as the participant, may influence the nature and scope of the process, at the same time blurring the role between researcher and participant. Due to the author involvement in the process, it can be arguable whether the action research approach applied by the author should be accepted or should it be regards as the author's personal experience.

4.5 Data analysis

Data analysis began with all interviews recording have been transcribed into 16 pages. The transcripts were read three times in order to get the idea and notes have been taken during the interviews. Besides, the transcripts were read three times to avoid any missing information. The interviews are transcribed manually by the author as there is limitation of the available software and mistakes made by some apps especially in spelling, wrong wording and error during the transcribe. All the transcripts from first and second round of interviews were sent to the interviewees for their review. Then the author presented a brief finding to the interviewees to clarify the data based on the interviews and obtain mutual agreement for the findings.
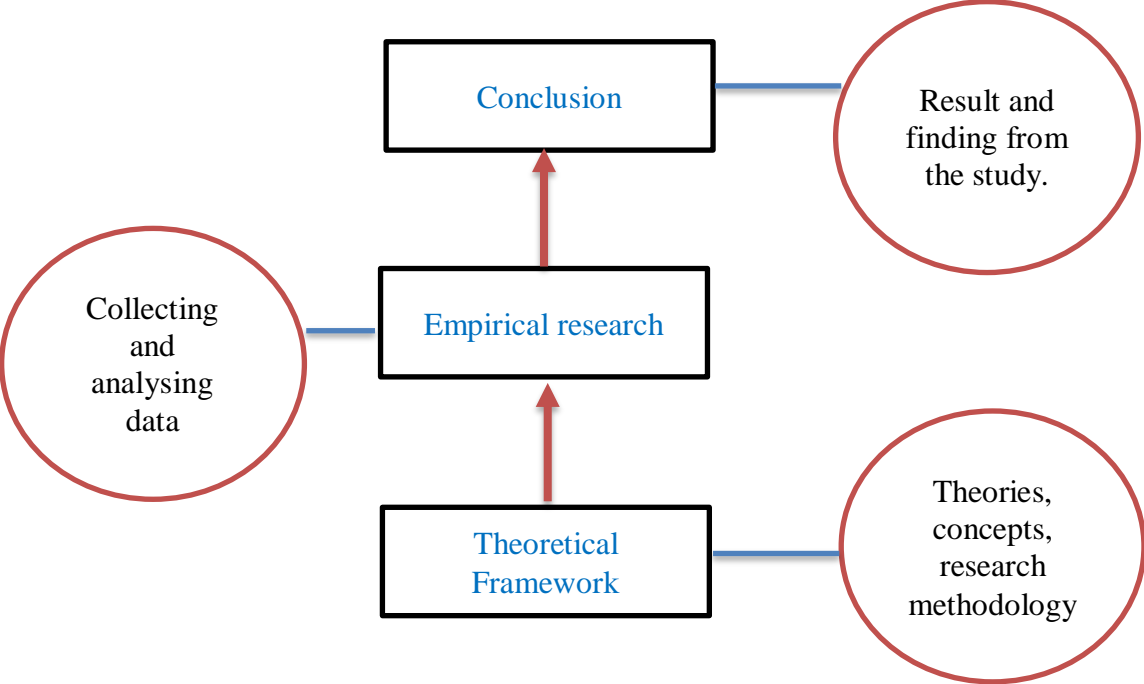

Figure 2: Illustration of the research process

To sum up, the research is based on hermeneutic processes: pre-understanding, understanding and explanation. Hermeneutic process can be applied in various approach and in this case combining with action research approach as illustrated in Figure 2. Pre-understanding is regard to the understanding of the fundamental theories, knowledge of the scenarios, issues or research setting, where researcher can play a role of researcher as well as participant. Next process is understanding, a combination of what have been known and what have been learnt during the process. This may enable contribution from the author to help improving the situation or solving the problem together with participants. Finally, in the interpretation process, is to explain and reflect the result as it yields for a better understanding in the theories with unique information provided by the people who gone through the experience (Gummesson, 2003).

5. CRM IMPLEMENTATION IN A SMALL FIRM

In this chapter, the findings from the interviews and the author's observation seek to answer the two main questions of this study: "*What are the challenges related to small firm CRM implementation?*" and "*What are the small firms' CRM benefits?*" Furthermore, the author hopes through the findings of this study able to add relevant information to the CRM implementation from a small firm perspective. The chapter is based on the interpretation of the interviews and author's observation; thus, the result is presented according to common topic groups.

5.1 CRM definition

One of the main things prior to starting any project is to have common goal for the project. The common goal could be the business strategy, defining the value, strategy, timeline, business needs. This is to ensure that everyone involved in the project are in the same direction to minimize the failure rate of the project. For this purpose, the author began the interview with seeking CRM definition from the interviewees. Below are the quotes from the interviewees on their own CRM definition.

"*It is the Customer relationship management program but I would guess that in the essence it a way of organizing your customer's details but also I would guess in our case, a way of organizing our work in the sales because it does the tasks in order to this kind different sales duties.*" – **Interviewee A**

"*Mainly something that let's say maybe relationship in that sense that we communicate them but we keep track of them, who are our customer are, what products and licenses they have purchased and do they have.*" – **Interviewee B**

"*In our case, it most likely that we can argue that even Google sheet or excel worksheet is a CRM in a way. But CRM means for me, it kind of more like a separate system which is bit more intelligent than just having a spreadsheet with all the customers.*" – **Interviewee C**

"It to manage your customer database. To have all your contacts, related products, companies or whatever you can do much more with it." – **Interviewee D**

Two themes of CRM derived from their responses and are summarized on below (Table 7). Overall, the CRM definitions provided by them revolved around customer database, customer and CRM as a program.

