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The Impact of Social Capital on Customer Relationship Management Performance in the Egyptian Financial Sector

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Dedication

This thesis is dedicated to the memory of my father Sobhy Ahmed Mohamed who died on August 27, 2009 during my PhD journey.

Abstract

Nowadays social relationships between service providers and customers are vital for their long term customer relationship management (CRM). Several scholars also believe that poor results of CRM initiatives are due to an extensive focus on technological aspects as an antecedent of CRM rather than social capital dimensions. Despite social capital and CRM concepts have attracted both academics and practitioners; the link between these two concepts is under-researched. Thus, this study examines the effect of social capital on CRM through mediating organisational perceived values.

The exhaustive literature review on social capital dimensions, organisational perceived values and CRM performance leads to the development of a conceptual framework and formulation hypotheses. The proposed framework and hypotheses were empirically assessed through a positivist methodological approach: survey study and quantitative data modelling techniques. The survey study was administrated to CRM managers of 201 Egyptian financial service institutions (e.g. banks, insurance companies and brokerage firms) using a drop & collect method. The usable response rate of 96.6 per cent was tested for non-response bias. The data analysis focused on exploratory factor analysis, confirmatory factor analysis, structural equation modelling and regression models which statistically validated the proposed research model.

Results of goodness of fit and statistical indices established validity and reliability of this study. The results confirmed three social capital dimensions (e.g. structural, cognitive and relational) and their antecedents. The findings also proved a significant and positive link between social capital and CRM performance (e.g. loyalty and retention) through the mediating roles of organisational perceived values (e.g. customer satisfaction and customer commitment). Therefore, the proposed conceptual framework was validated. Thus, sixteen hypotheses were supported while only one was refuted.

This study makes three main contributions: First, it remedies deficiencies in the existing social capital literature and develops an integrated model of social capital. Second, it develops and tests a comprehensive framework that integrates social capital with CRM performance in the financial service sector. Third, it brought in a new significant strategy for financial service institutions managers to improve customer-organisation relationships. It introduced social capital as an antecedent for an effective CRM performance. The implications and practice are considered in the light of the results of this study. Several limitations of the methodology are addressed and ideas for further research put forward.

Chapter 1 Introduction and Overview of the study

1.1   Introduction

The present business environment is characterised by shrinkage in markets (Gronroos, 1997), diversity of customer demands (Bose, 2002), severe competition among rivals to win new customers (Mendoza *et al.*, 2006) and high cost of attracting them (Reichheld and Kenny, 1990; Cockburn, 2000; Agrawal, 2004; Manrai and Manrai, 2007; Seo *et al.*, 2008). This environment has put a pressure on businesses to continually review and modify their traditional marketing strategies to encourage customers to be more loyal and retainable to an organisation (Anderson and Srinivasan, 2003; Aspinall *et al.*, 2001; Verhoef, 2003).

A loyal customer is a person faithful toward a specific organisation (Ghavami and Olyaie, 2006). Loyalty helps organisations to overcome the high costs of acquiring new customers, which can delay profits for up to three years (Reichheld *et al.,* 2000; Reichheld and Schefter, 2000). Loyal customers are persons who potentially remain with an organisation for a long time (Keiningham *et al.*, 2007). On the other hand, customer retention reflects the continuation of the relationship between customer and an organisation for a long time (Kassim and Souiden, 2007). Working to retaining a customer is easier, less costly and more profitable than attracting a new one (Reichheld *et al.*, 2000). Brown (2004) reports that attracting new customers cost twelve times more than keeping current ones. Payne and Holt (2001:167) report that a five-percentage-point increase in retention could double the net present value profits.

In fact there is a constant search for new ideas to make customers more loyal and retainable (Chalmeta *et al.*, 2001; Gursoy and Swanger, 2007). Several scholars reveal that both customer satisfaction and customer commitment represent the most important antecedents for establishing loyal and retainable customers (Johnson *et al.*, 2006; Xu *et al.*, 2006; Caceres and Paparoidamis, 2007; Richard *et al.*, 2007; Chen and Quester, 2008). Customer satisfaction always derives from high service quality provided by the organisation (Donavan and Hocutt, 2001; Beloucif *et al.*, 2004; Eraqi, 2006; Ndubisi, 2006). Good relationship between organisations and customers at service encounter is one of the main dimensions of service quality, which in turn develops trusting and

ongoing relationships between them (Ravald and Grönroos, 1996; Payne and Holt, 2001; Eichorn, 2004). A trusting and enduring relationship between an organisation and customer is the core meaning of customer relationship management or CRM (Sin *et al.*, 2005; Chang and Chen, 2008).

Customer relationship management (CRM) is one of the management approaches that aims to establish strong, ongoing and trusting relationships with profitable customers (McKenna, 1991; Mizuno *et al.*, 2008). CRM is an organisational effort that aims to improve customer loyalty and retention through a better managing for the relationship lifecycle with customers (Wu and Wu, 2005; Pozza and Noci, 2006). CRM is a comprehensive management approach to establishing and managing ongoing customer relationships through effective integration to organisation resources: technological, organisational and human in a synergetic way in order to maximise values for both customer and an organisation. The core goals of CRM are to understand the current and potential customers' needs (Reinartz *et al.*, 2004), offer them creativity solutions to satisfy their needs through giving them unique service (Chalmeta, 2006) and increase customer lifetime value (Minami and Dawson, 2008). When companies implement those goals, rate of loyal and retainable customers will be enhanced (Mendoza *et al.*, 2006; Eid, 2007; Tokman *et al.*, 2007).

Nowadays CRM represents one of the hottest topics in service relationship marketing (Bouilding *et al.*, 2005; Obeng and Loria, 2006; Minima and Dawson, 2007; Paison 2007; Seo *et al.*, 2008). Therefore, several authors such as: Eid (2007), King and Burgess (2008) and Mendoza (2008) pay a lot of attention to the role of CRM in enhancing organisation performance. This interest from scholars at academic level is parallel with the movement of many organisations to adopt the CRM concept. The evidence comes from the results of Data Warehousing Institute (2000)'s survey on 1500 companies, which finds that 91 per cent either have or plan to adopt a CRM solution in the near future[1] because of the expected benefits that these organisations hope to achieve.

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[1] TDWI Industry Study 2000: Harnessing Customer Information for Strategic Advantage: Technical Challenges and Business Solutions," The Data Warehousing Institute, 2000.

Although CRM is on the rise and holds tremendous promise for building mutually beneficial relationships with customers, it remains a huge investment with little measured return on investment (Richards and Jones, 2008). A number of scholars indicate that the basic issues of implementing CRM are the huge investments and the high frailer rate (Gray and Byun, 2001; Everett, 2002; Zablah *et al.*, 2004; Richards and Jones, 2008). Several scholars indicated that implementing CRM requires three main factors: technology, organisation process and people (Zablah *et al.*, 2004; Chalmeta, 2006; McNally, 2007; Edvardsson *et al.*, 2008). The appropriate technology, fitting organisational process and effective interaction among people within an organisation and with customers enhance CRM performance (Chen and Propovich, 2003; Yim *et al.*, 2004; Sin *et al.*, 2005; Van Bruggen and Wierenga, 2005; Ahearne *et al.*, 2007).

However, most CRM studies focus on the technology side in CRM implementation and ignore the other two sides; the roles of people and organisation process (Yim *et al.*, 2004; Van Bruggen and Wierenga, 2005; Ahearne *et al.*, 2007). This focus may explain the huge investments in CRM projects. In addition, some scholars believe that the poor results of CRM performance were due to ignoring the human element (employees) in enhancing an organisation - customer relationship and the extensive focus on the technological dimension of CRM (Yim *et al.*, 2004; Van Bruggen and Wierenga, 2005). The risk of considering CRM as technology is attributable to the dominance of technology developments in the minds of executives, which encourages managers to transform their organisations to technology-centric systems. Technology-centric organisations pay less attention to the role of the human element in implementing CRM (Ahearne *et al.*, 2007). Van Bruggen and Wierenga (2005) mentioned that existence of such technology is not sufficient for CRM implementation. Another important issue, which encourages an organisation to pay attention to the role of social interactions within an organisation and with customers in CRM success, is what Yim *et al.* (2004: 271) reported *"Technology does not seem to significantly increase customer satisfaction, loyalty and retention over the long run"*.

Undoubtedly, the human element within an organisation (employees) is an important dimension for the effective CRM implementation (Nairn, 2002; Shi and Yip, 2007; Dimitriadis and Stevens, 2008). If human resources work as hoped for, an organisation can provide better customer service (Noone *et al.*, 2003; Eid, 2007). Despite the important role of the human CRM dimension, few CRM studies pay attention to its role,

especially social interaction mechanisms within an organisation and their impact on customer service. Therefore, an organisation should not focus only on the technological dimension but it also should pay the same concentration to the roles of designing effective organisation processes and enhancing social interactions among employees to enhance CRM performance.

However, at a practical level, many organisations are starting to reduce spending on CRM technology and giving a lot of concern to other CRM factors, such as organisation processes and employees' performance (Chen and Propovich, 2003; Yim *et al.*, 2004; Sin *et al.*, 2005; Van Bruggen and Wierenga, 2005; Ahearne *et al.*, 2007). The evidence comes from Gartner research[2] which suggested that there was a reduction in CRM software spending between 1999 and 2003; because of the poor results of CRM implementation (Rigby and Ledingham, 2004). According to previous discussion, the focus on the role of the human element within an organisation in CRM implementation may remedy the poor results of CRM projects and reduce the huge investments in technological dimension of CRM which will be favourable in one of developing countries such as Egypt (field of the study).

Nahapiet and Ghoshal (1998) and Wang and Hong (2006) reveal that building social relationships can enhance social interactions among network members. These social interactions, besides sharing common goals, develop trusting relationships among network members (Tsai and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Lu and Yang, 2011). Trusting relationships among network members have been explained by many theories, such as social exchange theory (Young, 1996; Kayat, 2002; Pappas and Flaherty, 2008; Yang *et al.*, 2008) and social capital theory (Tollini, 2005; Watson *et al.*, 2005; Mu *et al.*, 2008). Social interactions reflect the structural dimension of social capital, whereas shared goals represent the cognitive dimension (Tsai and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Lu and Yang, 2011). In addition, the third dimension of social capital is a relational capital, which reflects trust among network members. Thus, social capital can contribute in enhancing human interactions among network members and as a result there is a call to examine the above hypothetical argument.

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[2] http://www.gartner.com/).accessed on 20/11/2007

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1.2   Research Problem

The rapid growth of Information Technology (Ein-Dor *et al.*, 2004; Chen and Ching, 2007; Ortega *et al.*, 2008), the strength of global competition (Lawniczak, 2007; Wiersema and Bowen, 2008) and the diversity of customer demands (Moon *et al.*, 2000; Petrovic *et al.*, 2008) have put pressure on organisations to manage their customer relationship effectively (Cooper *et al.*, 2008; Plakoyiannaki *et al.*, 2008). CRM is one of the new management paradigms, which focuses on managing a mutually beneficial relationship between organisations and their profitable customers (Kim and Lee, 2007; Gee *et al.*, 2008). Several scholars mention that adopting CRM projects can achieve many benefits for organisations, such as enhancing organisation performance (Jeong and Hong, 2007; McNally, 2007; Cooper *et al.*, 2008; Mizuno *et al.*, 2008) and improving the competitive position of an organisation (Cho *et al.*, 2002; Zineldin, 2005, 2006) through developing human interactions within an organisation and with customers (Shi and Yip, 2007; Dimitriadis and Stevens, 2008). Despite the large number of studies that have been done to find out the critical success factors of CRM, there is no agreement among scholars about those factors (Gummesson, 2004; Payne and Frow, 2005; Ahearne *et al.*, 2007; Eid, 2007; Ismail *et al.*, 2007). Moreover, most of these studies find adopting CRM projects are very costly and in many cases they have not been found to give the expected results (Gray and Byun, 2001; Everett , 2002; Kale , 2004; Reinartz *et al.* , 2004; Richards and Jones , 2006).

Many studies report that most CRM initiatives have not been successful. For instance, based on a survey of 300 companies Gray and Byun (2001) concluded that CRM is not a cheap, easy, or fast solution. They also mentioned that more than two-thirds of CRM projects end in failure. Everett (2002: 25) has also mentioned that 50 per cent of CRM projects failed and faced losses. Similarly, Reinartz *et al.* (2004) argue that up to 70% of CRM initiatives result in either losses or no improvement in company performance. Additionally, based on a TDWI survey, 41 per cent of the organisations which adopted

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CRM projects were either experiencing difficulties or close to failure[3]. In the same view, Davids (1999:23) mentioned that the failure rate for CRM projects is approximately 65%. Finally, in a survey of 451 managers, which had been done by Richards and Jones (2006:1) it was found that one in every five users reported that their CRM initiatives not only failed to deliver profitable growth, but also had damaged long-standing customer relationships.

Moreover, according to Gartner report, worldwide spending on CRM business process outsourcing will grow from $26.6 billion in 2005 to $41.4 billion in 2010, driven by investment in sales growth and customer retention processes. In addition, the CRM market in Europe, Middle East and Africa in 2007 will generate approximately $2.5 billion in total software revenue, representing annual growth of 14%. Through 2011, the market will grow at a compound annual rate of 11.3% to a market size of approximately $3.8 billion.[4] Despite the high investments in CRM projects, most of them fail in achieving their goals. The poor results of CRM projects and the huge investments associated with their implementation were due to focusing basically on the technology dimension and ignoring human and organisational dimensions of CRM (Sin *et al.*, 2004; Yim *et al.*, 2004; Eid, 2007). Therefore, there is a need for more studies that pay more attention to human and organisational dimensions of CRM to improve its performance. Social capital concept could be one of the concepts that remedy the poor results of CRM through paying more attention to the human dimension of CRM.

Social capital is broadly defined as an advantage that is built in social relationships (Baker, 1990; Acquaah, 2007; Bhattacharya, 2008). It embodies all actual or potential resources that aim at building social networks among network members (Loury, 1992; Inglehart, 1997; Portes, 1998; Leana and Van Buren, 1999; Inkpen and Tsang, 2005). These social networks establish social process, which create mutual values between network actors through producing and mobilising their network connections in order to exchange resources (Baker, 1990; Nahapiet and Ghoshal, 1998; Knoke, 1999). This

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[3] TDWI Industry Study 2000: Harnessing Customer Information for Strategic Advantage: Technical Challenges and Business Solutions," The Data Warehousing Institute, 2000.

[4] (http://www.gartner.com/) accessed on 7/3/2007

social process engenders trust among network members (Putnam, 1995; Inglehart, 1997; Nahapiet and Ghoshal, 1998; Woolcock, 1998). Trusting relationships among network members produce social outcomes such as exchanging knowledge and expertise, achieves cross-functional team effectiveness, facilitate exchange of resources and capability to collaborate (Hatzakis *et al.*, 2005). These social outcomes affect positively on operational outcomes like creativity, innovation, decision-making quality, collaboration and coordination of work that improves the quality and efficiency of customer service.

The concept of social capital has been applied recently in a wide range of organisation studies, both in the context of intrafirm and interfirm relationships (Burt, 1992; Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998). Intrafirm social capital describes the type and quality of relationships between individuals and units within a given organisation. On the other hand, interfirm social capital resides in the exchange relationships between organisation and its external stakeholders. This research focuses on the role of intrafirm social capital in enhancing CRM performance (customer loyalty and customer retention).

A review of the literature shows that intrafirm social capital focuses on building and maintaining trusting relationship among employees (Mithas *et al.*, 2005; Tellefsen and Thomas, 2005; Krause *et al.*, 2007). It concerns building relationships through formal and informal relationships. These relationships are achieved through interactions and building strong social bonds among employees (McElroy *et al.*, 2006; Zhang and Fung, 2006). Trust within an organisation has two basic predictors: high social interactions and shared goals among employees (Tsai and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Lu and Yang, 2011). Trust relationships within an organisation also enhance employees' performance and as a result improve service quality. High service quality increases customer satisfaction (Cullen *et al.*, 2000; Singh and Sideshunukh, 2000; Wonglorsaichon, 2002; Shek, 2008), which in turn increased customer loyalty and retention (Oliver, 1999; Kim, 2003; Dimitriades, 2006; Helgesen and Nesset, 2007). High loyalty and retention rates for the organisation reflects successful CRM implementation (Chen and Popovich, 2003; Eid, 2007). Therefore, intrafirm social capital is considered as a basis for enhancing CRM performance (loyalty and retention) and as a result there is a need to examine the association between intrafirm social capital and CRM performance.

For better understanding of social capital in the business environment, marketing practitioners and academics have devoted considerable effort to identify the role that social capital could play in adding values to organisations (Adler and Kwon, 2002; Huges *et al.*, 2007; Tokman *et al.*, 2007). These efforts are grouped into four different dimensions of investigation. Firstly, some studies focused on examining the impact of social capital on adding values for organisations (Vainio, 2005; Young, 2005; Krause *et al.*, 2007). Secondly, studies looked at the role of social capital could in creating values for customer (Giffith and Harvey, 2004; Weisingera and Black, 2006; Wiedmann and Hennigs, 2006). Thirdly, there are studies that explore the role of social capital in exchanging and combining resources between social units (Gabbay and Zuckerman, 1998; Tsai and Ghoshal, 1998; Kohley, 2002). Finally, studies have examined the role of social capital in enhancing organisation competitive advantages and improving organisation performance (McElory, 2002; Warde *et al.*, 2005; Anderson, 2008; Smedlund, 2008).

Despite the important role of social capital in adding values for both an organisation and customers, few scholars have attracted to explore its relative importance in enhancing customer behaviour (Moran, 2005; Krause *et al.*, 2007; Lawson *et al.*, 2008). In this regard, Holland and Johnsson (2003) and Johansson (2007) reveal that there is a need for more studies to improve understanding of the contributions of social capital in improving customer behaviour. For more understanding of the gaps in our research area, we conducted a search in some of the well-known databases in the social sciences. Table 1-1 illustrates a summary of the results in some of the most famous databases in social sciences. It shows some gaps in social capital literature which represent issues for research.

Table 1-1 Summary of research results

Key words / Data base	SC	SC& M	SC& M& E	CRM	SC& CRM	Impact of SC on CRM**	SC& CRM & E
ABI/INFORM Global -Scholarly Journals. -Dissertations	2912 2252	82 43	0 0	5320 1273	20 12	0** 0**	0 0
Science direct (all sources)	106856	14	0	64.074	14 889	0**	0
Business Resource Premium (Academic Journals)	3107	162	0	8624	2	0**	0
Academic Research Elite (All resources)	3169	40	0	1649	0	0**	0

Date: 2 November 2010.

** We focus solely on studies that investigate the impact of social capital on CRM.
***SC- Social capital, M-Marketing, CRM -Customer Relationship Management and E- Egypt.

According to Table 1-1, there is some evidence of a lack of social capital studies in marketing field, in customer relationship management and in the Egyptian business environment. Firstly, there is a shortage of studies that link social capital with marketing field (the percentage is 2.4% at ABI/Inform, 0.01% at Science Direct, 5.2% at Business Resource Premium and 1.26% at Academic Research Elite). Secondly, among studies that integrate social capital with CRM, the abstracts of most of these studies indicate that there is an absence of studies that investigate the impact of social capital on CRM (the percentage of studies are: 0.0% at ABI/Inform,0.0% at Science Direct,0.0% at Business Resource Premium and 0.0% at Academic Research Elite). Finally, there is an absence of social capital studies in marketing field in Egypt (0.0% at all databases). Finally, there is shortage of studies that link social capital with the CRM performance in the Egyptian business environment (0.0% at all databases). In conclusion, the results of searching in the above databases clearly show the existence of research gaps.

Moreover, social capital studies suffer from the absence of studies that explore the sub-factors that constitute social capital dimensions and investigate the interrelationships among these dimensions (Putnum, 1995:72). The reasons behind the shortcomings in these studies are the exploratory nature of these studies (Nahapiet and Ghoshal, 1998; Sporleder and Moss, 2002; Kumar and Worm, 2003; Edelman *et al.*, 2004; Huysman and De Wit, 2004; Lang, 2004; Newell *et al.*, 2004; Inkpen and Tsang, 2005; Presutti *et al.*, 2007; Montazemi *et al.*, 2008), the consideration of social capital as unidimensional

(Merlo *et al.*, 2005; Vainio, 2005; Krause *et al.*, 2007; Lawson *et al.*, 2008; Yang *et al.*, 2008) or the absence of adequate measures of social capital dimensions (Tasi and Ghoshal, 1998).

