MASTER IN BUSINESS ADMINISTRATION – BUSINESS MANAGEMENT

DISSIDERTATION

Customer Relationship Management Systems for the SME’s – Is this a perfect marriage made in the cloud?

A dissertation submitted in partial fulfillment of the requirements of Dublin Business School for the degree of M.B.A. in Business Management

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Declaration

I, Praful Gupta - Student Number 1779553, declare that all the work in this dissertation is entirely my own personal effort. Wherever contributions of others are involved, researcher made every effort to indicate this clearly with due reference to the literature, and acknowledgement of collaborative research and discussions. A full reference section is included within this dissertation. The work was done under the supervision of Brian Hickey at the Dublin Business School.

Praful Gupta

18th of May 2014
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Glossary of Acronyms

ASP  Application Service Providers
CRM  Customer Relationship Management
CSS  Customer Service and Support
DBS  Dublin Business School
EUR  Euro
EEA  Enterprise Application Architecture
ERP  Enterprise resource planning
IT   Information Technology
ROI  Return of Investment
SaaS Software as a Service
SFA  Sales force Automation
SME’s Small and Medium Enterprises
SWOT Strength, Weakness, Opportunity, Threat
TCO  Total Cost of Ownership
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Without the help and support of the above people, the successful completion of this dissertation would have been impossible.
Abstract

The purpose of this research is to identify the key evaluation criteria to be considered by the Small and Medium Enterprises before the selection of CRM deployment model and secondly, to build a practical guide for clear understanding which CRM deployment model will suits better for Small businesses in future considering those critical criteria. A review of the literature concerning CRM in-house / cloud CRM study found the area to be a topic of major concern for decision makers in small organizations because of the budget and risk constraints and Cloud CRM is comparatively a new innovation under study. Moreover there is no existing research which identify the key criteria for CRM model selection and describe which CRM model is better on those criteria. The research also focuses on identifying if subscription pricing model is better than ownership model for the small and medium organizations. The research also discusses the different concepts such as Customer Relationship Management, CRM in the cloud and cloud computing, especially in relation to SMEs, in order to have a great insight that gives the opportunity to successfully research this topic.

The deductive research uses quantitative approaches for data collection and analysis. The evaluation criteria for CRM systems at general level were proposed via a researcher through intensive literature review. In primary research, the general criteria were refined via collecting data from CRM in house / Cloud CRM experts and users in SMEs by structured questionnaires by that researcher analyze the key criteria for selecting CRM deployment model. This research provides valuable insight for managers in SMEs when selecting CRM delivery model for their companies. Furthermore, the academicians who are interested in cloud computing or CRM could adapt it further to different cases.

Keywords:
Customer Relationship Management, Cloud Computing, SME’s, Cloud CRM, in – house CRM
Chapter 1: Introduction
1.1 Background

“Successful CRM is about competing in the relationship dimension. Not as an alternative to having a competitive product or reasonable price – but as a differentiator. If your competitors are doing the same thing you are (as they generally are), product and price won’t give you a long-term, sustainable competitive advantage. But if you can get an edge based on how customer feels about your company, it’s a much stickier—sustainable—relationship over the long haul”

Bob Thompson

1.1.1 Defining Customer Relationship Management

The idea behind customer relationship management is not new. Even the earliest merchants knew it was a good idea to build a healthy relationship with customers to keep them coming back (Jobber, 2004). In the last few decades, the art of selling a product or services has fundamentally changed. There are no more simple buyer and seller relationships. We are in a world in which the consumers play an important role in how the products will be designed, marketed and sold. Knowing your customers better will enable you to serve them better and keep them loyal forever - this is the main theme of Customer Relationship Management (Khalid Rababah, Haslina Mohd, and Huda Ibrahim, 2011). However, the understanding of the meaning of CRM is still incomplete and growing, some authors describe it as “CRM is the strategic process of selecting customers that a firm can most profitably serve and shaping interactions between a company and these customers. The ultimate goal is to optimize the current and future value of customers for the company” (V.Kumar, Werner Reinartz, 2012, p.5). “Customer relationship management (CRM) is a business approach that integrates people, process and technology to maximize relationships with customers. CRM increasingly leverages the internet to provide seamless coordination among all customer facing functions” (Barton J. Goldenberg, 2008, p.3). Gartner Group, a reputed research organization defines CRM as “a business strategy, the outcomes of which optimize profitability, revenue and customer satisfaction by organizing around customer segments, fostering customer satisfying behaviors and implementing customer centric processes” (Gartner Group, 2008). Customer relationship management “allows companies to gather customer data swiftly, identify the
most valuable customers over time, and increase customer loyalty by providing customized products and services”. (Rigby et al, 2002).

1.1.2 CRM, importance to industry

CRM enables large organizations to serve their customers more intelligently, develop markets and to change the way they do business delivering levels of service that were previously unthinkable. As markets become more and more open and the use of technology and the internet increases, the larger companies are increasingly able to compete with small and business at a service and price – point level.

1.1.3 Need and Problems with CRM in SME’s

In order to compete with larger organizations, SMEs now need to change their business strategies and become more customer focused. CRM software for small and medium organizations is a contemporary way to increase their revenue, customer satisfaction, improve their customer service and to reduce the cost of acquiring new customers (Robert J. Baran, 2013, p 340). With these significant benefits associated with CRM applications, an increasing number of SMEs have adopted and are demanding CRM solutions. Business coach Michelle Neujahr states “small business can use CRM to record the details of every client contact” as well as “Templates within a CRM software program allow you to tailor letters, create newsletters and send e-mails. Staying in touch is as easy as a few clicks.” The small organizations now recognize that customer data cannot be stored in paper files, spreadsheets or email programs any more. Such information is often unavailable at the right time, easily lost and hard to present for analysis, which can put the business at a significant disadvantage. However, because of the resource and budget constraints, a state of the art CRM implementation for small and medium enterprises was not always a realistic option. Hubert Baumeister in his journal Customer relationship management for SME’s state, SME’s needs to have a low cost CRM solution model which can be adapted to their business model and IT infrastructure instead of changing their business model and IT structure according to the CRM software. So this research will focus on identifying which deployment model between cloud CRM and in-house CRM will be better for SME’s by considering different
evaluation criteria, which researcher had identified through secondary research, and to identify will Cloud CRM will make its way in SME’s in future.

1.2 Researcher background/Rationale for this topic

The researcher has keen interest in this topic and this area. The researcher is aiming to work as a CRM consultant within a consultancy company and believe the dissertation will be a real added value. This research will give insight about CRM applications, cloud computing, on demand CRM, and overall, this learning will play an important role in his recruitment process. Researcher has not restricted the analysis to any country specific services/products as suggested by the faculty in Cloud Computing and experts in the IT industry. The reason is that the research topic is already narrow while dealing specifically with CRM, Cloud and SME’s as well as analysis will take place in terms of CRM and cloud technology so the research is not affected by the country

1.2.1 Work background of Researcher

The researcher has worked for more than 3 years on the enterprise CRM applications. He is a certified Salesforce.com developer, which is a cloud based CRM platform. He has also worked on in-house CRM applications such as Oracle Siebel for the Xerox Corporation as a Software Engineer and is currently working as CRM Business Development Engineer with one of the SME’s in Dublin.

1.2.2 Academic Background of Researcher

Researcher has completed bachelors in Computer Science and Engineering and currently pursuing his Masters in Business Administration in Cloud Computing from Dublin Business School which is helping him to significantly improve his knowledge on the field he is to work in.
1.3 Contribution & Uniqueness of the study/Target Audience

This research will help the decision makers in SME’s to have a better understanding and to make a better decision, this research will first find out the general criteria for the selection of CRM by the SME’s based on secondary research and then base on this criteria researcher will do his primary research to find what are the key criteria’s SME consider before selecting CRM delivery model, researcher will also analyze which CRM delivery model will be better for SME’s considering all the criteria and constraints with SME’s as well as researcher also focus on determining, will cloud CRM make its way into SMEs. Researcher will be conducting surveys among CRM experts and users to know their experiences and feedback.

This research also studies the current trends in CRM and the Cloud computing and a critical analysis about the impact of connecting CRM to Cloud Computing. The researcher will provide the details about CRM solutions, CRM evolution, implementation, strategies, comparative analysis of in-house CRM and cloud based CRM in the light of small and micro enterprises. EU commission defines small and micro enterprises as follow: “A small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million.” Whereas a medium-sized enterprise is defined as an enterprise which employs fewer than 250 persons and whose annual turnover does not exceed EUR 50 million or whose annual balance-sheet total does not exceed EUR 43 million by the European Union Commission.

The target audiences for this dissertation are the decision makers in the SMEs, those who want to implement CRM model in their organization to manage their client relationships or those who are planning to shift their in-house CRM to Cloud CRM. This research will provide the insights about the best of both worlds, benefit and risk involved in both the models, deciding which models suits best to their needs. It will also help the academicians those who wants to learn about the CRM solution, Cloud Computing and CRM on-demand system.


1.4 Research Question and Objectives

The dissertation working title is as follow:

“Customer Relationship Management Systems for the SME’s – Is this a perfect marriage made in the cloud?”

The dissertation working research question is the following:

“Is Cloud based CRM the customer solution that SME’s have been waiting for?”

In order to be more clear and specific about the dissertation subject, the objectives below thoroughly detail the points, which the researcher will tackle and wants to understand:

1) Identify the key evaluation criteria for CRM on demand/in-house system selection in small organizations?

   The researcher in his literature review will initially propose the general criteria for CRM model selection from his secondary research and through primary research will identify the key criteria’s for CRM model selection in view of their importance in SMEs.

2) Which CRM deployment model is preferable for each evaluation criteria among smaller organizations?

   The purpose of this research objective is to understand which CRM model between Cloud CRM and in house CRM is better on each defined criteria’s in view of SME’s.

3) Will subscribing pricing be a silver bullet, in the light of Return of Investment?

   This research objective will focus on pricing structure in subscription CRM (Cloud) and ownership (in house) CRM models and identifying which CRM pricing model is better in terms of return of investment for SME’s.
1.5 Recipient of the research

Recipients of the dissertation which will be conducted as part of the researcher’s master’s degree in Business Administration at Dublin Business School are the following:

1.5.1 Primary Recipient:

The three primary recipients for this dissertation will be Dublin Business School where a researcher is a full time student. Second, will be the Liverpool John Moores University, the awarding body and third will be the supervisor of the researcher.

1.5.2 Secondary Recipient:

Secondary recipient will be the participants from the SME’s in IT industry who will be contributing in the research while surveys and will be interested in obtaining the copy of the results

1.6 Brief Outline of Dissertation

This dissertation is divided into 6 chapters that will give structure and logical flow:

Chapter 1: Introduction

Current chapter provides an introduction and background to the topic, defines a rationale for chosen this topic, contribution of the study, target audience, research question, objectives and outline of each chapter. Researcher believes this topic of critical importance as 99% of all European businesses are, in fact, SMEs and they are the true back-bone of the European economy (Europa, 2013). Now, SME’s need CRM solutions for improving customer relationship and drive their business but they have limited budget. This research will help decision makers in SME’s to understand the key criteria for evaluating CRM models and determining which CRM delivery model will be good for their business considering their requirements.
Chapter 2: Literature Review

This chapter will list the academic materials read by the researcher about this dissertation topic. The literature review includes several parts such as CRM and its evolution, implementation of CRM, challenges and benefit of cloud and in house CRM and general selection criteria for CRM model. Researcher believes as information technologies is changing and growing rapidly and cloud computing is comparatively new innovation so there is still dilemma among SMEs that which model will benefit them.

Chapter 3: Research Methodology

This chapter will present the method and the reason for choosing those method, which are used to do data research and to answer the research question and objectives. The researcher will be using the research design “Research Onion” and will describe which paradigm is chosen and why.

Chapter 4: Data Analysis and Findings

Superficial and deeper analyses were done, in this chapter the survey results are presented and analyzed by the researcher. Data is interpreted and gathered in the light of the literature review by researcher.

Chapter 5: Conclusions and Recommendations

In this chapter, the conclusions of whole dissertation is presented by the researcher as well as recommendation and future work is also discussed.

Chapter 6: Self Learning:

Finally, in the last chapter, the researcher will reflect the learning, the personal as well as
professional value added in the course of this MBA. It will also highlight the future learning and expectations of the researcher.
Chapter 2: Literature Review:
Literature Review

As Jankowicz (2005:161) points out: “There is little point in reinventing the wheel ... The work that you do is not done in a vacuum, but builds on the ideas of other people who have studied the field before you”. The researcher in this chapter will start by defining CRM and its timeline, determining the goal of CRM, implementation process and challenges with in-house CRM furthermore the researcher has also researched cloud computing in the light of CRM, benefits and challenges associated with it and general selection criteria for CRM are all studied in detail.