Themes	Representatives
CRM is a program that integrate customer database with marketing functions.	Interviewee A
CRM is a program that manage the customer database systematically that enable the company to gain knowledge about the customers.	Interviewee B Interviewee C Interviewee D

Table 7: Summary of CRM definitions.

5.2 Drivers for CRM

As the company is growing rapidly, the management realized that the current home-grown database system would not be sufficient enough to support and keep track with the ongoing updates with potential and existing customer and agents. Hence, they decided to expand the Sales and Marketing unit which previously only with one sales assistant in the unit.

The drive to replace home-grown software as it is not able to handle new product and services that are more complex in terms of information and customer data were mentioned by Interviewee A and D:

"Our company actually have a CRM or sort when we acquired the Open System Consultants but I would guess that the trigger point came in that phase where we have so much things going on within the customer that we cannot keep an updated on all the things." - **Interviewee A**

"The old one we have is inadequate so we need to install one with a better quality." - **Interviewee D**

According to Interviewee C, customer information will be formatted in a more sophisticated way to ease the sales process and rebuild the relationship with customers. In addition, the employees are able to analyze customer's purchasing pattern in order to improve sales forecasting, cross-selling opportunities and retain existing customers.

"One thing is that it is more structure customer relationship that it kind of fixed the customer relation process, in a sense of before CRM you might forgot to call some customers for a long time to see whether there is anything to be sold or something like that." - **Interviewee C**

"I want some kind of report or information from the CRM such as when we have last contact this company or do we have any open cases with this company." - **Interviewee C**

Lastly, Interviewee B mentioned that a proper CRM software can assist in identifying and updating customer's database as well as categorize into groups based on criteria such as location, products, active or passive customers' status and existing or new customers.

"The motivation is that we can know more about our customers and we know what they are doing and hopefully we know better what they are using our products for. We could communicate better with them instead of just having let say more passive relationship." - **Interviewee B**

Based on the above interview quotes, summary of CRM drivers is group in Table 8 along with author's observation based on Alshawi et al. (2011) three major factors: organizational, technical and data quality factor.

Findings: CRM Drivers
Organizational factors • Growing business is a major driver to have a better CRM system in order to manage the business and sales processes. • To build a long-term relationship in order to retain the existing business as well as to have new business opportunities. Previously, the company has minimal interaction with the partners and customers. **Technical factors** • Existing software unable to cope with the growing business needs and a proper CRM software is needed to handle the customer database and sales activities. **Data Quality Factors** • To consolidate customer's data and information such as email correspondence, phone conversations, and remarks into a single source or platform for sales, marketing, reports and product engineering so all employees are able to view the information. • To have a proper marketing campaign process that able to generate potential prospect from customer database such as leads, opportunities and able to track the progress of the marketing campaign.

Table 8: Summary of CRM drivers' findings.

5.3 CRM implementation process

Arch Red Oy is using home-grown software that have been customized to work as database to store information, purchase orders and products of all their customers. The home-grown software was inherited from the sister company. It was decided that the home-grown software is not a suitable solution to store customer database. Thus, they found a better software that meet most of the requirement such as sales forecasting, customer segmentations, able to integrate with company's other business system and most importantly, it is a proper CRM system. As the company is in a small scale, the decision to implement a CRM system is based on the co-decision making from the top management and sales team.

"A little bit but not that much because we have Jaakko who is taking care of this part of the work." - **Interviewee B**

"I participated more on what kind of CRM it should it be, what should it do, how much does it cost and this kind of things." - **Interviewee C**

The implementation of the CRM is quite straightforward as the purchased CRM software was a packaged software. Figure 3 below is the overall plan to transfer information from two sources: home grown system and email archive, into the new CRM system. Home-grown system contains customer information such as the product and services purchased, the validity period, contact person, address and important remark e.g. invoice number. These informations are store based on the products that have been purchased. The second source of the information is email archive from the existing employees. Information from both sources are required to be transferred into the new CRM system.
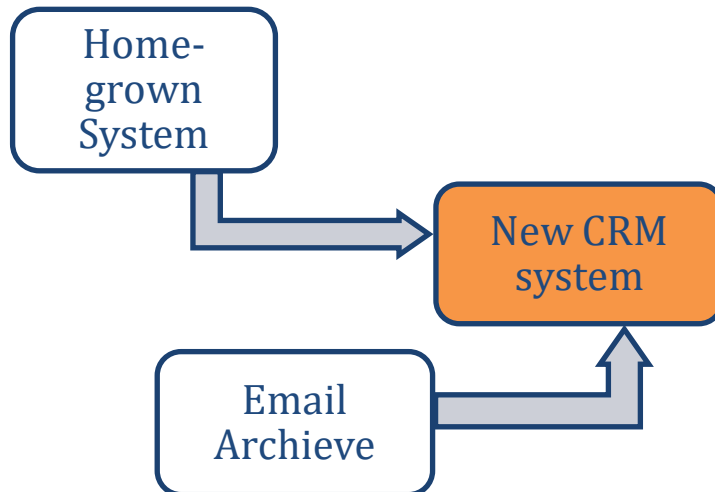
Figure 3: Overall CRM plan

The new CRM system is chosen based on the recommendation and reputation to be the leading CRM software in the market. The idea of integrating multiple business functions for example the customer database, email automation, marketing and sales operation, and firm's existing business system are one of the main features provided by the new CRM software.