Undoubtedly, social capital and CRM have been identified as critical elements that could add values to the relationships between customers and organisations (Reinartz *et al.*, 2004; Brown, 2005; Ryals, 2005; Mendoza *et al.*, 2006; Amador, 2007; Krause *et al.*, 2007; Tokman *et al.*, 2007; Wang, 2008). Despite the relative importance and the potential benefits of the integration between social capital and CRM in service relationship marketing, there is no attempt to integrate social capital into the CRM framework (Luo *et al.*, 2004; Gounaris, 2005). Therefore, the main objective of this study is to investigate the impact of social capital on CRM performance in the Egyptian financial service institutions. According to the previous discussion Figure1-1 summarises the different gaps in our research area that our study works to fill.

Figure 1-1 Summary of the research gaps

Summary for literature gaps in the research area

Shortage of SC studies:
1-Shortage of studies that explore the factors that constitute social capital dimensions.
2-Lack of studies that explore the interrelationships between social capital dimensions.
3- Scarcity of studies that explore the impact of social capital on organisational perceived values (e.g. customer satisfaction and customer commitment).

Shortage of CRM studies:
1- Shortage of studies that provide valid and reliable measures of CRM performance.
2- Shortage of CRM performance studies in the Egyptian financial sector.

1. Shortage of studies that integrate SC with CRM.
2. Shortage of studies that integrate SC with CRM in Egypt.

Notes: SC = Social capital, CRM = Customer relationship management.

Source: The author

Based on Figure1-1 we outline the following research questions:

1.3 Research Questions

The main research question is: to what extent does social capital affect on CRM performance through the mediating roles of customer satisfaction and customer commitment. This question can be divided into the next questions:

1. What is the magnitude of the use social capital in CRM performance in the Egyptian financial sector?
2. What are the sub- factors that constitute social capital dimensions (structural, cognitive and relational) within the Egyptian financial sector?
3. What is the nature of relationships among social capital dimensions in the Egyptian financial sector?
4. To what extent does social capital influence customer satisfaction and commitment in the Egyptian financial sector?
5. To what extent does social capital influence CRM performance (customer loyalty and retention) in the Egyptian financial sector?

These research questions are linked with the following research objectives.

1.4 Research Objectives

The main aim of this research is to investigate the impact of the social capital on CRM performance through the mediating roles of customer satisfaction and customer commitment. A conceptual model will be developed through social capital theory, social network theory, social exchange theory, Burt theory (1992), social resource theory, cognition theory and relationship marketing theory. This main aim can be more illustrated through the following objectives:

1. To explore the level of social capital and CRM in the Egyptian financial sector.
2. To identify the sub- factors of social capital dimensions (structural, cognitive and relational) in the Egyptian financial sector.
3. To examine the relationship between social capital dimensions in the Egyptian financial sector.
4. To investigate the impact of social capital dimensions on customer satisfaction and customer commitment in the Egyptian financial sector.
5. To explore the link between social capital and CRM performance (customer loyalty and retention) in the Egyptian Financial sector.

These objectives produce a research framework, which was validated through quantitative tests. The results show a better comprehends of social capital and CRM concepts in the Egyptian financial service institutions.

1.5 Overview of Methodology

The basic methodology chosen for this research is positivist (Hussey and Hussey, 1997). The positive social capital and relationship marketing theories that provide the theoretical framework for this thesis support such a methodology. A causal link between intrafirm social capital and CRM performance has not been established in prior studies. This research seeks to validate the established relationship among intrafirm social capital and CRM performance through the mediating roles of customer satisfaction and customer commitment in one model. A causal link between intrafirm social capital and the mediating variables has been established in prior studies by Rich (1997), Davis *et al.* (2000), Merlo *et al.* (2006) and Pervan *et al.* (2007). In addition, the causal association between the mediating variables and CRM performance has been established in prior studies by Merlo *et al.* (2006), Pervan *et al.* (2007), Chen and Quester (2008), Eakuru and Nik Mat (2008) and Lacey (2007).

To assess the significance placed on intrafirm social capital by organisations and the impact of intrafirm social capital on CRM performance in the financial service industry, a quantitative method approach was adopted. The quantitative method approach has been used in prior intrafirm social capital research by Tsai and Ghoshal (1998) and Lu and Yang (2011). The data of this study were collected through a questionnaire. The

items of this questionnaire were developed by adopting measures that had been validated in prior studies, modifying them to fit the context of research variables in the Egyptian business environment. This refining and modification were done through pilot interviews with 19 research targets. These interviews give validity to the questionnaire items and made them more relevant to practices in Egypt.

In keeping with the empiricist objectivist framework adopted for the study, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), structural equation modelling (SEM) and regression analysis were used to test the model and the structural relationships among the components of intrafirm social capital and CRM performance mediated by customer satisfaction. This EFA was used to identify the structure of social capital dimensions, as there is a shortage of social capital studies that identify the structure of social capital dimensions through EFA. SEM has become a major statistical analysis method in much of social science research (Hershberger, 2003) and especially in social capital studies. SEM enables researchers to simultaneously test the measurement model and the structural model. For greater accuracy in the results of this study, regression models were used. The regression results present confirmation of SEM results, which make generalising results more realistic. Prior studies examining the relationship among the intrafirm social capital components used regression analysis (Chua, 2002; Watson and Papamarcos, 2002; Requena, 2003; Hsieh and Tsai, 2007) or SEM (Tsai and Ghoshal, 1998; Chiu *et al.*, 2006; Chow and Chan, 2008; Lu and Yang, 2011) to test the research hypotheses, whereas this study used both SEM and regression models in one study.

1.6   Background of Financial Service Sector in Egypt

Financial services firms (FSFs) in recent years have been exposed to intense competition, which has an impact on their competitive advantages in the marketplace (Wahba and Mohieldin, 1998; Parnell and Hatem, 1999; Bolbol et al.,2005; Elsharnouby and Parsons, 2010). These firms make heavy use of intangible assets like reputational capital, technical expertise, customer relationships, market presence, trade names and credit deposit-insurance guarantees to produce their financial products and services (Rao, 2005:198; Eid, 2007). These financial services are highly intangible, risky, variable in quality, and require high customer involvement, but the continuity helps customers secure customised service delivery and a proactive service attitude

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(Berry, 1995; Lin *et al.*, 2003). Menon and O'Connor (2007:158) indicate that financial products, in general, can be relatively complex and require technical product information on the part of the customer. They add that most financial institutions provide homogenous products, leaving customers with little real choice and few options and the only source of heterogeneity is often the interpersonal organisation – customer service encounters. Traditional financial service companies struggle with the challenges associated with becoming customer focused enterprises.

Nowadays, financial service institutions have a close relationship with their customers (Hatem, 1999; Elsharnouby and Parsons, 2010). They often know them individually, understand what they want, and satisfy their needs through personal customised services (Peppard, 2000:312). As a result, they have earned loyalty and a large share of their customers' business. Fitzgibbon and White (2004:221) reveal that most financial service firms such as insurance companies, banks and financial advisory identify the 'most valuable customers' and focus the majority of their marketing efforts on them. They add that the level and nature of customer interaction is quite diverse, depending on the nature of the firm in the service sector. Some firms, such as brokerage firms which represent financial advisory firms, are involved in providing a service which requires a degree of interaction between customer and organisation. This interaction needs ongoing review of those investments from customers. Although most financial institutions know implicitly that some customers are more profitable than others, many of them go on treating all customers in the same way (Bose, 2002). Many banks have thought that the 80/20 rule applied: i.e. that 80 per cent of profits come from 20 per cent of customers (Peppard, 2000:322). Thus, financial firms should identify their profitable customers and set the appropriate customer-oriented strategies to keep them with the organisation (Eid,2007).

A study in the U.S. banking industry reported that those banks that develop a customer-oriented strategy in this area obtain higher profits (Lamparello, 2000; Liu, 2007). Other studies have shown that banks with good CRM retain their substantial competitiveness in the market place (Gandy, 2000; Eid, 2007). In service industry, research has shown that service quality enhancement and relationship marketing (Berry and Thompson, 1982; Day 1985; Eraqi,2006) are appropriate strategies for financial institutions. Moreover, as many other service businesses, the intangibility of the services in the financial service sector highlights the importance of customer relationship management

(Liang and Wang, 2004:58). Furthermore, Yavas (2007:30) reports that financial institutions realise that delivering quality service to customers is necessary for their success and survival. He adds that frontline employees are perhaps the most critical link in the provision of superior service to customers during service encounters, which determine customers' service quality perceptions.

Although the financial institutions have recently taken much interest in generating perceived value for the customer, they have experienced high levels of dissatisfaction on the part of users (Johnston, 1997). This is because it is not yet fully understood exactly what consumers want. While it seems to be clear to everybody how important it is for the firm to compose an offer of value to the customer, it does not seem to be clear what the value perceived by the customer is (Roig *et al.*, 2006:267). Thus, there is a need for new strategies that add values for customers, which in turn will improve customer behaviour and enhance CRM performance. Therefore, this study adopts intrafirm social capital as a new strategy to enhance the customer- organisation relationship in the financial services sector.

Regarding the relationship between intrafirm social capital and CRM, Harris (1990) and Gremler *et al.* (1994) found that the quality of service provided to the bank's external customers was influenced by the quality of service existing between departments within the bank. According to literature, intrafirm social capital aims to improve service quality within an organisation, while CRM seeks to improve the quality of relationship between customer and an organisation. Furthermore, there are indications that social capital and CRM are more advanced in the retail financial services sector than in most industry sectors. This view is supported by a number of sources. For example, Table 1-2 shows a search of the Science Direct database for citations on social capital and CRM in financial services up to 20 March 2011. This study selects the science direct database because this database contributes a large amount of social capital and CRM studies among all other databases as mentioned earlier in Table 1-1. This search found that citations of articles on social capital dealing with financial services exceeded citations of articles in other industry groups (representing 45 per cent of all social capital studies).

Table 1-2 Summary of research results for social capital and CRM in financial sector

Data base	SC	SC& FI	CRM	CRM & FI	SC&CRM
Science direct	108983	49070 (45%)	65320	19,314 (30%)	0

SC= Social capital
CRM= customer relationship management
FI=Financial institutions (banks or insurance or financial capital market or brokerage firms).
At: 20 March 2011.

Furthermore, a review of the CRM literature using the science direct database in Table 1-2 shows that CRM is more widely discussed within financial services than within any other industry group (represents 30 per cent of total CRM studies). Despite the high percentage of social capital and CRM studies in financial sector, there is a shortage of studies that integrate both notions in one study. In addition there is a scarcity of such studies in Middle East countries such as Egypt. In Egypt financial sector consists of banks and non -bank financial intermediaries as shown in Figure 1-2. Figure 1-2 displays the structure of financial institutions in Egypt.

Figure 1-2 Structure of financial sector in Egypt
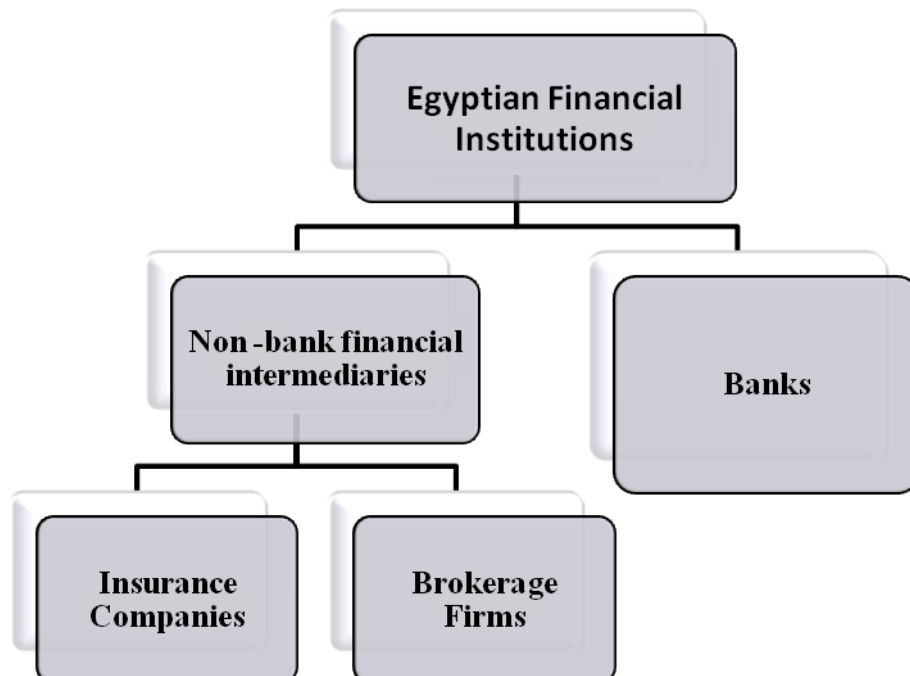
Regarding to Figure 1-2, the main structure of financial service institutions in Egypt encompasses 39 banks (regulated by Central Bank of Egypt), 25 insurance companies (regulated by Egyptian Insurance Supervisor Authority) and 144 brokerage firms (registered in Cairo and Alexandria Stock Exchange or CASE). All these companies have plentiful branches in Egyptian cities and towns, with new branches opening regularly. The Egyptian financial institutions introduce variety of financial products for customers. The main activities of banks are: deposits, lending, transferring money and investments whereas, insurance companies introduces property and life insurance services. Finally, brokerage firms focuses on creating and managing portfolio of securities for their customers.

The financial service institutions contribute in developing the Egyptian economy. For example, banks in Egypt is the dominant financial institutions, as they control most of the financial flows and possess most of the financial assets (Bolbol *et al.*, 2005:192). In addition, the banking system is the main resource for all economic activities in Egypt. Bank loans to private business are forecasted to grow by 9.5% during 2008- 09 to 2010-11[5]. On the other hand, the brokerage firms' assets as a ratio of GDP equal about 42%, which represents one-third the assets of the banking system. On the other hand, total investments of insurance companies in the Egyptian market are 32 billion pounds during the past fiscal year 2009/2010, compared with 29 billion pounds for the year 2008/2009, a growth rate of 10%. Moreover, the net income from these investments is 3 billion pounds for the year 2009/2010, compared to 2.3 billion for the previous year with growth rate of 23%. Therefore, the financial sector in Egypt is asserting itself as the engine of Egypt's economic development.

The financial sector in Egypt was chosen as the research setting for a variety of reasons. Firstly, in the bank-customer context many factors from theory are relevant, like continuous relationships, customer satisfaction, customer commitment, customer loyalty and customer retention. Secondly, an empirical study in the financial service industry is an interesting field for studying the service provider-consumer relationship (Berry, 1995;

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[5] http://www.researchandmarkets.com/reports/660025/

Verhoef, 2003; Michalski, 2004; Ryals, 2005). Thirdly, there is a shortage of financial service studies that integrate both social capital and CRM in one framework. Fourthly, churn costs in financial service institutions such as banks are $15 billion a year (Sciglimpaglia and Ely, 2006). Fifthly, most transactions in the financial sector in Egypt are done face to face, whereas online transactions in banking are less than 7% and those for brokerage firms 5% and for insurance activities are less than 1%. Sixthly, Egypt is one of the Middle East countries, which suffer a scarcity of social capital and CRM studies in the financial sector. Finally, service sectors contribute 48.6% of the total GDP of Egypt. Furthermore, this financial sector contributes 9.9% of the total GDP of service sectors as illustrated in Figure 1-3.

Figure 1-3 The contributions of financial sector in the GDP of Egyptian service sectors
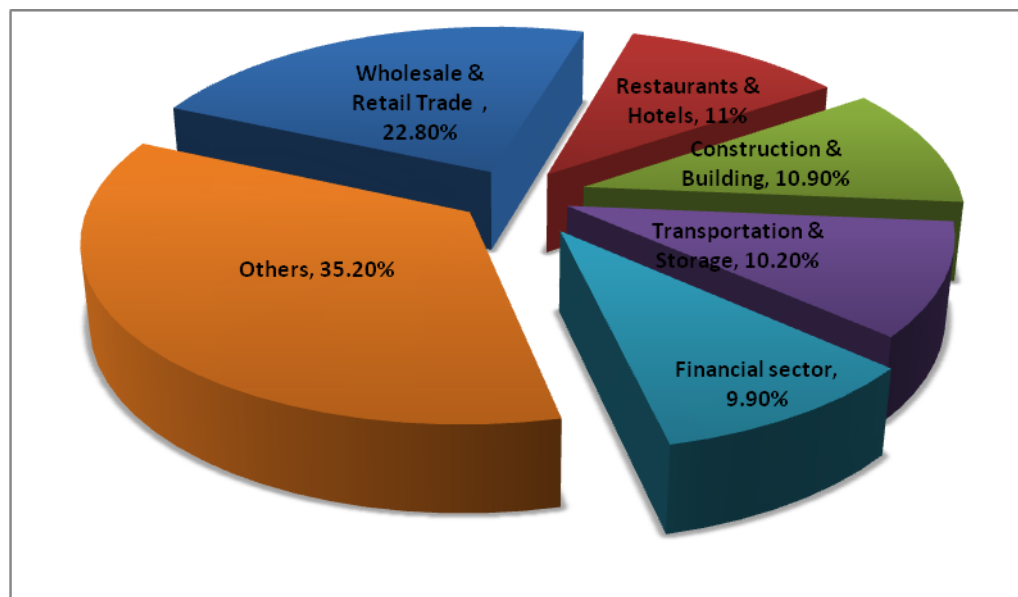
Source: Ministry of Economic Development in 2010

1.7 Contributions of the Study

Based on the argument in the research problem section, this research contributes to what is currently a limited amount of empirical research on investigating the antecedents of social capital dimensions and the relationships among social capital dimensions. It will augment the existing literature through developing a conceptual model, which integrates social capital with CRM performance through the mediating roles of customer

satisfaction and customer commitment. Furthermore, this study added to the contributions of social capital concept in marketing field.

Firstly, this study contributes to the social capital literature by deconstructing the components of social capital to create taxonomy of terms that can be used to describe the attributes of social capital as it relates to the financial service industry. In addition, the study introduced the predictors of social capital that give better understanding to social capital mechanism within the financial service industry in Egypt. These contributions supports in establishing a robust theory of social capital.

Secondly, this study indicated that social capital can be applied to understand the mechanism underlying customer - organisation relationship. Thus, this study developed and tested a model linking intrafirm social capital with CRM performance. The validation of the proposed model of this study was conducted using data collected from the financial industry in Egypt. This study validated the direct effect of social capital on customer satisfaction and highlighted that customer satisfaction contributes significantly to the development of CRM performance (loyalty and retention) within the financial service industry in Egypt.

Thirdly, this study assist Egyptian financial service institutions managers to pay heed to the role of intrafirm social capital in building the internal, bonding social capital within units and within the firm in the Egyptian financial service institutions. Adopting bonding social capital helps managers to develop effective and trusting relationships among employees by helping them to coordinate their efforts at both the organisational and personal levels. In the Egyptian financial services business adopting bonding social capital is one of the strategies to improve customer behaviour (satisfaction and commitment) and CRM performance (loyalty and retention).

Finally, this thesis contributed to "*AMA SERVCIG International Research Conference*", which held in Porto/Portugal from 17-19 of June 2010. The title of this paper is "the effect of relational capital on customer commitment: The case of Egyptian financial services institutions" was presented. This paper and this thesis represent contributions to social capital studies in marketing field. The revised version of this paper was submitted to *Journal of Business Research.*

1.8 Organisation of the Thesis

This study has nine chapters. This first chapter introduces social capital and CRM and provides a brief background on those two notions and their advantages and the contribution of integrating the two notions in one framework. The research problem has been identified and the research questions stated. A justification for the research has been argued from both the perspective of generating theoretical knowledge and providing a contribution to emerging business practice. The methodology has been briefly described and justified. The chapter also provides an overview of the financial service sector and justifies why Egypt was taken as a field of the study. On this foundation the thesis proceeds to the following chapters with a detailed description of the research conducted.

Chapters 2, 3, 4 and 5 explore the relevant literature to connect this study with the extant literature on the issues under consideration. Chapter two discusses in depth the different views in defining social capital, the gaps in literature on the multidimensional viewpoint of social capital and the dimensions and sub-dimensions of intrafirm social capital. Chapter three provides intensive background on the values of adopting social capital. In this chapter customer satisfaction and customer commitment were used as indicators of the organisational perceived values that managers expect as a result of adopting social capital. Chapter four discusses the evolution of the CRM concept, its advantages and the main dimensions of CRM performance: customer loyalty and customer retention. Both dimensions are discussed intensively in this chapter. Finally, chapter five seeks to explore the tripartite conceptual framework that integrates social capital, organisational perceived values and CRM performance in one framework. In addition, the chapter develops an integrative model to explore the proposed relationships among research variables.