2.1 Customer Relationship Management (CRM) and its timeline

Peter drucker well known professor and management consultant first wrote almost 50 years ago “it is the customer who determines what a business is …the purpose of a firm is to create and keep customers” (Knox et al 2012). Creating satisfied customer at a profit has been espoused as the prime role of business the purpose of CRM application is to help an enterprise to manage current and future customers in an organized and systematic way (Robert, 1991). For example, by using CRM application an enterprise might build a centralized database about its customer by which the people providing service, management, salespeople, and perhaps the customer directly could access information. Organizations can match customer needs with product plans and offerings, understand other products a customer had purchased, remind the customers of service requirements, and so forth and this all will help business to make better decision because they always have accurate and up-to-date customer information. Since the concept of customer relationship management came in to vogue in the mid-1990s, CRM has undergone a substantial evolution. To provide a historical perspective figure depicts a time line a thin section describe each of the phases in the timeline (V. kumar and Werner Reinartz, 2012, p.16).
1) First Generation (Functional CRM):

An outgrowth of sales force automation (SFA) tools in this generation, CRM is often referred to as one-to-one marketing (Peppers and Rogers, 1999). SFA software are used to automate routine tasks like tracking customer contacts and forecasting etc. The purpose of Sales force automation tools is to focus more on selling and lesser on administrative related tasks. Second focus is on Customer Service and Support (CSS): this function addressed mainly after sales activities such as help desks, contacts and call center and field service support. SFA/CSS applications delivered the promise of sales and service improvements, through their combined market niche remained small. Therefore, the market for Enterprise resource planning (ERP) was growing at that time. (V. kumar and Werner Reinartz, 2012, p.16).

2) Second generation (Customer Facing Front End Approach):

Innovations in CRM during the 1990s matched those of ERP. CRM technology was expected to fill the gaps left by ERP functionalities and address the basic needs of the company’s customer-facing front end. The goal was to create a single view of all interactions with customers, independent of the purpose of that contact (ex. pre sales, sales transaction) or its means (ex. telephone, internet, and email). Customer’s expectation in this period far exceeded the realized benefits of CRM technology. Furthermore, internet fuelled new expectations, it became clear that revenue increases through technology were difficult to implement, realize and measure without a more strategic understanding of the process (V. kumar and Werner Reinartz, 2012, p.16)

3) Third generation (Strategic Approach) :

By the end of 2002, the CRM market has started to pick up, and the gap between customer perceived value and values realized were closing. The best organizations began to focus on integrating customer- facing, front-end systems with back-end systems as well as with the system used by partners and suppliers. (See figure 1). And, here the integration of internet technology helped to boost CRM, companies adopted the strategic approach rather than
blindly implementing technology-based solutions. Companies recognized the eventual goal of CRM: to grow revenue not just control cost (V. kumar and Werner Reinartz, 2012, p.16).

4) Forth Generations (Agile and Flexible strategic CRM): In this generation ever increasing number of small and medium sized companies adopt this management tool and its corresponding technologies to drive their business. Agility, flexibility and low fixed costs become the important part of CRM applications. The emergence of social media and increased self service as well as the growing prevalence of web based services. Cloud CRM came in to existence and Salesforce has introduced the world to cloud based CRM known as Force.com and created a big impact in the CRM industry.

![Timeline of CRM evolution](image_url)

**Figure 1: Timeline of CRM evolutions**
Figure 2: Integration of Front end customers with back-end systems (V. kumar and Werner Reinartz p 18)

2.2 Goals of CRM applications in an organization:

1. Build long term and profitable relationships with chosen customers:

Bain & company, global management consulting firm, famously wrote that it costs 6 to 7 times more to acquire a new customer comparative to retain an existing customer also if a small or medium organization increase its customer retention rate by 5% then it can possibly create the profits by up to 95%. Furthermore, all customers do not contribute equally to the firm’s bottom line and thus are not equally valuable for the company (Natrajan, R. and Shekhar, B., 2010). That’s the reason why, the value of targeting the right kind of customers has become so important that the entire success and failure of an organization depends on customer acquisition and retention. It is for this reason, that technology has become very important in marketing in the form of CRM, it helps in providing wholesome understanding about customers, effective and efficient data generation and analysis, backed with appropriate data mining, organizations can reap such benefits with CRM.
2. Getting closer to customers with every point of contact with them

In the academic community, the terms “relationship marketing” and CRM are often used interchangeably (Michael John Baker et al, 2008, p. 392). (Shainesh and Sheth, 2006) states that CRM is an enterprise wide approach to understand and influence customer behavior through meaningful communication, it helps organizations to improve customer retention, customer acquisition, customer profitability and customer loyalty. CRM can be seen as an application for one-to-one marketing and relationship marketing, responding to an individual customer on the basis of what the customer says and what else is known about that customer (Rogers Peppers and Dorf, 1999). The heart of marketing is relationships and nurturing long term relationships should be the goal of marketing practice (Berry, L.L. and Wall, E., 2006, p. 25).

3. Low level of operating costs

The reduction of operations costs is one of the main priorities for every small and medium organization and all CRM processes are aimed on helping you to reduce operation cost and making company process efficient and effective. At the same time it is very important to have clear understanding of strategy that organizations have chosen for their business. Workflow automation and smart task are the powerful tools to automate the processes and it will eventually result in cost reduction (Salesforce.com, 2010). Every CRM process must be implemented and handled in a specific way in case lowering the costs.

4. Aiding the Marketing Department

This is another very important aspect of CRM applications. It includes lots of essential factors which must be considered while implementing particular processes. Customer relationship management helps organizations in dealing with company promotions, marketing campaigns and other essential activities that will help them to aid their marketing
department. In case they want to achieve this goal successfully, it must be negotiated with all the employees who are related to this department or involved in some other marketing processes. In addition this will help them to increase their level of profitability.

5. Quick Access to Customer Information:

CRM helps an organization in improving their sales and marketing as CRM application helps to easily query customer information such as their names, their background, their needs and competitive positioning etc are just some of the information can be easily accessed as a result of putting a CRM system (Barton J. Goldenburg, 2008, p.4).

6. Enhanced Customer Service:

Customer relationship applications enhance the customer service of an organizations as they can invest more time on their customers due to the reduction in the sales administrative workload, CRM also enhance their ability to monitor customer service levels, and highlights existing or potential customer service problems, which allow them to react more quickly to customer needs (Barton J. Goldenburg, 2008, p.4).

A study by Insight Technology Group and ISM concerning CRM systems confirms that the following level of benefit can be achieved by using CRM applications:

1. Studies shows that by implementing a CRM application, a minimum 10% per annum increase in gross sales revenue per sales representative during the first three years of implementation. This take place because the field personnel improve both their efficiency (for e.g., they get more batting time to call on customers and implement strategy) and their effectiveness (e.g., improved quality of their sales call as they are more knowledgeable about their customers).
2. CRM implementation can lead to a minimum 5% decrease in the general as well as administrative cost of sales during the first three years of the implementation. This is because field personnel and the companies are no longer need to send out costly literature and information in a shotgun approach to all their existing and potential customers; rather, field personnel and the companies can decrease their cost of sales by being selective in terms of deciding which customers receive specific promotional materials.

3. Studies show a minimum of 5% increase in win rates for forecasted sales during the first three years of the CRM implementation. This gain results because CRM enables, field personnel to select their opportunities more carefully, they can drop out potentially bad opportunities earlier on, and focus on those opportunities with a high likelihood of closure.

4. A minimum 1% margin improvement in the value of a deal over the lifetime of the system. This takes place because field personnel are working closely with a carefully selected group of customers who place as much emphasis on value selling as they do on discounts, and field Personnel thus tend to discount less often.

5. CRM implementation helps to achieve minimum 5% improvement in the quality rating provided by customers. This is a result of happier customers who get the information that they need more quickly, who receive better service, and who enjoy building on the relationship marketing approach that field personnel are now able to offer.

2.3 Implementation of CRM: Importance of People, Process and Technology

Research done by groups such as Gartner, Butler Group and Forrester Research had shown that CRM implementation failure rates were quite high during the period of 2001-2009. One of the major reasons for this fact is the misunderstanding of CRM concept. Small and medium organizations purchase and deploy CRM software and assume that CRM implementation is done. However, they overlook the important aspects of consideration such as people, process re-engineering, change management, and organizational management. Barton J. Goldenburg in 2008 states that the success of any CRM implementation relies on
the seamless integration of three crucial components such as: the people, process, technology used to “touch the customer” from any point in the organization (Barton J. Goldenburg, 2008, p. 21). Popovich and Chen described the different factors of holistic CRM as people, process and technology.

**People:** Human factor relates to managing people resistance to new technology, management support, training, transparent communication among departments and user acceptance.

**Process:** Processes that relate to customers within any organization are marketing, sales and customer service that are to be automated with CRM.

**Technology:** This factor is a bridge between people and processes and facilitates the CRM strategy implementation. It includes IT management, configuration, on-demand CRM vendor selection vs. customization on-premise, deployment as well as support.

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![Diagram of CRM Aspects](image)

**Figure 3: CRM Aspects (K. Popovich and J. Chen, Business Process Management Journal, 2003)**

Barton J Goldenburg in 2008 had provided the generic model for understanding how the people, process and technology mix will change the key CRM implementation activities. Below table illustrate how component mix applies to each.
First to determine the business requirements of an organization, they should apply the structured process to make sure that user needs are properly identified and prioritized. But most of the work involved in determining business requirements are related to people issues. Whereas, technology plays a minor role in determining business requirements. Similarly, the people component plays a crucial role when you are assembling your CRM project management team. For instance, you need to agree on who will be responsible for which CRM implementation activities. In determining the optimal way to set up the project management team and sub teams, the business process for CRM is also important. Again, technology will have a limited role here. Yet, when a company is ready to begin integrating legacy and other needed systems, technology becomes crucial. The selection of an appropriate Enterprise Application Architecture (EEA) and agreement on appropriate framework or the use of middleware tools. People may insist that their systems need to be integrated first irrespective of process, but overall, technology drives this activity. As a final example, when performing CRM software customization, all three components play a crucial role. People are critical for ultimately judging how well the customization meets their needs as well as for commenting on how the workflow will impact the overall user friendliness of the system. Process is important for driving workflow implementation. Technology plays a key role for developing, modifying and deleting screens and also for navigating between screens. Clearly all three components have their places- it’s all about getting the mix right (Barton J. Goldenberg, 2008, p. 22).
2.4 CRM Process Model

![Diagram: CRM Process Model](image)

Figure 5: CRM Process Model (ijeeee, April 2011)

The CRM Process Model (Figure 5) shows that, firstly the developments of customer strategy take place in which the target market is identified and then differentiated strategies are developed to deal with customers segments based on their profitability. In second step the setting of customer objectives is done with the aim for achieving customer value, customer loyalty as well as customer satisfaction. After that, organizational readiness assessing is carried out through turning the organization focus towards the customer rather than products. Next, an alignment of the organization behind corporate CRM goals which require an enterprise-wide program of change management is carried that may include change in the organizational fundamental. After that, the execution of CRM programs is performed, in which the focus on carrying out differentiated strategies for each customer segments by specific program. In last, CRM program effectiveness is measured through the development of a set metrics that are supposed to measure the attainment of customer objectives, to measure the contribution of each individual program to the overall CRM initiative, to measure the contribution of each program in the enhancement of an organization’s data capability, and to measure the potential for improving the future programs (Khalid Rababah, 2011)
2.5 Determining Customer Life Cycle in CRM

The term customer life cycle refers to the stages in the relationship between a customer and a business from opening a sale to its closing. It is important to understand customer lifecycle because it’s directly related to customer revenue and customer profitability. It’s a series of one after the other steps that a customer goes through while considering, or purchasing, or using the service or product of the company. Customer lifecycle in the perspective of CRM also focuses on customer selectivity as all the customers are not equally profitable for a company (Storbacka K., 2000) that’s why it’s very important for any organization to customize its one to one marketing programs by carefully targeting and segmenting its customers. The organizations can even go for customer outsourcing such that a company can allocate its valuable resources to customers it wants to serve the best. This will not only help an organization to filter its customers, but most importantly it will help it to identify those methods which are most cost effective and therefore creating value for both the organization and the customer. Marketers say that there are three ways to increase a customer’s value: (i) increase the use (or purchases) of products they already have; (ii) sell them more or higher-margin products; and (iii) keep the customers for a longer period of time.

In customer Lifecycle there are four types of customers:

Prospects: they are those people who are not yet customers but they are in the target market.

Responders: They are either the leads or prospects who have shown some interest, for instance, by filling out an application or registering on a company web site.

New customers: They are responders with whom company will do the business and they have made a commitment, by an agreement to pay, such as having made a first purchase, or having signed a contract.

Established customers: It includes, those new customers which have returned and for them the relationship is hopefully deepening or broadening.

Former Customers: They are the one, who have left either as a result of voluntary attrition or forced attrition.
From the perspective of CRM, the customer lifecycle (Stone M., et al. 2003) has been divided into five progressive stages:

**Identification**: At this stage, a company figure out the right set of customers they need to be targeted and offered its products and services in light of its marketing objectives.

**Acquisition**: After identification of their customer segment the company promotes its products and services to acquire the customers by selling them.

**Delivery**: At this stage, the company sells the product or service. This is an important stage, as the customers experience the company and its offerings first hand.

**Development**: The focus is on maximizing the value of the customers by delivering them customized products (Ansari, A. and Mela, C.F., 2003) and cross-selling (Kamakura, Wagner A., S. Ramaswami, and Srivastava, R., 1991). Cross selling helps in increasing the existing customer value and also broadens the relationship with their customers.

**Retention**: Customer retention stage relates to the proactive steps taken by the organization to detect and to prevent customer churn. This will helps in increasing the customer base value to the organization.

### 2.6 Barrier to success of in house CRM

Firstly, Building and managing a CRM solution in-house requires a company to define all its requirements, pay for software development, and bear all the R&D costs internally. Companies choosing to develop software in-house need to invest heavily in storage, application software and hardware all of these add considerably to the over head costs. The initial hardware and software expenses constitute only a small portion of the total cost which is largely shaped by maintenance demands, especially those arising from changing requirements from inside the organization (V. kumar and Werner Reinartz, p 177).