"It is the leading CRM software at the moment." - **Interviewee A**

The new CRM system is used and managed by the Sales and Marketing team of the company. As the firm is growing and actively participating in exhibitions and trade events, huge number of leads and opportunities from existing customers and new customers. The new system allows them to be able to track status of customer, open project, open lead throughout all the stages in the sales and marketing campaign. From there, the firm will evaluate the potential opportunity and project the potential revenue based on the customer tracking in the system. In addition, it also provides customized reporting and graph based on the criteria assigned to the system which is closely monitored by the sales and marketing team in their weekly meeting. The top management will be able to see the customized reports generated by the system as information for the company's planning.

5.4 Benefits of CRM implementation

5.4.1 The CRM software

As the CRM software is a new system to the company, it provides a fresh view and easier to be used once familiarized comparing to the home-grown software. Interviewees provide their overall opinion on the benefits gained throughout the implementation processes. Interviewee A mentioned that the simple interface is easily adapted and use by new users as it is straightforward.

"That is pretty easy. You can start using it by putting the new customer account." **- Interviewee A**

The flexibility to be able to edit, delete or add-on in the layout of the page for example, account fields can be customized based on the company's requirement is important. With the flexibility, users able to configure interface layout to be more user friendly, easy to navigate and meet the standard set by the company.

"CRM can record information in a more flexible way is needed. So overall, it just something that the company need now and especially in the future." **- Interviewee B**

"New CRM system itself provides tools / enables to build and tamper your own layout e.g. what the actual customer detail looks like and what type of info you can add there." **- Interviewee D**

Another benefit mentioned by Interviewee C and D is the ability to establish or foster relationship with the customers, such as customer tracking, reminders and notifications.

"The important thing is CRM helps to remember to contact customers, keep in contact with the customers in regular intervals, that kind of important things there." **- Interviewee C**

"Enables the users to keep track of their customers with various tools such as reports, tasks and reminders." - **Interviewee D**

5.4.2 Data

During the implementation process, extra attention was focused in data. This includes the decision on which type of data should be transferred, categorization, grouping, definition of the fields, migration and, export and import of data from old system to the new system. It provides a clearer view to the company on the view of their customer data in overall setting.

"More thorough view of what customer are doing, who they are, where they are and how they get our software." - **Interviewee B**

"When you make the new implementation of the CRM, you can use the actual or the old customer data, but when you are entering new information into the new CRM you are building a new database. When you are entering all customers as new customer, you can add these kinds of more contexts to the information about the customer so you can expand the customer profile at the same time when implementing the new CRM." - **Interviewee C**

Customer data quality improved after data clean up as it able to extract customer profile for business opportunities and sales projection. In addition, customer database is centralized in one single site instead of scattering among the employees.

"The benefits are that we can accumulate data there in a growing rate and it will be better organized than before. And that of course would be beneficial for gaining revenue from the customer base." - **Interviewee A**

"CRM provides a centralized database of customers and contacts which includes also information about purchases (such as invoice numbers, the actual purchased products, quotes)" - **Interviewee D**

5.4.3 Other's benefits

The interviewees were also inquired on the benefits gained aside from using the software and new database. The potential benefits can be regard as additional advantage to the daily operations and business overall. The cost of maintaining the server or backup could be expensive for a small firm and require additional expenditure in term of time and man power. Most of the customized CRM software companies provide third party server maintenance, therefore firms do not require paying extra maintenance cost. Interviewee B and C mentioned about less concern on the database back and ability to be updated.

"We don't have to worry about backups, so the availability of data if something goes wrong should be better." **- Interviewee B**

"CRM is kind of like service or software that should always evolve and develop further." **- Interviewee C**

Interviewee B mentioned that due to the software maintenance is supported by third party, therefore level of database crashing contingency is on a lower risk.

"The advantage is that of course the availability should be better and that is harder for the information to be accidentally destroyed." **- Interviewee B**

Summary of CRM benefits based from the interview quotes and author's observations are grouped into three perspectives: software, data and other as listed in Table 9.

Summary of CRM Benefits

Software:

- The packaged software can be used by the employee immediately after signing up for trial version and no additional software installation required.
- The functions and tools offered in the systems exceed the company's requirement especially in re-organizing company's customer information in a more systematic and functional order.
- User interface and navigation allows the ease of tracking customer information and viewing the entire profile of the customer's in just a page. This reduces the time in searching relevant customer information such as opportunity, task, and contact person separately.
- Employees able to login with internet access anywhere including with mobile apps as the database is stored in Cloud environment.

Data:

- It provides a thorough view on the customer information which can be categorize based on target market group such as location, products and status depending on the business needs.
- A centralized database with better compiled customer information input gathered from email archive, documents and old database system.
- With new system, it reduced data redundancy and data errors as it improves the data record input.
- Customer information is organized in sophisticated order that enable the company to predict potential revenues and business based on the database.
- Re-organizing the customer standard input such as name, address, and acronym as well as identifying missing information.
- Allow the company to identify the status of the customers whether are they still exist in business or have some changes in the organization, for example the company have been acquired by other organizations or the person in charge have left the company.