Chapter six addresses the methodological issues, dealing specifically with the epistemological, ontological and axiological considerations in research, which are appropriate for this study. The chapter further outlines the quantitative method approach used to investigate the phenomena. In this chapter the quantitative research design and data collection procedures are presented. The chapter also presents and outlines the methods used to analyse the data and test the proposed hypotheses. In addition, a

justification of the multivariate data analysis methods used in the study is provided. The seventh chapters of this thesis deal with the quantitative results of the thesis.

Chapter seven documents the analysis of the quantitative phase by presenting both univariate and multivariate analysis of the data. The EFA results are presented for independent, mediating and dependent variables of the study. The chapter also reports on the structural model and the measurement model used and the results of the hypotheses tested. In addition this chapter illustrated the results of regression models of the hypotheses tested. Chapter eight discusses the findings of the research in relation to the extant literature. Finally, in Chapter nine the contributions of the thesis to the extant literature are identified in addition to the research implications. Moreover, the limitations of the research, and opportunities for further research are presented. In conclusion, the following diagram outlines the thesis's chapters and the major questions that had been answered through these chapters.

Figure 1-4 Outline of Thesis

Ch 1
Identification of
Research Problem
Research Questions
Research Objectives
Research Significance

Q1: What have I done?

Ch 2
The Relevant
Literature Review of
Social Capital

Ch 3
The Relevant Literature
Review of Perceived value of
adopting intrafirm social
capital

Ch 4
The Relevant Literature
Review of CRM
performance

Ch 5
Conceptual Model Development

Q2: Why have I done it?

Ch 6
Research Methodology
Research philosophy,
methodological assumption approach,
strategy and choice
Data Collection
Sampling Process
Questionnaire Design
Reliability and validity concerns
Background of thesis's Multivariate
Techniques

Q3: How did I do it?

Ch 7
Research Results
Univariate Analysis
Multivariate Analysis:
EFA, CFA, SEM and Regression Models

Ch 8
Interpretations and Discussion of Key Findings

Q4: What have I found?

Ch 9
Conclusion and Recommendations

Q5: What are the implications?

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Chapter 2 Social Capital

This chapter aims to provide a critical review of social capital literature to understand how social capital is formed within business organisations. The chapter is organised in four parts. The first part reviews the role of social capital in different disciplines in social sciences. The second section discusses the definitions and features of social capital. After this discussion, we review the relevant literature related to the multi-dimension viewpoint of social capital. This reviewing explores the gaps in social capital studies relating to how social capital is formed and how can it work within an organisation. The third part, discuss in-depth the different dimensions of social capital and the antecedents of these dimensions. This chapter is closed by exploring the interrelationships between social capital dimensions and developing an integrated model of social capital.

2.1 Introduction

The concept of social capital is arguably one of the most successful exports from sociology to other social sciences and to public discourse during the last two decades. Social capital has been explored by numerous scholars in social science disciplines: sociology (Jacobs,1961; Coleman 1988; Warde *et al.*, 2005; Crow ,2006), psychology (Watson and Papamarcos, 2002; Tansley and Newell , 2007), political science (Woolcock , 1998; Inkeles, 2000; Tsai, 2007) economy (Berggren and Jordhal, 2006; Chou , 2006), business studies (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Inkpen and Tsang, 2005; Cooke, 2007; Tokman *et al.*, 2007), management (Hoffman *et al.*, 2005; Tien-Shang and Sukoco, 2007) and marketing (Grängsjö and Gummesson, 2006; Tsai, 2006).

Social capital is also a rich theme has been studied under aspects such as: trust (Adler and Kwon, 2002; Hoffman *et al.*, 2005), social support (Lin and Dumin, 1986; Offer and Shneider, 2007; Perry *et al.*, 2008), social exchange (Tsai and Ghoshal, 1998; McKee and Wang, 2006), social resources (Lizardo, 2006; Hemmings, 2007), embeddedness (Nahapiet and Ghoshal, 1998; Cooke, 2007; Welch *et al.*, 2007), relational resources (Luo *et al.*, 2004; Chattopadhay, 2007), and social networks (Baker, 1990; Uzzi, 1997; Warde *et al.*, 2005; Anderson, 2008; Smedlund , 2008). Numerous

scholars view social capital as an element of social context across different disciplines (Lin, 1999; Johen and Shon, 2008). This remarkable range of applications has been accompanied by a great deal of confusion concerning the actual meaning of social capital and growing controversy about its alleged effects (Portes, 2000; Koka and Prescott, 2002). Therefore, there is a need to understand the social capital concept deeply.

2.2   Social Capital Concept

To give a clear picture about how social capital is formed and accumulated within a social network, we review the social capital literature. This reviewing includes in depth discussion to two important issues: definitions of social capital and its features. Definitions of social capital help to explore the main components of social capital and its major outputs. On the other hand, social capital features assist to understand different issues of social capital.

2.2.1   Social Capital Definitions

Many scholars consider social capital as a buzzard word (Lappe and Du Bois, 1997; Narayan and Pritchett, 1997). Lappe and Du Bois (1997: 119) argue that social capital is "*a wonderfully elastic term".* It is a concept that means *"many things to many people"* (Narayan and Pritchett, 1997: 2). Hirsch and Levin (1999) demonstrate that a uniform and valid definition of social capital is still in the early stages. After a review of the literature, Table 2-1 displays some of social capital definitions.

Table 2-1 Some of social capital definitions in the literature

Study/Date	Definition
Baker, W. (1990: 619)	"A resource that actors derive from specific social structures and then use to pursue their interests; it is created by changes in the relationship among actors".
Coleman, J. (1990: 302)	"Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics' in common: They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure".
Boxman *et al.* (1991: 52)	"The numbers of people who can be expected to provide support and the resources those people have at their disposal".
Bourdieu and Wacquant (1992: 119)	"The sum of the resources, actual or virtual, that accrues to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition".

Burt, R. (1992: 9)	"Friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital".
Loury, G. (1992: 100)	Naturally occurring social relationships among persons which promote or assist the acquisition of social capital and traits valued in the marketplace... an asset which may be as significant as financial bequests in accounting for the maintenance of inequality in our society".
Schiff, M. (1992: 160).	"The set of elements of the social structures that affects relations among people and are inputs or arguments of the production and/or utility function"
Portes and Sensenbrenner (1993: 1323)	"Those expectations for action within a collectively that affect the economic goals and goal-seeking behavior of its members, even if these expectations are not oriented toward the economic sphere".
Fukuyama, F.(1995:10)	"The ability of people to work together for common purposes in groups and organizations".
Putnam, R. (1995: 67)	"Features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit".
Fukuyama, F. (1997: 18)	"Social capital can be defined simply as the existence of a certain set of informal values or norms shared among members of a group that permit cooperation among them".
Inglehart, R.(1997: 188)	"A culture of trust and tolerance, in which extensive networks of voluntary associations emerge".
Pennar, K. (1997: 154)	"The web of social relationships that influences individual behavior and thereby affects economic growth".
Nahapiet and Ghoshal, (1998: 243)	"The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network".
Portes, A.(1998: 6)	"The ability of actors to secure benefits by virtue of membership in social networks or other social structures".
Woolcock, M.(1998: 153)	"The information, trust, and norms of reciprocity inhering in one's social networks".
Knoke, D. (1999: 18)	"The process by which social actors create and mobilize their network connections within and between organizations to gain access to other social actors' resources".
Leana and Van Buren (1999: 538).	"A resource reflecting the character of social relations within the firm".
Lin (2001: 29)	"Social capital is typically defined as "resources embedded in a social structure that are accessed and/or mobilized in purposive action".
Adler and Kwon (2002:10)	"Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor".
Inkpen and Tsang (2005:151)	"The aggregate of resources embedded within, available through, and derived from the network of relationships possessed by an individual or organization"

Source: The author

According to Table 2-1, social capital is embedded in the social realm (Putnam, 1995b; Wasko and Faraj, 2005). It is understood as a useful resource created from the network of social ties that develop trust relationships among network members (Coleman, 1990; Kim, 2007). It puts forward the structure of social relationships between network members (Putnam, 1995b). Baker (2000) expresses social capital as the resources available in and through personal and business networks. Social capital also represents a social structure that creates value within a network (Coleman, 1990). This structure of social connections within a network is affected by members' shared history, levels of interdependence, frequent interactions, and closed structures (Nohria and Eccles 1992; Nahapiet and Ghoshal 1998; Wasko and Faraj, 2005). These social connections between individuals represent social ties that create values and facilitate actions within a network (Merlo *et al.*, 2006).

Moreover, social capital has many forms of social ties that affect relationships among people and help in achieving network goals (Schiff, 1992; Nahapiet and Ghoshal, 1998). The forms of these ties are derived from a set of informal values and norms shared among members of social networks. These social ties support interactions among them (Fukuyama, 1997; Nahapiet and Ghoshal, 1998; Woolcock, 1998; Putnam, 1995; Coleman, 1990). Cohen and Prusak (2001) also depict social capital as a stock of active social connections among people. Those connections are developed through the availability of trust, mutual understanding, and shared values and behaviours among network members (Nahapiet and Ghoshal, 1998; Tasi and Ghoshal, 1998; Lu and Yang, 2011). These social connections bind network members together that support cooperative action within a network. This cooperative action is a form of collective social actions (Portes, 1998). Social connections also serve as an enabler of continued network development, supporting coordination and co-operation of network ties among network members (Anderson and Jack, 2002; Smith and Lohrke, 2008).

After a review of these definitions, we can identify three principals, which represent the main components of the broad definition of social capital. Firstly, social capital embodies all actual or potential resources that aim at building social networks among network members (Loury, 1992; Inglehart, 1997; Portes, 1998; Leana and Van Buren, 1999; Inkpen and Tsang, 2005). Secondly, these social networks establish social process that creates mutual values between network actors through producing and mobilising their network connections in order to exchange resources (Baker, 1990; Nahapiet and

Ghoshal, 1998; Knoke, 1999). Finally, accumulating this social process over time engenders trust among network members (Putnam, 1995; Inglehart, 1997; Nahapiet and Ghoshal, 1998; Woolcock, 1998). Therefore, any social capital definition should include those three principals to reflect the core meaning of social capital and to understand how it can be formed and accumulated within a network. Understanding the core meaning of social capital helps in realising the main features of this concept.

2.2.2 Features of Social Capital

A review of the literature shows that social capital has been studied at two levels: individual and firm (Portes, 1998; Leana and van Buren, 1999; Inkpen and Tsang, 2005). At the individual level, social capital can be considered as a resource of an individual (Coleman, 1988; Boxman, *et al.*, 1991; Bourdieu, 1992; Woolcock, 1998; Adler and Kwon, 2002). Burt (1992) asserted that on individual level, social capital referred to social relationships, which characterised by frequent and close contacts among network members (e.g. friendship). The individual level of social capital can explain how social relationships among network members are formed (Van Oorshot and Arts, 2005; Kaasa, 2008).

Social capital can also be analysed at firm level (Ahuja, 2000; Burt, 2000; Subramaniam and Youndt, 2005; Tsai and Ghoshal, 1998; Coleman, 1990). Social capital at firm level is related to the relationship among organisations not individuals. It is related with establishing social connections outside the organisations (Fountain, 1998; Knack and Keefer, 1997; Landry *et al.*, 2002; Dakhli and De Clercq, 2004). This study focuses on exploring how can social relationships between employees affect on customer service. Therefore this study adopts the individual level of social capital. Moreover, several scholars also analyse social capital under two other facets: "bonding" and "bridging" (Putnam, 2000; Woolcock and Narayan, 2000; Adler and Kwon, 2002; Crowe, 2007).

Bonding social capital refers to the creation of dense relationships and networks within organisations (Taylor, 2004) through developing tightly woven networks among employees (Crowe, 2007). On the other hand, bridging social capital is often described as the weaker relationships and networks that tie an organisation with its outside environment (Granovetter, 1986). Bridging social capital strengthens the organisation's network of relationships with outside stakeholders such as suppliers (Lawson *et al.*,

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2008; Rottman, 2008), customers (Merlo *et al.*, 2006; Tsai, 2006) and competitors (Burt, 1997; Grängsjö and Gummesson, 2006). According to social capital literature, bonding social capital reflects the intrafirm social capital, while bridging social capital describes the interfirm viewpoint (Adler and Kwon, 2002). Yli-Renko *et al.* (2002:283) reported that interfirm social capital resides in the exchange relationships between firms and individuals representing these firms. On the other hand, intrafirm social capital refers to the extent and quality of relationships between individuals and units within a given organisation (Leana and Pil, 2006).

Intrafirm social capital also represents the mechanisms and structures that support employees within organisations/ departments to use their expertise collaboratively for the benefit of the organisation and its customers (Kilpatrick, 2002). Therefore, selecting either bonding or bridging viewpoints of social capital depends on the context of relationships among network members. If the context of relationships is within an organisation this reflects the bonding and intrafirm social capital. On the other hand, the external context of relationships reproduces the bridging and interfirm social capital viewpoint. Since, the main aim of this study is to explore the role of social capital within an organisation in enhancing CRM performance, thus the current study adopts the intrafirm social capital or the bonding viewpoint.

Adopting intrafirm social capital achieve many benefits for an organisation (Tsai and Ghoshal, 1998; Hitt *et al.*, 2002; Arregle *et al.*, 2007; Sirmon *et al.*, 2007; He *et al.*, 2009). Intrafirm social capital can reduce transactions costs, facilitate information flow, knowledge creation and sharing (Nahapiet and Ghoshal, 1998; Burt, 2000; Lin, 2001; He *et al.*, 2009), improve creativity (Perry-Smith and Shalley, 2003; Arregle *et al.*, 2007) and facilitate internal coordination (Sirmon *et al.*, 2007). It can facilitate the coordination of activities and projects across various functional units, establish effective decision making processes, and help in implementing the desired decisions (Hitt *et al.*, 2002). It also facilitates actions that create values (Adler and Kwon, 2002) and develops innovation within networks(Tsai and Ghoshal, 1998; Rothaermel, 2001).

Furthermore, Lin (2001a) reveals that developing intrafirm social capital enhances employees' abilities to do work through facilitating exchange of resources. Intrafirm social capital also has a positive impact on human resources performance (Lin and Dumin, 1996; Fernandez *et al.*, 2000; Akdere, 2005; Schoemakher *et al.*, 2006). It

creates intellectual capital within an organisation (Nahapiet and Ghoshal, 1998; Kwantes, 2007) and achieves cross-functional team effectiveness (Hargadon and Sutton, 1997; Hogel *et al.*, 2003; Young, 2005). Intrafirm social capital also improves the efficiency of internal communication, which increases the efficiency of technical problem-solving within an organisation (Cohen and Levinthal, 1990).

Despite the important role of social capital in adding values to organisations, it "*is difficult, if not impossible, to quantify and measure social capital*" because it is composed of "*intangible and ephemeral qualities*" (Bresnen *et al.*, 2005:237). According to literature, social capital can be measured through two approaches; the unidimensional and the multidimensional. The unidimensional viewpoint in measuring social capital describe it as one general factor (Smith, 2002; Watson and Papamarcos.2002; Kerpelman and White, 2006; Krause *et al.*, 2007; Potts, 2007; Tokman, 2007). Respect to multidimensional viewpoint, social capital encompasses three main integrated dimensions; structural, cognitive and relational. This study adopts the multidimensional perspective of intrafirm social capital because it helps in explaining the mechanism of social capital within an organisation and exploring the antecedents of social capital dimensions and investigate the interconnections among them which, represent two of the main objectives of this study.

To give butter understanding to the multidimensional viewpoint of social capital this study reviews social capital studies that adopt the multidimensional perspective. The comments and analysis in this section are based on a systematic review of the literature relating to social capital and creating values for business organisations. All the studies included in this review are detailed in Table 2-2, which also lists the key characteristics for each study. This reviewing explains the contributions of these studies and the major issues of these studies. It also helps in identifying potential gaps in these studies which represent the major contributions of this study. The main points that surface in this literature are outlined in Table 2-2.

Table 2-2 Summary of recent studies of social capital

Author/s	Research problem/ aim	Social capital context/ dimensions	Methodological approach	Data analysis	Relevant findings	Journal
Nahapiet and Ghoshal (1998)	To explore the role of social capital dimensions in creating intellectual capital.	Intrafirm/ -Structural, -Cognitive, -Relational	Theoretical paper	-	*Results:* 1. Social capital facilitates the creation of new intellectual capital. 2. Organisations are conduct to the development of high levels of social capital.	Academy of Management Review, Vol. 23 No. 2, pp. 242–266.
Tsai and Ghoshal (1998)	To examine the relationships among structural, cognitive and relational dimensions of social capital and between those dimensions and the patterns of resource exchange and product innovation within the company.	Intrafirm/ -Structural, -Cognitive, -Relational	*Survey:* Three managers from each business unit within 15 large companies in north of America, Europe and Asia. -these companies are worked in home appliances, communication computers products and industrial equipment	1. *Confirmatory factor analysis (CFA):* Convergent validity (achieved): Discriminant validity (achieved) 2.*Structural equation modelling (SEM) using LISREL 8* -SEM Model fit: Chi-square/df 7.94/15, p=0.93 GFI 0.89 NFI 0.95	*Significant effects:* 1.Structuralcapital (social interaction) →Relational capital (Trust and Trustworthiness)(+) 2.Cognitive capital(shared vision) →Relational capital (+) 3.Structural capital →Resources exchange and combination(+) 4.Structural capital→ Resources exchange and combination(+) 5.Relational capital→ Resources exchange and combination(+) 6.Resources exchange	Academy of Management Journal, Vol. 41 No.4, pp. 464–476.

					and combination →Value creation (product innovation) (+)	
Tsai (2000)	Investigate the impact of interaction between social capital and strategic relatedness on intraorganisational linkages.	Intrafirm/ -Structural, -Relational	*Survey* 36 large multinational companies in US, worked in edible oil, beverages, fast foods, and dairy products.	*Proportional Hazards Model:* Conduct seven Cox regression analyses. By using the graphs of the natural logarithms of cumulative baseline hazard functions to check the proportionality assumption.	*Significant effects:* 1.Structural capital (network centrality) → New linkage creation for tangible exchange (+) Relational capital (trustworthiness) → New linkage creation for tangible exchange (+) + Strategic relatedness → New linkage creation for tangible exchange (+) 2. Structural capital → New linkage creation for intangible exchange (+) Relational capital → New linkage creation for intangible exchange (+) Strategic relatedness → New linkage creation for intangible exchange (+) Structural capital → quality and formation of inter-organisational linkages (+). Relational capital →quality and formation	Strategic Management Journal, 21(9), pp 925–939.

					of inter-organisational linkages (+). Strategic Relatedness → quality and formation of inter-organisational linkages (+)	
Seibert *et al.* (2001)	To explore the impact of social capital on career success.	- Intrafirm/ -Structural, -Relational	*Survey:* A total of 2781 questionnaires to graduate business, Master of Business Administration and engineering school alumni randomly selected from large and private Midwestern Universities, 773 questionnaires delivered. The response rate was 28% -448 usable questionnaires.	1.*Exploratory factor analysis:* - average of Cronbach's alpha is 0.75 2.*Structural equation modelling (SEM) using LISREL 8* -SEM Model fit Chi-square/df (165.25/82)= 2, p<0.01 AGFI 0.91 CFI 0.96 NFI 0.92 RMSEA = 0 .05	*Significant effects:* 1.Weak ties →Contact at higher levels (+) 2.Weak ties → Contact on other functions (+) 3.Weak ties →Access to information (-) 4.Weak ties→ Career sponsorship (-) 5. Contact on other functions→ Access to information (+) 6. Contact at higher levels → Access to information (+) 7. Contact at higher levels→ Career sponsorship (+) 8. Access to information → Access to resources(+)	Academy of Management Journal, 44 (2), pp. 219–237.
Yli-Renko *et al.* (2001)	To examine the effects of social capital in key customer relationships on knowledge	Interfirm/ -Structural, -Relational	*Survey* Of total 936 questionnaires send to technological companies in UK,	1. *Confirmatory factor analysis (CFA):* Convergent validity (achieved), Discriminant validity (achieved)	*Significant effects:* 1.Structural capital (social interaction)→ knowledge acquisition (+) 2. Structural capital	Strategic Management Journal, 22(6/7), pp 587–613.