Secondly, Kale (2007) argues that CRM project failure ranges from 60-80% which is because of large implementation time, cost, unclear requirements etc. Sauer (1993) emphasis importance of organizational context in which the system is used. According to author, failure occurs when an organization is unable to sustain sufficient support for continuous
work with the system, including development, maintenance and operation. Another aspect of failure is because of stakeholders that are dissatisfied with what the system has done for them. Not managing expectation of the system, not evaluating it to ensure maintained support and that it offers the expected value for the stakeholder are risk for failures (King & Buregess, 2008). While analyzing the CRM deployment risk by market segment, then there is an interrelationship between project size and risk. Larger organizations implement larger and complex projects which thereby inherit higher risk whereas small businesses don’t necessarily have less risks as much as they have different risks. For example, small and medium business projects are generally simpler but they still have far more risks associated with resourcing as they have less experience in implementing IT projects, fewer IT specialists to call on for consultation or implementation and they have fewer IT resources comparatively.

There is cautious optimism that cloud or SaaS based CRM model may lower several implementation risk variables and ultimately lessen CRM implementation failure rates comparative to in-house implementation. With no hardware or IT infrastructure to build out or software to install, IT projects offer fewer components and therefore less technical risk. Cloud CRM deployments are also considered to be more accelerated than their on-premise counter-parts thereby also lowering project risk moreover cloud CRM systems offer an advantage of releasing more software capability over more iteration cycles—effectively allowing the new capabilities to be more easily consumed.

2.7 Cloud computing & Software as a Service (SaaS): a better way

Here in this section, researcher will be focusing on cloud computing and particularly on software as a service model as it’s a base of Cloud CRM. In 1990, Bill Gates, the founder of Microsoft, described in one sentence “world needed three things: a more personal computer, more powerful communications networks, and easy access to a broad range of information”. Now after 20 years later gates vision about the future of IT becomes the reality for the business and can see the rise of Cloud Computing. With cloud computing, enterprise can eliminate the headaches of managing hardware and software because that's the responsibility of an experienced vendor like salesforce.com, Microsoft, Amazon which are providing those
services. This shared infrastructure works like a utility model in which the enterprises only pay for what they need and upgrades are automatic and also scaling up or down is easy. Furthermore, Cloud-based apps can be up and running in days or weeks, and they also cost less so the main rationale behind this model is offering computing resource and storage, as “software as a service” (Rajkumar, James, 2011).

Gartner defines software as a service (SaaS) as software, which is owned, delivered and managed remotely by one or more cloud solution providers and unlike traditional packaged applications, SaaS users don’t need to install applications on their computers or servers, whereas the SaaS vendor owns the application and runs it on computers in its data center and rents it on a monthly or an annual fee. SaaS is sometimes also been known as hosted software or by the term, “on-demand.” SaaS was established on the idea of outsourcing business applications to providers which goes back as far as 50 years. As a consequence of digital era expansion with the internet in 90s, Application Service Providers (ASP) emerged in the business market. Initially, enterprises used to rent their software and deployed them on-site, whereas the contemporary ASPs provided them with web based client-server architectures. SaaS can be seen as an extension of ASPs, making these solutions more cost efficient by eliminating the need for purchasing IT resources at all. SaaS differs from ASP in two major characteristics: the supplier numbers and granularity of the software. SaaS offers more flexibility and customization of the software, whereas ASPs offered standardized software with minimal customization. ASPs had paired up with one software supplier whereas SaaS providers partnered with lots of software and hardware suppliers to offer a wide range of flexible solutions to their customer.

The use of Software as a Service (SaaS) has skyrocketed over the last few years and shows no signs of slowing down. The worldwide market of software as a service is expected to grow from US$18.2 billion in 2012 to be expected US$45.6 billion in 2017 (Global IBM survey, 2013). Among the over 800 companies being surveyed, reducing the total cost of ownership (TCO) of their applications was the top reason given for success and adopting of SaaS. Forty-one percent actually reached that goal to a high degree. Unexpectedly though, a greater number – 47 percent – are using SaaS to attain a broad range of powerful benefits that
combine to deliver something even more Significant: competitive advantage. In another
global survey conducted by the Harvard Business Review Analytic Services with nearly
1,500 business and technology leaders, the majority of 85% said their organization will
going to use cloud services moderately to extensively over the next three years. They
recommended ability of Cloud based CRM to increase business speed, lower cost; innovation
and collaboration are the main cause of its adoption. Early adopters (only 7% of respondents
have been using cloud computing for more than five years) has recommended that cloud
computing was advantageous to their business. The benefits are becoming more widely
recognized between the enterprises in which more than half of respondents (57%) believe
that adoption of cloud tools will be a source of competitive advantage for early adopters, and
26% said their company’s posture toward adoption of cloud as enthusiastic.

Figure 6: Current and Future Trend in Cloud Computing Adoption (Harvard Business
Review Report)

2.8 CRM in the Cloud

According to Rajkumar et al 2010, Customer relation management and Enterprise resource
planning applications are market segment that are flourishes in the cloud with CRM
application the more mature of the two. Cloud CRM application constitute a great
opportunity for small enterprises and start up to have fully functional CRM software without
large upfront cost and by paying subscriptions. Moreover, CRM is not an activity that
requires specific needs, and it can be easily moved to the cloud. Such characteristic together
with the possibility of having access to your business and customer data from everywhere
has fostered the spread of cloud CRM applications. In the survey conducted by the Gartner in 2012, they provide the insight about the worldwide CRM market which grew from $16B to $18 B at a growth rate of 12.5 % between 2011 and 2012. In the report it also shown that 40% of all CRM software sold in 2012 worldwide was SaaS-based. This means 4 out of every 10 CRM sold in 2011 and 2012 were Cloud based and it was expected that trend will accelerate (Gartner, 2012). Later on, in the latest enterprise software forecast from Gartner reveals that the Customer Relationship Management (CRM) increasing to a $36.5B worldwide market by 2017 as discussed in Figure 7.

![Figure 7: Enterprise Software Markets, worldwide 2012-2017 (Gartner, 2013)](image)

Gartner also states in their report that many enterprises are now moving from in-house legacy system to a SaaS-Based CRM system and moreover enterprises are also realizing that the additional functionality comes with SaaS CRM was not possible with legacy and previous-generation (Gartner, 2012). In another independent research conducted by Maximizer Software with more than 500 small to medium-sized enterprises (SMEs) reveals that the biggest attraction of cloud based CRM is the ability to avoid high incurring upfront cost on infrastructure in the survey 58% consider it to be the key benefit. The research shows that the scalability to increase or decrease the hardware or software resources is the
second most important advantage with 46% citing it as major benefit. After that as in the
cloud CRM the hardware and infrastructure for hosting the services are managed and
provided by the cloud service provider so that means user or enterprise don’t need to worry
about the updates which is rated as third most important benefit by 40 % enterprises with
that the other benefits of cloud CRM realized by the small and medium enterprises are
reduced maintenance/ staff cost, easier integration, low cost customization, real time
database updates in which the data stored in the cloud infrastructure can be accessed by
authorized users anytime from any part of the world. This all are of great convenience for
the business and allowed organization to leverage their potential (Maximizer Software,
2013).

![Figure 8: Key benefit of Cloud Based CRM (Maximizer Software, 2013)](image)

General arguments which are given in favor of Cloud CRM deployment model:

1: Hardware Infrastructure: The cost difference between in-house and cloud hardware
infrastructure is probably the most compelling argument in favor of the cloud. In the small
and medium organizations, especially sales startups and individual organizations, the often
substantial upfront costs, which is associated with hardware are totally eliminated by a cloud
model, replaced with the comparatively low monthly or annual subscription fee for use of the
cloud infrastructure (Pipelinersales, 2014).
2: Maintenance, Staff and Operational Costs: A cloud service provider has a vested interest in rendering the best possible services, and will have an often state-of-the-art hardware infrastructure that could never be afforded by small and micro organizations—the use of which is covered by a low monthly or annual subscription fee. With the IT infrastructure hosted in the cloud, that considerable outside data center space requirement can be put to more effective use (Pipelinersales, 2014).

3: Costs of Software: In an ownership model, once software is purchased, it has to be deployed across an organization. This requires IT experts and man-hours, and involves debugging if for some reason there are software conflicts or issues. With a cloud CRM solution, organizations can simply pay for their subscription and start using the software (Pipelinersales, 2014).

4: Costs for Upgrade or Update: With a cloud CRM solution, organizations don’t need to worry about upgrades or updates; the latest versions are automatically installed without the company ever having to be concerned about it as well as the latest version is always being utilized (Pipelinersales, 2014).

5: Cloud CRM Solution Implementation and Training Costs: Choosing the right on demand CRM solution means the sales force, it allows any relevant employees to be trained in hours, instead of weeks or months. By using Cloud CRM model, IT staff can concentrate on more important matters such as the sales pipeline and opportunity management rather than administrative tasks (Pipelinersales, 2014).

6: User-Driven Customization: Laura Abrar in the ‘grow marketing and sales’ argues that with the infrastructure lacking there’s no need to predetermine customization per user in cloud CRM. With less customization offered by CRM cloud service providers, and pre-built flexibility, this feature is handed to the end users, which are allowed to add logos, personal messages as well as adapt the user experience where they required (Laura Abrar, 2013).

7: 24/7/365 Accessibility: In cloud model data is stored on-site in the data centers managed by cloud service providers, sales and marketing teams have access to the applications any time they want, from anywhere. This can provide real edge to virtual workforces and
multinational teams; leading to easy access that scales as your business grows (Laura Abrar, 2013).

8: Increased Productivity: One of the most important advantages of Cloud CRM is that it enables employees to work from anywhere without being tied and tethered to an office desk, particular system, or office servers. It enables employees to contact customers or their prospects on the go and mine for real-time data. By providing more actionable and frequent customer insights to the employees, they can increase productivity across the board (Laura Abrar, 2013).

9: Sync with Mobile and BYOD Trends: Another important advantage associated with cloud CRM is that its very well harness a mobile device management strategy. Employees are now more up to date and able to conduct business faster as well as more intelligently when armed with smart devices out in the field or at client sites. Most importantly, they can access customer contacts and details through a mobile CRM applications and respond with agility (Laura Abrar, 2013).

10: Actionable Customer Information: Small organizations sales and marketing teams are no longer need to wait for access to CRM records and access systems based around in house servers. Cloud-based CRM gives them the ability to get fast, quickly, more precise, frequent and up to date information on where the customer is in the purchase lifecycle (Laura Abrar, 2013).

2.9 Challenges of Enterprise CRM Cloud Computing

The shift from in-house CRM system to the cloud CRM has taken a strong foothold and continues to be the highest-growth part in the worldwide software revenues. As more and more enterprises experience the benefits of the cloud CRM, its adoption will further accelerate in future and on-demand delivery will become main stream. However, the global rise of SaaS CRM has not been without its growing pains with that it also brings some of the challenges and issues as discussed.
Security Concerns get amplified in the cloud: When data or applications are moved to a cloud, Cloud Consumers ensure that the cloud offering satisfies the security requirements and enforces the compliance rules (NIST, 2011). CRM systems usually contain a company’s two major important information assets. Firstly, their customer list and secondly about their sales forecast. Now, ensuring information security around these assets is very important. A risk in information security can lead to number of hazards such as customer ill will or regulatory fines from the government.

System Integration: CRM is an integrated approach to identify, acquire and retain the customers. By enabling to manage and coordinate the customer interaction across different departments, multiple channels, lines of business, and geographies (Rai, 2008). Now, a failure to integrate between department or lines of business in an organization or geographies may lead to increase in an manual processes, manual data entry, data inaccuracies and can cause getting reports a challenging process.

Downtime and SLAs: Chuck Schaeffer states system downtime is another issue with application in the cloud and can cause a loss of business during the downtime rendering the business application worthless. This in turn can cause a loss of money, resources and business for the organization.

Legal and privacy concerns: They are specially tied to the ubiquitous nature of cloud computing, which spread computing infrastructure across diverse geographical location now in such case different legislation of different countries applies for instance US legislation is known to give extreme power to government agencies to acquire confidential data in case of thread to national security whereas the European countries are more restrictive as well as protect the right of privacy (Rajkumar, 2013).
2.10 Building the Selection criteria for CRM solutions

Until now, the researcher has presented general background information about CRM and its evolution, goals and benefit of in-house and on-demand CRM solutions, Challenges with on-demand and in-house CRM solutions. The previous literature review study provides a guideline to the literature review carried out in this section which will lead to the foundation of the general criteria for selecting CRM solution by SMEs.

2.10.1 General Selection Criteria and their definitions

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<tbody>
<tr>
<td>Total cost of Ownership</td>
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<td>Customization and Configuration</td>
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<td>Integration with Legacy systems</td>
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<td>Security and Privacy</td>
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<td>Implementation risk and failure</td>
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<td>IT upfront and initial cost</td>
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Table 1: Evaluating CRM selection criteria

**Total Cost of Ownership:** Gartner defines, total cost of ownership (TCO) as a “comprehensive assessment of information technology (IT) or other costs across enterprise boundaries over time”. For IT, total cost of ownership includes cost for hardware and software acquisitions, management and support for IT infrastructure, end-user expenses, training, cost of downtime and other productivity losses. This criterion is crucial because small and individual organization, which want to have the optimum value with the minimum cost. Myllylää addressed this issue in his publication “Software Services and Packaged
Software Solutions: a Customer Perspective”, In case of, on premises CRM delivery model these costs can comprises of installation, configuration, , license fee, consultancy fee, training, upgrade fee along with hardware and infrastructure costs are involved. Whereas in the cloud based CRM delivery method, ideally total cost of ownership would only consist of monthly subscription fees to the small and medium organization providing a cost-efficient solution.