Others:

- Company do not need to spend extra cost in maintaining the server and back up of the CRM as the application is hosted in Cloud environment.
- Training material and manuals are found online provided by the software provider. Blogs, forums and industry experts (users and programmers) offering advice and depth guidance on certain issues.
- The CRM is able to grow together with the company's business as it is extensible by adding applications and features recommended and needed by the company.
- Reports, dashboards and sales pipelines projected in the system can assist the company in planning ahead on the company business strategy and direction.
- Knowledge sharing among employees are more visible due to the implementation processes. It enhances the communication and interaction between the employees and thus, indirectly fostering the customer information flow to be more smoothly.
- Possibility to integrate with existing business system in the company.
- The new system enhances a better process for the work flow for example, sales process in the company is getting more systematic order in which employees are able to input more information and ability to assign or set task and reminders.

Table 9: Summary of CRM Benefits

5.5 Challenges during implementation

5.5.1 The CRM software

Initially, the CRM implementation was assumed to be straightforward. This is due to the factor that the new system is a packaged software that will require less technical skill. It is a basic function with basic structure software that is easy to be use in the initial stage. However, with the basic structure available in the software it creates some challenges to the employees. Interviewee D mentioned about the difficulty to familiarize with the new software.

"Pretty soon after we purchased the system, my boss realized that this require someone full attention." **- Interviewee D**

Furthermore, the new software is not as straightforward as it was being mentioned by the sales representative. Comparing with the previous home-grown software, the new software has unclear navigation and function which proved to be an issue at the start.

"How we can make it better and more searchable?" **- Interviewee B**

"This CRM system is multi-layered and a bit complicated -at least as of a basic user's point of view. The systems seem to be much difficult to be used and more complicated than expected. For example, the 'search' tool only shows results of frequently 'used' account details. This I'm afraid will cause problems in the future if we need to locate some old 'sleeping' accounts"- **Interviewee D**

"Challenges is understanding how things are done in salesforce and most effectively." **- Interviewee B**

5.5.2 Data

As discussed earlier on Chapter 2.2 Data in CRM, all the interviewees highlighted issue of data. These issues related to the amount of work specifically in time and manual work requires in converting the data from old system to the new system and capturing all the relevant data into the new system. This was partly due to unorganized customer database costing more time to analyze the data before transferring to the new system

"Well there is always major challenges that when we are converting on customer information from other databases to new system, there is a lot of manual work that need to be done." **- Interviewee C**

"The data that contains customer information are not standardized and requires a lot of manual work when transferring data from old CRM." **- Interviewee D**

Risk of losing partial customer's information during the process of data migration was mentioned by Interviewee A and B. The difference field name between two software's might be causing confusion during data mapping and increases the risk of certain customer information being left out.

"So, the biggest decision is how to save the data into current form in the best possible way." - **Interviewee A**

"It also a challenge on transferring the data, what are you transferring and where are you transferring to." **- Interviewee B**

Interviewee B and C mentioned that aside from the risk of losing customer information, mapping the customer information to the right location proved to be a demanding task due to lack of standardize customer database.

"The challenges probably would be that we get all the relevant information transferred and how the information that was entered in old system is to put into the new system." **- Interviewee B**

"You need to combine some other information, understand what this customer is and how it goes."- **Interviewee C**

5.5.3 Other's challenges

Aside from the challenges focusing on the system and data, there are other challenges highlighted by the interviewees as well. One of the challenges mentioned is lack of support from the software provider and was mentioned by Interviewee D. During the implementation process, training was only conducted once when the firm bought the software, and it was conducted via skype call.

"CRM representative revealed to be not so knowledgeable and later on this person has left the company. We did have few conference calls with the CRM provider but these were not so useful. Every time we asked something, this person will say 'Hmm, I will have to contact our technical personnel to assist. Currently we have no idea who our contact person within the CRM company is." **- Interviewee D**

The management team underestimated the project timeframe as it took longer time than expected. This point is highlighted by few of the interviewees. The implementation project was being lightly approached with the sudden realization that it will be an on-going process even after the project has completed.

"I would say that the timeframe is somewhat ongoing but it takes around a year to update everything from our existing system to the new system. The tasks were bigger than expected."
- Interviewee A

"It has been going for 2 years now and taking surprising long." **- Interviewee B**

There are concerns on integrating the CRM system with the existing business system that are being used by the firm and the question about the security issue in using the system is brought up by one of the interviewee.

"I would say that the disadvantage is that now we have transferred to the Cloud, so do we really have all the information always available? How far can we trust somebody else doing the backup?" **- Interviewee B**

The software has its own practice and approaches which was unfamiliar to the employees existing working approaches. It caused uneasiness especially when creating work process in the software.

"The pitfall is maybe that some of the processes might go wrong. CRM system have their own standard way of doing things that cannot be always smooth." **- Interviewee A**

"I'm not sure any of us have use or have good exposure, understanding on that software. That is the challenges also to get it done correctly from the beginning." **- Interviewee B**

The software does not recognize or prompt error in some incomplete business process that was customized built by the employees. It causes extra time and effort just to rectify the error and revising the process.