			180 usable questionnaires were valid with response rate 19%.	2.*Structural equation modelling (SEM) using LISREL* -SEM Model fit: Chi-square/df 1.7 GFI 0.89 NFI 0.91	(customer network ties) →knowledge acquisition (+). 3. Relational capital (customer network ties) →knowledge acquisition (+). 4. knowledge acquisition→ new product development (+) 5. knowledge acquisition →Technological distinctiveness (+) 6. knowledge acquisition →Sales costs (-)	
Chua (2002)	To examine the influence of social interaction on the process of knowledge creation	- Intrafirm/ -Structural, -Cognitive, -Relational	*Survey:* - E mail questionnaires were sent to 102 academic staff from an institute of higher education.	*1.Measuring reliability with inter- item correlation:* Cronbach's alpha is ranged from 0.73 to 0.91. 2.*Multiple regressions analysis* F= 29.274 with *p=.000* Adjusted $R^{2 =}$ 0.629	*Significant effects:* 1.Structural capital → Quality of modules (+) 2. Cognitive capital → Quality of modules (+) 3. Relational capital → Quality of modules (+)	Journal of Intellectual Capital 3 (4), pp. 375–392.
Sporleder and Moss (2002)	To explore the role of social capital in knowledge management.	- Interfirm/ -Structural, -Cognitive, -Relational	Theoretical paper	-	*Results:* Social capital plays an important role in managing knowledge in supply chain.	American Journal of Agricultural Economics, 84(5), pp.1345-1352.
Watson and Papamarco	To investigate the impact of social	Intrafirm/ -Cognitive,	Survey-based questionnaire.	*Hierarchical regression analysis:*	*Significant effects:* 1. Cognitive capital	Journal of Business and Psychology, 16(4), pp 537–

s (2002)	capital on organisational commitment level within organisation.	-Relational	Network analysis was adopted.	-R^2 is ranged between (0.478 to 0.493 to0.502 to 0.508). -F significant	(quality of communication) → organisational commitment (+). 2. Relational capital (interpersonal trust) → Organisational commitment (+). 3. Relational capital (shared normative framework) → organisational commitment (+). 4. Social capital (communication, trust and shared normative framework) →organisational commitment (+).	552.
Kumar and Worm (2003)	To assesses the impact of social capital on the dynamics of Sino-northern European business negotiations.	Interfirm/ -Structural, -Cognitive, -Relational	*Exploratory studies* *Conducted through in-depth interviews* with 24 Northern European and 15 Chinese managers.	*1.Categorisation* *2.Pattern coding* *3.Quotations*	*Results:* 1. *Cognitive capital* has three dimensions; Mutual Understanding for Goals/ Objectives, Similarity in Persuasive Styles and Communication Effectiveness. 2*. Structural capital* has four dimensions; Network Ties, Network Configuration, Intermediaries and Communication	International Marketing Review, 20(3),pp. 262–285.

| | | | | | Configuration.
3. _Relational capital_ has six dimensions; Attitude Towards Time, Perception of Trust, Managing Face, Information Exchange ,Perception of Flexibility and Management of Obligations
4. One of the main findings indicated that cognitive social capital and shared understanding among actors facilitates ease of business negotiations. | |
| Liao and Welsch (2003) | To investigate (1) how the three dimensions of social capital interact among themselves in technology-intensive new ventures, (2) to what extent the interactions are different from those in the context of non-technology-based new ventures, (3) | Intrafirm/
-Structural,
-Cognitive,
-Relational | Survey:
Of total 528 questionnaires sent to nascent entrepreneurs, 462 questionnaires (150 technology-related entrepreneurs and 312 non-technology entrepreneurs) are usable with response rate 0.87.5%. | 1. _Confirmatory factor analysis (CFA):_
Convergent validity (achieved), Discriminant validity (achieved)
2._Structural equation modelling (SEM) using LISREL 8_
-SEM Model fit
Model 1(technology-related entrepreneurs):
Chi-square 32.3, p=0.31
GFI 0.95
AGFI 0.92 | _Significant effects:_
Model 1:
1.Structural capital(Social interaction and ties) →Relational capital(Trust and trustworthiness) (+)
2.Cognitive capital (Shared vision) → Relational capital (+)
3.Structural capital → Cognitive capital (+)
4. Relational capital → Growth aspiration.
Model 2:
1.Structural →capital | Journal of High Technology Management Research.14 (1), pp. 149–170. |

					Relational capital (+) 2.Cognitive → capital Relational capital (+) 3.Structural → capital Cognitive capital (+) 4. Structural capital → Growth aspiration (+) 5. Relational capital → Growth aspiration	
	how the three dimensions of social capital influence the growth aspiration of the technology-based new ventures in a way that is different from non-technology-based ventures.			RMSR ≤ 0.06 *Model 2*(non-technology-related entrepreneurs): Chi-square 87.64, p=0.473 GFI 0.94 AGFI 0.91 RMSR ≤ 0.06		
Requena (2003)	To investigate the relationships between social capital and satisfaction and quality of the life in workplace.	- Intrafirm/ -Structural, -Relational	*Survey :* The data came from the Spain's ECVT survey conducted in 2001. -number of sample is 4800 cases.	*1.Exploratory factor analysis*: - average of Cronbach's alpha is ranged from 0.60 to 0.77 *2.Multiple regressions analysis* *Model 1*(social capital Job satisfaction) F= 318.44 with *p=.000* $R^{2}=$ 0.283 *Model 2*(social capital Quality of work life) F= 69.707 with *p=.000* $R^{2}=$ 0.358	*Significant effects:* Social capital → job satisfaction (+) Social capital → Quality of work life (+)	Social Indicators Research, 61 (3), pp. 331–360.
Edelman *et al.* (2004)	To argue that using social capital has both	Intrafirm/ -Structural, -Cognitive,	*1. An exploratory qualitative study of two case*	*1.Data coding* *2.Cateogrisation*	*Results:* 1. *Structural capital* in organisational contextual	British Journal of Management, 15(1), pp 59–69.

	benefits and drawbacks for organisations, and that these positive and negative aspects of social capital occur simultaneously.	-Relational	companies in the UK called Teleco and Constructco. 2. *The study interviewed 16 individuals, in* two organizations over a two-month period, logging 15 total interview hours		refers to how factors such as restructuring can leave holes in social capital network rendering social networks ineffective. Structural capital facilitates gaining access to information. However, relying on social capital networks in changing organizations is likely to be problematic. 2. At the group level, *cognitive social capital* creates strong bonds that are based on shared language and experience that facilitates knowledge sharing. However, at the organizational level, these bonds can obstruct problem-solving efforts by creating barriers between groups with different sources of knowledge or ideas, thus reducing creativity and innovation. 3. *Relational capital* can create a helpful, trusting, knowledge-sharing environment. However, if abused, it can induce	

					individuals to closely guard their knowledge and thus, be a disincentive to knowledge dissemination.	
Huysman and De Wit (2004)	To discuss conditions of the second wave of knowledge management that might overcome the problems of first wave of knowledge management.	- Interfirm/ -Structural, -Cognitive, -Relational	Theoretical study	-	*Results:* 1. Social capital can be seen as the core component of the second wave of knowledge management.	Knowledge and Process Management 11 (2), pp. 81–92.
Lang (2004)	To explore the impact of social capital on knowledge integration	Interfirm/ -Structural, -Cognitive, -Relational	Theoretical study		*Results*: 1. This paper is a first step in identifying the different modes of knowledge integration. 2. It provides the theoretical evidence for the relationship between social capital and knowledge integration.	Journal of Knowledge Management 8 (3), pp. 89–105.
Newell *et al.* (2004)	To explore the role of bridging and bonding forms of social capital on knowledge integration in ERP	Intrafirm/ -Structural, -Cognitive, -Relational	*1. Interviews 2. Observation. 3. Case study.* conducted between 1997 and 2000 in Quality	1.*Content analysing , 2.Conceptualisation*	*Results:* 1. There are two forms of social capital; bridging and bonding. 1.1Bridging occurs where ties between people are 'weak'.	British Journal of Management, 15(1), pp. 43– 47.

	project team.		Engineering Limited (QEL), which is a large global engineering corporation, headquartered in the Midlands, UK. -interviews with 19 (9 from ERP/HR project team members (9) and the 10 from process owners .		1.2 Bonding occurs where ties between people are 'strong'. 2.For the effective mobilization of 'weak' social capital bridges for collective purposes, there is first a need to create 'strong' social capital bonds within the project team so that it becomes a cohesive social unit that will be able to effectively integrate knowledge that is acquired through members' bridging activity. 3. Strong bonds and shared understanding are essential for knowledge acquisition in project teams. 4. Bridging access to weak ties develops additional learning opportunities.	
Hatzakis *et al.* (2005)	To propose a framework, based on social capital theory, for conceptualising the effects of change management	Intrafirm/ -Structural, -Cognitive, -Relational	*Case study:* - FinCo, a large financial institution in the U.K., was deemed an appropriate case for studying the social capital	*Documentation analysis*	*Results:* 1. *Structural capital* has two dimensions; Network ties and Network configuration. 2. *Cognitive capital* has two dimensions; Sharing narratives and Sharing	European Journal of Information Systems, 14(1), pp 60– 74.

	interventions in the poor relationship between business and IT colleagues.		approach to change management evaluation.		codes and language. 3.*Relational capital* has four dimensions; Trust building, Obligation enhancement' Identification fostering and Norm changes 4. There is a potential merit in using a social capital approach for the evaluation of change management interventions that aim to improve the collaboration between business and IT, during (information systems development) ISD and beyond.	
Inkpen and Tsang (2005)	To examine how social capital dimensions of networks affect the transfer of knowledge between network members across different types of networks (Intracorporate Network, Strategic Alliance and Industrial District).	Intrafirm/ -Structural, -Cognitive, -Relational	Theoretical paper	-	*Results:* 1. The study partially integrates the voluminous network and organisational knowledge literature. 2. It provides a common predictive basis for comparing knowledge transfer determinants across different types of networks (Intracorporate Network, Strategic Alliance and Industrial District).	Academy of Management Review, 30 (1), pp. 146-165.

| Liao and Welsch (2005) | To answer the following questions: 1. Are there significant differences in social capital between nascent entrepreneurs and the general public (control variables)? 2. Are there significant differences in social capital between technology and non technology nascent entrepreneurs? 3. How do the three dimensions of social capital interact among themselves across different sample groups? | Intrafirm/ -Structural, -Cognitive, -Relational | *Survey:* Sample from PSED in USA (A longitudinal database of individuals who were in the process of starting business) -Of total 1494 mail questionnaires 544 were usable (376 for nascent entrepreneurs and 168) for general public). | 1. Confirmatory factor analysis (CFA): Convergent validity (achieved), Discriminant validity (achieved) 2.Structural equation modelling (SEM) using LISREL 8 SEM Model fit *Model 1*(full sample; nascent entrepreneurs + general public): Chi-square 32.3, p=0.31 GFI 0.99 AGFI 0.98 RMSR ≤ 0.032 *Model 2*(nascent entrepreneurs): Chi-square 87.64, p=0.473 GFI 0.98 AGFI 0.97 RMSR ≤ 0.037 *Model 3*(general public): Chi-square 87.64, p=0.473 GFI 0.96 AGFI 0.93 RMSR ≤ 0.054 | *Significant effects:* *Model 1:* 1.Cognitive capital (Shared norms) → Relational capital (Trust and trustfulness)(+) 2.Structural capital (Social interaction and ties) → Cognitive capital (+) *Model 2:* 1.Cognitive capital → relational capital (+) 2.Structural capital → Cognitive capital (+) *Model 3:* 1.Structural capital → Cognitive capital (+) -There are no significant differences in social capital between the general public (control variables) and the nascent entrepreneurs. | Journal of Small Business Management; 3 (4), pp..345-362. |
| Wasko and | To examine how | Intrafirm/ | *Survey :* | 1.*CFA:* | *Significant effects:* | MIS Quarterly 29 (1), pp. |

Faraj (2005)	individual motivations and social capital influence knowledge contribution in electronic networks	-Structural, -Cognitive, -Relational	Of total 597 questionnaires sent to a notional legal professional association in US ,173 usable questionnaires were received , response rate 29%	Convergent validity (achieved), Discriminant validity (achieved) 2.*Partial least squares (PLS) structural equation modelling: analysis* *Model results:* R^2 for helpfulness to contribution= 0.19 R^2 for volume of contribution= 0.37	1.Structural capital (centrality) → Helpfulness of contribution (+) 2.Structural capital (centrality → Volume of contribution (+) 3.Cognitive capital (tenure in field) → Volume of contribution (+) 4.Relational capital (commitment) → Helpfulness of contribution (-) 5.Relational capital (reciprocity) → Volume of contribution (-)	35–57.
Chiu *et al.*(2006)	To integrate the Social Cognitive Theory and the Social Capital Theory to construct a model for investigating the motivations behind people's knowledge sharing in virtual communities.	Intrafirm/ -Structural, -Cognitive, -Relational	*Survey* The research model was tested with data from members of one professional virtual community called BlueShop. BlueShop is a well-known IT-oriented virtual community in Taiwan.	1. Confirmatory factor analysis (CFA) Convergent validity (achieved), Discriminant validity (achieved) 2.*Structural equation modelling (SEM) using LISREL* -SEM Model fit: Chi-square/df 1.95 CFI 0.94 NNFI 0.93 RMSEA 0.056	*Significant effects:* 1.Structural capital (social interaction ties) → Quantity of Knowledge Sharing (+) 2. Cognitive capital (shared vision) → Quantity of Knowledge Sharing (-) 3. Cognitive capital (shared vision) → Knowledge Quality (+) 4. Cognitive capital (shared language) →	Decision Support Systems 42(3), pp. 1872–1888.

			326 questionnaires distributed usable questionnaires 310, response rate .95%.		Knowledge Quality (+) 5. Relational capital (reciprocity) → Quantity of Knowledge Sharing (+) 6. Relational capital (trust) → Knowledge Quality (+) 5.Relational capital (identification) → Volume of contribution (+)	
Hsieh and Tsai (2007)	To investigate the influence of technological capability and social capital, two key resources for innovation in high tech firms, on the adoption of a launch strategy for innovative products.	Interfirm/ -Structural, -Cognitive, -Relational	*Survey:* Of total 119 e mail survey sent to Taiwan's IC design firms listed in the 2002 Semiconductor Annual Databook, 90 usable questionnaires used. -response rate 75.63%	1.*Exploratory factor analysis:* - average of Cronbach's alpha ranged from 0.55 to 0.928 2.*Multiple regressions analysis*	*Significant effects*: 1. Technological capability → adoption of a launch strategy for innovative products (+). 2. Social capital → the launch strategy for innovative products (+). 3. Technological capability → Market growth → the launch strategy for innovative products becomes weaker (-).	Industrial Marketing Management, 36(4), pp. 493−502.
Presutti *et al.* (2007)	To explore (examine) the role of social capital in knowledge acquisition of high-tech start-ups.	-Interfirm / -Structural, -Cognitive, -Relational	1.*In depth interviews* *2. Survey:* Of the 130 firms contacted, 107 accepted the proposal of a	*Hierarchical regression* Model fit : F= 47.15, P < 0.001, R^2 =0.84	Significant effects: 1.Structural capital → knowledge acquisition(+) 2. Cognitive capital → knowledge acquisition(+) 3. Relational capital → knowledge acquisition(+)	International Business Review 16 (1), pp. 23–46.

			personal interview in order to complete the questionnaire, yielding a response rate of 82 per cent.			
Chow and Chan(2008)	To further develop an understanding of social capital in organizational knowledge-sharing.	-Intrafirm/ -Structural, -Cognitive, -Relational	Survey: A total of 582 questionnaires to Hong Kong managers randomly selected from the directory of D&B Key Decision Makers in Hong Kong 2004/05 from 136 companies, 190 usable questionnaires delivered with a response rate of 33%	1. *Confirmatory factor analysis (CFA)* Convergent validity (achieved), Discriminant validity (achieved) 2.*Structural equation modelling (SEM) using LISREL 8.3* -SEM Model fit: Chi-square/df =1.887 CFI = 0.92	Significant effects: 1.Structural capital → knowledge sharing (+) 2. Cognitive capital → knowledge sharing(+) 3. Relational capital → knowledge sharing(-)	Information & Management 45(7), pp.458–465.
Montazemi *et al.* (2008)	To explore the ways information flow mediates brokerage relationships that are enacted through interaction of actors in the FI	Interfirm/ -Structural, -Cognitive, -Relational	*Interviews:* Face-to face interviews with 90 fixed-income senior managers and traders from 25 financial institutions in Canadian Financial	*Within-case and cross-case analysis*	Results: 1. Structural capital has two dimensions; network ties and network configuration. 2.cognitive capital has two dimensions (Shared Language and Codes and Shared Narratives)	Journal of Management Information Systems, 25(1), pp. 233–266.

	market and assess its effect on the use of electronic trading systems.		Institutions market .		3.Relational capital has four dimensions(trust, norms, obligations and expectations and identification) 4. The market structure of embedded interpersonal ties enables participants to take advantage of information asymmetry for profit taking.	
He *et al.*(2009)	To explore the dimensions of social relationship and its importance in the use of a knowledge management systems (KMS) by employees.	Intrafirm/ -Structural, -Cognitive, -Relational	*1.Observations: 2.Case study: 3.Survey:* a web-based survey, Out of the 200 users randomly selected from the KMS, 53 (26.5%) returned completed responses.	1.*A ''patternmatching'' technique in the data analysis phase:* An independent-samples t-test analysis was conducted 2.*A bivariate correlation technique (Pearson correlation)*	*Significant effects:* 1.Structural capital (strength tie) → Social relationships(+) 2.Cognitive capital (shared norms) → Social relationships(+) 3.Relational capital (trust) Social → relationships (+) 4. Social relationships → knowledge management systems usage(+)	Information & Management, .46(3), pp. 175–180.
Villena *et al.*(2010)	To evaluate how social capital in its cognitive, relational, and structural forms contributes to or impedes value	Interfirm/ -Structural, -Cognitive, -Relational	*Survey:* - Of total 730 questionnaires to supply chain managers in Spanish firms, 132 usable	1.*Exploratory factor analysis:* - Cronbach's alpha ranged between 0.70 and 0.84, 2.*Confirmatory factor analysis (CFA)*	*Significant effects:* 1. Cognitive capital → operational performance (+) 2. Relational capital → operational performance (+)	Journal of Operations Management, doi:10.1016/j.jom.2010.09.001.

	creation within buyer-supplier relationships (BSRs).		questionnaires were delivered, with a response rate of 18.12%. 2. Secondary data came from the (Sistemas de Análisis de Balances Ibéricos or SABI database).	Convergent validity (achieved), Discriminant validity (achieved) 3. *Ordinary least squares (OLS) regression.*	3.structural capital → strategic performance (+) 4. Cognitive capital → strategic performance (+) 5. Relational capital → o strategic performance (+)	
Lu and Yang (2011)	Propose a model to examine the mechanism by which social capital contributes to information exchange in virtual communities	Interfirm/ -Structural, -Cognitive, -Relational	*Survey:* Of total 2375 questionnaires sent students enrolled in a major university in Chengdu in China, 475 usable questionnaires were delivered, with a response rate of 20%.	1. *Confirmatory factor analysis (CFA)* Convergent validity (achieved), Discriminant validity (achieved) 2. *Structural equation modelling (SEM) using Partial least square (PLS).*	*Significant effects:* 1. Cognitive capital → Relational capital (+) 2. Structural capital has no influence on relational capital. 3. Structural capital → information quantity. 4. Structural capital has almost no influence on information quality.	Decision Support Systems, 50(2), pp 529-538.

Respect to Table 2-2, there is no agreement among scholars about social capital dimensions. Some studies see multidimensional social capital encompasses two dimensions; structural and relational (Tsai, 2000; Seibert *et al.*, 2001; Yli-Renko *et al.*, 2001; Requena, 2003) or cognitive and relational (Watson and Papamarcos, 2002). While most social capital studies consider multidimensional social capital cover three dimensions; structural, cognitive and relational (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Chow and Chan, 2008; Montazemi *et al.,* 2008; He *et al.,* 2009; Villena *et al.*, 2010; Lu and Yang, 2011). In addition, the multidimensional perspective of social capital is classified into two main categorises: intrafirm (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Tsai, 2000; Seibert *et al.*, 2001; Chua, 2002; Chow and Chan, 2008; He *et al.,* 2009) and interfirm (Yli-Renko *et al.*, 2001; Montazemi *et al.,* 2008; Villena *et al.*, 2010; Lu and Yang, 2011).