**Configuration and Customization:** CRM applications always require customization, personalization, customization to deliver an elegant user experience and to maximize the values they can provide to your organization. Each organization is different, with different types of customer information to record and different business process to support, with its CRM application. When discussing changes to CRM application, we use the term configuration to describe changes that can be made using the application administrative tools and features, with programming and customization to describe changing an application via programming. The extend and sophistication of a CRM application configuration abilities and customization flexibilities will determine to what extend you can tailor the application to your present and future needs (Kostojohn, Paulen, Johnson, 2011).

**Scalability:** The ability of the system to scale up as the customer needs and users increase. This factor becomes important as the resources in SMEs grow and more users subscribe to the service. Thus, a scalable architecture plays an important role in vendor selection (Kim, Lee and Cheun, 2009) and (Sun, Huang and Wang, 2011) defines scalability as an important criteria in evaluation the on demand or in-house solution.

**Integration:** Workday, an established US based company offering SaaS solutions in human capital management since 2005 and (mulik and godse, 2003) defines the ability of the system to be integrated with existing legacy systems of the customer. This criterion ensures easy migration and enables the customer to access the system within existing software.

**IT Upfront and initial Cost:** It consider the total cost involve in setting the CRM application in an enterprises, which includes initial software license cost, hardware
infrastructure, customization and configuration as per business requirements (Bryan Bergeron, 2002).

**Implementation risk and Failure:** Most of the risks associated with implementing and realizing the potential benefits of a major CRM initiative can be categorized as either internal or external to the organization. Some of the risks of CRM implementing failure are vendor failure, customer rejection, cost overruns, time overruns, disruption of service, internal rejection, evolving standards, shifting customer expectations, new technology etc (Bryan Bergeron, 2002, p 168)

**Security and privacy:** Although some organizations configure their CRM applications in an “open” manner – where each user can see all information in the system – many needs to compartmentalize information. Common example includes sales information, sensitive customer information such as social security number, account number or even compensation or commission information. A robust security model within your CRM application will give you the flexibility to manage a wide range of different security scenario (Kostojohn, Paulen, Johnson, 2011). Thomas R. Schrier at Lowa state university state that the vendor can assure security and privacy by having world class data security centers, backup, risk management and contingency plans. The privacy can be assured by protecting the system from hackers and thus application of firewalls.
2.11 Literature Review Summary

- Customer relationship management software are increasingly being seen as the key business applications due to its power and capabilities. CRM applications are being used for everything from online sales to market research to customer support and they have become a single source business decision making applications.

- CRM Evolutions, first generation of CRM focuses on Sales Force Automation and Customer Service and Support applications. In second generation, the goal was to create a single view of all interactions with customers, independent of the purpose of that contact. In Third generation, companies adopted the strategic approach of integrating customer-facing, front-end systems with back-end systems and system used by partners and suppliers. Agility, flexibility and low fixed costs become the important part of CRM applications in fourth and current generation of CRM.

- In the survey conducted by the Gartner in 2012, CRM market which grew from $16B to $18B at a growth rate of 12.5% between 2011 and 2012. In the report it also shown that 40% of all CRM software sold in 2012 worldwide was SaaS-based. This means 4 out of every 10 CRM sold in 2011 and 2012 were Cloud based and it was expected that trend will accelerate reveals that the Customer Relationship Management (CRM) increasing to a $36.5B worldwide market by 2017.

- In house CRM, Kale (2007) argues that CRM project failure ranges from 60-80% which is because of large implementation time, cost and unclear requirements. Secondly, the initial hardware and software expenses of in house CRM constitute only a small portion of the total cost which is largely shaped by maintenance demands. Thirdly, In house CRM solutions involves IT specialists to call on for consultation or implementation as well as for integration with legacy systems or communication systems like outlook. Customization and Configuration of CRM applications as per business requirement is also an integral part of CRM applications.
• The worldwide market of software as a service is expected to grow from US$18.2 billion in 2012 to be expected US$45.6 billion in 2017 (Global IBM survey, 2013). The cost difference between in-house and cloud CRM hardware infrastructure is probably the most compelling argument in favor of the cloud. With a cloud CRM solution, organizations can simply pay for their subscription and start using the software. With a cloud CRM solution, organizations don’t need to worry about upgrades or updates. System downtime is an issue with applications in the cloud and can cause a loss of business during the downtime. Another issue with Cloud CRM is spread of computing infrastructure across diverse geographical location now in such case different legislation of different countries applies.

• Literature Review so far lead to the formation of general criteria for CRM model selection as follow: Implementation risk and Failure, Total cost of ownership, customization and configuration, IT upfront and initial cost, scalability, integration with legacy systems, security and privacy.

In an extensive secondary research conducted by researcher, he has tried to explain different concepts such as Customer Relationship Management, in house CRM, CRM in the cloud, their benefits and issues and cloud computing, especially in relation to SMEs, in order to have an insight about the research topic.
Chapter 3:
Methodology
3.1 Methodology:

“Research is a discerning pursuit of the truth. Those who research are looking for an answer.” (Hair et al 2003, p. 4). Research is a common parlance known as search of knowledge. Research can also be defined as a scientific and systematic search for pertinent information on the specific topic (Shyan, 2013). In fact, research is an art of scientific investigation.

The term ‘research’ has been defined by several experts which are enumerated as below:

According to Clifford wood research includes defining and redefining problems, formulating hypothesis, solutions, collecting, organizing or evaluating data, making deduction or reaching conclusions (Rajendr Kumar, 2008, p. 1). Similarly, Redman and Mary define research as systemized effort to gain new knowledge. Research may be defined in terms of a review of existence knowledge in a particular area together with the creation of a new slant on this knowledge (Riley et al, 2000, p. 7). Saunders et al. (2009) define research as “something that people undertake in order to find things in a systematic way, thereby increasing their knowledge.” (Saunders et al, 2009, p. 5).

Whereas, methodology is defined as the way the knowledge is gained, how theories are generated and tested, and the relationship between theoretical perspectives and research problems (Blaikie, 2004, p. 12). “It refers to the procedural framework within which the research is conducted.” (Remenyi et al. 2005; p. 28). Finally, Research methodology is a system comprises of models, procedures or techniques used by the researcher to find the results of a problem is known as research methodology (R. Panneerselvam, 2006, p.2)

Here, the purpose of the research is to find out key evaluation criteria used by small and individual organizations, decision maker for the selection of CRM model and to analyze which model is better on those key criteria’s and furthermore to analyze impact of subscription pricing model in long run. For this research the various methods were used by the researcher to complete the research, it includes positivism paradigm for his research philosophy, deductive approach at the logical level, quantitative research method, cross sectional time horizon. Data collection and analyzing techniques besides, it researcher also
describes the ethical considerations and limitations taken to complete this research. The following sub-sections describe the overall methodology in more detail.

3.2 Proposed Methodology:

Saunder in the fifth edition of the book entitled: “Research methods for business students”, justify research as “something that people undertake in order to find out things in a systematic way, thereby increasing their knowledge” (Saunders et al., 2009, p.5). The researcher will be using the research design “Research Onion” and will describe which paradigm is chosen and why in detailed below.

Figure 9: The Research Onion (Saunders, Lewis and Thornhill, 2009, p.108)
3.3 Research Structure

The research structure represents the research sequence undertaken by the researcher in construction to answer the research question. The sequence is embarking on research developing knowledge in the direction to research finding (Saunders, et al, 2009).

![Research Structure Diagram]

Figure 10: Research Structure

3.3.1 Research Philosophy-Positivism:

Researcher philosophy relates to the development and nature of knowledge and the chosen research philosophy makes assumption about the way, the researcher scene the world (Saunders et al, 2009, p 107). The research philosophy directly linked to the type of the research questions as well as the philosophical bias of the researcher (Corbin and Strauss, 2008). Positivism is based on the scientific nature as it is conducted with the factual reality, figures, facts and surveys (Saunders et al 2007, p. 103). Positivism philosophy presents statistics, percentage, tables, numbers, charts, etc. during the data analysis and collection. This philosophy does not affected by other researcher works (Garner et al, 2009). The pattern stands on the ontology which illustrate what is reasonable and valid in the existing globe instead of epistemology which underlines a degree of belief or the knowledge someone’s own. Moreover, the positivism result looks like that of the natural sciences, law-like generations and physical sciences (Rose, 2009).

Positivism research is the most appropriate for this study, due the need of data sampling from empirical end user population in which researcher conducted surveys to collect primary data and that was easily turned into numbers to perform analysis and secondary data was used to assess the current situation in customer relationship management technology.
3.3.2 Research Approach – Deductive:

There are two research approaches that can be taken by the researcher in research design; these are the inductive and deductive approaches (Saunders, Lewis and Thornhill, 2009). Through deductive approach, the theory is tested by conducting research and the final findings are derived through logical reasoning (Ghauri and Gronhaug, 2005). Hussey and Hussey (1997) defined deductive research as “a study in which a conceptual and theoretical structure is developed which is then tested by empirical observation; thus particular instances are deducted from general influences”.

The researcher predominantly applied the deductive approach for his research, as the main emphasis of deductive approach is to move from general to specific. First the research question was formulated and then the appropriate methodology was selected to collect and analyze data. Deductive approach allowed the researcher to research the field through literature review, test the knowledge acquired through primary research and in last, derive conclusion using the data analysis.

3.3.3 Research Strategy- Surveys:

The processes of collecting, analyzing, and interpreting observations is defined by the research strategy undertaken by the researcher. (Yin, 2009, p.77) states that the choice of research strategy is determined by the questions asked. It is important that the research strategy enables the researcher to plan how to answer the research questions and to meet the research objectives. Saunders et al. (2009) define seven research strategies in research design as follows: case study, experiment, survey, grounded theory, action research, archival research and ethnography. According to Jankowicz (2000), each of these strategies has advantages and disadvantages however the choice of a particular strategy is considered by the following:

- Nature and scope of the topic and dissertation.
- Sources of data the researcher is considering.
- Purpose of the researcher while gathering the data.
- Degree of assumptions while analyzing the data.
Furthermore, the research strategy is also determined by four key issues: research question, cost or budget available for the research, the time available for the research and the skills of the researcher. (Remenyi et al, 2005; p.45).

![Diagram showing the relationship between research question, cost, research strategy, time, and skills.](image)

**Figure 11: Four issues affecting the research strategy (Remenyi et al, 2005; p.45)**

Researcher has chosen Survey strategy as stated by Saunders, et al. “survey strategy is usually associated with the deductive approach. It is a popular and common strategy in business and management research and is most frequently used to answer who, what, where, how much and how many questions” (Saunders, et al. 2009, p. 144). As the researcher has adopted deductive approach, survey strategy is best suited for his research. The conclusion will be based on quantitative data obtained from the questionnaire design supported by secondary data obtained from the literature review. Secondly, survey strategy also allows the researcher to collect the quantitative data in a large scale in order to be representative of the target population in the most cost effective approach.
3.3.4 Research Choice-Mono Method-Quantitative:

Research choice refers to the way in which the researcher combines techniques and procedures the ‘Research choice’ (saunder et al, 2009, p.151) There are several choices of research method as shown below:

(Cooper & Schindler, 2006) defines quantitative research as a research design where the focus of researcher is to describe, explain and to predict phenomena whereas on other hand “qualitative research provides a holistic view of a research problem by integrating a larger number of variables however asking only a few respondents” (Hollensen, 2010, p.181). Some research problems also combines both quantitative and qualitative methodologies in which the researcher may adopt mixed methods approach where both quantitative and qualitative data collection techniques and analytical procedures are used in same research design (Saunders et al., 2009)

In this dissertation, the researcher has used Mono Method – Quantitative Research: A mono method selection as quantitative research is considered appropriate to this research, because by using quantitative approach, researcher can gather the responses from large number of the CRM experts and users in the SME’s by sending them the survey questionnaire and from their responses researcher can conclude more reliable result. Marchington and Wilkinson (2005) also state that qualitative data can be generated from the quantitative data. So the researcher believes quantitative research choice is most suitable for his research.
3.3.5 The Time Horizon- Cross Sectional:

The period of time in which the study takes places is described as the Time Horizon. It can be either Cross-sectional, which studies a point in time of a phenomena, or Longitudinal, which studies phenomena over a period of time observing change and development (Saunders et al, 2009, p. 155).

The researcher has chosen Cross Sectional study, since the dissertation had to be accompanied within a time frame of 3 months, a longitudinal study demand much more time for research and also cross-sectional approach is the study of a particular phenomenon at a particular time. According to Saunders and associates, cross sectional study research represent a “snapshot taken at particular time” (Saunders, 2009, p 155). So, researcher had chosen cross sectional study as it is best suitable for this research.

