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**FACTORS AFFECTING THE SUCCESS AND
FAILURE OF CRM IMPLEMENTATIONS**

by

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A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
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ABSTRACT

This study investigates the issue of the high failure rate of customer relationship management (CRM) systems. By collecting data from different groups of users and experts, this study aims to reveal factors that both affect the success of CRM systems and those that make up the success of CRM systems. The main goal is to deliver an individual-level perspectives' CRM success model that is based on perspectives of individuals from different functional groups. To do so, this paper will take a qualitative approach in an attempt to divulge what CRM success is and what contributes to this success. In order to collect data and analyze the data in a way that paves the way for inducing a mid-range theory, this study utilizes a grounded theory method. The grounded theory method allowed researchers to have three stages of data collection, which facilitated changing interview questions to probe more into the phenomenon. After collecting data, interviews were transcribed and coded. This yielded a theoretical model incorporating a novel second order dependent variable and other variables along with relationships between these variables. The induced model is a unique model that features perspectives of both researchers and practitioners, after collecting data from operations, commercial, and IT managers, and project management and information systems success researchers. Another unique feature of the model is that it incorporates both early implementation and continuance factors that affect the success of CRM system. A third

interesting finding is the nature of CRM success construct. CRM success was induced as a second order construct which is made up of four components (project management success, overall success, bottom-line success, and system success) that represent CRM success from different individual perspectives. The theoretical model is considered to be a breakthrough step towards understanding the success of CRM systems. By integrating agile software development methodologies with IS continuance and proposing how both these constructs are related to the success of CRM systems, this study offers a holistic process view of CRM success that is strictly based on individual perspectives. The biggest contribution this research makes is offering a new success model for researchers to test in different contexts and under different conditions.

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DEDICATION

To my wife. Without her love and support, finishing this
dissertation would have been impossible.

TABLE OF CONTENTS

ABSTRACT.....	iii
APPROVAL FOR SCHOLARLY DISSEMINATION	v
DEDICATION	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
ACKNOWLEDGEMENTS	xi
CHAPTER 1 INTRODUCTION	1
Summary	1
Problem Description	4
Importance of the Research	5
Theoretical Overview.....	6
Theoretical Base.....	6
Research Limitations	8
Research Contributions	9
CHAPTER 2 PRIOR RESEARCH.....	12
Prior Research on CRM	12
Prior Research on CRM Success	13

CHAPTER 3 RESEARCH METHOD	20
Qualitative Approach	20
Grounded Theory Methodology	24
Interview Guide	22
Sample and Context of Data Collection.....	24
Coding Methodology	26
CHAPTER 4 RESULTS	29
Theoretical Constructs	29
Theoretical Integration.....	43
Theoretical Propositions.....	46
CHAPTER 5 DISCUSSION.....	50
Primary Theoretical Outcome.....	53
CHAPTER 6 CONCLUDING THOUGHTS	57
Research Implications.....	57
Practical Implications.....	59
Conclusion	61
REFERENCES	63
APPENDIX A HUMAN USE APPROVAL LETTER	63

LIST OF TABLES

Table 1	<i>Success Factors' Literature</i>	17
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LIST OF FIGURES

Figure 1: Theoretical Model	29
Figure 2: CRM Success	31
Figure 3: CRM Success Expanded to Selective Nodes	32
Figure 4: Agile CRM	37
Figure 5: CRM Continuance	39
Figure 6: Continuance as Moderator	44

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CHAPTER 1

INTRODUCTION

Summary

The goal of this study is to explore and analyze the nature of customer relationships management systems (hereafter, CRM) and the factors which affect the success of CRM implementations. Employees from the various organizational departments and functions have different perspectives on what CRM success is and this can prove problematic because functional area alignment is essential for CRM to succeed (Zablah et al, 2003). While most studies on CRM success take an organizational or project level perspective, I will study success here from the perspective of the individuals who work with, deal with, and understand CRM success. This should allow me to gain an individual-level understanding of what CRM success is, of the corporate-level composites of success, and of the factors which affect success from the perspective of different functional groups in the firm. Doing so addresses problems with prior studies of CRM implementation and performance (Coltman and Dolnicar, 2007). Thus, the objective is to demonstrate an individual perspective of CRM success derived from individuals who engage with CRM systems on daily basis.

The dangerously high failure rates of customer relationship management implementations is the point of concern. As a frequently used technology in marketing

(Ahearne et al, 2012) CRM is one of the most implemented enterprise-wide software systems. Yet, a critical problem with CRM implementations is their high failure rate (Shannahan et al, 2010) reaches the 70%-80% level (Deshmukh et al, 2020; Bush et al, 2005; Finnegan and Currie,2010; Wilson et al, 2007). This failure rate amounts to billions of dollars in corporate expense, in addition to incalculable expenses arising from impacts on customer relationship and product strategies. The CRM failure rate has been the basis of investigations (Subhani, 2019 and some researchers studying CRM implementation failure factors adopted a project management approach. In this literature, a successful CRM implementation is a one that meets three main PM success criteria:

- Finish on-time
- Finish Within Budget
- Finish Within Scope (required features)

In the time period of 2001 to 2009, only 32 percent of projects succeeded in meeting these objectives (Krigsman, 2009). The issue, however, is the CRM implementation which meets PM criteria but does *not* impact performance, since many studies on CRM-performance links report inconclusive results (Ernst et al, 2011). Even worse, according to Gartner Group estimates reported by Stringfellow, Nie, and Bowen (2004), as much as 55 percent of CRM projects are not expected to produce results. Other results report 70 percent of organizations concluded that they experienced no visible improvement, or even business performance declines after CRM implementation (Pedron, Picoto, Dhillon, and Caldeira, 2016).

Thus, the project management perspective cannot be used to measure CRM success, since failing systems can often meet PM success criteria. The project

management success “indicators” perspective does not take into account the varying factors leading to success of a system; the PM perspective ignores the individual level factors that we believe are contributory to success.

Another issue to be dealt with is the ambiguity surrounding the concept of CRM success, in general. Although CRM use is wide-spread, and though there are any number of published studies on the concept, the underlying nature of CRM success remains vague and unclear with as many as forty different definitions of the concept (Zablah et al, 2004). For that reason, more precise characterization of the factors that contribute to successful CRM system implementation is needed, in order to accurately measure implementation success. By collecting data from individuals from different organizational functions, we can gain a broader perspective on the characteristics that are indicative of CRM success. This leads to the ability to induce a composite CRM success construct.

We take a qualitative approach to understanding CRM Systems, their implementations and their successful deployment and use. In the process, we gather several distinct “slices” of data (Glaser 1978), with interview from leading researchers specializing in IS success and project management, contrasted to interviews drawn from IT managers and functional area managers who implement and use CRM systems. Data collection is achieved through videoconference and phone interviews, utilizing open-ended interview guides. The open and interpretive nature of our analysis permits the induction of factors affecting the success of CRM implementations.

Having induced success factors, we will develop a theoretical model of cause-and-effect. What makes this model unique is the individual-level perspective of experts

and managers, alike, on factors leading to the success of CRM systems. Another interesting aspect of this model is that it can provide a perspective from which to induce both early implementation and continuance factors for CRM systems. We believe that by taking both views (experts and managers, alike) into account and exploring the unique dimensions that arise from such analysis.

Problem Description

The CRM concept gained name-recognition and momentum in the 1990's (Jackson, 2005). Since then, thousands of companies have adopted CRM systems all around the world. CRM offers organizations the ability to create and manage relationships with customers more efficiently and effectively through a detailed and accurate analysis of costumers' data using various information technologies (Pai and Tu, 2011). The burst of industry implementation led to a large body of research on CRM implementation and success factors. Yet, as mentioned, CRM implementations suffered a high failure rate. The "failure factor" phenomenon has led to a body of research on the specifics of implementation failure (Speier & Venkatesh, 2002; Jain et al, 2007; Kale, 2004). Some previous research agrees that two key factors that are key to the success of CRM projects: technological readiness and top management commitment, support and involvement (Meyliana et al, 2016). In other research dozens of additional success factors are reported.

This project differs from previous research on the topic by incorporating empirical data from both expert scholars and CRM managers. This will also be the first research to investigate individual perspectives of CRM success. This data should allow us to produce a unique theoretical contribution to the emerging literature on CRM success.

The aim of this project, then, is to answer the following research question:

Research Question: What is CRM success from an individual point of view, and what reasons can be found in the individual perspective for the high failure rate of CRM implementations?

Importance of the Research

Success and failure are recognized areas of study in IS literature where a number of generic success models have been developed and tested (Davis, 1989, DeLone and McLean, 1992, Seddon, 1997, Rai et al., 2002). The goal of this project is to develop a model that supplies CRM researchers with means to evaluate the success of CRM systems, specifically. This study seeks to identify factors either enhancing or hindering the success of CRM implementations, and we seek to induce cause-and-effect relationships between these factors. By empirically developing this model, the field will be supplied with a model that not only describes CRM implementations, but can also be generalized to testing ERP, EMR, and other enterprise system success factors.

The qualitative nature of this dissertation project will permit us to probe and explore in specific detail previously untapped factors affecting the success of CRM projects. It is considered crucial to move beyond simply describing and justifying CRM practices to seek a better understanding of the effects of context on CRM practice (Williams et al, 2016). While CRM failures arise from a number of factors, as well as their interaction (Mukerjee & Prasad, 2017), it is important to induce these factors into a model that describes the relationships that link these factors to the eventual success of CRM projects.

A major problem in CRM research is the extensive use of confirmatory analysis for testing limited numbers of CRM success factors (Meyliana et al, 2016). By adopting a qualitative approach, we hope to reveal factors that were previously ignored or overlooked in previous studies. In doing so, the study provides researchers with new and previously unexplored CRM implementation factors to study. Identifying new factors should also help practitioners strategically plan for the CRM implementation process. Taken together, this all suggests the positive contribution of this study toward the objective decreasing the possibility of failure in future CRM implementations.