Social capital studies confirm that both intrafirm and interfirm viewpoints create values for an organisation. Intrafirm social capital contributes in creating an intellectual capital (Nahapiet and Ghoshal, 1998) and supporting resource exchange between organisational units that encourage product innovation (Tsai and Ghoshal, 1998; Inkpen and Tsang, 2005). It establishes intraorganisational linkages (Tsai, 2000), enhances career success for employees within an organisation (Seibert *et al.*, 2001) and encourages knowledge creation (Chua, 2002). In addition, it improves knowledge sharing (Chiu *et al.*, 2006; Chow and Chan, 2008), supports knowledge management (He *et al.*, 2009) and increases growth aspiration for new ventures (Liao and Welsch, 2003).

Intrafirm social capital also encourages satisfaction and quality of the life in workplace (Requena, 2003), increases level of organisational commitment (Watson and Papamarcos, 2002) and improves knowledge integration (Newell *et al.*, 2004). On the other hand, interfirm social capital helps in enhancing knowledge acquisition and knowledge exploitation (Yli-Renko *et al.*, 2001; Presutti *et al.*, 2007), managing knowledge (Sporleder and Moss, 2002; Huysman and De Wit 2004), affecting on the dynamics of business negotiations (Kumar and Worm 2003) and improving knowledge integration (Lang, 2004). It is also supporting launch strategy for innovative products (Hsieh and Tsai, 2007), impeding value creation within buyer-supplier relationships (Villena *et al.*, 2010) and improving information exchange (Lu and Yang, 2011).

Reviewing studies in Table 2-2, show that there are three different methodological approaches to study social capital: theoretical (Newell *et al.*, 2004; Inkpen and Tsang, 2005), qualitative (Hatzakis *et al.*, 2005; Montazemi *et al.*, 2008;) and quantitative (Tsai and Ghoshal, 1998; Tsai, 2000; Seibert *et al.*, 2001; Yli-Renko *et al.*, 2001; Chua, 2002; Watson and Papamarcos, 2002; Liao and Welsch, 2005; Chiu *et al.*, 2006; Hsieh and Tsai, 2007; Presutti *et al.*, 2007; Chow and Chan, 2008; He *et al.,* 2009; Villena *et al.*, 2010; Lu and Yang, 2011). Theoretical studies in Table 2-1 represent 18.5% of total studies. On the other hand, qualitative studies are 22.5%, whereas quantitative studies equal (59%) of the total studies reviewed in Table 2-2. These varieties in methodological approaches of social capital studies enrich literature and give butter understanding to the formation of social capital and its effects.

These methodological approaches in social capital contribute in enrich literature in different aspects. Firstly, the theoretical studies support the conceptualisation of social capital and develop social capital theory (Nahapiet and Ghoshal, 1998; Sporleder and Moss, 2002; Huysman and De Wit 2004; Lang, 2004). Secondly, the qualitative methodology studies used different methods to collect data such as interviews, observations and case studies. They also used different methods to analyse qualitative data such as content analysis, categorisation, pattern coding, quotations, within-case and cross-case analysis and documentation analysis (Kumar and Worm 2003; Edelman *et al.*, 2004). These varieties in qualitative data collection and analysing enrich social capital literature and support in establishing robust theory for social capital. Finally, some of quantitative studies used survey method (questionnaire) to collect data and one of statistical methods to test the research hypotheses such as Multiple Regression Models (6.25%), Proportional Hazards Model (6.25%), Hierarchical Regression Analysis (12.5%) and Structural Equation Modelling (50%)[6]. According to these parentages SEM represents the most common multivariate techniques used in social capital studies

Moreover, there are some studies used mixture of two statistical multivariate techniques in one study such as exploratory factor analysis (EFA) and multiple regression, which represent 12.5% of total studies (Requena, 2003; Hsieh and Tsai, 2007) and exploratory

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[6] This percentage describes the percent of social capital studies that adopted SEM in the quantitative studies in Table2-2.

factor analysis and SEM, which equal 12.5% (Seibert *et al.*, 2001; Villena *et al.*, 2010). Despite the varieties of multivariate techniques in testing hypotheses there is a shortage in social capital studies that combine exploratory factor analysis, SEM and regression analysis in one study. Thus, the current study will be one of the first studies that used mixture of EFA, SEM and multiple regression techniques in one study. Research contributions in the social capital literature have evolved gradually. However, the field has remained quite fragmented in terms of its research scope. As a consequence of this fragmentation a number of gaps and deficiencies can be discerned:

1. The literature specifically displays a gap in terms of empirical studies, which examine how social capital enhances CRM performance. For instance, it is little recognised that an intrafirm social capital represents a resource and co-producer, in addition to the commonly identified roles of improving organisation-customer relationship.

2. The literature exhibits gaps in terms of recognising reliable structures for intrafirm social capital dimensions and their antecedents. Although there is a body of literature that covers different areas of social capital, the predictors of social capital dimensions are an area that is seldom addressed. This deficiency is due to the nature of the interconnections among those dimensions (Liao and Welsch, 2005), which makes developing a reliable structure for social capital dimensions and their predictors are more difficult.

3. Inkpen and Tsang (2005) recommended that future studies should examine the interrelationships among social capital dimensions. However, limited numbers of scholars have investigated these interconnections (Tasi and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Lu and Yang, 2011).

4. Most scholars who have examined the role of intrafirm social capital on adding values to an organisation (Tasi and Ghoshal, 1998; Liao and Welsch, 2003; Inkpen and Tsang, 2005; Liao and Welsch, 2005; Leana and Pil, 2006; Krause *et al.*, 2007; Tien-Shang and Sukoco, 2007; Tokman *et al.*, 2007) focus only on how intrafirm social capital enhances the internal processes functioning, supports product innovation and improves customer service and do not pay enough attention to the impact of intrafirm social capital on customer behaviour.

5. Although organisations as social entities are heavily influenced by personal and social interaction processes (Granovetter 1985) most of them are faced with a challenge to understand social capital phenomenon and its implications for the workplace and organisation performance (Akdere, 2005: 1). Griffith and Harvey (2004:245) also report that there is need for "*understanding the development and leveraging of different types of social capital*" and its "*influence on a firm's ability to enhanced customer value delivery*".

6. In addition, social capital is not well documented in the marketing domain, especially in the customer relationship management area. Based on Figure 2-1, the ratio of social capital studies in management journals is 63%, whereas marketing journals contribute in social capital studies with 7%. This low ratio of social capital studies in marketing journals reflects shortage of social capital studies in marketing field. Moreover, there are deficiencies in the literature related to the impact of social capital on customer behaviour (Holland and Johnsson, 2003; Moran, 2005; Johansson, 2007; Krause *et al.*, 2007; Lawson *et al.*, 2008). Therefore, there is a need for more studies to investigate the role of social capital in establishing positive customer behaviour.

Figure 2-1 Contributions of journals in multidimensional view of social capital
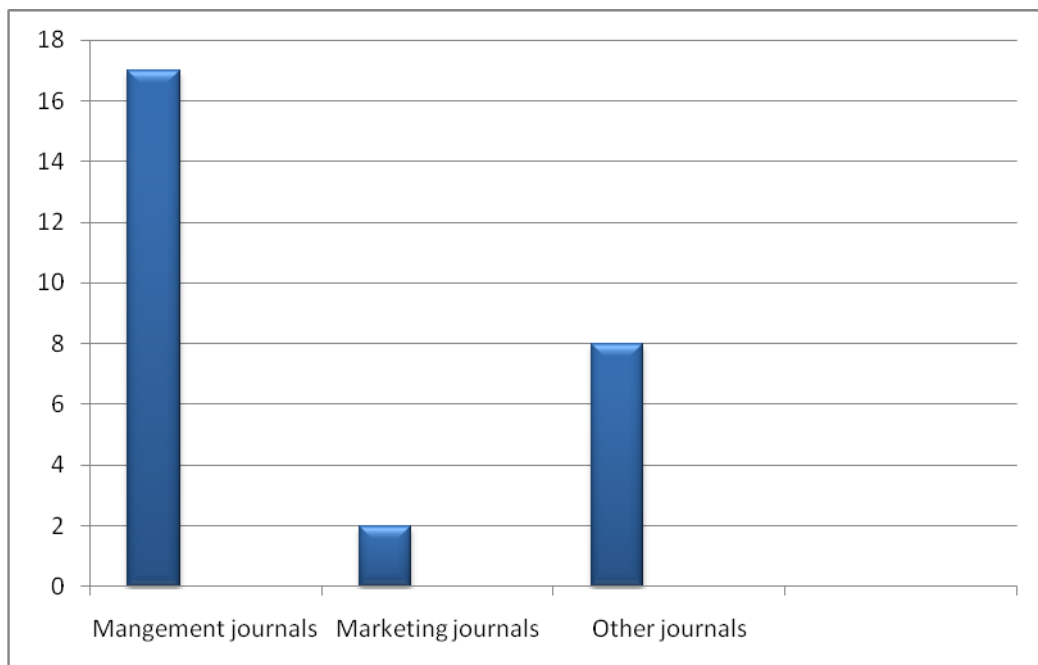
Source: Table 2-2.

Therefore the current study aims to fill these gaps through achieving the following objectives. Firstly, it explores the antecedents of intrafirm social capital dimensions. Secondly, it develops a reliable structure for intrafirm social capital dimensions and their predictors. Thirdly, it investigates the interrelationships among intrafirm social capital dimensions. Fourthly, it investigates the impact of intrafirm social capital on customer behaviour (satisfaction and commitment). Finally it develops a comprehensive model that integrates intrafirm social capital with CRM framework. To achieve these objectives this study defines social capital as all actual or potential resources that aim at building social networks among network members through improving social interactions and establishing common goals among employees that engender trust among them. Nahapiet and Ghoshal (1998:243) called these resources social capital dimension, which include three dimensions: structural, cognitive, and relational. In the next sub-sections we discuss the dimensions of social capital in depth.

2.3   Social Capital Dimensions

Since Putnum (1995:72) recommended further research into social capital and argued that "*we must sort out the dimensions of social capital, which is clearly not a unidimensional concept",* a large numbers of scholars have responded to this call and work towards exploring the dimensions of social capital (Newell *et al.* 2004; Wasko and Faraj, 2005; Chiu *et al.*, 2006; Presutti *et al.*, 2007; Chow and Chan, 2008; Villena *et al.*, 2010). Despite the large numbers of those studies a limited number of them investigate the interrelationships among social capital dimensions (Tsai and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Lu and Yang, 2011). Nahapiet and Ghoshal (1998) are the pioneers who identified several theoretical dimensions of intrafirm viewpoint of social capital. They mentioned that intrafirm social capital consists of three basic dimensions: structural, cognitive and relational.

Several scholars support the viewpoint of Nahapiet and Ghoshal (1998) that social capital is a multidimensional concept (Tsai and Ghoshal, 1998; Hatzakis *et al.*, 2005; Inkpen and Tsang, 2005; Li, 2006; Hsieh and Tsai, 2007; He *et al.*, 2009; Villena *et al.*, 2010; Lu and Yang, 2011). This study adopts Tasi and Ghoshal (1998), Liao and Welsch (2003) and Lu and Yang (2011)'s frameworks which focuses on intrafirm of

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social capital. These frameworks exemplify the role of intrafirm social capital in adding values to organisation processes. Therefore the following sub-sections discuss each social capital dimension, the factors that constitute each dimension and the interrelationships between social capital dimensions.

2.3.1 Structural Capital

The structural dimension of social capital has been studied extensively as a dimension under two different notions; intellectual capital and social capital (Firer and William, 2003; Bozbura, 2004; Ordonez de Pablos, 2004; Chen *et al.*, 2005; Chen, 2008). This study focuses on structural capital as one dimension of social capital. The developing of structural capital as one dimension of social capital is derived from the contribution of many theories such as social network theory, social exchange theory, social resource theory, Burt's theory (1992) of structural holes, social resource theory and social capital theory (Granovetter, 1973; Burt, 1992; Seibert *et al.*, 2001; Wasko and Faraj, 2005). Structural capital involves the pattern and structure of relationships between network actors (Adler and Kwon, 2002; Liao and Welsch, 2003). These relationships are derived from routines associated with basic information sharing and the level of involvement between network members (Krause *et al.*, 2007).

Structural capital establishes structural embeddedness among network members through building formal and informal connections. These connections facilitate generation, acquisition and transfer knowledge among network actors (Ordonez de Pablos, 2004; Li, 2006). These connections also create strong social and interpersonal ties between network members, which facilities closeness and establish an effective structure of social interactions among them (Nahapiet and Ghoshal, 1998; Butler and Purchase, 2008; Lee, 2008; He *et al.*, 2009). Several scholars report that efficient structural capital reflects high level of social interactions among network actors (Larson, 1992; Liao and Welsch, 2003). This study adopts the viewpoint that operationalised structural capital in terms of social interactions as recommended by Putnam (1995), Tasi and Ghoshal (1998), Yli-Renko *et al.* (2001), Liao and Welsch (2003, 2005), Chiu *et al.* (2006), Taylor (2007), Ramström (2008) and Lu and Yang (2011).

Mehrabian and Russell (1974) describe social interactions as a series of personal exchanges. It describes a collection of behaviours such as small group interactions,

friendship formation, participation, and helping (Bitner, 1992; Zemke and Shoemaker, 2007). Chen and Huang (2007) also mention that social interactions refer to the extent to which network members interact with each other in terms of communication and cooperation. Furthermore, a social interaction is concerned with how an overall network configuration assists or hinders the flow of resources among network actors (Butler and Purchase, 2008). Social interactions may be through members across departments or may be extended to include members across the entire organisation (Van Maanen, 1976; Louis, 1980; Friedlander, 1987; Heffner and Rentsch, 2001). According to literature, structural capital is more precisely conduct of social interactions – both internal and external to an organisation (Tsai and Ghoshal, 1998; Bresnen *et al.*, 2005; Sherif *et al.*, 2005; Vainino, 2005).

Intrafirm (internal) social interactions express interactions between individuals within social entities such as an organisation (Hornsby *et al.*, 2002; Kuratko *et al.*, 2005; De Clercq and Sapienza, 2006; De Clercq *et al.*, 2009). These social interactions are developing because of the social bonding that occurs between members of the same company, often across subunits (Taylor, 2007). In contrast, interfirm (external) social interactions describe the interactions between organisation and its external stakeholders (Griffith and Harvey, 2004; Merlo *et al.*, 2006; Presutti *et al.*, 2007; Tokman *et al.*, 2007; King and Burgess, 2008). As we mentioned earlier in section 2-2 this study adopts the intrafirm viewpoint of social capital, thus this study adopts the internal structural capital. The internal structural capital is considered as the facilitator of exchange resources within an organisation and the enhancer for social interactions between employees (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Tsai, 2000; Seibert and Liden, 2001; Yli-Renko *et al.*, 2001; Chua, 2002; Liao and Welsch, 2003 Kumar and Worm, 2003; Requena, 2003; Lang, 2004; Hsieh and Tsai, 2007; Montazemi *et al.*, 2008; Lu and Yang, 2011).

Undoubtedly, organisations as social entities aim to support social interactions among their employees to enhance their performance (Chen, 2007; Villena *et al.*, 2010). Kilpatrick (2002) mentions that social interactions help employees to use their knowledge and skills along with the knowledge and skills of others through informal social networks to enhance the internal functions. Social interactions enable employees to get to know each other and share resources and information, which facilitate achieving their tasks (Ramström, 2008). Moreover, social interactions would encourage

cooperative behaviour, thereby facilitating the development of new forms of association (e.g. friendships) and innovativeness within an organisation (Putman, 1993; Liao and Welsch, 2003). It also plays an important role in explaining execution-oriented managerial tasks to employees (Krause *et al.*, 2007), which creates many advantages for organisation.

Chen (2007) argues that social interactions have positive effects on an organisation's competitive advantages. Chen *et al.* (2005) also assert that structural capital enhances firm profitability and revenue growth. Furthermore, Liao and Welsch (2003) find that social interactions have positive and direct effects on the growth aspiration of non-technology-related entrepreneurs. In addition, Tasi and Ghoshal (1998) argue that social interaction has a positive and significant impact on departmental information exchange and product innovation. Villena *et al.* (2010) also reveal that social interactions among employees have a positive direct impact on strategic performance of an organisation. Therefore, we need to explore how social interactions are developed within organisations.

Effective social interactions have been developed within organisations through encouraging elaboration, questioning and free discussion among employees (Liaw and Huang, 2000; Northrup, 2001; Kreijns *et al.*, 2003). Furthermore, in depth discussion of key issues among employees (Sivadas and Dwyer, 2000; Chiu *et al.*, 2006; Huang *et al.*, 2008) and sharing resources and ideas informally among employees (Friedlander, 1987; Heffner and Rentsch, 2001; Bonner and Calantone, 2005) facilitate those interactions. Castro and Sa'ez (2008) express the same view. They argue that the purpose of social interactions is to provide an appropriate context for communication, cooperation, adhesion and identity. In addition, effective social interactions between employees enhance the decision- making process within an organisation and supports employees to enhance customer service. High customer service increases customer satisfaction and customer commitment (Young, 2000; Merlo *et al.*, 2006; Su *et al.*, 2008).

To maintain a positive effect of social interactions within organisations we need to explore its elements and discuss how it can extend for a long time. A review of the literature suggests that social interactions among employees are affected by a number of factors such as open communication (Hutt *et al.*, 2000; Hoegl *et al.*, 2003; Ramström, 2008), cooperation (Yli-Renko *et al.*, 2002; Wasko and Faraj, 2005;Powers and Reagan,

2007), collaboration (Northrup, 2001; Kreijns *et al.*, 2003; Ku *et al.*, 2007), affiliation and social support (Philippe and Seiler,2006; Herington *et al.*, 2009; De Clercq *et al.*, 2009) and sharing knowledge (Tsai and Ghoshal, 1998; Inkpen and Tseng, 2005; De Clercq and Sapienza, 2006; Chen and Huang, 2007). Therefore, we discuss these elements in depth and explore how can they foster social interactions among employees and enhance organisation performance.

In terms of communication, frequent and open communications create a strong sense of positive association among employees that supports social interactions (Ruyter *et al.*, 2001). Undoubtedly, the availability of appropriate quantity and quality of communication channels in intraorganisational settings will increase the transferability of critical information and knowledge among organisational departments that improve the level of interactions (Hoegl *et al.*, 2003). In addition, open communication should make employees be aware of new options and provide them with the opportunity to locate the expertise required to handle any work problems (McLean, 2005; Merlo *et al.*, 2006). Open communication is also needed to establish relationships among employees (Deborah and Caldwell, 1988; Deeter-Schmelz, 1997). Furthermore, open communication establishes positive emotional and motivational effects on the relationships between employees (Hu and Korneliussen, 1996) and encourages cooperation among them.

Cooperation between employees requires leveraging their resources and organising their efforts to produce outcomes better than one member would achieve alone (Anderson and Narus, 1990; Powers and Reagan, 2007). Roschelle and Teasley (1995:70) stated that ''*cooperation is accomplished by the division of labour among participants, as an activity where each person is responsible for a portion of the problem solving*''. In addition, cross-functional cooperation within organisations is an important instrument for the effectiveness of the organisation's internal operations (Leana and van Buren, 1999; De Clercq *et al.*, 2009). Furthermore, cross-functional cooperation creates a favourable situation to share novel ideas and new knowledge between employees (Nahapiet and Ghoshal, 1998; Contreras-Castillo *et al.*, 2004). This cooperation helps an organisation in exploiting opportunities (Floyd and Lane, 2000; Mom *et al.*, 2007) and enhancing its performance (Anderson and Narus, 1990; Powers and Reagan, 2007). Many scholars also mention that cooperation is a key element in group learning

(Gunawardena, 1995; Gilbert and Moore, 1998; Liaw and Huang, 2000; Northrup, 2001; Kreijns *et al.*, 2003).

Group learning within an organisation could be increased through encouraging collaboration among employees. In this study we define collaboration as the process of exchanging expertise from the professional to non professional employees as recommended by Ku *et al.* (2007). Merlo *et al.* (2006) reveal that close social interactions among employees give frequent opportunities to learn from each other and help in solving organisation's problems (Johnson *et al.*, 1985; Garrison, 1993; Kreijns *et al.*, 2003). Collaboration also helps new employees to learn new job tasks from old members (Zaccaro and Collins, 1988; Heffner and Rentsch, 2001). It represents one of the critical variables in the socialisation process, especially in improving work experience. The efficiency of the socialisation process needs frequent interactions among employees, which in turn enhance affiliation and social support within an organisation (Cousins *et al.*, 2006).