3.3.6 Data Collection and Analyzing:

3.3.6.1 Population and Sample

Malhotra & Birks (2006) advocates that sampling is a key component of any research design. Sampling is the selection of a relatively small number of individuals from whom the research obtains data in order to be able to generalize about a large population (Gary, et al, 2007). Sampling techniques are relevant in the research work where it is not possible to survey the entire population due to time constraints or limited resources (Bryman and Bell, 2007, p. 182). Henry (1990, as cited Saunders et al., 2009), mention that using sampling can make it possible achieve higher overall accuracy than entire population. This is because the smaller number of case means that more time can be spent designing and piloting the means of collecting data. Collecting data from fewer cases also means that the collected information is more detailed or accurate. (Saunders et al., 2009, p. 212-213). However, Fowler (2009) highlights the sampling errors as a result of variation caused between the data collected from samples and the true value from the population as a whole (Fowler, 2009, p.13).
The basic idea is that the researcher selects some elements in a population of CRM experts and users who have worked on either in-house or cloud platform of CRM and from their responses, the researcher can draw conclusions about the entire population. The most important question in relation to population sampling is ‘what are the key criteria for deciding which CRM model they will choose, which model is better on that criteria between in-house / cloud CRM and which pricing model out of subscription/ownership will be better for SME in terms of ROI’ . The samples of 80 respondents for survey were selected. These samples were selected from CRM users or experts who work in different SMEs and uses CRM solutions as their customer management system. In order to collect the quantitative data the researcher requested the respondents to complete questionnaire which was sent to them via email and also requested to pass the questionnaire to their friends and co-worker. Furthermore, researcher also posted the questionnaire on CRM experts groups on LinkedIn from where he received good feedback and comments from CRM experts.

3.3.6.2) Evaluation: Data Collection, Editing and Coding

After defining the research problem of the dissertation, and selecting the method to be adopted, now the evaluation process adopted for this research had been explained. The evaluation process includes data collection, and editing and coding of the collected data in order to develop the outcome of the prospective research.

Data Collection

Data collection is an important part of the research and it can be classified into two categories, namely primary data and secondary data. (Saunders et al., 2009). The researcher has used both primary and secondary data collection methods for obtaining data for his research.

Secondary data Collection

Saunders et al (2011) advocates that the secondary data can be a good tool to compare the findings of the primary data in such a way that the researcher can put the primary findings
within a more general context as well as triangulate it. According to Cooper and Schindler, (2008), secondary data sources are interpretations of primary data. For secondary data collection the researcher had referred through encyclopedias, textbooks, handbooks, journals, magazines and newspaper articles as a literature review. Researcher also made sure that this information collected was not be out-of-date. These all was the secondary source of information considered for the research.

**Primary data Collection**

The researcher had used the quantitative approach for primary data collection. Questionnaires method chosen by the researcher had an advantage of measuring people’s preferences and habits even if they are geographically dispersed in a cost effective way. In quantitative part, self-administered questionnaire technique was used for the data collection and that was sent to CRM experts and decision makers working in different SME’s by using Emails, questionnaire were also posted on CRM groups on professional website like LinkedIn. Researcher considered online survey tool Google docs for the creation of the survey as it had a professional look, enhanced reporting mechanism and created trust in respondents. Structured questionnaires was built via close and open ended questions such as choosing preferences via given choices.

Questionnaires were designed to gather some insight about general information about the respondents (position, company size, CRM knowledge). Furthermore, the survey respondents were asked to rate the proposed general criteria using 5 point Likert Scale to give their opinions about the importance and validity of the proposed criteria according to the following alternatives:

- Not Important
- Little Important
- Neutral
- Important
- Very Important
Apart from Likert scale questionnaire also includes dropdown and open ended question to have any recommendation or suggestion from the participants. Later, the questionnaire results will be analyzed and checked for internal validity and reliability.

**Questionnaires Design**

As defined ‘A questionnaire is simply a list of mimeographed or printed questions that is completed by or for a respondent to give his opinion’. A questionnaire is the main means of collecting quantitative primary data. A survey questionnaire allows quantitative data to be collected in a standardized way so that data are internally consistent and coherent for analysis. Questionnaires should always have a definite purpose that is related to the objectives of the research and it need to be clear from the outset how the findings will be used (Roopa S, Raani MS, 2012, p 273)

In order to gather useful and relevant information it is important that careful consideration is given to the design of your questionnaire. A well designed questionnaires requires thought and effort, and need to be planned in a number of stages (Roopa S, Raani MS, 2012, p 273)

![Figure 13: Stages of planning a questionnaire (Roopa S, Raani MS, 2012, p 273)](image)

The researcher had designed a questionnaire in such a way that respondent won’t lose the interest and it won’t displease them as well as to make sure effective use of their time. Special considerations are taken that the questions in a survey are easy to understand and
answer and also they meet the objectives of the researcher. Below is a logic flow of a questionnaire:

- Researcher first, second and third question in survey questionnaire collect general information about respondents like organization size, primary job function and their experience in CRM.
- Fourth question of questionnaire is focused on answering first objective of researcher which is ‘what are the key criteria is CRM deployment model selection’.
- Fifth question in questionnaire will focus on second objective of researcher that which CRM model best suits best among different criteria.
- Sixth question in questionnaire is similar to fourth question security and privacy factor, the rationale behind it’s to check the consistency and reliability of respondents.
- Seventh, Eight, and ninth question of questionnaire answer the final objective of researcher as well as seventh question had the same purpose and they are mean to check the reliability of the respondent.
- And finally tenth and eleventh questions are an open ended question to gather any recommendation or feedback from respondents.

**Questionnaires Pilot Testing**

A pilot test is normally performed before the data collection so as to identify the shortcomings in design and instrumentation and to provide alternative data for the selection of a probability sample. (Cooper and Schindler, 2008; p. 91) They further suggest that, the pilot test should take subjects from the target population and encourage the procedures and protocols that have been designated for data collection. Although the size of the pilot group may vary from 25 to 100 subjects, depending on the choice of the method to be tested, but it is not necessary that the respondents should be statistically selected. (Cooper and Schindler, 2008, p.91)
The following is a checklist that was proposed by Irassi in 2006 that researcher as a survey designer, should consider during the pilot test:

Do the respondents of questionnaire understand the objective of the survey? Are the respondents feels comfortable answering your questions? Are the wordings of the survey clear to the respondents? Is the time reference clear to the participant? Are the answer choices compatible with the respondents’ experience in the matter of research subject? Do any of the items require respondents to think too long or hard before responding? If so, which ones? Which items causes irritation, embarrassment, or confusion? Do any of the questions generate response bias? If so, which ones? Are the answers collected in primary research reflects what you want in regards to the purpose of the survey? Is there enough diversity in the answers received from respondents? Is the survey too long? According to your test audience, is there any other important issues to be overlooked? (Iraossi 2006, 90-92)

Researcher had contacted the managing director of SME which work as CRM reseller in Ireland and Salesforce.com consultants for the pilot test. After their feedback, researcher had made the following changes in questionnaire:

- Researcher had changed the design of questionnaire, for example: in question 4 of survey he used matrix/grid format. Earlier, he was asking each criteria in rows as a separate question.

- After the pilot test, it emerged that, some of the words they found difficult to understand, there were also some grammatical problems creating difficulty in exactly understanding the researcher’s point. Researcher had eliminated the confusing words and corrected the grammatical mistakes.

- There were personal question asking name and email id of respondents, they were removed later on.
3.3.6.3 Techniques for Data Analysis

As Dill and Romiszowski (1997; Cited in Wishard, 2008; p. 42) put it, “Learning is a process by which each individual creates his or her own understanding of the world and how to interact with it. People form models in their minds that help them make sense of their experiences. These models define which behaviors are considered appropriate for each level.”

The purpose of data analysis is to extract the meaning from the data collected and present it in an understandable form (Kwale et al, 2008). The raw data from the questionnaire was partly analyzed through the research program SPSS Statistics, which is a computer application providing statistical analysis of data. SPSS Statistics allows in-depth data penetration, analytical reports, graphics and modeling. For the data analysis the researcher has first used IBM SPSS tool and Microsoft Excel. The quantitative data was first coded using the IBM SPSS tool and Microsoft Excel and then processed to generate statistical results.

Data is presented in the form of graphs and tables.

3.4 QUALITY STANDARDS: Validity & Reliability

3.4.1 Validity

Validity is the capability of a measurement instrument to measure what is supposed to be measured and is considered to be the most significant reason of measurement instrument as stated by Wiedersheim-paul and Eriksson (1998; cited in Rai, 2008; p.58). Additionally, Yin (1994, p.33), discussed about external generalisability; (cited by Saunders et al., 2009; p. 151) and internal validity and explained that internal validity occurs when data analysis is done, external validity should occur during research design and reliability must be considered while collecting data. (Saunders et al 2009)
3.4.2 Reliability

“Reliability is the degree of measures which are free from error and therefore yield consistent result” (Zikmund, 2000, p.280; cited by Rai, 2008; p.57) hence concerned with the credibility of research. For research to progress and to contribute to knowledge, it is important to reflect on the methods employed (Scandura and Williams, 2000). Considerations of reliability, validity and generalisability are included. One way of assuring the application of a reliable and valid survey is to use an established and tested instrument, particularly when construct complexity is high (Punch, 1998). Thus, researchers avoid the challenges (Ashkanasy et al., 2000) and cost (De witte and van muijen, 1999) associated with new instruments.

3.5 Ethics:

American Educational Research Association, 2002 states that “It is of paramount importance that educational researchers respect the rights, privacy, dignity, and sensitivities of their research populations and also the integrity of the institutions within which the research occurs. Educational researchers should be especially careful in working with children and other vulnerable populations”. The researcher had ensured that he had conduct his research in a responsible and ethical way as well as he had followed the four principles discussed below:

- **Minimizing the risk of harm**: Research must not harm any participants. In case if there is any possibility that the participant could be harmed or discomfort in such scenario there will be additional planning to illustrate how participant harm (or discomfort) will be reduced, informed consent, and detailed debriefing will be done.

- **Obtaining informed consent**: Informed consent will be taken by the participants which means that participants should understand that they are taking part in research and what the research requires of them.

- **Protecting Anonymity and confidentiality**: Researcher must take the precaution to protect the privacy of the data provided by the participants during collection, analyzing and reporting of the data and will also keep it anonymous and confidential. Nonetheless, permissions will be sought before such confidential information is disclosed.
• **Providing the right to withdraw**: Research participants always have the right to withdraw their data from the research process. In case, a participant chooses to withdraw from the research process, they will be no pressure to stop them from withdrawing.

### 3.6 The Limitations of the Research

The researcher have encountered some difficulties and limitations while writing up his dissertation that were out of his control. Indeed, these limitations can be from different nature.

• **Time & Cost Constraint**: The researcher had limited timeframe and budget to gather the secondary data from textbooks, journals, newspaper etc., to design questionnaire for survey, to collect primary data and to perform the analysis.

• **Limited Experience**: Researcher had limited experience in collecting secondary and primary data, conducting research, surveys and analyzing the data which researcher had developed during his MBA programme and doing this dissertation. Researcher has explained how he had improved his research and analysis skills in detail in self learning chapter.

• **Limited Literature**: As Cloud CRM is comparatively new and emerging platform so there is limited books, journals and information is available in the libraries or internet. So, again the researcher needs to put more effort to gather the data and provide the dissertation of master degree level.

• **Lack of Reliability**: Saunders et al. (2009) explain that reliability refers to the extent to which data collection and analysis procedures will provide consistent findings. Robson (2002, cited in Saunders et al. 2009) identifies four main threats for reliability that the researcher has to take into consideration: subject or participant bias, subject or participant error, observer bias, observer error.
• **Quantitative Research Limitation:** Researcher is focused to gather responses particularly from CRM experts and decision makers from SME’s and to gather the maximum responses, researcher has emailed the survey as well as posted it on professional sites LinkedIn but due to the short time horizon of the research, the researcher encountered limitation in sample size and response rate as well as the researcher can’t guarantee that respondents take the time to fill the questionnaires.
Chapter 4
Data Analysis and Findings
This chapter will focus on the data findings and analysis from the questionnaire distributed to the sample population which included CRM experts and decision makers working in SME’s.

4.1 Quantitative Research through Questionnaire

Researcher has distributed several questionnaires (Appendix 1) to CRM professionals working on either in house or cloud platform via email and a cover letter explaining the research purpose, what the research is for, and also informed them that their personal identity will not be disclosed to anyone in any circumstances. Researcher had also requested the respondents to pass on the questionnaire to their co-workers and friends who are also CRM professionals in order to get as much responses as possible.

The survey yielded 32 valid responses from various CRM users/experts that work in SMEs. Thus, the response rate of the questionnaire is calculated as: 32 / 80 = 0.40 which means response rate is 40%. In the research by Watt et al. (2002), the overall response rate for online surveys is considered to be 32.6%, whereas the researcher had response rate of 40% because of timely follow up emails with the respondents. However, the response rate is not too high but the researcher had done the reliability test to assess the consistency of response, which is discussed later in this chapter.

Other than the informative questions and criteria rating questions, two open-ended questions were added to ensure that the respondent can recommend any other additional criteria to be added to the list along with stating their comments. One of the participants recommended in extending the research topic to cover the value of SME using cloud computing, this recommendation will be added to future work part of the dissertation as they are out of scope for the dissertation. There were two more comments one in favor of cloud CRM and one in favor of ownership model of CRM, they are discussed in detail in the end of analysis.
4.1.1 Default section: Respondents’ profile

**Question 1: Number of Employees?**

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-9 (Micro)</td>
<td>20</td>
<td>62.5</td>
<td>62.5</td>
<td>62.5</td>
</tr>
<tr>
<td>10-49 (Small)</td>
<td>8</td>
<td>25.0</td>
<td>25.0</td>
<td>87.5</td>
</tr>
<tr>
<td>50-249 (Medium)</td>
<td>4</td>
<td>12.5</td>
<td>12.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2: Number of Employees**

![Figure 14: Number of Employees](image)

The result revealed that out of 32 respondents 20 were from micro or individual enterprises and 8 from small enterprises, which shows that majority of the respondent of this survey are CRM experts or users from individual or small enterprises, this is because the objective of the researcher is to get responses from the CRM experts/ decision maker from SMEs for his primary research and to answer the research question. Only 12.5 percent of response is from respondents of medium enterprises.
Question 2: Which best describes your primary job function?