A grounded theory methodology will permit generating a CRM success model that is induced from individual user perceptions. This can lead to the “creation” of a composite construct which will be the first CRM Success construct based on individual user perspectives, as opposed to prior success constructs which are based on practitioner data, or that are construed only at the organizational level. The CRM Success construct we intend to induce will help us supply the field with a more “conclusive” CRM success model that allows researchers to study CRM system success from various perspectives, which is a notable void in the literature.

Theoretical Overview

Theoretical Base

This dissertation will explore factors that affect the success of CRM implementations and which, if unchecked, can lead to high failure rates. One of the widely accepted models that was used to test CRM success is Delone and McLean’s IS Success Model (1992) which was refined further in 2003. Encompassing a broad review of information systems research studies from 1981–87, contextualized in the

communications research of Shannon and Weaver (1949) and the information influence theory of Mason (1978), a comprehensive and multidimensional model of IS success was explicated (Delone and McLean, 2003, p. 10). Numerous other IS researchers have also developed alternative frameworks to measure IS effectiveness. Grover, Jeong & Segars' (1996) model contained six variables, expressed in the form of effectiveness measures, are infusion measures, market measures, economic measures, usage measures, perceptual measures, and productivity measures. Smithson and Hirschheim (1998) also proposed a framework consisting of three categories of measures: efficiency, effectiveness, and understanding. Yet, neither of these alternative models introduce constructs that are significantly different from the constructs available in Delone and McLean's (2003) IS Success Model, which has been applied and validated in numerous published studies.

The IS Success Model has been used to assess the success of knowledge management systems (Wu and Wang, 2006), e-government systems (Wang and Liao, 2008), e-commerce systems (Brown and Jayakody, 2008) and EMR systems (Tilahun and Fritz, 2015). When it comes to measuring the specific success of CRM systems, Delone and Mclean's model (1992) has also been used by numerous researchers (cf., Khodakarami and Chan, 2011; Choi et al, 2013; Khlif and Jallouli, 2014; Lal and Bharadwaj, 2015; Phung, 2016; Rodriguez and Boyer, 2020). Yet, all previous studies of success using the Delone and McLean model do so at the organizational or the project level. The unique point of view found in the convergence of the theoretician and the practitioner has not yet been touched upon; none of these models see CRM success from the individual user perspective.

To that end, we use Delone and McLean (1992) here as a background since these models see success as an organizational-level or multi-level construct affected by organizational and project-level factors. We believe that concentrating on the individual user perspective will permit us to understand the success or failure of implementations from the perspective of those actually charged with achieving the work. This will permit operationalizing a composite IS success construct that reflects IS success from differing individual perspectives.

Grounded theory methodology (GTM) will be used to induce success factors from the data that we collect. GTM is used to systematically derive theories of human behavior from empirical data (Glaser and Strauss, 1967), which makes GTM perfect for our uses here.

Research Limitations

One major limitation of research such as this, using GTM, is the subjectivity of the approach. Qualitative data coupled with interpretive analysis permits us to uncover constructs and the relationships between these constructs that cannot be discerned using other methods. However, it is a subjective approach in which the views of the researcher interpreting the data can influence the direction of outcomes; a great deal of objectivity and self-discipline is required.

Another limitation is that although we aim to uncover and confirm factors that affect the *failure* of CRM implementation, we will be developing a model that assesses factors leading to the success of CRM implementations. This is a limitation to the extent that identifying aspects of failure is considered a necessary aspect of understanding success. We intend to generate one model that speaks to the aspects of CRM success,

and intend to reach it through an understanding of both success and its converse. Prior research has not been this granular.

A third limitation of this research is that the induced model will be strictly based on the perspectives of individual users. This means that the success construct will be at the individual level of analysis when the prior research traditionally was at the organizational level. Although the model will likely include factors at different analytical levels, all of these factors will be induced from individual perspectives of CRM success.

Another limitation is that we are considering CRM as a unitary entity, and we will not engage in discussions of the three main types of CRM systems (Operational, analytical and collaborative). Hence, by not going into details on the various types of CRM we do not deal directly with the variance in functionality of CRM systems and the effect of these variances on different stakeholder groups. This can limit the generality of our induced model when dealing with specific types of CRM systems.

One last limitation of this research is the generalizability of the results. This is due to the qualitative nature of our inquiry, which typically permits one to generalize to an emergent theory rather than to the larger business environment (Yin, 2011). Our data also originates from respondents largely in North America. This may limit the immediate applicability of our results to other parts of the world due to social and cultural differences.

Research Contributions

By inducing factors affecting the success and failure of CRM system implementations we make numerous contributions. The first contribution lies in the identification of factors that may serve to limit the high failure rate of CRM

implementations (e.g., Farhan et al, 2018). Hence, our contribution will be toward the reduction of this failure rate by offering organizations who implement a CRM system a better understanding of various factors that affect CRM implementations. We hope that the factors we induce will be taken into account by organizations that implement CRM systems and, by accounting for these factors, can increase the probability of implementation success.

Another contribution that we intend to make in this research resides in the method chose for study: grounded theory methodology is rarely seen in this sort of research and its application here may serve to produce better internal reliability of subsequently-modeled constructs. While our qualitative approach will allow us to discover factors that affect the success of CRM implementations from both the experts and managers' point of view, it will also allow us to induce a theoretical model that relates these success factors to the overall Success construct which we expect to be a composite construct made up of items induced from different users' perspectives. This model should provide the field with an individual perspective induced success model that can be applied not only to CRM systems, but also to Enterprise Resource Planning (ERP) systems and Supply Chain Management (SCM) systems along with other enterprise systems used by organizations.

A third contribution we intend to make is to supply both the IS field and world of practice with a clear picture of what leads to the success of a CRM systems from the individual user perspectives. This CRM success concept should also permit organizations to fully understand what the success of CRM systems means in the contest of individuals who engage in its implementation.

One last contribution we intend to make is to supply the IS field with a Success model that is composed of the perspectives of both researchers and practitioners; these two perspectives are rarely integrated with each other. This success model sees the success from an individual point of view taking into account the views of individuals from different functions. The model also contains the first composite success construct that will be induced from perspectives of individuals from different areas.

CHAPTER 2

PRIOR RESEARCH

Prior Research on CRM

There is a considerable body of prior research on factors affecting both CRM success and CRM failure. Researchers have tried to identify and test various factors affecting CRM implementations, but there still seems to be a lack of consensus on the nature of CRM success. Another problem that researchers face in conducting confirmatory analysis on the CRM construct is the limited number of factors identified in relation to successful CRM implementations. The use of quantitative methods limits researchers to specific sets of indicators arising from previously established factor models of CRM success; this limits the capability for new discovery. Most previous research on CRM success was conducted at the organizational and group levels of analysis, meaning that extant models are overlooking the individual point of view in implementations.

CRM system types fall into three main classes (Gebert et al, 2003):

1. *Operational CRM Systems* that aim at automating CRM processes to improve efficiency and productivity.
2. *Analytical CRM Systems* that aim at providing a better understanding of customers' behaviors and needs.
3. *Collaborative CRM Systems* that aim at managing and integrating customer communication channels and networks.

Going into details on the differences between various CRM is beyond the scope of this dissertation; rather, when we say CRM we mean the overall system implemented by a company regardless of the CRM class it belongs to. Our goal is to study the individual factors that affect the success and failure of CRM systems in general.

Having a clear idea of what CRM success is, proves vital for companies implementing CRM systems. Approaching CRM success from individual perspectives allows us to take into account individual level, group level, and organizational level factors that both affect and make up the success of CRM systems. What makes this possible is that our data will be collected from individuals representing researchers, commercial managers, IT managers, and operations manager. This allows for adopting a bottom-up approach which permits for inducing both group-level and organizational-level factors from individual perspectives. This is made possible by the collective influence of individual perspectives.

Prior Research on CRM Success

Numerous theories have been used to measure CRM success. Some studies based their model on Knowledge management-related variables (Garrido-Moreno and Padilla-Melendez, 2011), while other studies integrated factors from the market orientation approach with factors from the knowledge management approach to come up with a model that has CRM success as a dependent variable (Cambra-Fierro et al, 2017). Other studies have integrated factors from various theories. One of these studies have integrated factors from Delone and Mclean's (2003) IS success model, Davis's (1989) technology acceptance model, Igbaria's (1990) end user computing effectiveness model, and Venkatesh and Davis's (2000) TAM3 (Anaam et al, 2018). Another study combined

constructs from Iacovou et al's (1995) EDI adoption, Rai and Bajwa's (1997) impact model top management support, and Knowledge management capabilities (Croteau and Li, 2003). Numerous researchers have used Delone and McLean's IS success model to measure CRM success. Some of these studies have developed a conceptual model that incorporated constructs and relationships between these constructs from Delone and Mclean's (2003) IS success model to study the success of CRM implementations (Avlonitis and Panagopoulos, 2005; Negahban et al, 2016; Khlif and Jallouli, 2014). The other group of the studies used the Delone and Mclean IS success model "as is" to measure the success of CRM (Lal and Bharadwaj, 2016; Khodakrami and Chan, 2011). These studies used various theories to try to qualitatively test different factors affecting CRM success.

Richards and Jones (2008) identified what they considered as the most important advantages gained by an enterprise through using CRM. These advantages gained by the enterprise are: Identifying the most profitable customers – Improving the efficiency and the effectiveness of the salesforce and the customer service – Customizing products and services – Improving prices (Richards and Jones, 2008). Khlif and Jallouli (2014) used linear regression to study the effect of customer orientation, system quality, and customer satisfaction on profitability (Khlif and Jallouli, 2014). Khorakarami and Chan (2011) used qualitative case studies to uncover factors contributing to the success of CRM implementation. They found that system integration affects the use of systems, and system integrity facilitates information sharing and allows employees to access accurate information in a timely manner (Khokarami and Chan, 2011). Another paper that used structural equation modeling to examine the effect of various factors including CRM

perceived ease of use and CRM perceived usefulness on CRM acceptance and salesperson performance. The authors of this paper concluded that the most important influence on performance comes from perceived usefulness and perceived ease of use (Avlonitis and Panagopoulos, 2004).