Ramström (2008) points out that social interaction extends to emotional or affective responses, which includes feelings of familiarity, personal recognition, and social support among employees. High level of affiliation and social support among employees enhance informal talks, sharing inner feelings, disclosing personal secrets and exchange gifts (Yau *et al.*, 2000). Social support in the workplace produces a high degree of positive social relationships among employees (Dormann and Zapf, 1999; Wanberg and Banas, 2000; Contreras-Castillo *et al.*, 2004) that increases social interactions (De Clercq *et al.*, 2009). Affiliation and social support enable employees to express their feelings and desires freely to their direct supervisors (Aspinwall and Taylor, 1992; Wiesenfeld *et al.*, 2001). Certainly, relationships among employees, which characterised by a high level of affiliation and social support create positive attitudes among them (Johnson and Johnson, 1989; Philippe and Seiler, 2006). These positive attitudes increase social interactions among employees overtime (Floyd and Lane, 2000; De Clercq and Sapienza, 2006) that support exchange knowledge among employees(Gold *et al.*, 2001; Droge *et al.*, 2003; Seines and Sallis, 2003; Lin and Lee, 2005; Sivadas and Glazer, 2006; Chen and Huang, 2007).

Several scholars reported that exchange knowledge is facilitated by intensive social interactions among employees (Lane and Lubatkin, 1998; Yli-Renko *et al.*, 2000; Zahra

et al., 2000; Inkpen and Tseng, 2005). Taking a similar view Tsai (2002), Chen and Huang (2007) suggest that social interactions among employees within an organisation enable them not only to have access to information and resources, but also to efficiently exchange and utilise knowledge. Tappeiner *et al.*, (2008) also reveal that knowledge diffusion in social networks need social interactions among employees. In the same line, Nahapiet and Ghoshal (1998) indicated that social interaction plays an important role in exchanging informal knowledge through cooperation, communication and learning among organisational employees. Tsai (2002) argues that knowledge sharing among competing units within the same organisation enhance carries synergistic behaviour among employees, which improves social interactions. After the perivous disscussion, social interactions in this study refer to the extent to which employees within an organisation interact with each other in terms of communication, cooperation, collaboration, affiliation and social support and sharing knowledge.

Despite the large number of social capital studies, Lawson *et al.* (2008:457) reveal that there is a need for developing reliable and valid measures of structural capital. Furthermore, there is a shortage of social capital studies that explore the dimensions of structural capital (Inkpen and Tsang, 2005). Therefore, the current study aims to explore the predictors of internal structural capital and establishe valid and reliable measures for structural capital and its predictors. To achieve these objectives we review the literature to identify the dimensions of internal structural capital. A review of the literature, propose three antecedents of internal structural capital. The literature reveals that those factors have a positive effect on establishing social interactions among employees. These predictors are: strength of network ties between actors (Nahapiet and Ghoshal, 1998; Seibert and Liden, 2001; Kumar and Worm, 2003; Hatzakis *et al.*, 2005; Montazemi *et al.*, 2008), network configuration or employee organising within an organisation (Krackhardt, 1989; Nahapiet and Ghoshal, 1998; Kumar and Worm, 2003; Bresnen *et al.*, 2005; Hatzakis *et al.*, 2005; Inkpen and Tsang, 2005; Lee, 2008) and stable of information flow within an organisation or network stability (Burt, 1992; Liao and Welsch, 2003; Inkpen and Tsang, 2005; Butler and Purchase, 2008). The following sub-sections discuss in depth the predictors of internal structural capital.

2.3.1.1 *Network Ties*

Network ties refer to the strength of links among network actors (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Balkundi and Kilduff, 2005; Inkpen and Tsang, 2005; Wasko and Faraj, 2005; Cummings and Higgins, 2006; Lee, 2008). They reflect the shape of relationships among network members (Granovetter, 1982, 1985; Tsai and Ghoshal, 1998; Adler and Kwon, 2002; Inkpen and Tsang, 2005; Chiu *et al.*, 2006; Fliaster and Spiess, 2008). A social tie is one of the systematic methods to develop social interactions within an organisation (Anderson *et al.*, 1994; Yli-Renko *et al.*, 2001; Ramström, 2008). Social ties facilitate inter -member social interactions and support knowledge exchange within an organisation (Inkpen and Tsang, 2005).

Furthermore, social ties facilitate access to the whole organisational resources formally or informally (Haythornthwaite, 2002) and provide the opportunity to combine and exchange knowledge among employees (Tsai and Ghoshal, 1998; Chiu *et al.*, 2006). Nahapiet and Ghoshal (1998:252) argued that "*network ties influence both access to parties for combining and exchanging knowledge and anticipation of value through such exchange*". The access to all resources within an organisation is expected to be easy in case of strong ties between employees (Balkundi and Kilduff, 2005; He *et al.*, 2009). In strong social relationship ties, discussion and constructive disagreement are limited (Nelson, 1989). On the other hand, the access to new or novel information and dissemination of ideas among employees with strong social ties is limited (Gales and Boynton, 1992). Therefore understanding the type of social ties among employees is an important matter in encouraging social interactions within organisations.

One of the most important contributions to understanding the pattern of social ties among network actors is the work of Granovetter (1982, 1985) who identified three types of social ties: strong, weak and absent. In this study the focus will be on the strong ties, which represent the most common type of social network ties within an organisation (Gales and Boynton, 1992; Haythornthwaite, 2002; He *et al.*, 2009; Hossain and de Silva, 2009). From the literature, it appears that there are three factors that establish strong ties within organisations: frequent contacts, intimacy (Granovetter, 1982; Wellman, 2001; Cummings and Higgins, 2006; Rau *et al.*, 2008; Fliaster and Spiess, 2008) and level of resource exchange (Garton *et al.*, 1997; He *et al.*, 2009; Hossain and de Silva, 2009).

Frequent contacts reflect regular and intense contacts among employees. Frequent contacts strength social ties among employees through different ways. Firstly, they improve information and knowledge sharing (Burt, 2000; Helmsing, 2001; Lin, 2001). Secondly, they establish greater assistance among employees (Reagans and McEvily, 2003). Thirdly, they minimise the level of friction among employees (Katsikeas, 1989; Boyle *et al.*, 1992; Uzzi, 1997; Oke, *et al.*, 2008). Fourthly, they encourage employees to support each other (Miller and Lefcourt, 1982; Hu and Smith, 2004) and foster exchange of advices among them (Hu and Smith, 2004; He *et al.*, 2009). Fifthly, they enable employees to discuss their social and personal matters freely with their colleagues (Ritter *et al.*, 2002; Hu and Smith, 2004). Finally, they foster cooperation among employees (Krackhardt, 1992; Becerra and Gupta, 2003; Wasko and Faraj, 2005). Thus, these advantages beside intimacy establish strong social ties among employees (Rau *et al.*, 2008).

Intimacy is another driver of shaping social ties among employees (Granovetter, 1982; Wellman, 2001). Rau *et al.* (2008) reveal that intimacy reflects the quality of interactions and relationships among employees. Intimacy is derived from continues motivation to emotional closeness and open communication. Intimacy among employees reproduces feelings of closeness and emotional bonding, involving strength of liking and moral support (Tolstedt and Stokes, 1983; Rau *et al.*, 2008). In addition, emotional intensity among employees describes a high degree of emotional feelings beyond economic matters (Gilliland and Bello, 2002). Furthermore, intimacy represents the strength of emotional bonds that increase the harmony and support among employees (Wu *et al.*, 2008). Therefore, high level of intimacy establishes strong social ties (e.g. friendship) among employees. Strong social ties are characterised by high level of resources exchange (Balkundi and Kilduff, 2005).

Strong ties enable employees to share their best practices and expertise (Perry-Smith and Shalley, 2003; Tiwana and McLean, 2005) and to accept new ideas (Gruen *et al.*, 2000; He *et al.*, 2009). He *et al.* (2009) demonstrate that people with strong social ties are more willing to be helpful in transferring knowledge, experience and expertise within an organisation. Strong ties also provide broader support in employees' decision making (Wellman and Wortley, 1990). They create a high degree of conformity among employees that encourages individuals' ability to listen to the advice and help of their

colleagues (Hossain and de Silva, 2009). In conclusion, strong social ties have a direct impact on the level of resource exchange in intrafirm networks.

According to the previous discussion, the structural view of social capital is influenced by the pattern of network ties among network members (Nahapiet and Ghoshal, 1998; Chua, 2002; Liu and Besser, 2003; Hutchings and Michailova, 2004; Huysman and De Wit, 2004; Inken and Tsang, 2005; Lee, 2008) and thus we suggest that the shape of social ties is one of the antecedents for establishing structural capital within an organisation. Therefore, this study operationalises network ties as the degree of intensity of connection among employees. These intense of social ties are affected basically by the way in which those networks are configured.

2.3.1.2 *Network Configuration*

Social interactions within a network are affected by the way which network actors are configured or structured (Granovetter, 1973; Burt, 1992; Nahapiet and Ghoshal, 1998; Huysman and De Wit, 2004; Inkpen and Tseng, 2005; Wasko and Faraj, 2005; Chow and Chang, 2008; Lee, 2008; Smith and Lohrke, 2008). In the intrafirm social capital context, an effective organisational structure plays an important role in explaining how social interactions take place between employees (Uzzi and Gillespie, 2002; Gilsing and Nooteboom, 2005; Smith and Lohrke, 2008). An effective organisational structure reproduces a high degree of connectivity, closure (Faust, 1997; Frank, 2002; Costenbader and Valente, 2003; Gomez *et al.*, 2003; Hossain and Wu, 2009) and easy access to relevant information within an organisation (Nahapiet and Ghoshal, 1998; Kilduff and Tsai, 2003; Jayachandran *et al.*, 2005; Butler and Purchase, 2008).

Chen and Huang (2007) reported that there is a strong relationship between the effective organisational structure and both communication and coordination within an organisation. This effective organisational structure facilitates sharing knowledge and information between departments and subunits. It is also characterised by a low degree of formalisation and high degree of decentralisation and integration, which creates a high level of social interactions among employees. Moreover, Janz *et al.* (1997) mentioned that a flexible organisational structure produces a high degree of coordination between organisational departments. The flexibility in organisation structure creates an integrative structure.

The integrative structure describes to what extent organisational departments and subunits work interrelatedly and integrity (Germain, 1996; Sciulli, 1998). The integrative structure enhances the level of connectivity among employees and facilitates access to any database within an organisation. The ease access to organisational databases and smooth connections enable employees to have access to the broadest variety of knowledge in order to carry out particular tasks and problem solving. The integrative structure encourages mutual learning among employees, develop coordination and expand communication channels to exchange relevant expertise and knowledge (Janz and Prasarnphanich, 2003). In addition, it creates what is known as organisation closure (Coleman, 1988; Reagans and Zukerin, 2001).

Organisation closure describes to what extent employees are connected to each other (Coleman, 1990: 310) and explain how personal ties are built among employees (Flap and Völker, 2001). A high degree of closure among employees is considered as an indicator of the large number of connections among employees (Coleman, 1988). It is also an indicator for the absence of structural holes within an organisation (Reagans and Zukerin, 2001). Furthermore, it facilitates exchange and cooperative actions (Butler and Purchase, 2008). Cooperative actions encourage employees to accept different viewpoints and develop common interests that, in turn, foster sharing resources (Tsai and Ghoshal, 1998; Tsai, 2002). These cooperative actions encourage information flow among all the organisation's touch points (Burt, 2000).

Moreover, an effective organisational structure is characterised by ease access to all organisation databases (Kilduff and Tsai, 2003) and smooth access to all channels of information (Nahapiet and Ghoshal, 1998; Bartol and Zhang, 2007). In addition, Jayachandran *et al.* (2005) mention that an effective organisational structure provides relevant employees with required information when they need. In the same view, Berger *et al.* (2002) assert that creating a database is a critical component of a firm's attempts to create an effective organisational structure. The effective organisational structure also reduces the barriers in the intra-functional communication (Chen and Quester, 2008) and allows employees to have contacts to higher levels of hierarchy (Seibert *et al.*, 2001).

Moreover, a successful organisation should develop a central data bank in which all customer-related information is stored (Greenberg, 2001; Jayachandran *et al.*, 2005).

The front offices also should be supported by a customer data depository and software that helps respond to customer requests (Berger *et al.*, 2002; Jayachandran *et al.*, 2005). Furthermore, all relevant organisation functions, such as sales, customer service, and marketing should be connected to organisation databases. In the same view, Sherif *et al.* (2005) reported that communication software, like email, discussion groups, and chat rooms are technological means that help in establishing effective organisation databases. Therefore, the effective organisational structure support social interactions among employees in terms of open communication, cooperation, collaboration, social support and exchanging resources (Janz *et al.*, 1997; Reagans and Zukerin, 2001; Tsai, 2000; Janz and Prasarnphanich, 2003; Chen and Huang, 2007; Chen and Quester, 2008).

Despite the important role of network configuration as one of structural dimensions of social capital, there is a "*little empirical work has been done specifically in examining the effect of network structure on social interaction behavior in intrafirm knowledge management*" (Chen and Huang, 2007:105). Therefore, there is a need to investigate the role of network structure in establishing social interactions within an organisation and this is one this study's aims. According to intrafirm structural capital network configuration reflects an effective organisational structure. This effective organisational structure describes the level of connection and accessibility among employees. Therefore, the current study operationalises network configuration or the effective organisational structure in terms of degree of connectivity (easy reach) among employees (Kilduff and Tsai, 2003) and level of accessibility (easy access) to all organisation databases (Nahapiet and Ghoshal, 1998; Bartol and Zhang, 2007). A network structure represents the guarantee of smooth information flow within the organisation, which is known as network stability.

2.3.1.3 *Network Stability*

Robert (2003) reveals that information is one of the most important resources in an organisation. An organisation which seeks to enhance its performance should support and maintain information flow within its entire networks (Ismail *et al.*, 2007). Network stability describes the consistency of information flow within organisations (Fischer, 1982; Deeter-Schmelz, 1997; Burt, 2000; Inkpen and Tsang, 2005; Cummings and Higgins, 2006; Eng, 2006; Stanko *et al.*, 2007). Deeter-Schmelz (1997) reveals that information flow between organisation units is valuable because it drives from various

functional departments and reflects different professional viewpoints. Furthermore, Walker *et al.* (1997) report that stable of information flow within organisations leads quickly to establish norms of cooperation that reduces the structural holes in an organisation (Eng, 2006).

Stable of information flow enhances coordination between organisation units, which improves organisation's internal functions (Szymanski and Henard, 2001). Bowersox *et al.* (1999) point out that information flow through organisation channels increases the employees' willingness to exchange their technical, operational and strategic information. Ismail *et al.* (2007) reveal that stable of information flow helps employees to better understand the continually changing in the business environment. In addition, Richards and Jones (2008) reveal that improving the flow of customer information across organisational information systems augments employee's practices during the service encounter and will increases customers' retention rates. Therefore, stable of information flow improves organisation performance.

Moreover, information flow increases confidence in reliability and integrity among employees (Morgan and Hunt, 1994). Stanko *et al.* (2007) point out that stable of information flow encourages exchange of information and knowledge among employees within an organisation. They add that it creates mutual confidence among employees, which in turn increases employees' willingness to maintain the extensive flow of important information between them. The willingness of employees maintains ongoing relationships and creates a unity of interest and solidarity among employees (Noordewier *et al.*, 1990; Heide and John, 1992). Furthermore, stable of information flow among employees foster reciprocity among them (Newcomb, 1961). Deeter-Schmelz (1997) also points out that consistency of information flow strengthens the linkages between organisation units and enhances the coordination and improvements between these units. He adds that "*coordinated information flows can lead to reduced response times to customer orders, changes in market demands, and competitive conditions*"(p:159).

Furthermore, information flow can be facilitated through using the appropriate information technology (Lai and Lee, 2007). Advanced information technology (IT) facilitates information flow and improves the quality of relationship among employees within an organisation (Davis, 1989; Swatman and Swatman, 1991; Venkatesh and

Davis, 2000). Dedrick (2003) reveals that IT automates procedures, provides better information and enhances their entire business processes. Furthermore, Kim *et al.* (2004) report that advanced information technology enables employees to gather and analyse large amounts of information about network actors (e.g. customers, competitors, suppliers, etc.). Such information helps employees to interact regularly, which enhances their performance.

Firms recognise the value of information flow in enhancing organisation processes (Cohen and Levinthal, 1990). If an organisation fails to maintain an information flow among its employees, it may suffer. Chaston (1994:305) also reveal that "*the poor information flow between managers and staff concerned with service provision can increase the difference (gap) between customer expectations and management perceptions of expectations*". In addition, Lai and Lee (2007) demonstrate that 80 percent of European organisations consider knowledge as a strategic asset. They add that moreover 78 percent of the same respondents believe that their organisations are missing out on business opportunities by failing to exploit their knowledge base successfully. Therefore, the main responsibility of managers is to create and maintain appropriate information systems that support information flow, which improves social interactions among employees (Raub and Wittich, 2004).

Based on the previous discussion, social interactions within organisations are affected by stable of information flow among employees (Lai and Wong, 2002; Kim *et al.*, 2004; Cummings and Higgins, 2006; Eng, 2006; Lai and Lee, 2007; Stanko *et al.*, 2007). Therefore, the current study operationalises network stability in terms of degree of consistency and reliability in information flow among employees. In conclusion, Figure 2-2 shows the sub- factors that constitute the antecedents of structural capital (in terms of social interactions).

Figure 2-2 Dimensions of structural capital
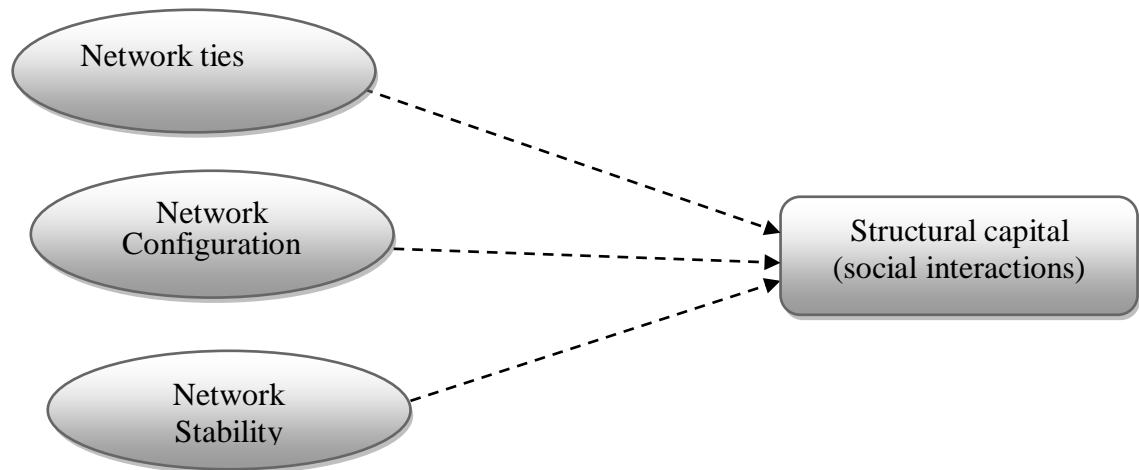
Source: The author

Figure 2-2 displays three main antecedents for establishing structural capital (in terms of social interactions): network ties, network configuration and network stability. To complete the factors that constitute social capital, the next section discuss in depth the antecedents of cognitive capital (the second dimension of intrafirm social capital).

2.3.2 Cognitive Capital

Nahapiet and Ghoshal (1998:423) were among the first scholars who paid attention to and labelled cognitive capital as one of the three dimensions of social capital. Cognitive capital defines as resources providing network members with shared representations, understandings and systems of meaning (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Inkpen and Tsang, 2005; Chua, 2002; Krause *et al.*, 2007; Lee, 2008). This dimension of social capital has received the least attention amongst social capital dimensions in the literature (Nahapiet and Ghoshal, 1998). Consistent with this viewpoint, Lee (2008) recently mentions that there is a shortage of studies that focus on the cognitive capital as one of social capital dimensions. However some studies have embarked on defining cognitive capital and outlining key dimensions of cognitive capital.

Cognitive capital defined as the "*ability of individuals to create understandings of network behaviour and the aspects involved in the joint learning process*" (Butler and Purchase, 2008: 534). He *et al.* (2009) demonstrate that cognitive capital puts forward

the shared norms that govern how employees behave, think, make judgments and coordinate their actions. Huang *et al.* (2008) reveal that cognitive capital includes shared language, codes, and narratives. According to the previous definitions, cognitive capital represents the power that creates common interest, coordinated actions, common behaviour and joint learning processes that help network members to develop common goals. This power is derived from the resources that network members have, such as shared values and norms (Powers and Reagan, 2007; He *et al.*, 2009). Cognitive capital is affected by three elements: similarity in perceptions, common goals and the way of interaction among network members (Tasi and Ghoshal, 1998).