"Some tasks like the automated email have been more difficult to transfer than the idea that was the originally expected." **- Interviewee A**

Summary of CRM challenges based from the interview quotes and author's observations are grouped into three perspectives: software, data and other as listed in Table 10.

Summary of CRM challenges
Software: • Familiarizing with the navigation and functions provided by the software requires full attention and time of the employees.   • The software is not as straightforward and easy to be use as it claimed to be.   • Although it contains basic functions but it requires a lot of customization work based on the firm's requirements.

- No learning manual to refer prior using the software. Information on how to use the software are heavily based on the internet source e.g. official website of the software, forums, blogs and YouTube.

- The software seems to be constantly releasing new update and features that are still in Beta phase, exposing risk of failure in the business process flow in the system.

- Over-promising by the salesperson and the software itself. Problem surfaced when the employee tried to implement certain marketing function and the software provided limited support and only cover basic function.

- Multiple layers of interface that cause confusion and difficulties in navigation when working with the system.

Data:

- The process of transferring data from old system to the new system is tedious and requires manual work in converting the information.

- The data definitions were not sorted out before the implementation as the software have its own definition and the employees have their own definition on certain headings. For example, 'lead' in the system refers as potential new opportunities from new person, meanwhile it means a potential opportunity from existing customer by the employees.

- Customer data and information are scattered among employees for example email correspondences are not shared to all, thus making it harder to compile information for new database.

- Lack of data standard e.g. abbreviation, acronym names, cap locks that hinder the mapping and input of data in the new system. Often duplicated account names appeared in the new system as some employees previously have entered the same account using different standard.

- Possibility of missing data during the data migration.

- Bad data formats in the old system, for example, missing zip code, incomplete address and typos.

- Confusing data fields in the old system with different remarks towards certain product and services causing more time to analyze, for example date of validity are difference from the account summary and products.

Others:

- Timeline for the implementation exceeded the estimated schedule as the expectation to be completed within less than one-year time.

- Insufficient support and almost zero training from the software. There is no effort in providing training and most of the 'guides' or 'topics' are very general and can be found online.

- The representative of the software provider is keen on selling support and professional services to the company rather than being helpful in providing solutions.

- Doubt over by the database availability as it is being managed by third party (Cloud) and not being managed in-house.

- Certain data that have been input cannot be deleted due to the system restriction which provides hassle and confusion to the employer as the hidden data also appeared in certain views. The software limitation is acknowledged by the software representative.

- In order to achieve certain functions and tools, firm have to acquire software customization, third party software or solutions from the recommended companies or applications. This hinders the motivation to develop the software as the software itself is lack of advanced functionality and needs add-on applications.

- Feeling uncertain over customize process flow in system due to the software unfamiliarity.

- The software can only be accessed online and require verification code when accessing from different browser or computer. At the moment, the verification code is assigned to one employee only.

- Underestimated the level of difficulty in familiarizing with the software.

Table 10: Summary of CRM challenges.

5.6 Summary of CRM implementation in a small firm

Summarizing the findings, Figure 4 shows an illustration of the CRM implementation stages. During the pre-CRM stage, employees and management have high hopes and expectations towards the CRM implementation that the new system would perform better than the home-grown software. In addition, they expected the new CRM system to ease their daily work operations and hopefully able to being integrated into other business systems in the future.

Figure 4: Illustration of the implementation time frame

During the implementation stage, the real issues mainly concern the system surface, including challenges with the system functions and tools, different business terms between the system and lack of support from the system provider. Aside from the issue with the system, the firm also noticed a negative impact on the customer database and indirectly on the business process flow using both systems concurrently, which causes disappointment during this stage. At the same time, they also feel excitement when the system able to perform systematically in certain process flow created than expected and ease in providing more customer information when needed.

In the post CRM implementation, most of the employees feel the CRM somewhat accomplished the objectives and met certain key requirements set by the management. Although certain issues were still unresolved, the firm and employees were having a positive perspective and attitude towards the overall new CRM system. According to one of the interviewees, CRM is a continuous process that can grow together with the firm and can be customized as well as developed further based on the business need.