A significantly smaller body of research have tried to quantitatively uncover factors that affect the success of CRM implementations. While some of these papers took a broad research approach that allowed interviewees to define CRM systems (Foss et al, 2008), others used a “narrower” and more specified research approach to strictly try soliciting CRM success factors from their interviewed sample (Wilson et al, 2002; Lawson-body et al, 2016). The induced factors from most of these studies confirm factors that were previously studied using quantitative methods, except for one study (Wilson et al (2002)) which revealed three extra success factors (IT’s strategic capability, Approval procedures for capital expenditure, and leveraging a model of best practices embedded in an off-the-shelf system). All these studies analyze the factors on an organizational or project level.

One small sub-group of papers that researched factors affecting the success and failure of CRM systems used mixed methodology. Both mixed-methodology papers that we reviewed started with a qualitative approach followed by the confirmatory quantitative approach. Yet while one of the papers linked the success of information systems to human groups (Taruna, 2015), the other one used metrics as a proxy to measure IS success (Peelen et al, 2007). None the less, both mixed method papers investigated factors affecting the success of CRM implementations from an overall organizational and project levels of analysis.

Both qualitative and quantitative previous studies have identified a fair number of factors that affect the success of CRM implementations. These factors were found to play a significant role in the success of CRM implementations. Numerous studies that have investigated the success of CRM systems have identified performance indicators that have been used to measure the success of CRM systems. The top three identified performance indicators for CRM systems are:

1. Customer Satisfaction (Alrefaie et al, 2014; Chang et al, 2014; King and Burgess, 2008).
2. Performance of applied resources (Buttle, 2004; Javalgi et al. 2006; Rigby and Ledingham, 2004).
3. Customer Loyalty (Chen and Ching, 2004; Kim and Kim, 2009; Lemon et al, 2002).

Table 1 shows both the most cited factors and the papers that identified and tested these factors.

Table 1*Success Factors' Literature*

Success Factor	Papers
Top management support	Ranjan and Bhatnajar (2008) Wilson et al. (2002) Williams and Ramaprasad (1996)
Organizational Culture	Esteves and Pastor (2001) Mendoza et al. (2007) Sanad et al. (2012)
IT systems management	Arab et al. (2010) Migdadi et al. (2010)
Knowledge management capabilities	Williams and Ramaprasad (1996) Roschmann and Ziyadullaeva (2011)
Staff commitment	Williams and Ramaprasad (1996) Vazifehdust et al. (2012) Maleki and Anand (2008)
Skillful and trained staff	Pamsari et al. (2013) Bose (2002)
Customer data management	Kampath and Roglinger (2010) Roh et al. (2002)

In addition to the factors mentioned in Table 1, other factors were identified and tested by researchers. Some papers grouped these factors into three main groups: people, process, and technology (Chen and Popovich, 2003) or contextual, organizational, and hybrid individual-organizational categories (Lawson-Body et al, 2011). Other studies identified a process to identify success factors. One study suggests starting with a CRM readiness assessment, followed by CRM change management, CRM project management, and employee engagement (Foss et al, 2008); another point of view is to follow four major implementation processes that lead to CRM success, consisting of translating the vision to company management, linking it to departmental and individual objectives, business planning, and feedback and monitoring results (Kaplan and Norton, 1996).

Other studies have identified processes similar to those above, yet there is no one-size-fits-all solution that leads to a guaranteed successful CRM system.

Previous research has also measured the CRM success construct in different ways. Studies that employ the Delone and Mclean IS success model (Delone & McLean, 2003) typically use net benefits as the construct representing IS success. Net benefits is a reflective multi-level construct (individual and organizational levels) consisting of a set of perceived benefits' indicators. Another study used the construct "metrics" to measure IS success (Peelen et al, 2007); metrics, here, was operationalized using factors reflecting market-product situation (such as efficiency and sales per customer). One last group of papers characterized the success construct specifically as "CRM success" (Cambra-Fierro et al, 2017; Garrido-Moreno and Padilla-Melendiz, 2011; Ventorini and Benito, 2015) or "CRM impact" (Croteau and Li, 2003).

CRM impact was operationalized using both organization's satisfaction factors (such as customer loyalty and customer retention rates) and organization's perceived customer satisfaction factors (such as the employees' team spirit and convenience to the customer) (Croteau and Li, 2003).

The CRM success construct has been operationalized using indicators reflecting financial results and marketing results (Bang, 2005; Garrido-Moreno and Padilla-Melendez, 2011), and also using indicators reflecting employee's performance (Ryals and Knox, 2001) , leader performance (Fletcher and Wright, 1996), economic factors (Rigby et al, 2002) , and technical factors (Reinartz et al, 2004; Cambra-Fierro et al, 2017). One last operationalization of IS success incorporated 3 main indicators loading on IS success

(Ventorino and Benito, 2015), which were operational benefits, benefits of the customer life cycle, and benefits in performance.

Qualitative work which can expand the set of success factors to consider in future quantitative research is sparse and would serve to expand the base of inquiry. Having novel CRM success construct along with a set of factors affecting this construct that are strictly based on individual perspectives will enrich the body of research by supplying IS researchers with a new set of constructs and relationships to test and validate.

It is noteworthy to point out that no previous research has studied the success or failure of CRM systems from the individual perspective while also accounting for both practitioner and researcher points of view. Previous research used both organizational level and project level of analysis to analyze factors affecting the success of CRM success. Although some studies incorporated individual-level constructs (such as the studies that used TAM or Delone and Mclean's IS success model), they combined these individual-level factors with organizational level factors in order to study their effect on the success of CRM implementations on an organizational or project level.

All previous operationalizations of CRM success construct consisted of analysis conducted at either the project or the organizational level. Thus, we did not find any study of the success of CRM systems that is strictly at an individual level of analysis and that operationalizes IS success strictly at an individual level. We believe that when inducing from individual-level data, we will identify key individual level factors that will serve to enrich the knowledge represented by current literature by expanding the factors that can be considered to affect the success of CRM systems.

CHAPTER 3

RESEARCH METHOD

Qualitative Approach

The first step to be taken in qualitative data collection is to identify the subjects to be interviewed. Interviews are the most basic form of qualitative inquiry and provide the benefit of subject responses being unconstrained by “writing skills of the respondents, the impossibility of probing or extending responses, and the effort required of the person completing the written questionnaire” (Patton, 1990). This method is valuable because it enables the researcher to gain deep understanding of complex behaviors and events (Patton, 1990).

The first set of interviews was conducted with scholarly experts on IS success and project management. These interviews gave us an initial view of authoritative definitions of CRM success from the literature. The second round of interviews included CRM users from various business functions (IT managers, commercial managers, and operations managers). These respondents provided the views of people who rely on CRM systems in their day-to-day business operations; the user-level view will also provide unique perspectives on CRM success, from the standpoint of its impact on business operations at the functional level.

Grounded Theory Methodology

Grounded Theory Methodology (GTM) was selected for this study of CRM success factors. According to Charmaz (1996), grounded theory expedites your research, enables you to develop a cogent analysis and stimulates your excitement about and enjoyment of doing research. More importantly, GTM can reveal novel factors and relationships (Glaser, 1999), serving to take data collection through several stages to the induction of a mid-range theory.

Grounded theory methodology was introduced by Glaser and Strauss (1967) as a reaction to increasingly rigid theoretical trends in the field of sociology. Grounded theory relies on inductively developing new theory, as opposed to deductively testing existing theoretical propositions. According to Glaser and Strauss (1967), GTM aims to systematically derive theories of human behavior from empirical data collected mainly through qualitative interviews (Glaser and Strauss, 1967).

Grounded theory methodology allows for discovering theory via the qualitative data coding process. Coding involves attaching concepts to data (Urquhart, 2012), and can occur at different levels (open, selective, theoretical – in the Glaserian view). These codes of initial meaning, thematic groupings and theoretical effects and processes (open, selective, theoretical, respectively) open the door for researchers to analyze and conceptualize the progressive evolution of subject recruitment (called “slices” of data). In the coding process -- the interpretive coding of subject responses into categories of meaning and cause-and-effect relationships -- researchers build middle-range theories that are made up of induced concepts and relationships, which are literally “grounded in the data” (Glaser, 1999).

GTM's special quality of inductive inspiration arises from the synchronized involvement in data collection and data analysis phases of research (called theoretical sampling). In this approach to evolving theoretical in ongoing data collection, what is learned in earlier interviews forms new inquiries to be explored in subsequent interviews, permitting refinement of emerging conceptual groupings (Glaser and Strauss, 1967; Glaser, 1978; Glaser 1992; Strauss, 1987; Strauss and Corbin, 1997). It is a synergistic process. Another useful GTM feature is that researchers can create analytical codes, themes of meaning and theoretical linkages between key constructs induced directly from data, rather than deducing them from hypotheses. GTM involves extensive notetaking during interviews (called "memoing") which allows researchers to fill analytical gaps and better explain behaviors, on the fly during key interviews.

Interview Guide

The main points we wanted to cover when we initiated our first round of interviews, held with scholarly experts on CRM Success were, as follows:

- What do CRM systems do?
- How can you tell if a CRM system is a success?
- What are the main factors that affect the functionality of the CRM system?
- What factors play a major role in avoiding the failure of CRM systems prior, during, and after adoption?

In asking these questions of our scholarly experts, the responses we obtained constituted qualitative data, which we transcribed and coded. Following coding and the recursive consideration of what was learned in order to improve interview structures in future encounters (called the "constant comparative process"), we used the scholarly

expert data we collected as a guide for interview guide revisions in the next data collection phase. Thus, taking what was learned in coding the responses of our scholarly experts, we then revised an interview guide to be used with industry managers, using the following updated interview guide:

1. What are CRM systems? What do they do?
2. What is CRM success? Success indicators?
3. What do you like about CRM system?
4. What do you hate about CRM system?
5. How often do you update/upgrade the system? Is it enough?
6. Is there adequate training on the system's features? How often do you have training and is it enough?
7. What changes would you add/remove from the system to make it more successful?
8. We are studying the success factors for CRM implementations. Help us understand how CRM systems might succeed or fail?
9. We are wondering about the role that employee resistance to implementation might play in eventual success. How do you deal with employee resistance?
10. How important is employee engagement with the CRM system in terms of success? Can you help us understand the issues of employee utilization of CRM functionality and its contribution to or hindrance of CRM system success?
11. What would you like the CRM system to do more?
12. What hinders the functionality of your CRM system?