To date, there is no agreement between scholars about a unified operationalisation for cognitive capital. According to literature, there are two main approaches to operationalise cognitive capital. Firstly, cognitive capital is operationalised in terms of sharing: norms, narratives, language and codes (Edelman *et al.*, 2004; Hatzakis *et al.,* 2005; Montazemi *et al.,* 2008; Liao and Welsch, 2005; He *et al.*, 2009). This approach is more appropriate for measuring the factors that constitute cognitive capital. On the other hand, the second approach measures cognitive capital in terms of shared vision and goals (Tasi and Ghoshal, 1998; Kumar and Worm, 2003; Chiu *et al.*, 2006; Krause *et al.*, 2007; Chow and Chan, 2008; Villena *et al.*, 2010). Tsai and Ghoshal (1998) argue that the effect of cognitive capital will be high when partners have common goals, shared vision and similar perceptions. High levels of cognitive capital provide a network member with a common perspective that enables them to perceive and interpret events in similar ways (Boland and Tenkasi, 1995; Nohria, 1992). The second approach is the more appropriate for this study because it reflects the outcomes of sharing common; interpretation, representations, understandings and systems of meaning among employees. This approach also reflects the viewpoint of most of intrafirm social capital studies because it is logic to measure cognitive capital through this approach. Moreover, this approach is used in many multidimensional social capital studies as recommended by Tsai and Ghoshal (1998), Chiu *et al.* (2006) and Chow and Chan (2008).

A review of the literature asserts that shared goals and shared vision are interrelated concepts. Several scholars reveal that shared vision is manifested in shared goals (Tsai and Ghoshal, 1998; McLean, 2005; Merlo *et al.*, 2006). For example, Tsai and Ghoshal (1998:467) use shared vision, which embodies the shared goals to measure cognitive

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capital. McLean (2005) also notes that shared vision make employees agree on what are the best goals for them and how they can organise their efforts to solve problems and generate ideas instead of identifying what goals should receive focus. In this study we adopt the viewpoint of Merlo *et al.* (2006:1217) who note that "*shared vision should be seen principally in terms of agreement on the goals to be achieved, including the fundamental purpose of the organization and not in terms of an agreed view on the means by which the end is realized*". Therefore, based on a review of the literature, this study conceptualises cognitive capital in terms of shared goals.

Chow and Chan (2008:464) define shared goals as "*the degree to which one has shared goals, missions and visions with other people.*" Mukherji *et al.* (2007:955) introduce a a practical definition for shared goals and define it as "*the degree of unity principals and agents feel toward common organizational goals*". Numerous scholars also support that cognitive capital is more precisely the practice of shared goals among network members (Tsai and Ghoshal, 1998; Inken and Tsang, 2005; Vainino, 2005; Chiu *et al.*, 2006; Presutti *et al.*, 2007; Chow and Chan, 2008). These shared goals need continuous interactions among network members that help them to understand each other's constraints and opportunities (Jap, 1999; Clarke, 2006). Powers and Reagan (2007) report that network members seek to achieve common goals through joint actions and working to maintain their relationships. Network members should possess resources (sharing in interpretations and meanings) within a network to make shared actions. While it is to be expected that departments in an organisation will differ in some of their goals, there should be commonality on the goals that are important to the organisation (Anumba *et al.*, 2000; Samaddar *et al.*, 2006).

Moreover, Chiu *et al.* (2006) argue that shared goals bind employees with their organisations and enhance the cooperation and level of interactions among them. According to goal interdependence theory, interactions between employees are affected by the extent to which employees share the common goals (Yang *et al.*, 2008). Employees who share common goals work effectively toward achieving organisation goals (Deutsch, 1949). Furthermore, Mukherji *et al.* (2007) indicate that lack of shared goals or goal conflicts may have a negative impact on attaining organisational goals. Clarke (2006) also reveals that if employees have common goals, they will have a low level of uncertainty towards organisation goals. Through shared goals, organisations can guarantee the cooperation among employees, where they all contribute their knowledge

to achieve organisation goals (Chow and Chan, 2008). Thus, the current study operationalises shared goals in terms of common vision, collective goals, common understanding and common meaning among employees (Das and Teng, 1998; Sarkar *et al.*, 1998; Tsai and Ghoshal, 1998; Liao and Welsch, 2005; Clarke, 2006; Merlo *et al.*, 2006; Samaddar *et al.*, 2006; Mukherji *et al.*, 2007; Chow and Chan, 2008; Oke, *et al.*, 2008).

Despite the important role of cognitive capital in achieving organisation goals (Tsai and Ghoshal, 1998; Chiu *et al.*, 2006; Presutti *et al.*, 2007; Chow and Chang, 2008), few studies pay attention to its dimensions (Nahapiet and Ghoshal, 1998; Haines III and Bedard, 2001; Lee, 2008). The hypothetical foundations for the factors (resources) that constitute cognitive capital can be derived from the perspective of social cognitive theory, social exchange theory and social capital theory (Bandura, 1989; Nahapiet and Ghoshal, 1998; Onyx and Bullen, 2000; Mondal, 2000; Dakhli and De Clercq, 2004; Inkpen and Tsang, 2005; Karuse *et al.*, 2007). According to literature, shared values and norms represent the main streams for creating common goals among employees (Schermerhorn *et al.*, 2003; Hatzakis *et al.*, 2005; Taylor, 2007; Valentine and Fleischman, 2007; Montazemi *et al.*, 2008; He *et al.*, 2009). For example, Powers and Reagan (2007) point out that achieving shared goals is related to employees' values and norms. In addition, cognitive capital, which develops coordination within an organisation, is derived from shared norms, values and ways of doing things (Nahapiet and Ghoshal, 1998; Lee, 2008). Therefore, the next sub-sections discuses in depth the antecedents of cognitive capital.

2.3.2.1 *Shared Values*

Values play an essential role in building social relationships among employees within an organisation (Miller, 1982). They work as a guide to human behaviour and to the decision- making process in achieving organisational goals (Rokeah, 1973). Shared values among employees increase the cooperation among their efforts, which in turn leads to effective attainment of their shared goals (Meglino *et al.*, 1991). Shared values among employees improve their practices within an organisation through increasing the degree of responsiveness among them, which supports achieving organisational goals (Posner *et al.*, 1985). Shared values also play an important role in identifying, forming and modifying the nature of relationships between employees within an organisation

(Agle and Caldwell, 1999). Furthermore, shared values between employees enhance their interactions and help them to achieve their common goals (Kluckhorn, 1951). It can be supported that; shared values within an organisation improve the quality of customer service (Schneider, 1980).

Mittins *et al.* (2011) reports that shared values between service employees and their managers enhance the service quality outcomes and increase customer satisfaction. Lai and Lee (2007) also reveal that employees' performance depends on the degree of values similarity among them. Similarly, Ogbonna (1993) indicates that shared values enable management to expect employees' reactions and maximise the scope of desired results. Employees who share the collectivist culture such as Middle East region (e.g. Egypt) accept their collective goals more easily (Ouchi, 1981; Taylor, 2007; Hyder and Fregidou-Malama, 2009). Organisational values, which derived from employees' values have positive impact on employees' successful achievement (Ruppel and Harrington, 2001; Lai and Lee, 2007).

Moreover, employees' values represent one of the important dimensions of establishing common meaning system within an organisation (Weick, 1995:99; Czarniawska-Joerges, 1989:139). Posner *et al.* (1985) find that shared values are associated with feelings of personal success, awareness in understanding personal and organisational values and achieving organisational goals. Hyde and Williamson (2000) mention that shared values create psychological bonds between employees within an organisation. Similar values generate social systems that facilitate the necessary interactions for individuals to achieve their common goals (Sagnak, 2005). In addition shared values among employees shape the organisation value (Wiener, 1988) and create a mutual support among employees (McDonald and Gandz, 1992).

Furthermore, Nall (2002) reveals that shared values increase the degree of similarity in attitudes between employees within an organisation. Harrington and Preziosi (1998) demonstrate that employees' values represent their personal philosophies, which reflect their attitudes toward their organisations. Adkins and Ravlin (1996) indicate that shared values among employees represent their core beliefs. These beliefs represent *proper standards of conduct or desired results (*Nystrom, 1990:971). These standards have strong effects on employees' responses and commitment to personal and organisational goals (Posner *et al.*, 1985: 294). Nahavandi and Malekzadeh (1999:93) point out that

shared values reproduce employees' common *"beliefs" "about what is important and what is not"*. Sagnak (2005) also reports that shared values reflect the beliefs that employees come to share. He adds that those beliefs derived from *"symbolic devices such as myths, rituals, stories, legends, and specialized language"* (p: 222). Organisational stories and rituals support the creation of common beliefs and attitudes among employees. In addition, shared language among employees also facilitates a common understanding of shared goals (Tsai and Ghoshal, 1998). Employees' attitudes and beliefs shape the work values for employees.

Many scholars assess shared values among employees within an organisation using the Comparative Emphasis Scale or CES (Ravlin and Meglino, 1987b; Meglino *et al.*, 1989, 1992; Russell and Werbel, 1997; Nahapiet and Ghoshal, 1998). The CES scale items include questions that measure the four work values: achievement, fairness, honesty, and helping and concern. All CES scale items are derived from the work of Rokeach (1973). In the same line, Ouchi (1981) and Taylor (2007) add collectivism work value as one of value congruence measurements. Rokeach (1973:23) conceptualised values as both dependent and independent variables. He revealed that social attitudes affect employees' values (dependent variable), which in turn affect employees' social behaviour (independent variable) and mentioned that *"values are guides and determinants of social attitudes and ideologies"*(p.24). This study adopts the second viewpoint of Rokeach (1973) who considers employees' values as a force that helps employees to achieve organisation goals. So, based on a review of the literature, this study defines shared values as the degree of sharing the same beliefs, work values and attitudes among employees. To better understanding to cognitive capital dimension we discuss its second predictor; shared norms.

2.3.2.2 *Shared Norms*

Many scholars report that shared norms are considered as one of the key motivational sources of cognitive capital (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Huysman and De Wit, 2004; Liao and Welsch, 2003, 2005; Inken and Tsang, 2005; Presutti *et al.*, 2007). Despite the important role of shared norms in establishing social capital, there is some ambiguity towards their role in forming cognitive capital (Adler and Kwon, 2002:26). This study aims to discuss how shared norms contribute in enhancing common understanding among employees, which in turn leads to achieve

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organisational goals. Understanding the core meaning of norms is a good starting point to explain how shared norms among employees can help in developing and achieving common goals within an organisation. Table 2-3 summarised some common definitions of norms.

Table 2-3 Norms definitions

Author(s)	Definition
Bettenhausen and Murnighan (1985)	Norms define as customs, rules and patterns of behaviour which are standardised as a consequence of the contact of individuals.
Lawrence (1988:310)	Norms describe as "widely shared judgments" or "standardised ways of perceiving the world".
Coleman (1990: 241)	A norm "is a property of a social system, not of an actor within it''
Deeter-Schmelz (1997:167)	Norms are "the expectations about behaviour that are at least partially shared by members of the team".
McAdams (1997:381)	Norms defined as "a decentralised behavioural standard that individuals feel obligated to follow, and generally do follow for esteem reasons or for internalisation obligation system"
Nahavandi and Malekzadeh (1999:243)	Norms are "shared rules and expectations about group members' behaviours".
Aksehirli (2003:5)	Norms are "standards and common understandings within groups".
Sherif *et al.*,(2006:799)	Social norms define as "beliefs about how people should behave within the organization".

Source: The author

According to these definitions, norms are behavioural standards, shared judgments, common understandings and rules, which employees share and obligate with. Norms include "*general societal expectations for our behaviour, expectations of others for our behaviours, and our expectations of our own behaviour*" (Aggrwal, 2002:7). Norms that are informally stated, understood, and shared obviously by employees (Nahavandi and Malekzadeh, 1999) serve to regulate employees' behaviour within an organisation (Deeter-Schmelz, 1997). Norms also act as a control system within an organisation (Bettenhausen and Murnighan, 1991) that guides employees' behaviour towards enhancing the organisation's internal functions and as a result achieving organisation goals (Schultz *et.al*., 1999). To give better understanding of shared norms and their role in establishing common goals among employees, we need to explore factors that establish common norms.

Eng (2006) indicates that norms are the expectations of employees' behaviour derived from their culture. According to Feldman (1984) and Aksehirli (2003) there are four factors that shape the development of a norm: (1) past experience (facing similar situations), (2) explicit statements (impact of the organisation's leaders), (3) initial behaviours of the group members and (4) critical events. In contrast, Schermerhorn *et al.* (2003) identified eight types of norms that can affect employees' performance. These norms are performance, timekeeping, preparedness, criticism and social behaviours, dealing with supervisors, dealing with colleagues and customers, establishing guidelines for honesty and ethical behaviours. In the same line, Deeter-Schmelz (1997:167) stated that relational norms (among network members) consisted of three dimensions: (I) "*norm of flexibility,* (2) "*norm of information exchange* and (3) "*norm of solidarity*". Aksehirli (2003) added two other norms: cooperation and competitiveness. This study focuses on the role of shared norms in creating a common behaviour among network members. Table 3.5 illustrates the definitions and the impact of these types of norms on the network performance.

Table 2-4 The impact of shared norms on the behaviour of network members

Type of norms	Condition	Impact on network members' behavior
Flexibility	Shared	The network is more flexible in the face of changing circumstances and adapts information gathering activities to meet the needs of the situation
Information Exchange	Shared	The network endorses the active sharing of information; strong, long-term relationships with important information sources may result.
Solidarity	Shared	The network places high value on Intra team relationships and works together as a unit.
Cooperation	Shared	The network members know how ought to work together to achieve a goal.
Competition	Shared	The network members know how ought to contend with others to achieve a goal.

Source: Adopted from (Deeter-Schmelz, 1997:167; Aksehirli, 2003:36)

According to Table 2-4, shared norms reflect shared guidelines regarding what is acceptable behaviour and what is unacceptable (O'Neill, 2005). Shared norms among employees create a common obligatory behaviour within an organisation. This obligatory system is formal or informal (Aksehirli, 2003; Schermerhorn *et al.*, 2003). This common obligatory behaviour enhances the organisation's ability to adapt to environment changes, enhance employees' willingness to share information and

expertise, improves intrafirm relationships and helps to achieve collective goals (Alder and Kwon, 2002; Inkpen and Tseng, 2005; Sherif *et al.*, 2006; Durlauf and Blume, 2008).

Moreover, shared norms govern how employees within organisations behave and make decisions in different situations (He *et al.*, 2009). Liao and Welsch (2003) reveal that shared norms describe acceptable behaviour that minimise opportunistic behaviour in intrafirm relationships. Furthermore, Mukherji *et al.* (2007) reveals that employees with common norms of mutuality and solidarity can agree on collective goals easily. Shared norms also facilitate developing common behaviours among employees and help in overcoming pervasive problems of collective actions (McAdams, 1997). On the other side, sharing norms of mutuality and solidarity enhance cohesiveness, unity, and equitable sharing of future benefits and burdens among employees (Sherif *et al.*, 2006). The function of shared norms among employees is to coordinate their expectations in interactions that enhance the organisation performance (Durlauf and Blume, 2008).

Nahavandi and Malekzadeh (1999: 243) state that having common norms enables employees to achieve the following purposes:

- provide a sense of order and control,
- regulate social interaction and work performance,
- allow for smooth internal functioning and
- help establish the group's culture and identity.

All these advantages support achieving collective goals for an organisation. Additionally, Chow and Chan (2008) states that shared norms make employees focus their efforts in a common direction to achieve the organisation's collective goal. This could be done through creating frames of reference for explaining and understanding employees' behaviour and recognising what are the proper and improper behaviours.

Moreover, shared norms facilitate acquisition of information among network members (Deeter-Schmelz, 1997:173). Shared norms produce *"propositional attitudes"* that may affect employees' behaviours (He *et al.*, 2009:176). They also create obligations within an organisation and encourage employees to share their best practices (Sherif *et al.*, 2006). Common norms impose uniformity of behaviour within a certain organisation

and shape the employees' sense of obligation toward their organisations (Durlauf and Blume, 2008). In the same view, Inkpen and Tseng (2005) report that shared norms develop common obligatory behaviour and sometimes cause extreme obligatory behaviour within an organisation.

Furthermore, social norms present the main source of ethical decision-making in the organisation (Ambrose *et al.*, 2007:330). Similarity, King and Burgess (2008) report that shared norms among employees create common behaviour and obligations among them. Shared norms also encourage employees to respect and commitment organisation's obligatory system (Alder and Kwon, 2002), which governs employees' behaviours within an organisation (King and Burgess, 2008). The organisation's obligatory system is affected by organisational ethics and corporate social responsibility or CSR (Logsdon and Yuthas, 1997; McWilliams and Siegel, 2001; Achua, 2008).

Organisational ethics describe desired ethical standards and business practices that an organisation adopted (Valentine and Fleischman, 2007). Employees' obligations are defined as the ethical duties of each employee toward his/ her company (Sherif *et al.*, 2006). Common moral obligation among employees develops an ethical climate within an organisation (Adams *et al.*, 2001; Deshpande and Joseph, 2009). Victor and Cullen (1987: 51-52) define an organisation's ethical climate as ''*the shared perceptions of what is ethically correct behavior and how ethical issues should be handled*''. Furthermore, Valentine and Fleischman (2008:161) reveal that *"a natural extension of organizational ethics is a company's involvement in CSR"*.

CSR is described as *"societal expectations of corporate behaviour that appear to further some social good, beyond the interests of the firm and that which is required by law"* (McWilliams and Siegel, 2001:288). CSR extends to all organisational stakeholders, such as employees, customers, competitors, suppliers, communities and stockholders (Anderson, 1993). The success of corporate social responsibility mainly depends on the ethical orientation among employees (Logsdon and Yuthas, 1997; Achua, 2008). Therefore, this study focuses on employees' role in establishing CSR. McWilliams and Siegel (2001) assert that social responsibility build ups joint behaviour among employees that supports organisation practices towards achieving organisation goals. It creates corporate behaviour among employees that reflects a high degree of congruence among employees' social norms (Sethi, 1975; Lindgreen *et al.*, 2009).

In addition, organisation ethics and CSR activities have direct impact on employees' responses to work (Valentine and Fleischman, 2007). Therefore, based on a review of the literature, this study defines shared norms as the degree of obligation to common behaviour standards and work rules within an organisation. These shared norms create obligation with behaviour standards and work rules within an organisation that support employees' efforts to develop and achieve shared goals. The previous discussions of cognitive capital and its predictors identify two main factors that establish common goals within an organisation: shared values and shared norms. Figure 2-3 shows the precursors of cognitive capital (in terms of shared goals).

Figure 2-3 Dimensions of Cognitive Capital
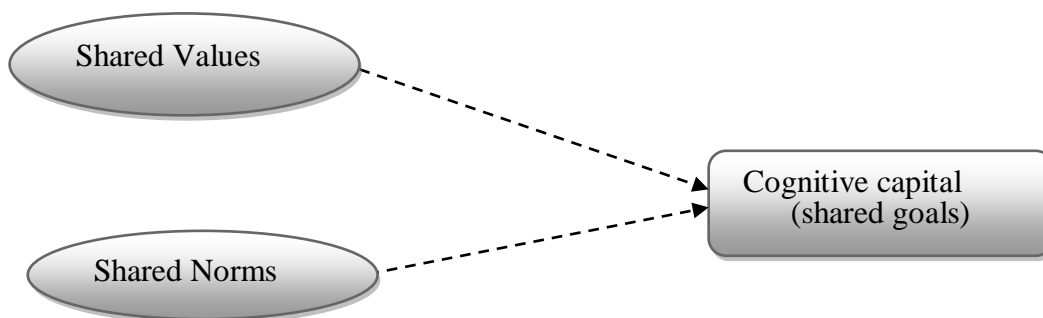
Source: The author

Figure 2-3 displays the two antecedents of cognitive capital; shared values and shared norms. Shared values and norms indirectly contribute in developing relational capital within an organisation.