<table>
<thead>
<tr>
<th>Primary Job Function</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>12</td>
<td>37.5</td>
<td>37.5</td>
<td>37.5</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td>8</td>
<td>25.0</td>
<td>25.0</td>
<td>62.5</td>
</tr>
<tr>
<td>General Management</td>
<td>7</td>
<td>21.9</td>
<td>21.9</td>
<td>84.4</td>
</tr>
<tr>
<td>Administrator</td>
<td>3</td>
<td>9.4</td>
<td>9.4</td>
<td>93.8</td>
</tr>
<tr>
<td>Service</td>
<td>2</td>
<td>6.3</td>
<td>6.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Primary Job Function

Result shows that, out of 32 respondents, 12 were from IT industry they are generally those who work as CRM consultant, Cloud consultant, Software Engineers and out of remaining 20, 8 were from Marketing and sales and 7 from general management, they are end user who use CRM for their business purpose, combined together marketing and management respondents are 15 , which is the maximum because as literature review shows that CRM applications are mostly used by marketing, sales and management people for customer management and managing customer services in an effective and efficient manner.
Question 3) Have you used or planning to use CRM System?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>28</td>
<td>87.5</td>
<td>87.5</td>
<td>87.5</td>
</tr>
<tr>
<td>Valid</td>
<td>4</td>
<td>12.5</td>
<td>12.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Respondents CRM Experience (Have you used or planning to use CRM)

![Chart](chart.png)

Figure 16: Respondents CRM Experience

Result shows that out of 32 respondents 28 have used or planning to implement CRM system, this suggests that most of the respondents of the survey are either CRM end user or expert and aware about CRM functionalities and will give valuable responses and feedback.

<table>
<thead>
<tr>
<th>Primary Job Function</th>
<th>Have you used or planning to use CRM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>IT</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>General Management</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Administrator</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Service</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 5: Cross tabulation – Primary Job function/Have you used or planning to use CRM.

In Table 5, cross tabulation table, result shows among 27 respondents from job function IT, Marketing & Sales and General management, 25 respondent’s uses or planning to use CRM. As represented in literature review, CRM core functionality is to increase sales, marketing and customer services so it’s ideally used by IT, sales and management professionals rather than HR and other services.
4.1.2 Research Objective 1 “Identify the key evaluation criteria for CRM on demand/in-house system selection in small organizations?”

Question 4) please choose the importance of following criteria to identify their effect in deciding CRM model for your organization

Below table represents the summary of the respondents rating of the proposed criteria in which they were asked to rate importance of each criteria on 1-5 likert scale

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Proposed Criteria</th>
<th>Very Important</th>
<th>Important</th>
<th>Neutral</th>
<th>Little Important</th>
<th>Not Important</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Cost of Ownership</td>
<td>50%</td>
<td>46.9%</td>
<td>3.1%</td>
<td>0%</td>
<td>0%</td>
<td>4.4688</td>
</tr>
<tr>
<td>2</td>
<td>IT upfront &amp; initial Cost</td>
<td>15.6%</td>
<td>40.6%</td>
<td>21.9%</td>
<td>18.8%</td>
<td>3.1%</td>
<td>3.4688</td>
</tr>
<tr>
<td>3</td>
<td>Security &amp; privacy issues</td>
<td>21.9%</td>
<td>28.1%</td>
<td>28.1%</td>
<td>21.9%</td>
<td>0%</td>
<td>3.5000</td>
</tr>
<tr>
<td>4</td>
<td>Integrity with legacy systems</td>
<td>15.6%</td>
<td>31.3%</td>
<td>34.4%</td>
<td>15.6%</td>
<td>3.1%</td>
<td>3.4063</td>
</tr>
<tr>
<td>5</td>
<td>Scalable system</td>
<td>40.6%</td>
<td>40.6%</td>
<td>18.8%</td>
<td>0%</td>
<td>0%</td>
<td>4.2188</td>
</tr>
<tr>
<td>6</td>
<td>Ability to customize &amp; configure</td>
<td>15.6%</td>
<td>34.4%</td>
<td>40.6%</td>
<td>9.4%</td>
<td>0%</td>
<td>3.5625</td>
</tr>
<tr>
<td>7</td>
<td>Implementation risk and failure</td>
<td>71.9%</td>
<td>25%</td>
<td>3.1%</td>
<td>0%</td>
<td>0%</td>
<td>4.6875</td>
</tr>
</tbody>
</table>

Table 6: CRM model selection criteria

The means of the proposed criteria represent the average of the importance on 1-5 Likert scale as seen by the participants. According to the participants, the top 3 important criterion for CRM selection are ‘Implementation risk and failure’ and next is ‘Total cost of ownership’ associated with CRM application and then ‘scalability’. In CRM ‘customization and configuration’ are important part of the applications and it’s rated on forth number followed by ‘security and privacy’ of their data, last but not the least are ‘IT upfront and initial cost’ and ‘Integrity with legacy systems’ in selection criteria for CRM.
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Proposed Criteria</th>
<th>Mean</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Implementation risk and failure</td>
<td>4.6875</td>
<td>Importance</td>
</tr>
<tr>
<td>1</td>
<td>Total Cost of Ownership</td>
<td>4.4688</td>
<td>&gt; 4</td>
</tr>
<tr>
<td>5</td>
<td>Scalable system</td>
<td>4.2188</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ability to customize &amp; configure</td>
<td>3.5625</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Security &amp; privacy issues</td>
<td>3.5000</td>
<td>&gt; 3</td>
</tr>
<tr>
<td>2</td>
<td>IT upfront &amp; initial Cost</td>
<td>3.4688</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Integrity with legacy systems</td>
<td>3.4063</td>
<td></td>
</tr>
</tbody>
</table>

Table 7: CRM selection criteria and Importance

As presented in literature review by the researcher, CRM has high percentage of ‘failure rate’ because of several factors such as vendor failure, time or cost overruns, internal rejection etc., that’s may be the reason respondents have chosen it to be the most important criteria, followed by ‘total cost of ownership’ as 87.5% of respondents are from individual or small enterprises and those enterprises don’t have high budgets for expensive enterprise applications, that’s a reason its second critical factor in choosing CRM. Third factor is ‘scalability’ which provides flexibility to enterprises to increase or decrease their hardware or software resources as per business requirements and fourth factor is ‘customization and configuration’ which allow to change the application for example: change layout, create new fields, new reports and dashboard as per the requirement of an enterprise. Respondents believe ‘security and privacy’ issue to be fifth important factor in the their selection criteria as the CRM application may or may not have sensitive information of customers and last but not the least factors are ‘IT upfront & initial cost’ and ‘Integrity with legacy system’ which means a cost involve in setting up CRM application in an organization and flexibility of CRM applications to integrate with other applications in an organization for example integrate with Outlook, MS Word, SAP and other applications.
Researcher has calculated Cronbach’s Alpha to demonstrate the reliability of the survey results. The formula for the standardized Cronbach's alpha:

\[
\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N - 1) \cdot \bar{c}}
\]

Alpha coefficient ranges in value from 0 to 1 and used to describe the reliability of factors extracted from dichotomous and/or multi-point formatted questionnaires or scales. The higher the score, the more reliable the generated scale is. However it indicated 0.7 to be an acceptable reliability coefficient (J. Reynaldo, 1999). 0.718 ratio for this question shows that the survey is at an acceptable level.

On the basis of the responses from participants, the refined key general criteria for the selection of CRM model is as follow in descending order:

1) Implementation risk and failure
2) Total Cost of Ownership
3) Scalable system
4) Ability to customize & configure
5) Security & privacy issues
6) IT upfront & initial Cost
7) Integrity with legacy systems
4.1.3 Research Objective 2 “Which CRM deployment model is preferable for each evaluation criteria among smaller organizations?”

Question 5) Which CRM deployment model is better on the following criteria?

Researcher asked the respondents to select which model between In house CRM and Cloud CRM is better on an individual selection criteria’s. The responses from CRM experts or decision makers are summarize below in a table 8:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Criteria</th>
<th>In house CRM</th>
<th>Cloud CRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Cost of Ownership</td>
<td>15.6%</td>
<td>84.4%</td>
</tr>
<tr>
<td>2</td>
<td>IT upfront &amp; initial Cost</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>3</td>
<td>Security &amp; privacy issues</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>4</td>
<td>Integrity with legacy systems</td>
<td>65.6%</td>
<td>34.4%</td>
</tr>
<tr>
<td>5</td>
<td>Scalable system</td>
<td>18.8%</td>
<td>81.3%</td>
</tr>
<tr>
<td>6</td>
<td>Ability to customize &amp; configure</td>
<td>68.8%</td>
<td>31.3%</td>
</tr>
<tr>
<td>7</td>
<td>Implementation risk and failure</td>
<td>12.5%</td>
<td>87.5%</td>
</tr>
</tbody>
</table>

Table 8: CRM selection criteria and preferred model

Individually, analyzing the result for each criteria:

Which CRM deployment model is better on the following criteria - Total Cost of Ownership?

![Figure 17: CRM models comparison: TCO](image-url)
<table>
<thead>
<tr>
<th>Q5_Total Cost of Ownership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In house CRM Solution</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
</tr>
<tr>
<td>Total Cost of Ownership</td>
<td>3</td>
</tr>
<tr>
<td>Important</td>
<td>2</td>
</tr>
<tr>
<td>Very Important</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 9: Cross Tabulation - Total cost of ownership (Rows represent result from response of question 4, Total cost of ownership factor)

According to the results, 84.4% of the respondents suggest that Total cost Ownership for in-house CRM is more than Cloud CRM, which means Cloud CRM is better in terms of TCO, 14 out of 16 respondents which says TCO is a very important factor in CRM selection responded that Cloud CRM is better in TCO.

**CRM Deployment Model better in terms of total cost of ownership: Cloud CRM**

**Which CRM deployment model is better on the following criteria - IT upfront & initial Cost?**

![Figure 18: CRM model Comparison – IT upfront and initial cost](image)

<table>
<thead>
<tr>
<th>Q5_IT Upfront &amp; Initial Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In house CRM Solution</td>
</tr>
<tr>
<td>Not Important</td>
<td>0</td>
</tr>
<tr>
<td>Little Important</td>
<td>1</td>
</tr>
<tr>
<td>Neutral</td>
<td>1</td>
</tr>
<tr>
<td>Important</td>
<td>4</td>
</tr>
<tr>
<td>Very Important</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 10: Cross Tabulation - IT upfront and initial cost (Rows represent result of question 4 IT upfront and Initial cost factor)
In a survey, 75% responded that Cloud CRM is better in IT upfront & initial cost as researcher had reviewed in literature review that cloud CRM doesn’t require cost for IT infrastructure like Servers, hard disk etc. 12 out of 18 respondents who said ‘IT upfront & initial cost’ is important or very important factor in CRM selection said Cloud CRM is better in ‘IT upfront & initial cost’.

*CRM Deployment Model better in terms of IT upfront & initial cost: Cloud CRM*

**Which CRM deployment model is better on the following criteria - Security & privacy issues?**

![Figure 19: CRM model Comparison - Security & privacy issues](image)

<table>
<thead>
<tr>
<th>Security and Privacy Issue</th>
<th>Q5_Security and Privacy Issue</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In house CRM Solution</td>
<td></td>
</tr>
<tr>
<td>Little Important</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Neutral</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Important</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Very Important</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Cloud CRM Solution</td>
<td></td>
</tr>
<tr>
<td>Little Important</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Important</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Very Important</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

*Table 11: Cross Tabulation: Security and Privacy Issue (Rows represent result of question 4 Security and privacy issue factor)*

According to survey, 75% of respondents believe in – house CRM is better in terms of security and privacy as data is stored at their local site and they are the owner of it. Out of 16 respondent which believe Security and Privacy is an important or very important factor in deciding CRM model 11 responded in – house CRM is better from security and privacy perspective.

*CRM Deployment Model better in terms of Security and Privacy: CRM In house*
Which CRM deployment model is better on the following criteria - Integrity with legacy systems?

![Figure 20: CRM model Comparison - Integrity with legacy systems](image)

<table>
<thead>
<tr>
<th>Q5_Integrity with legacy systems</th>
<th>In house CRM Solution</th>
<th>Cloud CRM Solution</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Important</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Little Important</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Integrity with legacy systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>6</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Important</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Very Important</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>11</td>
<td>32</td>
</tr>
</tbody>
</table>

Table 12: Cross Tabulation: Integrity with legacy systems

Results shows 65.6 % consider In house is better in integrating with the legacy systems for example integration of CRM system with SAP for accounting or integration of CRM system with Peoplesoft in HR applications. Although there are just 15 respondents out of 32, who believes it’s an important or very important deciding factor in CRM selection.

**CRM Deployment Model better in terms of integrity with legacy systems: In house CRM**

Which CRM deployment model is better on the following criteria - Scalable system?

![Figure 21: CRM model Comparison - Scalable system](image)
<table>
<thead>
<tr>
<th>Scalable system</th>
<th>Q5_Scalable system</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In house CRM Solution</td>
<td>Cloud CRM Solution</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Important</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Very Important</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>26</td>
</tr>
</tbody>
</table>

Figure 13: Cross Tabulation: Scalable system (Result from question 4 and 5 scalable system factor)

In a survey, 81.3% respondents responded that cloud CRM is more scalable as you can easily increase / decrease the number of users or hardware infrastructure as per business requirements and 26 out of 32 suggest its important or very important criteria in CRM selection model.