13. Do you consider partial failure to be part of the implementation process? Do you think it should be expected and accounted for early on?

Sample and Context of Data Collection

Data-collection interviews were held either face-to-face, on teleconference media, or over the phone; any format in which an audio recording could be captured for subsequent transcription into the QSR Nvivo Qualitative Analysis software (QSR, 2019) was considered suitable. The interviews were guided by open-end questions which being at a general level and the seek to focus in on specific details of interest, as subjects engage with the topics. The questions are oriented toward understanding CRM and implementation success factors.

The first interviews were with researchers, scholarly experts on CRM and project management. The initial interview was with a co-founder of one highly recognized and cited IS Success Models. Considering the results of that interview, we then interviewed another IS success researcher who led the publication of the most recent retrospective of the IS Success Model in which the notion of considering IS Success from an individual level of analysis was first considered.

Both these interviews were conducted face-to-face and captured on a digital field recorder for subsequent transcription.

Based on the emergent notion of “failure factors,” which arose in the first interview and was expanded upon in the second interview, a third interview was conducted with a noted project management expert and researcher, in which a synthesis of success and failure factors was undertaken. After conducting these three interviews, patterns of meaning were clear in their emergence. An intermediary state of saturation

having been reached, a second “slice of data” (e.g., Urquhart, 2013) was devised featuring a group of commercial, operations, and IT managers involved with CRM operation. These managers worked for medium-to-large sized companies and were involved with the implementation, usage, and the development of CRM systems. The industries represented ranged from software solutions, banking, and food and beverage. An open-ended interview guide featuring the 13 guiding questions listed above was used to drive the interview process.

After the fifth managerial interview, a second intermediary theoretical point of saturation was reached, and the emerging conceptualization of CRM Success was refined. The breakdown of the managers and experts who were interviewed was as follows:

- 1 Project Management researcher.
- 2 Information Systems Success researchers.
- 1 operations manager at an international bank.
- 2 IT managers working at a power company and a software solutions company.
- 1 commercial manager from the foods and beverages (F&B) industry.
- 1 IT solutions operations manager working at a software solutions company.

While the industries that the interviewees work in varies, the size of their companies varied too. The biggest company was a software solutions company with over 100,000 employees. The third company is also a software solutions company. It is a cloud-based provider of integrated digital human capital and business solutions with around 15,000 employees. The fourth company is an international bank with around 2,000 employees. And finally, the fifth company is a power electric utilities company

with around 500 employees. As for the F&B company, we do not know the size of the company. All we know is that it operates in the southeast region of the United States.

Obtaining such a rich and diverse sample was hard. Concerning the three research experts, I met all three of them at an IS conference around 2 years ago. I contacted them and they agreed to give me an interview. I interviewed 2 of them face-to-face and one of them via zoom. As for the managers, a professor of mine introduced me to the F&B commercial manager and shared with me his contact details. I then held a phone call interview with him. I obtained the contact details of three other managers from another professor of mine. I then emailed them, and they all agreed to give me a video call interview. As for the international banking operations manager, I solicited his/her contact details from a friend of mine who used to work with him. I then emailed him, and he agreed to give me a phone call interview.

Coding Methodology

After collecting, transcribing, and coding of data, theoretical models which demonstrate connections between factors affecting the success and failure of CRM implementations are induced. Two schools of thought exist on coding methods in the GTM approach, largely paralleling the separate and distinct approaches advocated individually by Glaser and separately by Strauss (Urquhart, 2013). The approach to coding can influence the direction that theoretical induction takes.

The main difference between the two competing coding approaches initially centers on Glaser's 3-round coding (open, selective, theoretical) versus Strauss's 4-round approach (open, axial, selective, theoretical). There are also differences in the nature of the approach. While Glaser's approach embraces the openness, engaging nature, and

interpretivisms of the grounded theory method (Urquhart, 2013), Strauss's approach is more structured and formulaic, and with its hypothesis development step the Strauss approach leads researchers down a pre-determined path rather than keeping the door open for further changes driven by interpretations (i.e., prevents Glaser's "theoretical sampling" process of evolving the research question and interview foci in successive interview episodes). Urquhart follows the Grounded Theory approach of Glaser rather than Strauss (Urquhart and Fernandez, 2013). In this study, we also follow Urquhart's coding and analytical process.

To code the interviews, we used three rounds of coding in the Glaserian style (Glaser, 1978):

- Open Coding: Line-by-line coding.
- Selective Coding: Grouping categories that are related to a core category by developing "theme groups" from the open codes.
- Theoretical Coding: Relating selective codes to each other by looking for relationships between these codes.

The use of these three levels of coding reflects our commitment to following Urquhart's method of inducing mid-range grounded theories (Urquhart, 2013). This process of theoretical sampling (Glaser, 1978) guided our interviewing process until we reached a point where we felt that the data we have saturates in the explication of the emergent theory (displayed in our theoretical model). This method enhances the process of abstract theorizing which facilitates the emergence of a theoretical model consisting of theoretical nodes and the relationship between these nodes (Urquhart et al, 2010).

Following data collection, transcription and coding, a model was induced in the form of a graphical theoretical matrix (Yin, 2011) which demonstrates the connections between factors affecting the success and failure of CRM implementations in the context of overall Information system success.

CHAPTER 4

RESULTS

Theoretical Constructs

Before inducing a mid-range theoretical model, open codes were assigned followed by thematic grouping of these open codes under selective codes. At that point, theoretical constructs can be interrelated and the relationships between them described at the theoretical level of coding. This is graphically represented in Figure 1.

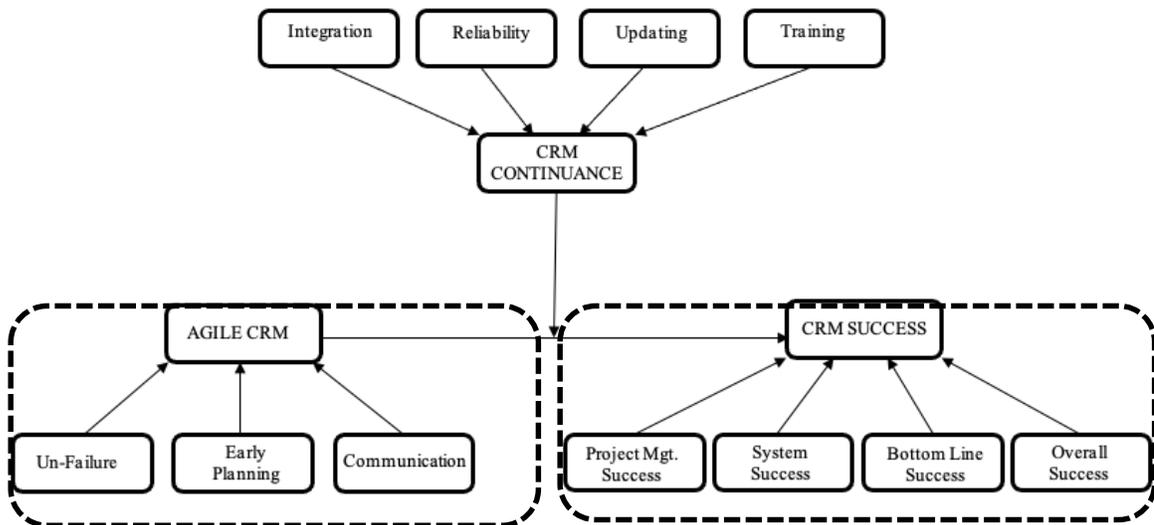


Figure 1: Theoretical Model

As mentioned in the methodology section, the transcribed “slices” of data were first coded line-by-line, which produced a group of labels describing the data. The second step following open coding is selective coding which involved grouping categories

related to the core category (CRM Success). This grouping of categories yielded a group of first level selective nodes. The last coding phase is theoretical coding. Theoretical coding involves looking for relationships between the selective codes. Relating selective codes to each other gave birth to two second-level theoretical constructs, namely CRM Success and Agile CRM. Both these theoretical constructs are conceptualized as second order constructs formed of a group of constructs (each made up of a group of codes) as shown in Figure 1. Theoretical coding also induced relationships among the two second-order constructs and the remaining induced constructs.

The theoretical model consists of three “main” constructs, namely Agile CRM, CRM Continuance, and CRM Success. The endogenous construct in the model (CRM Success) was specified as a second order construct arising from four first order codes. Agile CRM was also specified as a second order construct, while CRM continuance was specified as a first order construct affected by four other first-order constructs.

The first order constructs indicating CRM Success are induced from open coding into selective codes of specific thematic meaning, indicative of the different dimensions of CRM Success. The second key theoretical construct (Agile CRM) arises from three constructs (Communication, Un-failure, and Early Planning). CRM Continuance acts as a moderator between Agile CRM and CRM Success. At the theoretical level of coding, Continuance is affected by four constructs (Integration, Reliability, Updating, and Training).

CRM Success is a construct that has been studied and tested in previous work. CRM Success is the holistic success of the CRM system as seen by individuals belonging to different groups of stakeholders. This means that CRM Success is a composite

construct that incorporates individual level perspectives of what success is. Hence, as shown in Figure 2, the CRM Success construct induced here is envisioned as a second order construct at the theoretical level arising from four first-order constructs that represent four different types of success, each important to the overall success of the CRM implementation. These four success types compose what CRM Success is to the experts and managers that we interviewed.