5.7 Re-evaluation of the theoretical synthesis

First of all, this thesis is aimed to understand small firm's perspective in CRM implementation. The diverse definition of CRM found in the academic literature and industry experts indirectly influencing the CRM process implementation depend much on the authors' definition on CRM. Based on result of this study, the author illustrates the findings by integrating into the theoretical framework as shown in Figure 5. By dividing the CRM implementation based on the CRM process model enable further discussion on how the perceptive of employees and firm are related to each of the CRM processes.
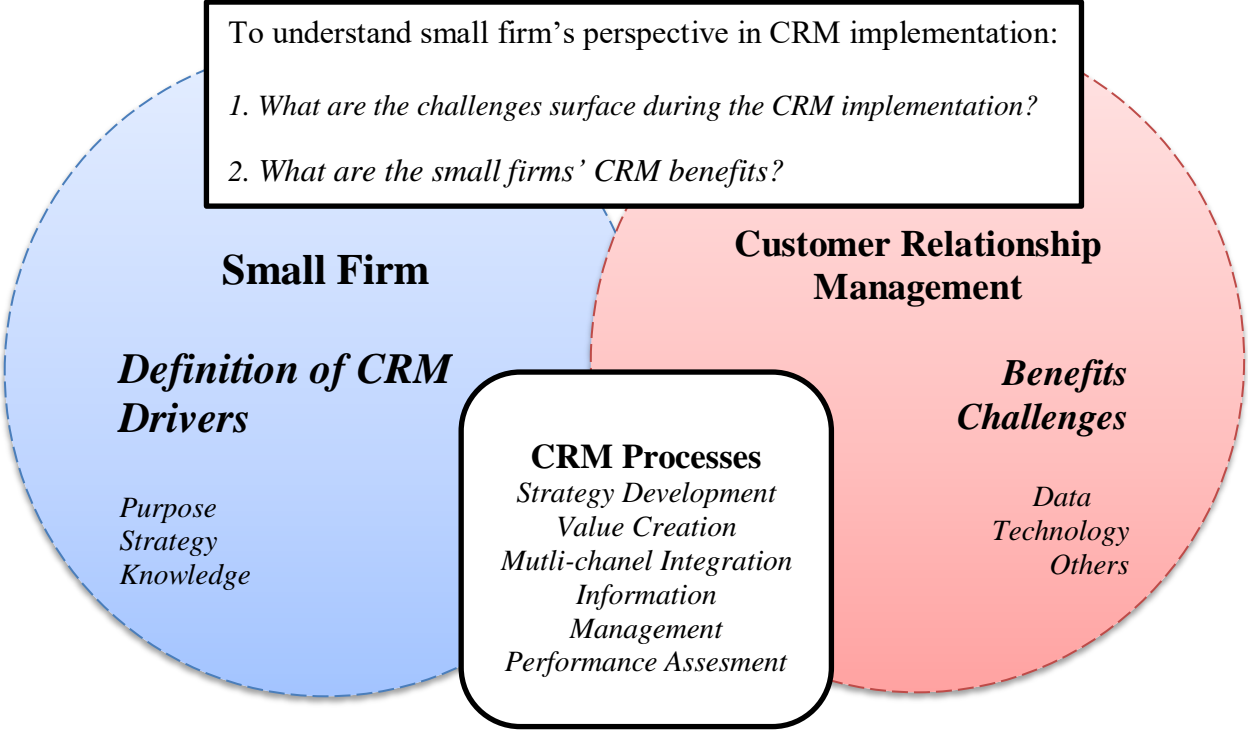
To understand small firm's perspective in CRM implementation:

1. What are the challenges surface during the CRM implementation?

2. What are the small firms' CRM benefits?

Small Firm

Customer Relationship Management

Definition of CRM Drivers

Benefits Challenges

CRM Processes
*Strategy Development
Value Creation
Mutli-chanel Integration
Information Management
Performance Assesment*

*Purpose
Strategy
Knowledge*

*Data
Technology
Others*

Figure 5: Synthesis of the result with the theoretical framework

Based on the Payne and Frow CRM process *Strategy Development,* it is important to identify the organization business strategy and customer strategy before starting CRM activities (2005). This process is also known as *Customer Relationship Formation* (Parvatiyar & Sheth, 2001) whereby the purposes are to increase marketing productivity and creating mutual value. In the theoretical framework, definition of CRM is related to *Strategy Development.* It explained the firm's point of view in their own CRM definition and how CRM suit in their business strategy

and context. From the firm's perspective, CRM is more likely to be a software that can assist in managing the customer database and performing marketing activities. According to previous literature, to have a successful CRM implementation it should begin with associating business and CRM strategy to fit in the overall marketing strategy of the firm (Bohling et al., 2006). The firm began by evaluating the business strategy and the future business plan by having a systematic CRM in their business. This is in line with the literature suggesting for successful CRM implementation is by evaluating overall business strategy align with CRM (Nguyen et al., 2007). From a small firm perspective, growing business along with rapid changes in the global market triggered the need to establish and foster relationship with the firm's customer.

Value Creation is based on value assessment to the customer, from the customer and co-creation with the customer. It is almost similar with Swift (2000) *Knowledge Discovery* process whereby firm analyzes the customer information in order to identify business opportunities marketing planning and suitable strategies based on historical information. According to the result, almost all of the interviewees mentioned 'gaining knowledge about the customer' in the CRM definition. This reflected the importance of having a better view of customer in terms of their status, ability to forecast business opportunities and identifying the changes in the customer's organizations. In addition, one of the CRM drivers is to have a better understanding and relationship with the customers. Although the firm is small, it does not prevent them in seeking the opportunity to gain value and knowledge from customer which has been practiced by most of large organization. For example, learning their needs and requirements, current market trend and probability to engage in collaboration in certain projects. Based on the interviews and observations, the firm management hierarchy is small and lead by the shareholders and owners. Thus, the support and focus of the CRM implementation is highly prioritize in the firm. This is in-line with Bohling et al. (2006) study, top management support is one of the important drivers for a successful CRM implementation. In the finding of this study, small firm also indirectly shows the importance of associating CRM strategy with the marketing strategy in creating value for the company.