*CRM Deployment Model better in terms of Scalability: Cloud CRM*

Which CRM deployment model is better on the following criteria - Ability to customize & configure?

![Figure 22: CRM comparison model- Ability to customize & configure](image)

<table>
<thead>
<tr>
<th>Ability to customize &amp; configure</th>
<th>Q5_Ability to customize &amp; configure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In house CRM Solution</td>
<td>Cloud CRM Solution</td>
</tr>
<tr>
<td>Little Important</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Neutral</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Important</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Very Important</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 14: Cross Tabulation: Ability to customize & configure (Result from question 4 and 5 Ability to customize & configure criteria)
As per the result, In house CRM is much better than Cloud CRM in terms of ability to customize and configure. 68.8% responded that In house CRM has more ability to customize and configure the CRM applications than Cloud CRM. Out of 32 total respondents 16 believe it’s an important or very important factor in their CRM selection.

*CRM Deployment Model better in terms of ability to customize and configure: In house CRM*

**Which CRM deployment model is better on the following criteria - Implementation risk and failure?**

![Figure 23: CRM model Comparison - Implementation risk and failure](image)

<table>
<thead>
<tr>
<th>Implementation risk and failure</th>
<th>In house CRM Solution</th>
<th>Cloud CRM Solution</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Important</td>
<td>0</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Very Important</td>
<td>4</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>28</td>
<td>32</td>
</tr>
</tbody>
</table>

*Table 15: Cross Tabulation: Implementation risk and failure (Response from question 4 and 5 Implementation risk and failure criteria)*

87.5% of the respondents consider that cloud CRM is better choice in terms of implementation risk and failure as it has lesser chance of failure because as studied in literature review to set up cloud CRM enterprises don’t need IT hardware infrastructure and can be directly access via browser that’s the reason cloud CRM has higher success rate. Moreover respondents also consider it as the most crucial factor in CRM model selection criteria.

*CRM Deployment Model better in terms of implementation risk and failure: Cloud CRM*
Question 6) In house data storage has higher security and privacy than Cloud storage. Do you agree?

The purpose of this question is to check the reliability and consistency of the responders. Researcher asked the similar question in Question 5 like which model is better for ‘Security & Privacy issues’ and in this question researcher analyze if there will be any difference between responses.

![Figure 24: Security and Privacy issues (analysis from question 5: security and privacy issues)](image)

![Figure 25: Security and Privacy Comparison (analysis from response of question 6)](image)

Researcher have also calculate the mean for the security and privacy issues in question 5 which was 1.2500 and response for this question that is 1.2800, which are very nearly equal.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>In house CRM Solution</td>
<td>24</td>
<td>75.0</td>
<td>75.0</td>
<td>75.0</td>
</tr>
<tr>
<td>Cloud CRM Solution</td>
<td>8</td>
<td>25.0</td>
<td>25.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 16: Security and Privacy Criteria (Response from question 5)
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>23</td>
<td>71.9</td>
<td>71.9</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>28.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 17: Security and Privacy Criteria (Response from question 6)

In question 5, 75% responded that In house CRM is better solution if a company is concerned about security and privacy similarly in Question 6, 72% responded that in house CRM offer better security and privacy which means that the responses are similar as well as the mean values of both the responses are very nearby, this shows that the respondents are reliable and consistent. Similarly below table shows variance and standard deviation in response to both the questions.

<table>
<thead>
<tr>
<th>N</th>
<th>CRM In house offer security and privacy than Cloud CRM</th>
<th>Q5_Security and Privacy Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Valid</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>1.2813</td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
<td>.45680</td>
</tr>
<tr>
<td></td>
<td>Variance</td>
<td>.209</td>
</tr>
</tbody>
</table>

Table 18: Statistics comparison of response for security and privacy comparison in question 5 and 6
4.1.4 Research Objective 3 “Will subscribing pricing be a silver bullet, in the light of Return of Investment?”

Question 7) a subscription model CRM would be more expensive than in-house CRM over time and as business grows. Do you agree?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>18</td>
<td>56.3</td>
<td>56.3</td>
<td>56.3</td>
</tr>
<tr>
<td>Valid</td>
<td>No</td>
<td>14</td>
<td>43.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 19: Subscription / In house CRM cost comparison over time

![Pie chart showing the response distribution]

Figure 26: Subscription / In house CRM cost comparison over time

According to the result 56.3% responded that Cloud CRM will get more expensive as the business grows over time. As studied in literature review, there are number of factors illustrating it, first the enterprises need to pay more for upgrading their business plan. Secondly, in Cloud CRM everything is on rent for example server, storage, software etc so they have to continuously pay to use the services. The remaining 43.8 percent don’t agree cloud CRM will be more expensive than in house CRM.
Question 8) Contracts in subscription model bonds a company. Do you agree?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>3</td>
<td>9.4</td>
<td>9.4</td>
<td>9.4</td>
</tr>
<tr>
<td>Disagree</td>
<td>9</td>
<td>28.1</td>
<td>28.1</td>
<td>37.5</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6.3</td>
<td>6.3</td>
<td>43.8</td>
</tr>
<tr>
<td>Agree</td>
<td>9</td>
<td>28.1</td>
<td>28.1</td>
<td>71.9</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>9</td>
<td>28.1</td>
<td>28.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 20: In Cloud CRM contracts bond a company

As per survey, 56.2% responded that they are either agree or strongly agree that subscription model bonds a company, as more than half on the respondent are from the individual or micro enterprises and it may be required that a company is not able to afford the CRM because of internal or external economical conditions but due to being in contract they have to keep on paying for the services.

Question 9) Which CRM pricing model you consider is better, considering higher Return of Investment?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscription based</td>
<td>22</td>
<td>68.8</td>
<td>68.8</td>
<td>68.8</td>
</tr>
<tr>
<td>Ownership based</td>
<td>10</td>
<td>31.3</td>
<td>31.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 21: CRM Pricing Model Comparison
Figure 28: CRM Pricing Model Comparison

Table 22: Cross tabulation – CRM pricing model comparison (Response from question 7 and question 9)

From the above figure it can be seen that most of the respondent prefer subscription based CRM rather than ownership model, 68.8% of the respondent have chosen subscription model as their preferred choice. As discussed in the literature review, secondary research shows that large number of small enterprises are considering to move to cloud because of lower initial cost and they don’t need to buy or maintain server or IT infrastructure. They just need to pay as per their usage like as in ‘pay as you go’, which provide flexibility to small organizations. Table 22 shows, 22 out of 32 respondent which said subscription model has better ROI than ownership model.
4.1.5) Open Ended Questions

Question 10) in your opinion, Comparing on-demand CRM and on-premise CRM system, which one is your champion? And why?

In the End, researcher had also asked open ended question to take the respondents suggestion and to understand the view of CRM experts in regards to cloud/in house model. CRM expert’s responses in open ended question clearly shows that the experts have mix opinion on the selection of CRM deployment model as stated in the literature review. One of the respondent said they prefer on demand CRM because “as I get the benefit of the latest updates to the latest CRM features at no extra cost and on cloud system does not go out support from the vendor, as common in on premise CRM solutions.” And another responded that he/she prefer In house CRM because “1) this type of system can still be portable when used with a laptop, or tablet. 2) Better security as I have all the data with me and in house on my server. 3) It is very rare that I require data that needs to be updated before I return back to base.”
Chapter 5

Conclusion and Recommendation
This chapter provides a summary of discussion of the results and limitations along with conclusion and future work.

5.1 Discussion

According to Saunders et al (2009), the main purposes of the conclusion chapter are to answering the research question and meeting the objectives of the research (Saunders et al, 2009; p. 538). The researcher will follow those guidelines for his conclusion. The goal of this research is to answer the research question “Is Cloud based CRM the customer solution that SME’s have been waiting for?”

To answer the research question, researcher has proposed three objectives:

1) Identify the key evaluation criteria for CRM on demand/in-house system selection in small organizations?
2) Which CRM deployment model is preferable for each evaluation criteria among smaller organizations?
3) Will subscribing pricing be a silver bullet, in the light of Return of Investment?

The researcher in his literature review has initially proposed the general criteria for CRM model selection that required extensive literature review about general CRM selection criteria, software selection criteria and quality attributes for innovation adoption. Since there were many academic articles regarding these subjects, the general criteria were formed with ease. The questionnaire method was utilized to refine these criteria by collecting data from CRM on-demand on in house users and experts. Since the proposed framework is not limited to any country-specific situation, the self-administered email method was used. The only disadvantage of this method was the low response rate of 40% however this non-response bias was expected initially. The alternative methods such as field study, structured interviews were considered however they were ruled out because of entailed costs, time and the global nature of the research. As an advantage, the self-administered web survey method allows the respondents to complete the task at their own convenience which allows flexibility and allows the researcher to receive answers from experts that are globally dispersed.
5.2 Conclusion

Objective 1:

The first objective of the researcher is to find the key criteria for the selection of CRM model for individual and small organizations, for which researcher through his secondary research has proposed the general criteria and asked the CRM experts and users to rate their importance on 1-5 likert scale and from the responses researcher found top 3 criteria for CRM selection are ‘implementing risk and failure’ as researcher has explained in his literature review that it was a big concern among organizations as CRM has failure rate of around 30-50%. Participants responded that second important criteria is ‘total cost of ownership’ which includes overall cost like licenses, hardware infrastructure, maintenance and support. Third key criteria for them in ‘scalability’ which allow them to increase or decrease their uses as per their requirements. ‘Ability to customize and configure’ and ‘security and privacy’ are the fourth and fifth criteria and the last two criteria were ‘IT upfront and initial cost’ and ‘integrity with legacy system’. Researcher has listed in table 23 all the key criteria for CRM model selection in ranking order in view of SME’s, it will help the decision makers in SME’s which are looking to implement CRM model, to understand the selection criteria and their importance in CRM model selection.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Key Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implementation risk and failure</td>
</tr>
<tr>
<td>2</td>
<td>Total Cost of Ownership</td>
</tr>
<tr>
<td>3</td>
<td>Scalable system</td>
</tr>
<tr>
<td>4</td>
<td>Ability to customize &amp; configure</td>
</tr>
<tr>
<td>5</td>
<td>Security &amp; privacy issues</td>
</tr>
<tr>
<td>6</td>
<td>IT upfront &amp; initial Cost</td>
</tr>
<tr>
<td>7</td>
<td>Integrity with legacy systems</td>
</tr>
</tbody>
</table>

Table 23: CRM selection criteria and importance
Objective Two:

Second objective of the researcher is to find ‘which CRM deployment model is preferable for each evaluation criteria among smaller organizations’. The purpose of this research objective is to understand individually which CRM model is better on each individual selection criteria’s proposed by the researcher in his literature review. For which the CRM experts has responded that “Cloud CRM” is preferable in terms of ‘total cost of ownership’, ‘IT upfront and initial cost’, ‘scalability’, ‘implementation risk and failure’ where as in house CRM is better in terms of other three factors ‘ability to customize & configure’, ‘security & privacy issues’ and ‘integrity with legacy systems’.

Summarizing the result for first and second objective below:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Key Criteria</th>
<th>CRM Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implementation risk and failure</td>
<td>Cloud CRM</td>
</tr>
<tr>
<td>2</td>
<td>Total Cost of Ownership</td>
<td>Cloud CRM</td>
</tr>
<tr>
<td>3</td>
<td>Scalable system</td>
<td>Cloud CRM</td>
</tr>
<tr>
<td>4</td>
<td>Ability to customize &amp; configure</td>
<td>In house CRM</td>
</tr>
<tr>
<td>5</td>
<td>Security &amp; privacy issues</td>
<td>In house CRM</td>
</tr>
<tr>
<td>6</td>
<td>IT upfront &amp; initial Cost</td>
<td>Cloud CRM</td>
</tr>
<tr>
<td>7</td>
<td>Integrity with legacy systems</td>
<td>In house CRM</td>
</tr>
</tbody>
</table>

Table 24: First and second objective result

The above table represent key criteria’s for CRM model selection ranking from top to bottom and also present which CRM model is preferable for each individual criteria for SME’s.
Objective Three:

The third objective of researcher is to find ‘Will subscribing pricing be a silver bullet, in the light of Return of Investment’. To which 71.4% of respondent nearly three fourth of overall respondents said subscription based CRM is better than ownership based CRM in terms of return of investment and which means subscribing model offer better value for investment. However 57.3% of respondent also believes that subscription model of CRM will be expensive as the business grows as they will need to upgrade their plans for number of users but the researcher believes the condition will be similar with ownership CRM model also as they need to buy more number of license and upgrade their IT infrastructure as the number of users increase. 53% are agree or strongly agree that subscription model will bond them in a contract and they have to pay until contracts finish. However as seen in literature review, researcher believes subscription model offer better exit criteria than ownership model in which if the organization want to implement CRM model they need to own software licenses and IT infrastructure whereas in subscription model everything is on rent so it’s easy to exit.

Research Question:

From the extensive primary and secondary research, responses from CRM experts / decision makers in different SMEs, researcher can conclude that Cloud CRM is a better choice for individual and small organizations. From the first and second objective it can be concluded that the top key criteria’s for CRM model selection such as ‘CRM implementation and failure risk’, ‘total cost of ownership’, ‘scalability’ as well as it has ‘lower initial cost’ prefer Cloud CRM over ownership model of CRM. Furthermore, the third objective shows that subscription pricing model of Cloud CRM offer higher return of investment comparative to ownership model which is again critical factor for SMEs as budget is a major constraint in decision making of SMEs as well as subscription model also offer better exit criteria to an enterprises.