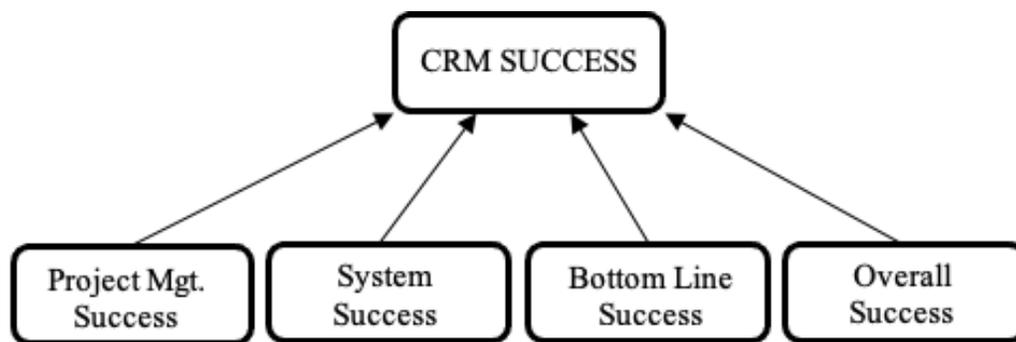


Figure 2: CRM Success

The first one of the four success constructs subsidiary to CRM Success is Project Management Success. Project management success is the successful planning, organization, monitoring and control of all aspects of project to achieve project goals within agreed schedule, budget and performance criteria (Caupin, 2006). The success of projects has been used by numerous project management researchers to measure the success of IS implementations. Normally, as noted in Figure 3, it is measured by using three fundamental determinants: On-time, within budget, and meeting specifications. According to one expert:

“To be successful, two of the three determinants should be met: budget – on-time – and full functionality.” (IS Success Expert)

Another expert picked two of three determinants to measure the success of a project:

“Projects are measured in terms of on-time and on-budget and not by their contribution.” (Project Management Expert)

Another expert also expresses that the project management “triad” is an accepted and practiced way of measuring the success of information systems in the industry:

“When it comes to CRM systems, all developers measure is functionality, on-time, and on-budget.” (Project Management Expert)

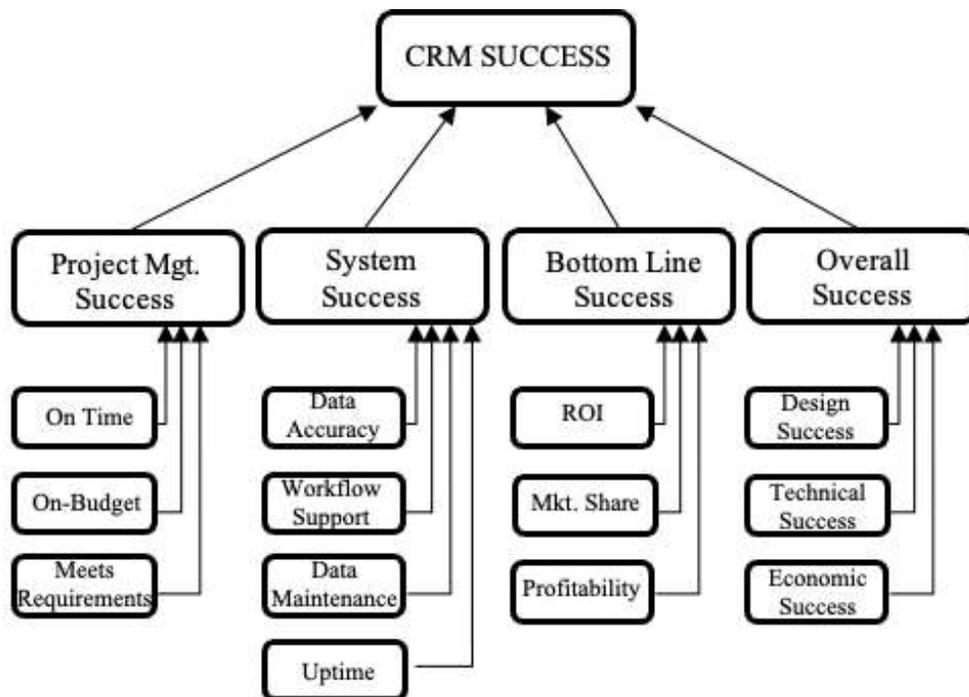


Figure 3: CRM Success Expanded to Selective Nodes

The second subsidiary success construct we induced is System Success. System success is the capability of the CRM system’s features and data quality to support business functions. System Success is a construct arising from four selective codes. The

first one of these selective codes is Data Accuracy. For a CRM system to be successful, it is imperative that the data the system provides is accurate. According to one commercial manager who have worked with CRM, the accuracy of the data is a feature of a successful CRM system:

“CRM gives factual data and a full picture of sales performance.” [F&B (foods & Beverages) Commercial Manager]

Another manager sees that accuracy is a key constituent of the success of a CRM system:

“Systems success also depends on the accuracy of the information and meeting your forecast.” (Power Company IT Manager)

Data Accuracy is important, as discerned from one respondent in the energy sector who leveraged CRM for pricing decisions. This manager believed system accuracy to be vital since it affects the pricing feature that his company heavily relies on for performing business transactions:

“CRM success is when you get good feedback from your sales force, management can leverage the system, and having accurate pricing. (Power Company IT Manager)

The second selective node contributing to System Success is Workflow Support. In our encounters with executives and managers, it quickly became clear that CRM systems had a primary role of facilitating the firm’s work, insofar as this work involved understanding, serving and retaining customers. Much in the way of workflow processes were supported through CRM systems functionality:

“Building workflows is a complicated task because it requires many approval levels, which hinders CRM systems.” (Power Company IT Manager)

“For a CRM system to be successful, it needs to have a meaningful and supportive workflow that saves time.” (Software Solutions Company Operations Manager)

The third selective node contributory to the construct of system success is data maintenance. Data maintenance is the act of maintaining, cleaning, and retaining CRM system data. Data maintenance is essential for accurate reporting. As one manager puts it:

“If you don’t maintain the data in your CRM system, then it is really not effective.” (Power Company IT Manager)

The fourth selective node contributory to System Success is Uptime. As the converse of downtime, uptime is an essential success characteristic, as it connotes effective system operation. Uptime means that you can actually use the system. The better the system Uptime you have, the more fully the system can be utilized. Conversely, poor Uptime performance will lead to denigrated system performance and benefits to business operations. This can be reflected from the following statements obtained from the managers we interviewed:

“CRM is successful if it doesn’t go down – easy to use – has a meaningful and supportive workflow that saves time.” (Software Solutions Company Operations Manager)

“We leverage the sales force cloud not our servers.” (Software Solutions Company IT Director)

“We worry about up-time. We rely on the cloud. One of the top factors that hinders CRM functionality is downtime.” (Software Solutions Company Operations Manager)

The third subsidiary success construct we induced in constituting CRM Success is Bottom Line Success. Success from a bottom-line perspective is derived from the selective nodes of ROI, Market Share and Profitability. Bottom Line Success is reflective of the qualities used to assess pragmatic success of a business venture, in terms of market share growth for sales and meeting financial goals for regional and corporate-level managers. As one senior manager puts it:

“CRM system is a success when you reached management goals in terms of bottom-line results by market share and financial goals”. (International Bank Manager)

Some managers see CRM Success from a sales perspective; sales goals and good customer relationships are prized, because they support company objectives for performance.

“A main feature of CRM is retention of current customers by offering extra/superior services.” (Software Solutions Company IT Director)

“CRM system can help retain the relationship by adding new products and serve the clients using parallel product strategies.”(International Bank Manager)

The fourth subsidiary success construct constituting CRM Success is Overall Success. Overall Success is a holistic quality, as expressed by our expert respondents. This type of success is discerned in the confluence of three selective codes: Design

Success, Technical Success and Economic Success. These specific selective nodes were discerned in a key point made by one of our scholarly experts:

“Success is made up of design success (did you use CRM correctly?), development or technical success (Did CRM help you get better?), and economic success (Did CRM succeed at the workplace?).”(Project Management Expert”

This expert, skilled in the ways of project management, consider technical and design success to be critical aspects of overall CRM Success:

“Two success factors are functionality and software content.”(Project Management Expert)

At the theoretical level of coding, in addition to the highly evolved second order theoretical node of CRM Success, there are also two causal constructs which influence the outcome and degree of success, either directly or indirectly. These nodes are the exogenous Agile CRM construct and the moderating effect of the CRM Continuance on the impact of Agile CRM on CRM Success.

As shown in Figure 4, Agility represents the flexibility in implementation of the CRM project. The term “Agile” in the context of CRM implementation has been used by previous researchers to refer to the typically cyclical, iterative system development process and customer-oriented approach to CRM implementation (Claudelin, 2010). Hence, Agile CRM is the iterative system development approach to CRM implementations. Three nodes constitute Agile CRM: Un-Failure, Early Planning and Communication.

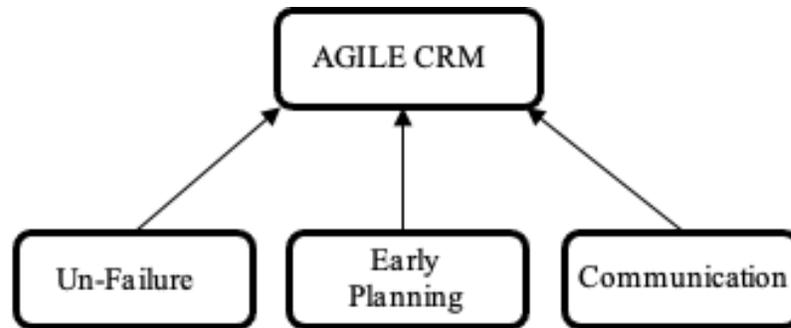


Figure 4: Agile CRM

We coined the term “Un-Failure” in response to a particularly insightful interview with one of the IS Success experts we interviewed. It was our realization during this interview that partial failure is inevitable in any implementation, and should be anticipated and accounted for rather than dreaded:

“Failure is inevitable in every implementation.” (IS success Expert)

Un-Failure is the act of recovering from partial failure, assimilating lessons learned and taking precautions to avoid future failure of the project. Un-Failure encompasses seeing early failure as a beneficial part of the implementation process, providing early and actionable information about aspects of the project that must be revised for eventual success to occur. This led to the consideration that certain amounts of failure should be embraced as informative and useful:

“Embracing failure makes fixing it possible.” (IS success Expert)

Agile methods to CRM implementation are seen as both informative and useful, in the view of our project management expert. What does not work is indicative of system requirements that were not properly discerned, it seems:

“With agile technologies, you get to fail early and fail often so as to understand the requirements of the system and how to develop it.”(Project Management Expert)

From the IT manager’s perspective, failure is also a part of the implementation process that must be dealt with. Agile development methods present themselves as a solution to dealing with partial failure:

“Fail fast and continue improving. You need to analyze the cause of the failure, do changes and continue to improve. Thus, the agile approach.” (Software Solutions Company IT Director)

Another expert considers agility as the antidote to failure:

“Agile method saves time and helps you avoid failure.” (Software Solutions Company Operations Manager)

Early planning is the process of planning and preparing all the needed requirements early in the CRM implementation process. From defining success to preparing software and hardware requirements to expertise and personnel requirements, Early Planning is a key part of Agile CRM:

“Early planning is key for CRM success.” (F&B Company Commercial Manager)

This node serves to define the elements of success for a CRM implementation, and is an important ingredient of an agile implementation:

“You need to define success and conflicts at an early stage of implementation.