Multichannel Integration regards as selecting the right or suitable communication channel to deliver messages and adding value to the specific target groups. Similar CRM processes have been suggested by Swift (2000) *Market Planning* and *Customer Interaction process,* and Parvatiyar and Sheth (2001): *Customer Relationship Formation* process whereby the aims are to create marketing and communication channel with customer in order to identify investment

opportunity, and executing and managing customer interaction with relevant and timely information to enhance mutual value. Payne and Frow (2004) study mentioned that there are lack of studies relating multichannel integration in CRM, although there are increased of interest from the researcher. Based on early stage of observations, the firm needs to engage in more than just sending emails to the customers. Comparing to large organization, small firms have limitation in establishing multiple communication channel due to financial and manpower. Therefore, small firm need to select few suitable communication channels to communicate with customers. Based from observation, the firm begins to communicate more often via Skype call with the customers and it proved to be quite successful despite the time difference between the time zones. Besides Skype call, participating in exhibitions and partnering with reseller in product development projects are few of the channel of communications chosen by the firm to create co-value with the customers.

Information Management in this process refers as customer information is gathered and used for marketing planning. Process involving gathering and analyzing customer information for the purpose in learning more about the customer have been mentioned by Swift (2000): *Knowledge Discovery, and Analysis and Refinement,* Nykamp (2001): *Understand and Differentiate, and Develop and Customize,* and Zablah et al. (2004) *Knowledge Management process.* According to Winer (2001, p. 102) findings, firms are realizing the importance of customer database and attempt to obtain as much information as possible from the customer to gain competitive advantage in the market. Based on this case study, data in CRM does provide the benefit and challenges in the firm during the implementation process. First of all, the benefits of data provide a clearer sight to the firm on the integrity and informative information gains through the customer database. Secondly, the knowledge derived from the employees and the customer's purchasing pattern enable the firm to understand the needs of the customer and helps in planning their business strategy. However, the major challenges of data are tedious manual work in organizing customer database in a systematic order and mapping informations to the correct fields.

Performance Assessment is an important process to ensure CRM objectives are on the right progress and achieve the target set during the beginning of the project. Although the implementation process took less than two years, it is crucial to keep track on the progress and evaluate it from time to time. This will help to ensure the CRM project is moving towards the right direction. Based on observation and interviews, the firm is constantly updating the

progress of the CRM implementation and ensuring the objectives are always align during the progress. The progress of the implementation is easier to monitor in small firms comparing to large firms as it will be closely observed by the management team while large firms have more red tapes of reporting.

In summary, by following CRM framework process mainly based on Payne and Frow and integrating other author's CRM processes, it proved to be more practical in order to understand and study the CRM implementation from a small firm's perspective. The findings of this study are similar to the previous existing academic studies results.

6. CONCLUSION

The overall aim of this research was to build and understand small firms' perspective into CRM implementation. To achieve the objectives, the study had two research questions:

1. What are the challenges related to small firm CRM implementation?

2. What are the small firms' CRM benefits?

In relation to both research questions, this study reviewed relevant literature and several similar research studies in SME implementing CRM. First of all, the diverse definitions and opinions/views on/regarding CRM implementation and related processes emerged as a challenge to identify a suitable definition and process for this study. Different challenges as well as benefits of CRM and its drivers to implement this management strategy were discussed in two main chapters. Then, a theoretical framework was built upon the two main chapters: CRM and small firms integrating with the CRM processes. The main purpose of this study is to understand the small firm's perspective according to the CRM processes along with the challenges and benefits arising during the implementation period. A qualitative method was chosen for data collection in this study. Semi-structured interviews were conducted with selected employees along with author's analysis.

6.1 Results and findings

This sub-chapter is intended to summarize the results and key findings based on the interviews and author's observations. According to the results of the qualitative interviews and observations, research questions 'What are the challenges related to small firm CRM implementation?' and 'What are the benefits related to small firm by having CRM?', the data gained have been categorized into three main categories: the CRM software, data and others. This study highlighted the common findings between the academic studies and the practice of implementing CRM in small firm.

First of all, different firms have their own CRM definition and vision. It is important to set a clear vision and strategy before starting any CRM implementation project. Based on the

interviews, it showed that all the interviewees were in the same level of definition when describing CRM. The key phrases mentioned were 'program' and 'customer database' aligned with existing description of CRM found in academic studies. In addition, the findings show that connection between CRM and customer views are associated with the business strategy. This is supported by the existing literature that CRM can assist in gaining business goal and objective (Alshawi et al., 2011; Goodhue et al., 2002). Without a good strategy and purpose in implementing CRM, it will cause bigger issues in trying to solve the problem after the implementation.

According to the small firm's drivers for CRM, the main motivation for the implementation was to have a suitable CRM system that able to cope with the expanding business operation, customer database, fostering relationship with customers and align with the business objective. Based from the findings, the small firm verified the three factors influencing CRM adoption in SME: organizational, technical and data quality factor that have been described in previous literature studies.

Thirdly, to achieve successful CRM implementation, support from top management and employees' attitude need to change and transform in the same direction (Kale, 2004, p. 45; Koh & Maguire, 2004). One definite finding of this study is that the firm change management indirectly undergo changes in a slow pace. In the earlier stage during the implementation process, employees of the firm know are aware of the CRM system being implemented however there was not much involvement from the other employees. In order to get the employees to accept that it is a process that will impact the company and not just one-off project, there were few sessions of introducing the CRM system to the employees. Although those sessions were brief, they created a mutual understanding among the employees; for example, this positively influenced their expectations and helped them to understand the functions and capabilities from CRM, with the goal of easing the overall business operations.

Based on the findings, inadequate planning and under estimated time needed for the completion of implementation were few of the challenges identified during the process. These two challenges were mentioned in previous academic studies as reason of the CRM failure (Bligh & Turk, 2004; Rigby et al., 2002). Considering from the small firm's perspective, the requirements and strategies for the CRM in their business are differ from large firms as they

prefer simple and ready to use software to manage their customer database and daily sales operation. In addition, the implementation process was not complicated comparing to large firms.