After analyzing all the three objectives researcher can conclude that Cloud CRM model is a better choice for SME’s looking for CRM implementation.
5.3 Recommendations and Future work

- Currently, the focus of a research is on individual or small enterprises. In future, the evaluation framework can be applied to medium and large organizations, while considering medium or large organizations there may be other criteria’s to consider which may vary according to the business dynamics of those organizations. In that case, the questionnaire or interview method can be applied to the decision makers, CRM experts and users in large organizations for data collection and analysis.

- In future, research can also be extended by studying other requirements for CRM implementation for example: CRM functional requirements like Salesforce Automation, Marketing Automation, Service Automation, CRM Analytics, Extendible CRM and Social CRM for evaluating functional criteria of CRM.

- Since, each country has unique CRM market dynamics, the evaluation framework can also be tailored to a specific country or region in future. In that case, structured interviews can be carried out with CRM experts in that specific country or region to understand the situation and define the criteria for evaluation according to the particular country.

Finally, the researcher has met the objectives of his research and identified the key evaluation criteria of Cloud or in house CRM deployment model and also determined which CRM model is suitable on different criteria’s for the SMEs and finally, answered his research question. In future, this research can also be pursued by other researchers.
Chapter 6
Self Learning
6.1 Introduction

Boyd & Fales (1983. pp 99-117) define reflective learning as the process on internally examining and exploring issues of concern. These issues are triggered by experiences, which in turn create and clarify meaning in terms of selfhood, and which results in a changed conceptual perspective. Boyd & Fales (1983) further state that this process is central to ones understanding of the experiential process. Self reflection is an important part of any learning experience. When a person learns, in effect there is a shift from one mind set to another. While it is difficult to tangibilise this movement, it is possible to conceptually benchmark the change that has occurred.

This section is divided into two parts. First part will present the researcher’s background and the learning style adopted in this process of reflection on learning through the dissertation, and second part will present how pursuing the dissertation has added value to the researcher and the skills that researcher had developed.

Learning style

According to Kolb (1984, p.38) “learning is the process whereby knowledge is created through the transformation of experience”. Moreover, Mumford (1999) explained that “learning has happened when people can demonstrate that they know something that they didn’t know before and/or when they can do something they couldn’t do before” (Mumford, 1999). Kolb and Fry (1975) argue that the learning cycle can begin at any one of the four points - and that it should be approached as a continuous spiral. However, the learning cycle suggests that concrete experiences create an environment for reflecting and observing where the experiences are considered. This must then be followed by the development of ideas, theories or questions about the process of abstracting. The last stage is that of active experimentation, or application through actions.

Honey and Mumford had developed their learning styles system as a variation of Kolb’s (1984) model. Their descriptions of the stages in the learning cycle are as follow: activist, reflector, theorist, and pragmatist. There is a strong similarity between the Honey and Mumford stages and the corresponding Kolb’s learning styles.
• **Activist (Accommodator):** they are those people who act first and consider the consequences later. They are focused on the present and are very attracted to new challenges.

• **Reflector (Diverger):** these people watch and listen before offering an opinion. Seeks data and considers thoroughly before taking any decisions. Postpones conclusions until the end.

• **Theorist (Assimilator):** these people seek perfection and in their approach to problems use the vertical step by step approach. They dislike fickleness.

• **Pragmatist (Converger):** these people act quickly and confidently to implement ideas. They see problems as an opportunities and display good practical problem-solving and decision-making skills.

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**Figure 29: Kolb’s learning Cycle**
6.2 Self-Assessment

After studying attributes of the Honey and Mumford learning styles, researcher realized that his learning style is that of an activist (Accommodators). Some of the major events in his life confirmed this notion.

Researcher did his Bachelors in Computer Science and Engineering from UPTU, Uttar Pradesh, India. This program has enhanced his technical knowledge and problem solving skills. During the bachelor’s degree, he was the first student to attempt and pass Sun Certified Java Programmer exam which later on was followed by other student. In the final year of his bachelor’s degree, he was selected as an Associate Software Engineer by a Multi-National Company through campus placement. Within one year of joining the organization, he was awarded as a Star performer for his learning skills, problem solving and to attain perfection in all of his work. He had been continuously looking out for changes in the IT field and upgraded himself accordingly and because of this, he had enrolled for Salesforce.com certification exam and passed it. This confirms that the researcher has been learning by doing and an open mind approach.

Furthermore, after working for 3 years as a Software Engineer, researcher planned to get into new experiences and to develop new learning and he has taken an admission into MBA course in Ireland, which proves his inclination towards exploration and risk taking. He always gets enthusiastic with new experiences and dominated by immediate experiences because of which he achieved the highest marks in first semester of MBA cloud computing module. By the time he has completed second semester he secured an internship as a CRM Business Development Engineer with an SME in Ireland. From this, he can say that he involves himself fully, without bias, in new experiences and happy to be dominated by immediate experiences. He is open-minded, not skeptical, and this tends to make him enthusiastic about anything new. He tends to thrive on the challenge of new experiences and seeks to center all activities around himself, which represents the activist approach of a researcher.
6.3 Masters Experience

Enrolling on the MBA program was one of the biggest challenges the researcher have faced. Because when he enrolled on the program, he was new in the country and English isn’t his first language, also he did not realize how much diverse and demanding the program will be. He did a total of six modules that involved taking up the task of finding articles, journals and referencing it, which was something new for him. He has managed and learned the new way of academic writing, not only during the development of this dissertation but also at classes. The researcher has continuously analyzing experiences, reflect upon those to develop concepts and apply them in the study. Classes provided for the MBA course were especially based on case studies which are real situations and require the students to develop and theorize the lessons learn deducted by the cases studies and to apply them to other real life situations. As an MBA graduate, the researcher will be able to combine new knowledge with past experience and apply it to new circumstances. The Masters program has empowered the researcher with skills that will enable him to synthesize, analyze and solve complex unstructured business problems in professional world.

6.4 Skills Development

6.4.1 Research capability and analytical skills

This was a complete new skill for a researcher as his graduate course didn’t involve extensive research work. He noticed significant improvement in his research skills since joining this MBA programme. The different modules assessments required some level of review of academic literature. The researcher learned in this programme, how to support his opinion with academic authors. For example, by writing literature review and several other assignments the researcher learned how to gather data by searching in academic articles and how to extract the information he needed. He developed patience and to quickly identify the key information within a document and also how to conduct information searches and locate published papers within information databases and the internet. Finally, the dissertation helped the researcher to develop, good analytical and research which will help him in his professional career ahead.
6.4.2 Team Working Skills

The researcher is not a native English speaker, as most of the assignments during MBA were used to be group based, communication in English has been a massive effort. During group assignments, he has developed the skills to work with different individuals and in a team together. Working as part of a team has taught him to take ownership of the work that needs to be done and also to contribute to the performance of the team. While working with teams, he realized team is more about us and not ‘I’, in groups its necessary either to understand others or to convince them to agree upon a common point to draw the conclusion. While working in a team enhances his skills of expression, brainstorming and questioning.

6.4.3 Cloud Computing/CRM knowledge

This master’s degree in Cloud Computing helped the researcher to foster his knowledge in Cloud computing and to acquire new knowledge in this field. Indeed, this new learning about emerging technology and learning the concepts of Cloud model, Big Data, privacy and security issues and working on cloud application like windows azure, Salesforce.com during the course will help him in his future job searches.

6.4.4 Time management Skill

Researcher has demonstrated improvements in his time management skills as he had learned how to combine the programme with an internship to meet the deadlines of all the compulsory set times for the submission of modules assessments. In the initial stages of the dissertation he devoted lot of time in reading and reviewing documents due to the vast amount of literature on the subject required. In these instances he had reassess the strategy taken and developed a new approach, which incorporated the collection of primary data through the developed questionnaire. Because of the size and level of time involved, he created a project plan which was useful to track his objective completion and to move the dissertation forward.
6.4.5 Stress Management Skill

Last but not the least and the most important skill researcher has learned during his dissertation is stress management. Since beginning researcher was working as an intern as CRM business development engineer. So, balancing a work life, academic life and personal life as well as completing the research was a big challenge. Researcher is thankful to his supervisor for his endless support and guidance in completing this dissertation successfully.

6.5 Future application of learning

Doing his master’s degree in business management at Dublin Business School is the most rewarding accomplishment for the researcher. This International MBA programme has helped the researcher to extensively develop in key skill areas like research and analytic skills, team work, effective communication with student of all nationalities as well as technical skills in cloud computing. The programme has offered him a variety of challenges and opportunities to develop as a better individual both academically and personally as well. Moreover, Dublin Business School has offered a stimulating platform to learn and enjoy, giving him a sense of accomplishment on every day of college. Additionally, he has developed stress management skill and learned to be a critical thinker, he also learned to work under pressure and with deadlines. He has also learned to collaborate and negotiate with other individuals to develop and synthesis solutions. A SWOT analysis is presented in the appendix (Appendix 2: SWOT Analysis) as a summary of researcher’s overall development during his MBA, from start to end of his MBA programme. Researcher believes he could not have learned so much in one year without enrolling in this programme and this learning will help in his professional career.
Chapter 7: Bibliography


Dills, C. And Romiszowski (1997), Instructional Development Paradigms, Educational Technology Publications, New Jersey.


Schmitz, A. 2013. Sociological Inquiry Principles: Qualitative and Quantitative Methods


Chapter 8: Appendix
Appendix 1 – Survey

**CRM Dissertation Questionnaire**

Dear Participant,
My name is Pratul Gupta and I’m a MBA Cloud Computing student at Dublin Business School, Ireland. As part of my master degree program, I’m carrying out a research on topic ‘Customer Relationship Management Systems for the SME – Is this a perfect marriage made in the cloud?’ The purpose of the survey is to understand which CRM deployment model is better for SMEs and their evaluation criteria. I am inviting you to participate in this research study by completing the attached survey.

Please note that your participation is voluntary and that you may withdraw at any time. Needless to say all information provided will be treated with strict confidence.

I would be very grateful if you could complete this survey today. This survey should take 5 minute of your time.

Thank you for taking the time to assist me in my educational endeavour

Sincerely,
Pratul Gupta

*Required

**Questionnaire**

1) **Number of Employees** *

- [ ] 1-10 (Micro)
- [ ] 10-50 (Small)
- [ ] 50-250 (Medium)
- [ ] I am not sure
2) Which best describes your primary job function? *
- IT
- Marketing & Sales
- General Management
- Administrator
- HR
- Service

3) Have you used or planning to use CRM System? *
- Yes
- No
- Not Sure

4) Please choose the importance of following criteria to identify their effect in deciding CRM system for your organization *

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Not Important</th>
<th>Little Important</th>
<th>Neutral</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost of Ownership</td>
<td></td>
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<td></td>
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<tr>
<td>IT upfront &amp; initial Cost</td>
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<tr>
<td>Security &amp; privacy issues</td>
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<tr>
<td>Integrity with legacy systems</td>
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<td>Scalable system</td>
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<tr>
<td>Ability to customize &amp; configure</td>
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<tr>
<td>Implementation risk and failure</td>
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</tbody>
</table>
5) Which CRM deployment model is better on the following criteria? *

<table>
<thead>
<tr>
<th></th>
<th>In-house CRM Solution</th>
<th>Cloud CRM solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost of Ownership</td>
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<td>IT upfront &amp; initial</td>
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<td>Integrity with legacy</td>
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<td>Scalable system</td>
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<td>Ability to customize</td>
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<td>Implementation risk</td>
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</tbody>
</table>

8) In house data storage has higher security and privacy than Cloud storage. Do you agree? *

- [ ] Yes
- [ ] No

7) A subscription model CRM would be more expensive than in-house CRM over time and as business grows. Do you agree? *

- [ ] Yes

8) Subscription pricing model has lesser flexibility than on premises model. Do you agree? *

1 2 3 4 5

- [ ] Strongly Disagree
- [ ] Strongly Agree
9) Which CRM pricing model you consider is better, considering higher Return of Investment? 
   Subscription based ▼

10) In your opinion, Comparing on-demand CRM and on-premise CRM system, which one is your champion? And why?

11) Any Comment/Suggestion?

Thank you for your participation in this survey. Please click done to ensure that the survey is forwarded correctly.
## Appendix 2: SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths (Internal)</th>
<th>Weaknesses (Internal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Strong research, technical and analytical skills.</td>
<td>1) No professional experience in cloud computing.</td>
</tr>
<tr>
<td>2) Strong interpersonal skills with ability to work in a team.</td>
<td>2) No professional experience in business management.</td>
</tr>
<tr>
<td>3) Eager to learn and grow.</td>
<td>3) English is not a primary language.</td>
</tr>
<tr>
<td>4) Can work under stress and pressure conditions.</td>
<td></td>
</tr>
<tr>
<td>5) Ambitious.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities (External)</th>
<th>Threats (External)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Current growth in the IT industry.</td>
<td>1) Competition with more experience and skills professionals.</td>
</tr>
<tr>
<td>2) MBA (Cloud Computing) specialization in emerging IT technology.</td>
<td>2) Competition with those who went to more reputed institution.</td>
</tr>
<tr>
<td>3) Global market and jobs for skilled labor in IT sector in Ireland.</td>
<td>3) Changing visa policy of government.</td>
</tr>
<tr>
<td></td>
<td>4) Recession and unpredictable future of IT</td>
</tr>
</tbody>
</table>