Agreeing on success definition between different stakeholders is needed to succeed.” (Project Management Expert)

“Defining success early is key for success.” (Project Management Expert)

“Agile presents itself as a solution for the requirements issue.” (IS success Expert)

Another characteristic of Early Planning is solving problems early in the implementation process:

“Solving problems at an early implementation stage is key to success.” (Project Management Expert)

Communication is defined as the exchange of information between different stakeholders during CRM system implementation. Communication is the third node contributory to Agile CRM. Implementation team communication processes are important for any project to succeed. As seen in the context of System Success, Communication proves more crucial when embracing an agile approach to implementing a CRM system:

“To deal with organizational change, you need to communicate with people to unfreeze that culture.” (IS Success Expert)

The third (moderating) induced construct in our theoretical model is the moderating effect of Continuance. Continuance is affected by four other variables as shown in Figure 5.

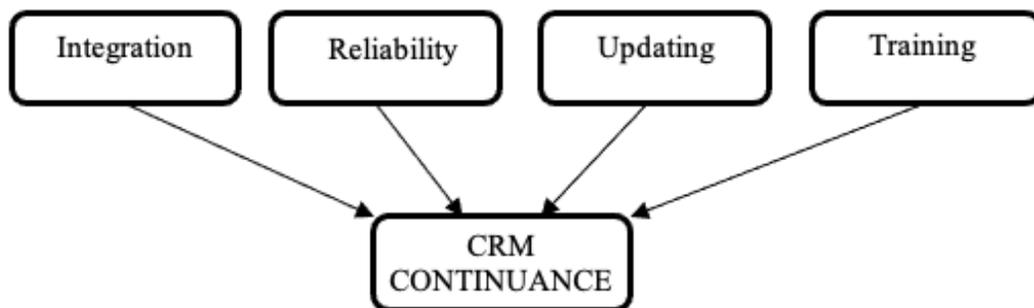


Figure 5: CRM Continuance

Information systems continuance is defined as the continued usage of IT by individual users over the long-term and *after their initial acceptance* (Bhattacharjee and Barfar, 2011). Continuance affects the success of any information system. Based on our coded data, continuance will impact the way in which agility in the development process impacts subsequent CRM Success. A positive moderation effect for CRM Continuance would mean higher degrees of CRM continuance will increase the positive effect of CRM Agility on CRM Success.

The first one of the constructs that affect CRM Continuance is Integration. Integration is defined as the extent to which an information system allows data to be integrated from various sources (Wixom and Todd, 2005). Integrating existing systems (such as enterprise resource planning system) of the firm with the new CRM system is crucial in order for the CRM system to deliver the accurate data needed for different user groups, as aptly noted by one manager:

“When implementing, you need to integrate with other systems successfully.”

(Software Solutions Company IT Director)

For users to continue using a CRM system, once it has been implemented, the CRM system should be fully functional. This functionality requires integrating different data, including end users’ data, from different systems. This integration between systems allows for using data from different systems to support building workflows:

“Building workflows (complicated, many approval levels) and system configuration issues can play a major role in hindering the functionality of CRM systems. Leveraging info effectively from management is needed for CRM success.” (Power Company IT Manager)

The second construct contributory to CRM Continuance is Reliability. Reliability is the dependability factor of system operations (Wixom and Todd, 2005). If the system is not reliable, users will rely on workarounds and alternatives to using the system. Intended uses and associated objectives for use will not be achieved. One manager describes it best by saying:

“Our CRM system is flexible and gives us full functionality to manage relationships with customers.” (General Dynamics IT Director)

Reliability can be interpreted from the perspective of system workflow support of workflows:

“A successful CRM system is a system that has a meaningful and supportive workflow that saves time.” (Software Solutions Company Operations Manager)

Updating is the third construct affecting the CRM Continuance construct at the theoretical level. Updating is the process of adding additional user functionality, with an eye towards ensuring a positive experience with the software (Goodhue and Thompson, 1995; Larsen et al, 2009). Updates are an important factor that affect the continued usage of any technology. With systems up-to-date, users are provided with the features and functionality they require. Yet, the impact and effectiveness of updates depends on many factors:

“It depends on size of company, size, and type of system.” (Power Company IT Manager)

Updates are essential to ongoing system functionality, to be sure. And, functionality is critical to continued usage. According to one manager:

“Updating is a key feature to enhance CRM systems. CRM is updated every quarter in order to add extra functionality.” (Power Company IT Manager)

“We update our system monthly, yet since 2019 we are in crisis mode so no regular update.” (International Bank Manager)

The fourth construct related to the CRM Continuance is Training. Training, while essential and typically conducted early in the implementation stage, is typically less prevalent later on in the system’s post adoption stage. Our work tends to indicate it should continue through the development process, being a key effector of the Continuance construct. Training here is defined as the continued and periodic teaching of personnel on system features and how to use them. While initial training is needed at the initial early implementation stage of technology deployment, periodic training in use is also required in order to keep users up-to-date on system features and the latest system functions:

“Training makes sure that users understood functions and how to use them, the training at our firm is adequate. CRM systems do not need extensive training.”
(Power Company IT Manager)

Managers also stress that training is essential to proper operation. Training employees ensure that they understand how to use the system. When users understand how to use the system and the functionality, there is a better chance that users will continue using the system rather than resorting to workarounds:

“On training, if the users understood functions and how to use them, the training is adequate. You need to train people to make sure they plug in the right info.”
(Power Company IT Manager)

Not only is training needed to keep users updated on the new features of the CRM system, but it is also important to make sure that users make the most from CRM system functionality:

“Training is important to keep up with new features and is needed for utilization.”

(Software Solutions Company Operations Manager)

While some functions and departments require (and benefit) more from training on CRM systems, all departments need periodic training to achieve full operational functionality:

“Training mainly targets IT personnel. As for managers, we got monthly training on the latest features and updates.” (International Bank Manager)

Theoretical Integration

Data collection comprised three waves of interviews (or, “slices” of data, in the Glaserian rubric). Coding these three slices of data permitted us to systematically induce our constructs and relate them to each other in a putative casual network. While it was intuitively evident that embracing agile methods during the implementation of a CRM system would affect the success of the system due to the flexibility, responsiveness and communicative nature of the agile approach, we relied on data we collected from experts and managers to induce the relationship between Agile CRM implementation and the success of CRM systems.

Extending from the understanding gained in our interviews, we induced a role of Continuance that served as a moderator for the Agile/Success causal link we posited. An induced process model (displayed in Figure 6) demonstrates our theoretical consideration

that CRM Continuance would moderate the positive relationship between Agile CRM and CRM Success.

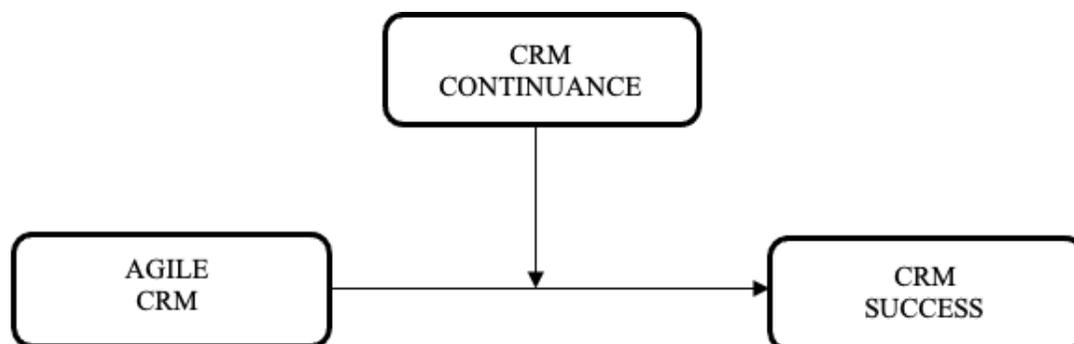


Figure 6: Continuance as Moderator

By proposing CRM Continuance as a moderator, our specific theoretical expectation is that higher usage continuance among system users (reflected by Integration, Reliability, Updating and Training) will result in agile implementation having a stronger effect on the success of CRM systems.

Thus, we expect that the Agile CRM systems implementation approaches will positively affect CRM Success due to the typical responsiveness of the Agile approach. The more direct and positive that CRM Continuance intentions are, the more positively the success of these systems affected by Agile CRM implementation processes. It is a simple and compelling theoretical conclusion: without continuous dedicated usage, the effect of the early implementation factors (agility) on the success of the system will decrease.

Agile CRM involves the continuous communication between different functions. This ensures the success of CRM implementations. Continued usage of the CRM system ensures that Agile CRM will be fully functional. When employees continue using the

system, various functions will be involved in different aspects that affect the system usage such as training and updating. This continuous connection between different functions increases the effect of Agile CRM on CRM success.