Full benefits of the CRM system were not fully visible but nevertheless met the expectations set by the firm. The lack of exposure towards the CRM system caused frustration during the process of trying to use the system during the early stage. However, once the user has become comfortable in using the system, the benefits have become more visible. For example, when populating and mapping data into the CRM system, it provided useful mapping tools for data input and prompt for record duplication. The user only need to click n match without renaming the whole columns from the sheet to match the existing fields in the system.

The empirical data found is in line with the findings in academic literature reviews for both benefits and challenges (Alshawi et al., 2011; Mulhern, 1999). All interviewees agree that *data* plays a significant role in both benefits and challenges. Issues such as categorizing the data, grouping customer based on the unique segmentation and compiling the information from few sources indicated that customer data quality direct impact towards the CRM implementation (Goodhue et al., 2002). The firm also realized the importance of the customer data as it provides a clearer view on the hidden business opportunities once the data have been clean up and rearrange in a systematic order.

Although not many studies emphasize procurement being an important issue for these SMEs, this study identifies a great need of properly documented business processes with regard to the firm's growth. For instance, at the moment there is no standard business process to record procedures by the sales and technical team. The employees are only aware of their own job scope which causes challenges for new employees as there is not much business process manual to refer to. Most of the time, those procedures are depending on the existing employee's knowledge and the previous interaction history with customers, which results in a problem once the knowledgeable employee leaves the firm.

Half of the interviewees expressed doubts regarding the competence of representative from the software provider. Feeling dissatisfied with the post-sale service offered, the lack of support and misleading information provided by the representative caused frustration when dealing and communicating with the representative. One important finding of this study is that firm should

not rely on vendor claims, stating that their software package CRM are able to provide all solutions to the requirements and potential problems arising during the implementation process (Alshawi et al., 2011). This is also due to the lack of expertise and familiarity by the employees toward CRM software and strategic issues in CRM implementation.

In summary, the small firm begin by identifying the need to have CRM in their business during the pre-CRM implementation. Reviewing the business objectives and identifying the drivers to implement CRM were conducted at the early stage. During the implementation process, benefits and challenges of the CRM emerged and present the importance of data quality, value of customer information, software weakness and longer timeframe needed for the CRM implementation. Finally, post CRM evaluated whether the initial standards and requirements defined by the management have been accomplished. From the findings, half of the standards and requirements were accomplished and it is an ongoing process for the firm.

6.2 Limitation of the research

This study has it owns limitation that is similar to almost all research studies. In this study, the only method to collect data was based on interviews and author's observation. The greatest limitation in this study was the author's involvement in the implementation process that took the biggest in portion compared to the target interviewers. Although there were 4 interviewers participated in the interviews, there was only one directly using the CRM systems as a user while the rest are indirectly involved during the implementation processes. The author did almost all the tasks and works set by the firm in order to meet the expectation and target.

Secondly, this study was based on a single case study of a small firm in Finland. The industry of the firm is under network engineering field which is different comparing to previous academic research case studies that majority focused on retails industry. Although the case study cannot be generalized and applied across as small firm's perspective, the findings are regards as relevant for the future reference based on the industry and the data collection methods.

Lastly, the methodology choice used in this study allows author to interpret and describe based on personal views that might not be accurate. Despite trying to remain neutral throughout the

interviews and observation, there is a small possibility of bias tendency might have existed. With the limitation in data collection the author had tried to disregard those limitation and throughout the research process the best possible.

6.3 Managerial implications

Although the aims are to identify the challenges and benefits perceived during the implementation process, all the interviewees had perceived CRM as a technological tool that can assist in achieving the firm's objectives. Based on the results of this study, the benefits and challenges encountered by the small firm during the implementation are not different from bigger firms. The theoretical approach on CRM processes from the perspective of the firm provides a better understanding of the CRM implementation process. However, few issues emerged from this study.

First of all, small firms should pay attention to the CRM implementation goal and objective before implementation. According to Rigby et al. (2002), probability of CRM failure is generally higher than the success rate. Therefore, it is also suggested that firm regardless of the organization size should identify the CRM objectives that fit into the business strategy and do not perceive CRM as just a technological tool. A proper plan on the implementation should be created and assess according to the business strategy before executing the plan. A successful CRM implementation enables the firm to have a competitive advantage in the market such as knowledge sharing between the employees, able to customized service and product based on customer's need and building customer retention and loyalty.

Secondly, small firms should view CRM as a continuous cycle and process in their business. CRM implementation should not be focusing on technological perspectives merely as CRM tool or CRM software and view the implementation as completed once the system goes live/starts to operate. Regardless of the firm's sizes, they should approach CRM as an overall strategic approach with a customer-focused strategy that requires commitment from the top management and employees to succeed in creating customer retention and profitability.

Finally, this study identified a major issue as customer knowledge in terms of information acquisition and previous interaction was either not shared with all the employees, or the information was not being stored in a database. The interviewees agreed that the customer

database was not complete and thus they often had to rely on employee's memories and emails to recall the previous interaction with the customer. This caused knowledge about customers being lost or hidden in the transition process. This loss of information results in a loss of potential business opportunities.

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