“When implementing a CRM, you need to adopt an agile method which allows you to have continuous connection between tech team and the business team. You should be agile when adopting a CRM, all functions should communicate at all times. Agile method saves time and helps you avoid failure.” (Software Solutions Company IT Director)

This “all-the-time” communication is vital for the success of Agile CRM. The more continuous this communication is the higher Agile CRM is. Yet, this continuous communication is increased by continuous usage. The more employees continue using the CRM system, the more will the agility of this system help companies avoid wasting time, be faster to market, and avoid failure. Hence, the higher the continued usage, the more the agility of the system affects the success of the system.

“Agile presents itself as a solution for the requirements issue.” (IS Success Expert)

While agile CRM solves the requirements issue, to know these requirements agile teams should be continuously communicating and collecting these requirements. Continued usage of the system and continued communication between departments is needed to collect requirements and solve them using Agile CRM. Thus, continued usage increases the effect of Agile CRM of CRM Success by enhancing the ability of Agile CRM to solve the requirements issues which increases the success of CRM systems.

A big body of research investigates the effect of continuance on the success of information systems, with lots of them using variables from Delone and McLean's IS Success Model (Lin & Chen, 2012; Veeramootoo et al, 2018; & Zhou, 2016). However, in this study, we did not investigate the relationship between CRM continuance and CRM success. Although a direct relationship may seem probable, our induced data exclusively entailed a moderating effect of CRM continuance on the relationship between Agile CRM and CRM success. The data analyzed was collected from experts and managers only. Collecting data from other stakeholders (such as end users) may lead to an induced direct relationship between continuance and success.

Theoretical Propositions

Based on our theoretical model, we derived a set of induced constructs and a specified pattern of relationships between these constructs. The first construct was our study's center of attention: CRM Success. Owing to the lack of a coherent definition on the concept in the literature, we opted to the array the basic building blocks of implementation success as indicating a second order construct which served the theoretical role of an endogenous construct in the induced model, and which further operationally defined the constituent components of CRM Success as a primary contribution to the literature. Each of the first order constructs represents the perspective of a group of the interviewed respondents, coded at the theoretical level of analysis.

Hence, our first proposition:

Proposition 1: The success of a CRM implementation is a constituent of 4 "success" characteristics: Project Management Success, System Success, Bottom Line Success, and Overall Success.

An exogenous construct and a moderator remain to specify from the model. Serving in the exogenous role is Agile CRM – the agile implementation method adapted specifically to the unique requirements of CRM implementation (composed of the constructs Un-Failure, Early Planning and Communication). As mentioned earlier, Un-Failure is the act of recovering from partial failure, assimilating lessons learned and taking precautions to avoid future failure of the project. Planning (particularly, planning taking place early in the process) involves early training and preparations early on during the early stages of adopting the CRM system in order to prepare the work environment for CRM integration. Planning early in the process is distinct from the orthodox requirements planning process found in traditional development methods. Communication reflects the smooth flow of information between different stakeholders in the CRM implementation.

The first proposition being an operational definition for our emerging CRM Success construct, the first causal relationship we induced in theoretical analysis leads to our second proposition: the positive relationship between Agile CRM and CRM success. This relationship was supported by numerous users:

“Agile method saves time and helps you avoid failure. When implementing a CRM, you need to adopt an agile method which allows you to have continuous connection between tech team and the business team. Agile method saves time and helps you avoid failure.” (Software Solutions Company Operations Manager)

“Fail fast and continue improving. Failure can be due to lack of requirements and scope changes. You need to analyze the cause of the failure, do changes and continue to improve.” (Software Solutions Company IT Director)

Hence, our second proposition and first theoretical cause-and-effect relationships in the theoretical analysis we induced is:

Proposition 2: Agile CRM is a flexible and responsive approach to CRM implementation and is constituent of three characteristics: Un-failure, early planning, and communication. Agile CRM is also positively related to CRM success.

The moderating effect that we induced from the data we collected and analyzed is CRM Continuance. Continuance represents the act of ongoing motivated usage of the CRM system. For users to continue using a system, this system should include features that makes the users want to use it effectively rather than resorting to workarounds. We induced that continuance intentions can strengthen the relationship between Agile CRM and CRM Success, based on our subject interactions on the topic:

“We face tech problems with some clients such as not supporting our products all the time.” (International Bank Manager)

“Training is important to keep up with new features and is needed for utilization.” (Power Company IT Manager)

“The system will not succeed if the system wasn’t easily updated by users. If you don’t have accurate data it fails, cause the data will not be trustworthy.” (Software Solutions Company IT Director)

“Integrating different systems (features and functions or data from ERP...etc.) is important for the success of a CRM system.” (Project Management Expert)

For these reasons, our third theoretical proposition operationalizes the role of Continuance intentions as a moderator of the Agile/Success linkage that so compellingly presented itself in our analysis:

Preposition 3: The concept of CRM Continuance directly impacts the effect of agile implementation methods on CRM Success.

CHAPTER 5

DISCUSSION

The induced theoretical model comprises a mid-range theory of CRM Success containing three main dimensions: a fully conceptualized second-order theoretical construct of CRM Success, along with its exogenous precursor, Agile CRM, which was also conceptualized as a second-order theoretical construct. CRM Continuance is induced as the intervening moderator that maximizes the positive relationship between agility and success in the model. These constructs are related to each other through induced theoretical relationships, and the likelihood of CRM Success is determined by the employment of Agile CRM methods of implementation, as moderated by CRM Continuance motivations on the part of the developers, managers, and users.

The goal of agile methods is to allow companies to deliver quickly, change quickly, and change often in order to meet changing requirements for development and outcomes (Delucia et al, 2010). For this reason, CRM is identified as one of the important systems that can be implemented using agile methods (Boardman, 2015). Agile CRM allows implementation teams to plan early and revise planning quickly, thus dealing with problematic issues early in the implementation process; this process is at the heart of what we characterize as Un-Failure, or “partial” failure. The ability to embrace potential failure in finding the way forward is possible due to clear, quick, and smooth communication between different organizational functions involved in the

implementation of CRM systems. To that end, this study's induced theoretical construct of Agile CRM is consistent with previous research.

There is a limited body of empirical research that studies agile information system development (Dingsoyr et al, 2012). After reviewing 482 papers on agile ISD, Hammel (2014) concluded that more research is needed for identifying the success factors underlying agility (Hummel, 2014), and the same consideration is valid for Agile CRM. Very few studies have examined CRM implementation projects using agile development methods (Mohamed and Darwish, 2019). Yet, previous research has pointed out that, in addition to the traditional structured "waterfall" method of development, CRM software can also be implemented using agile techniques (Stender, 2002; Denning, 2013; Dragon, 2008). Using the agile approach while implementing a CRM system has shown promise for yielding better performance than in cases where traditional development methods have been employed (Nasrabad, 2017).

This study has induced three first-level nodes that comprise the theoretical node of Agile CRM. These nodes empirically represent factors that are representative of Agile CRM processes: Planning is an integral part of Agile CRM, and so is Un-failure which represents the ability of the implementation team to respond quickly to issues early on in the implementation process and do changes to avoid failure. The last factor that makes up the Agile CRM construct is Communication. Communication allows implementation teams from different functions to respond quickly and promptly to needed actions, and to iteratively transmit the required steps that need to be taken to make the implementation a successful one.

The third induced construct in our study is CRM Continuance, which we posit as a moderator. Research on continuance, along with pre-adoption and adoption activities, is a mature field of inquiry in IS research (Jasperson et al, 2005); much is known about it in the generic systems implementation context. While research on acceptance was largely based on theories such as theory of planned behavior (Ajzen, 1991), innovation diffusion theory (Rogers, 1995), technology acceptance model (Davis et al, 1989), and the unified theory of acceptance and use of technology (Venkatesh et al, 2003), the eventual success of an Information System depends on its continued use rather than initial acceptance and use (Bhattecherjee, 2001).

One of the highly cited papers in IS research dealing with IS continuance is Bhattacharjee's expectation disconfirmation perspective on continuance (Bhattecherjee, 2001). In this highly cited account, Bhattacharjee (2001) introduced a post-acceptance model of IS continuance, in which continuance figured prominently. Another group of studies tested continuance mostly as a dependent variable (Serebo and Eikebrock, 2008; Limayem et al, 2007; Bhattacharjee, 2001; Venkatesh et al, 2011).

In this study, IS continuance was induced not as an outcome but as an intervening variable in the process of technology development - a variable that influences the effect of development methodology on the success of CRM systems implementations. We see it as a moderator. CRM system continuance is affected by four induced constructs: Integration, Reliability, Updating and Training.

In the case of CRM systems, an integrated CRM system will import data from enterprise resource planning (ERP) systems, supply chain management (SCM) systems, electronic medical record (EMR) systems, and other systems. This data will then be

integrated into the CRM and used to generate meaningful reports that allows users to better serve the customers of the organization.

Reliability refers to the extent to which employees can depend on the system to execute its intended functions. To be reliable, a system has to be up and working every time users need it, thus downtime should be minimized.

Training serves to ensure best outcomes in CRM Success from the employment of Agile implementation methods. Based on the data that was collected, CRM systems are periodically updated and upgraded, meaning that new features are introduced on regular bases. This calls for periodic training that allows employees to make best use of the system to perform their tasks, *on an on-going basis*. Without continuous training, employees will resort to performing workarounds from outside the system to get their work done.

Updating was previously tested in the literature investigating the effect of feature updates on providing additional user functionality, with an eye towards ensuring a positive experience with the software (Goodhue and Thompson, 1995; Larsen et al, 2009), and thus facilitate users' continued usage of the system. Updating a CRM system is critical in the process of buttressing CRM Continuance.

Primary Theoretical Outcome

This study's key theoretical outcome in the model is our induced conceptualization of CRM Success as a second order theoretical construct encompassing four more specific success variables: Project Management Success, System Success, Bottom Line Success and Overall Success. The ability to discern this level of granularity in the theoretical formation of CRM Success arises from our theoretical sampling during

data collection in a range of subjects from scholarly expert to managerial experts in industry, and it constitutes a primary contribution to the evolving literature on CRM and Implementation.

Previous literature has measured CRM Success using different constructs. Yet, none of the previous literature was found to measure CRM from the individual perspective of both functional groups of practitioners and systems implementation researchers. Previous research assessed success from an adoption viewpoint (Roberts et al, 2005; Peelen et al, 2009; Bohling et al, 2006) or from the continuance perspective (Alamgir and Shamsuddoha, 2015). In this study, CRM usage is seen from an “internal” organizational lens. The discussion of the usage of the CRM system is assessed using the perspectives of managers and experts, not customers; it is an implementation success perspective, not a customer service view. Managers do however reflect customers’ satisfaction and usage of a CRM system as assessed by Bottom Line Success factors such as Market Share, Return on Investment (ROI), and Profitability. These factors contribute to the success of the CRM system, and were induced as a part of the CRM Success construct.

The first important contributor to CRM Success is Project Management Success. Project Management Success is discerned in being on-time, on-budget, and meeting requirements or specifications. It makes sense that, for both project managers and project management researchers, projects are assessed by these three qualities. A project is considered a success if it was finished and running on-time, within the allotted budget, and possessed of the features that were promised prior to the implementation.

The second theoretical contributor to CRM Success is System Success. System Success is a construct based on three selective nodes: Data Accuracy, Workflow Support, Data Maintenance, and Uptime. For a CRM system to be successful, the data should be accurate and precise, and it should be maintained so that it can give accurate reports to support the work of users, various group of users' accurate reports. From the managerial perspective, a CRM system should support business workflows so that employees are not tempted to engage in unsanctioned workarounds to complete their work tasks. The last factor consequent to CRM Success is Uptime. Uptime is the opposite of downtime, which proves to be lethal to the success of any system. When the system is down, users can not use it, which leads to the antithesis of success. The greater the amount of system downtime, the less the system will be utilized. A lack of utilization is not a success factor. Thus, for a system to be successful, downtime should be minimized.

The third construct converging on the higher order factor of CRM Success is Bottom Line Success. The Bottom Line is evidenced by the end results of the process a system is intended to support and facilitate. These end results vary by business function; marketing managers seek end results reflective of market penetration and market share, sales managers' end results are focused on number of clients and total sales, IT managers like to see fewer system bugs and security breaches. Bottom Line Success speaks to these various factors.

The fourth construct subsidiary to CRM Success is Overall Success, which has four constituent selective nodes. These items are Design Success, Technical Success and Economic Success. Design Success is indicated by how correctly the users use the CRM system for its intended purposes. Technical success is found in the ways in which the

CRM system performs as designed and intended. Economic Success evaluates the pragmatic and pecuniary efficiency of the CRM system.

CHAPTER 6

CONCLUDING THOUGHTS

Research Implications

In this study, a CRM Success Model was induced from data that was collected from a group of managers and expert researchers. Data was collected from these sources and was then transcribed and coded. The result of coding yielded an induced theoretical model with both second level and first level constructs. The endogenous construct in the theoretical model was the main phenomena of interest behind this research, CRM Success. The exogenous construct was Agile CRM. A third construct, CRM Continuance, was posited to moderate the influence of Agile CRM on CRM Success. This theoretical model holds numerous of research implications for researchers.

The first contribution this study makes is in the provision of offering the first higher order success model that is strictly based on individual perspectives of different functional areas in the firm. The implication is that Information Systems researchers can now empirically test the model in different contexts.

The second contribution relates to the fact that the theoretical model induced here is based on data collected from both researchers and practitioners – something not yet done in the literature. This will serve to bridge the gap between the research perspective and the practitioner perspective on the success of CRM systems. This also should serve to help reduce the schism between practitioners and researchers.

The theoretical model integrates both early implementation factors (embodied in the Agile CRM construct) and continuance factors (embodied in the CRM Continuance construct). This serves to mark this study as one of the very few that effectively incorporates both early implementation and continuance factors; it is in very rare cases that integrating both concepts in one model is found. In terms of future research, this broad conceptualization of perspective will allow researchers to study both the relationship between early implementation and continuance, and also to study how these factors interact and affect the success of an information system.

Future research can use this model to study the success of various information systems besides CRM. Other information systems implementations such as electronic medical records, enterprise resource planning, or even supply chain management systems are apt areas of application. For this study, the data was collected from managers and experts. Future research can look at data collected from different groups of users and experts from different backgrounds. This should allow future research to test the model and see if the constructs and relationships are supported for different systems, and in an effort to find generality for the induced mid-range theory of CRM Success explicated here.

A key implication found in this study regards the operational definition of two novel theoretical constructs: Agile CRM and CRM Success. This study induced Agile CRM as a construct that embodies adopting a CRM system while utilizing agile development methods. Future research employing quantitative data for purposes of confirmatory analysis can shed the light on the concept of Agile CRM and the factors which indicate it. Researchers can study both antecedents and consequences both in the

context of early implementation or success of CRM or any other information system. The “new” CRM Success concept features four nodes consequent to the higher order factor of CRM Success. Future research should test the operationalization of this new construct and validate it using rigorous quantitative methods and in different contexts.

One interesting observation that was made during data collection and coding is that none of the interviewees spoke of security or privacy. We are bemused by this, since CRM systems contain sensitive data on customers, and the naïve and intuitive expectation would be that data security would be important. While, on the one hand, this paves the way for future research to investigate the effect of security and privacy on the success of information systems. On the other hand, the reasons why key experts and managers were unconcerned about data security in the context of CRM Success bears consideration in future research.

Practical Implications

In addition to the research implications that study makes way for, inducing a theoretical model that features relationships between variables affecting the success of CRM systems also makes numerous practical implications. Practitioners can benefit from this model in numerous ways that should allow them to better understand the effect of numerous early implementation and continuance factors on the success and failure of CRM implementations.

This first implication that this study makes for practitioners is allowing them to see a different picture of CRM success. Organizations normally see CRM success at an organizational level, which means that they see it through the eyes of executive level managers and high-level directors. This study induced a model that is based on data

collected from managers and experts. By inducing factors based on different functional managers' perspectives, this model provides upper management with a picture of what makes up and affects CRM success according to functional level managers who are involved in adopting, updating, and using CRM on daily bases. This will supply organizations with a more precise view of CRM success that is based on individual perspectives.

Incorporating experts' opinions in building this model is very valuable. Besides bridging the gap between researchers and practitioners, this also helps practitioners to account for factors that might have been overseen, not seen, or even not accounted for by them. The addition that researchers make to the study is priceless due to the fact that researchers have studied a big number of systems from different industries, and thus they possess an insightful and rich knowledge on system success and the factors that affect the success of CRM systems.

The model integrates both early implementation and continuance factors. It also shows the relationship between early implementation and continuance and how these constructs affect CRM success. This proves valuable to practitioners since it allows them to account for factors that should ensure a successful system early implementation and the factors that ensure continued usage synchronously. By accounting for both early implementation and continuance and understanding the effect of both factors on the success of a CRM system, practitioners avoid the pitfall of ensuring a successful implementation and neglecting the continuous usage and success of the CRM implementation.

The second order CRM success construct is an eye-opener for practitioners. This allows them to see CRM success as a composite phenomenon that includes different success items. This all-inclusive view of CRM success will allow practitioners to better understand what makes up CRM success and to account for these items that are the building blocks of CRM success. Practitioners can now see CRM success from a multi-lens perspective that allows them to understand what CRM means to different functions and how these different perspectives combine to form the success of the CRM system.

Finally, by introducing the induced concept of the agile CRM, this study highlights the importance of adopting agile development methods in the CRM implementation process and stresses on the factors that affects agile CRM. The study also makes it possible for practitioners to understand the importance of agility during implementation, the relationship between agility and continuance, and the overall effect of agile CRM on the success of a CRM implementation.

Conclusion

This study utilized a grounded theory approach to study and subsequently conceptualize the phenomenon of CRM Success. By collecting data from a group of experts followed by data collection from a group of managers distributed over three stages of interview sessions, a theoretical model was induced to explain both factors that make up CRM Success and factors that affect CRM Success from the individual perspectives of both practitioners and researchers. The research question that guided this study focused on discovering the nature of CRM Success is from an individual point of view and sought to better inform that regrettable fact that a high failure rate for CRM implementations remains an industry norm.

There were both commonalities as well as deep differences between respondents on the nature of CRM Success and its constituent components. While this was expected due to the fact that interviewees came from widely varying backgrounds, the variations in perspective across interviews paved the way to inducing a model that contains both early implementation factors and continuance factors that interact and affect the success of CRM systems.

The induced model permits us to offer theoretical propositions suitable for confirmatory testing in hypothetico-deductive settings. These propositions can lead to the examination and confirmation of the emergent mid-level theory of IS success induced here. Although rich in validity, testing these propositions will be also be useful for assessing reliability of the theoretical codes iterated here, and for assessing external validity of the concepts of the theoretical model. However, the major contribution that this study makes is supplying the IS field with a success model that is based strictly on individual perspectives and incorporates the views of both practitioners and researchers.

This study induced a model based on perspectives of experts and managers. Further investigation is needed to induce knowledge based on the perspectives of other stakeholders such as frontline staff or even customers who are the main determinants of the success or failure of most organizations.

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APPENDIX A

HUMAN USE APPROVAL LETTER



OFFICE OF SPONSORED PROJECTS

EXEMPTION MEMORANDUM

TO: Mr. Mohamed Tazkarji and Dr. Tom Stafford

FROM: Dr. Richard Kordal, Director of Intellectual Properties
rkordal@latech.edu

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: October 27, 2020

TITLE: "Success and Failure Factors Impacting Utilization of CRM Systems in
 the Financial Industry/Revision for Further External Data Collection,
 Further Revision of HUC 19-027

NUMBER: HUC 21-028

According to the Code of Federal Regulations Title 45 Part 46, your research protocol is determined to be exempt from full review under the following exemption category(s): 45 CFR 46.104(d) (2) i.

"Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

- (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;
- (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or
- (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by § 46.111(a)(7)."

Thank you for submitting your Human Use Proposal to Louisiana Tech's Institutional Review Board.

A MEMBER OF THE UNIVERSITY OF LOUISIANA SYSTEM

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