2.3.3 Relational Capital

The importance of maintaining strong and continuing ties among employees is becoming more dynamic and demanding (Morgan and Hunt, 1994; Yang *et al.*, 2008). According to the social exchange theory and the social capital theory, the main aim of any organisation is to set up an ongoing, trusting and mutually beneficial relationship among employees and other stakeholders (Morgan and Hunt, 1994; Eid, 2007; Yang *et al.*, 2008). A review of the literature suggested that relational capital represents the strength of ties between parties (Krause *et al.*, 2007; Davis and Mentzer, 2008; Lawson *et al.*, 2008). The strength of these ties is derived from a history of social interactions and goal congruence among network members over time (Tsai and Ghoshal, 1998; Liao

and Welsch, 2003; Inken and Tsang, 2005; Vainio, 2005). Relational capital focuses on building trusting social relationships between network actors (Nahapiet and Ghoshal, 1998; Yang *et al.*, 2008). Cousins *et al.* (2006) assert that informal socialisation processes are the main means of creating relational capital. It is the process of connecting individuals to create a network of interdependent social exchanges (Axelrod, 1986; Jones and George, 1998; Williams, 2001; Kingshott, 2006). For more understanding of relational capital's mechanism, we need to discuss the different definitions of relational capital.

According to social capital literature, there are two different viewpoints in defining relational capital; the narrow and the broad viewpoints. The narrow viewpoint considers relational capital as an evaluation of the cost- benefit analysis for the value of a firm's network of relationships internally and externally (Gulati and Kletter, 2005), a kind of personal relationships (Nahapiet and Ghoshal, 1998: 244), or an exchange process built in trust, social interactions and common goals among parties (De Clercq and Sapienza, 2006). Meanwhile, the broad viewpoint considers relational capital as collective assets that organises and directs the organisation's relationship with its stakeholders (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Bozbura, 2004). For example, Bozbura (2004:358) defines relational capital as *"the sum of all assets that arrange and manage the firm's relationship with the environment"*. These resources are derived basically from the benefit of mutual trust between parties (Tsai and Ghoshal, 1998; Kale *et al.*, 2000; Inken and Tsang, 2005; Chow and Chan, 2008; Lawson *et al.*, 2008; Yang *et al.*, 2008; He *et al.*, 2009). This study adopts the broad viewpoint of relational capital. Despite a large number of social capital studies there is no agreement among scholars about the resources of relational capital

A review of the literature identified different resources for relational capital which can be classified into seven viewpoints. Some scholars see it as a trust (Inken and Tsang, 2005; Chow and Chang, 2008; He *et al.*, 2009) or as trust and trustworthiness (Barney and Hansen, 1994; Uzzi, 1996; Tsai and Ghoshal, 1998). Other scholars refer to generalised trust and reciprocity (Lang, 2004; Whitley and Prince, 2005; Chiu *et al.*, 2006) or generalised trust and norms or expectations (Liu and Besser, 2003; Montazemi *et al.*, 2008). Furthermore, others perceive these resources as respect, trust, trustfulness and friendliness (Liao and Welsch, 2003), or trust, obligation and reciprocity (Lawson *et al.*, 2008). Other scholars think of them as friendship, reciprocity and trust (Dyer and

Singh, 1998; Kale *et al.*, 2000; Lawson *et al.*, 2008; Yang *et al.*, 2008). Selecting any of these viewpoints depends on the nature of the study and the viewpoint that researcher believe in.

This study adopts trust as main resource for relational capital because the broad definition of trust includes all other resources such as trustworthiness, friendship and reciprocity. This viewpoint is compatible with the viewpoints of Uzzi (1996), Tsai and Ghoshal (1998), Tsai (2000), Liao and Welsch (2003, 2005), Merlo *et al.* (2006), Sherif *et al.* (2006), Chow and Chan (2008) and He *et al.* (2009). This viewpoint refers to relational capital's resources as trust among individual actors, while the other resources such as reciprocity and friendship represent the factors that form trustworthiness and trustworthiness itself is an important dimension of trust. For example, Cousins *et al.* (2006) and Kaasa (2008) consider reciprocity and friendship as the essential factors that shape and develop trustworthiness among network actors. Moreover, the relationship between reciprocity, friendship and trustworthiness is not clear in literature. Therefore, we need to understand the meaning of these constructs and the relationships among them.

Reciprocity defines as a norm driven by a feeling of indebtedness where there is an expectation that good is returned for good received, and every party in a relationship has both rights and obligations (Gouldner, 1960). Reciprocity is also described as people acting for the benefit of others and expecting to get help in return when it is needed. Therefore, reciprocity means that each party should act honestly to achieve the other party's interest and this is the aim of trustworthiness. Kaasa (2009) and Ben-Ner and Halldorsson (2010) reveal that reciprocity is one of the essential norms that form trustworthiness among network actors. Friendship is also one of the essential dimensions of trustworthiness (the benevolence dimension). Cullen *et al.* (2000) demonstrate that the benevolence dimension of trustworthiness reflects the belief that a network actor will behave with friendliness towards network actors. In addition, the trustworthiness of the service provider represents the customer's overall perception towards the ability, benevolence and integrity of the service provider (Keh and Xie, 2009). Therefore, reciprocity and friendship are from the factors that constitute trustworthiness.

There is another issue related to the debate in literature about whether trustworthiness is a dimension of the trust construct or it is a distinct construct (Crosby *et al.*, 1990; Buchan *et al.*, 2003; Hardin, 2004; Ashraf *et al.*, 2006; Kim and Zhao, 2008; Sweeney and Swait, 2008; Ben-Ner and Halldorsson, 2010). Some scholars believe that trustworthiness is distinct from trust and can be described as a characteristic of an entity such as a person or brand (Ashraf *et al.*, 2006; Buchan *et al.*, 2003; Sweeney and Swait, 2008). On the other hand, others consider trustworthiness as one of the dimensions of trust or a component of a broad definition of trust that encompasses two components; perceived trustworthiness and trusting behaviour (Mayer *et al.*, 1995; Tyler and Stanley, 2007). Perceived trustworthiness reflects confidence in the partner's reliability and integrity (Ganesan, 1994; Doney and Cannon, 1997). Trusting behaviour refers to the good intention and guarantee of positive actions between partners in different situations (Dasgupta, 1988; Mayer *et al.*, 1995).

Moreover, many scholars consider trustworthiness as one of the trust dimensions, which is manifested in the benevolence and credibility dimensions (Crosby *et al.*, 1990; Gefen, 2000; Kim and Zhao, 2008; He *et al.*, 2009). In the same view, other scholars see trust as a belief or an expectation about an exchange partner's trustworthiness, which is derived from the partner's expertise or reliability (Anderson and Weitz, 1990; Schurr and Ozanne, 1985; Eisingerich and Bell, 2007). Tyler and Stanley (2007:335) state that there is a need for *"interconnection of the belief component (perceived trustworthiness) and behavioural component (trusting behaviour) of trust"* when defining trust. Because of the interconnection between trustworthiness and trusting behaviour, many scholars see trust as a broad, socially-defined phenomenon relating to the integration between perceived trustworthiness and trusting behaviour (Mayer *et al.*, 1995; Tyler and Stanley, 2007). Understanding these interconnections gives more reliability for the conceptualisation of the trust construct.

Trust development is derived from an accumulation of trustworthiness over the history of interaction among network members (Tullberg, 2008). However, some scholars still see perceived trustworthiness as a key antecedent of trust: individuals are more likely to trust others when they evaluate others' trustworthiness more favourably (Mayer *et al.*, 1995; Mayer and Davis, 1999; Gillespie, 2003; Tyler and Stanley, 2007; Lau *et al.*, 2008). Similarity, Lewicki and Bunke (1995) suggest that confidence on the part of the trusting party results from an actor's belief that the trustworthy party is reliable and has

high integrity, which is associated with such qualities as consistency, competence, honesty, fairness, responsibility, helpfulness, and benevolence. In addition, Stack (1978) describes trust as feelings of trustworthiness. Therefore, trustworthiness is a central factor in developing trust. This study adopts the broad viewpoint that considers overall trust as a result of integration between perceived trustworthiness and trusting behaviour (Tasi and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Ashraf *et al.*, 2006; Tyler and Stanley, 2007; Sweeney and Swait, 2008). To understand the importance of trust in the organisation- customer relationship we should analyse the different definitions of trust.

Trust has been well documented and referred to as the belief in a partner's credibility and benevolence (Gyskens *et al.*, 1996; Doney and Cannon, 1997). It also described as the belief in the honest and cooperative behaviour of the partner (Fukuyama, 1995) and the confidence in partner's reliability and integrity (Morgan and Hunt, 1994). It is the overall perception towards the ability (competencies), benevolence (emotional attachment) and integrity (honest) of network actors (Keh and Xie, 2009). Others define trust as confidence in a partner's actions toward the relationship (Mayer *et al.*, 1995). Moreover, trust describes one partner's expectations that the other partner is dependable and can be relied on to deliver its promises (Sirdeshmukh *et al.*, 2002; Lacey, 2007).

Some scholars define trust as "*the perceived ability and willingness of the other party to behave in ways that consider the interest of both parties in the relationship*" (Seines and Sallis, 2003:84). Finally, others define trust as correct expectations of the actions of others (Dasgupta, 1988). Anderson and Narus (1990:45) describe trust as the partner's belief that their colleagues will perform actions that will result in positive outcomes for their interest, as well as not taking unexpected actions that will result in negative actions to them. According to the previous definitions, a trust relationship among network actors is governed by their abilities and willingness to behave with honesty, integrity and benevolence towards their colleagues to maintain the value relationship between them. Therefore, this study adopts Seines and Sallis (2003:84)'s definition which describe trust as "*the perceived ability and willingness of the other party to behave in ways that consider the interest of both parties in the relationship*".

Trust literature reveals that trust is composed of two dimensions: affective and cognitive (Lewis and Weigert, 1985; Hite, 2005; Smith and Lohrke, 2008). Scholars refer to the affective dimension as the emotional or benevolent side of trust (McAllister, 1995;

Mayer *et al.*, 1995; Hite, 2005). Affective trust develops when individuals emotionally invest in relationships, resulting in more focus on the other partner's interest (McAllister, 1995). On the other hand, researchers often label the rational, or credibility, dimension of trust as "cognitive" (Lewis and Weigert, 1985). The cognitive side of trust is more concerned with the history of interaction among partners that allows them to know, understand, and predict the routines and processes of the interaction (Hite, 2005). Credibility trust is the confidence that the partner has the willingness and ability to meet his/ her obligations and make his / her promised contributions to the network (Johnson, *et al.*, 1996; Cullen *et al.*, 2000). An affective (cognitive) trust can reside at an interpersonal level and can also develop at the institutional (organisational) level (Lewis and Weigert, 1985). According to trust literature, the affective component of trust refers to the trustworthiness of the network actor, while the cognitive dimension refers to trust in the network's actions (credibility trust).

A review of the literature shows that trust is the common factor and the vital element of relational capital resources (Coleman, 1988; Wu, 2008; Tsai and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Keh and Xie, 2008). It can be analysed at intrafirm or interfirm level (Gulati and Kletter, 2005). Intrafirm relational capital describes the trusting social relationships within an organisation (e.g. between: employees, functional departments, branches, sub –units), while interfirm relational capital refers to trusting social relationships with other external partners such as customers, suppliers and alliances (Tsai and Ghoshal, 1998; Yli-Renko *et al.*, 2002; Arregle *et al.*, 2007). Our focus on this study will be on intrafirm relational capital (Tasi and Ghoshal, 1998; Liao and Welsch, 2003, 2005).

Intrafirm relational capital engenders trust among employees (Tsai and Ghoshal, 1998; Inken and Tsang, 2005; Chow and Chan, 2008; He *et al.*, 2009). It also creates a basis for learning and know-how transfer between internal sub-units that result in enhancing customer services (Kale *et al.*, 2000). Furthermore, it encourages the transfer of "best practice" among organisation members (Nahapiet and Ghoshal 1998) and facilitates information sharing between them (Dyer and Chu, 2003; Wu, 2008). In addition, it plays a strong role in explaining innovation-oriented tasks, and enhancing relationships among organisation departments and their sub units (Tsai and Ghoshal, 1998) and with customers (Krause *et al.*, 2007). It also promotes employees to do more than what is formally expected (Sako, 1992; Delerue-Vidot, 2006) and enhances product quality and

employees' performance when serving customers (Uzzi, 1996; Cohen and Fields, 1999; Merlo *et al.*, 2006; Lee, 2008).

Moreover, intrafirm relational capital also engenders trust that facilitates information sharing, which in turn leads to more joint problem solving between organisation departments (Hitt *et al.*, 2006) and as a result improves customer service. A high level of customer service is positively related to two positive outcomes: (1) customer satisfaction with the service encounter and (2) customer commitment to the firm (Donavan and Hocutt, 2001). In conclusion, intrafirm relational capital engenders trust between organisation departments, which enhance employees' performance, resulting in enhancing the organisation's reputation, which leads to increasing organisational trust.

Despite the important role of intrafirm relational capital in enhancing organisation performance, most relational capital studies focused on interfirm relational capital especially on alliances and interorganisational relationships (Kale *et al.*, 2000; Gulati *et al.*, 2000; Capello and Faggin, 2005; McLaughlin *et al.*, 2009). On the other hand, there is a need for more studies that give more understanding to the vital role of intrafirm relational capital within organisations. Despite the large number of intrafirm social capital studies, there is a shortage of studies that integrate intrafirm relational capital as a major outcome for intrafirm social capital with the expected customer behaviour. Therefore the current study examines the impact of intrafirm relational capital on customer behaviour. For better understanding to the role of intrafirm social capital in enhancing customer behaviour, we should understand the interrelationships among social capital dimensions.

2.3.4   The Relationship between Social Capital Dimensions

Since Liao and Welsch (2005) asserted that the various dimensions of social capital are not mutually exclusively but interconnected, a limited number of scholars have explored the interrelationships between those dimensions. The next sub-sections discuss in depth the interrelationships among social capital dimension to explore the mechanism of intrafirm social capital.

2.3.4.1 *The Relationship between Structural Capital (Social Interactions) and Cognitive Capital (Shared Goals):*

The structural links among employees are created through social interactions, which support achieving collective actions within an organisation (Burt, 1992; Putnam, 1995b; Wasko and Faraj, 2005). Krackhardt (1990) reveals that social interactions among employees influence the formation of a shared vision. Through social interactions, employees from various functional departments can be assembled, integrated, and directed to achieve organisational goals (Bartol and Srivastava, 2002; Koskinen *et al.*, 2003; Chen and Huang, 2007). In addition, social interactions among employees encourage new employees to understand and share goals with old employees (Van Maanen, 1976; Louis, 1980; Heffner and Rentsch, 2001). Moreover, Rentsch (1990) mentioned that social interactions between employees are likely to develop similar interpretations of organisational goals. Furthermore, informal social interactions may shape and sometimes create new sets of goals, and practices for organisations (Stites-Doe, 1994).

As we mentioned earlier in section 2.3.1, social interactions among employees are manifested in cooperation, communication, social support and exchange of information. Common goals are established among employees through exchange of various knowledge and expertise (Chen and Huang, 2007), exchange information (Doucette, 1997) and cooperation (Anderson and Narus, 1990; Powers and Reagan, 2007; Yang *et al.* 2008). Moreover, the direct relationship between structural capital and cognitive capital has been studied in some social capital studies. For example, Liao and Welsch (2003, 2005) and Lu and Yang (2011) indicate that structural capital was found to be positively related to cognitive capital. In contrast, Tasi and Ghoshal (1998) found no evidence to support a direct effect of structural capital on the existence of cognitive capital. Therefore we can suggest that there is an interrelationship between structural capital and cognitive capital.

2.3.4.2 *The Relationship between Cognitive Capital (Shared Goals) and Structural Capital (Social Interactions)*

Up to my knowledge, the direct impact of cognitive capital on structural capital has not been studied yet. The current study is one of the first studies that empirically investigate

the impact of cognitive capital (in terms of shared goals) on structural capital (in terms of social interactions). Chiu *et al.* (2006) reveal that people with common interests, goals or practices engage in social interactions. Krause *et al.* (2007) also reveal that shared goals create continued social interactions. In the same line, social interactions require development of a shared understanding among employees (Symon, 2000). Furthermore, Taylor (2007) indicates that cognitive capital enhances social interactions within an organisation by creating common goals and objectives among its departments. Moreover, shared goals represent one of the key factors in designing a system for inter-organisational coordination (Whetten, 1977; Murray and Kotabe, 2005) and increasing the willingness of employees to share knowledge (Chow and Chan, 2008). Therefore we suggest that cognitive capital (shared goals) affect structural capital (social interactions).

2.3.4.3 *The Relationship between Structural Capital (Social Interactions) and Relational Capital (Trust):*

The network literature has documented the influence of strong social interactions on trust among network actors (Dahab, 1996; Smith, 2002; Dhanaraj, 2004; Ping Li, 2007). Ping Li (2007) finds that structural capital has a positive impact on trust within an organisation. In the same line, Lawson *et al.* (2008) argue that personal interactions and reciprocity within an organisation support creation of relational capital. In addition, social interactions and additional feedback among employees create trust within an organisation (Powell *et al.*, 2006). Development and progress in social interactions among employees foster trusting relationships among them (Gabarro, 1978; Granovetter, 1985; Gulati, 1995; Liao and Welsch, 2005; Kuo *et al.*, 2008).

Moreover, formal and informal meetings among employees create social interactions (Hutt *et al.*, 2000), which in turn lead to developing trust (Putnam, 2000; Ramström, 2008). Developing trust among employees is derived from exchange of expertise (Smith, 2002), cooperative work (Leana and Van Buren, 1999; Powell *et al.*, 2006), cooperation (Powell and Smith-Doerr, 1994; Tsai and Ghoshal, 1998) and open communication among employees (Auh *et al.*, 2007), which represent indicators of social interactions. Furthermore, the direct relationship between structural capital and relational capital has been studied by some scholars, such as Tasi and Ghoshal (1998), Liao and Welsch (2003) and Lu and Yang (2011). For example, Tasi and Ghoshal (1998), Liao and Welsch (2003) and Butler *et al.*, (2006) reveal that structural capital has a positive and

significant impact on relational capital. Similarity, argue that structural capital has a positive influence on trust in relationships between employees. Contrary to the previous results, Lu and Yang (2011) found no significant relationship between structural capital and relational capital. Thus we can predict that structural capital has a positive impact on relational capital.

2.3.4.4 *The Relationship between Cognitive Capital (Shared Goals) and Relational Capital (Trust):*

Many studies demonstrate that cognitive capital has a significant and positive impact on relational capital (Tsai and Ghoshal, 1998, Liao and Welsch, 2003; Lu and Yang, 2011). Furthermore, Miretzky (2002) asserts that common goals within organisations have a positive impact on trusting relationships among employees. Mutual cognition between employees influence observed trusting behaviour among them (Fichman, 2003). Establishing trusting relationships needs sharing in common goals among network members (Betts, 2002). Moreover, shared norms and common values as the main antecedents for establishing cognitive capital within an organisation encourage trust relationships among employees (Van Buren, 2004; Delerue-Vidot, 2006; Lacey, 2007; Blair and Carroll, 2008). Therefore, we can suggest positive relationship between cognitive capital (shared goals) and relational capital (trust).

Figure 2-4 Relationships among social capital's dimensions
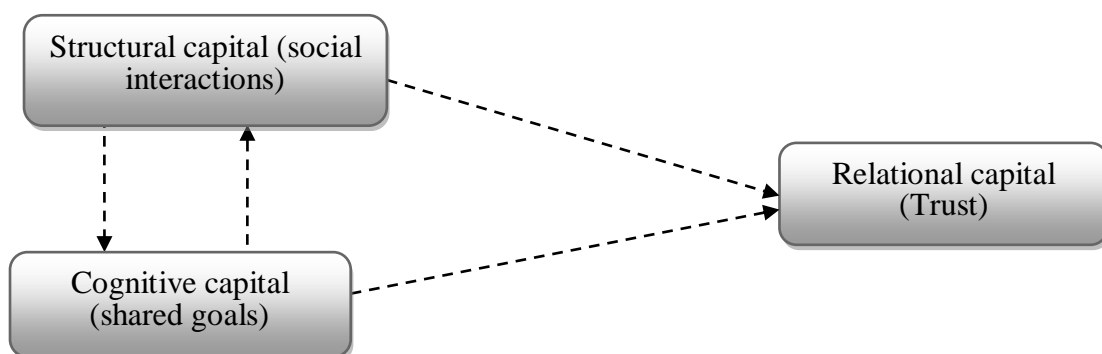
Source: The author

Based on the previous discussion of the antecedents of social capital dimensions and the interconnections among these dimensions in this chapter, we suggest an integrated model for intrafirm social capital in Figure 2.4. The suggested model in Figure 2-4 is developed from the contributions of previous models such as Tasi and Ghoshal (1989)

in Figure 2-5, Liao and Welsch (2003) in Figure 2-6 and Lu and Yang (2011) in Figure 2-7.

Figure 2-5 Proposed model of social capital
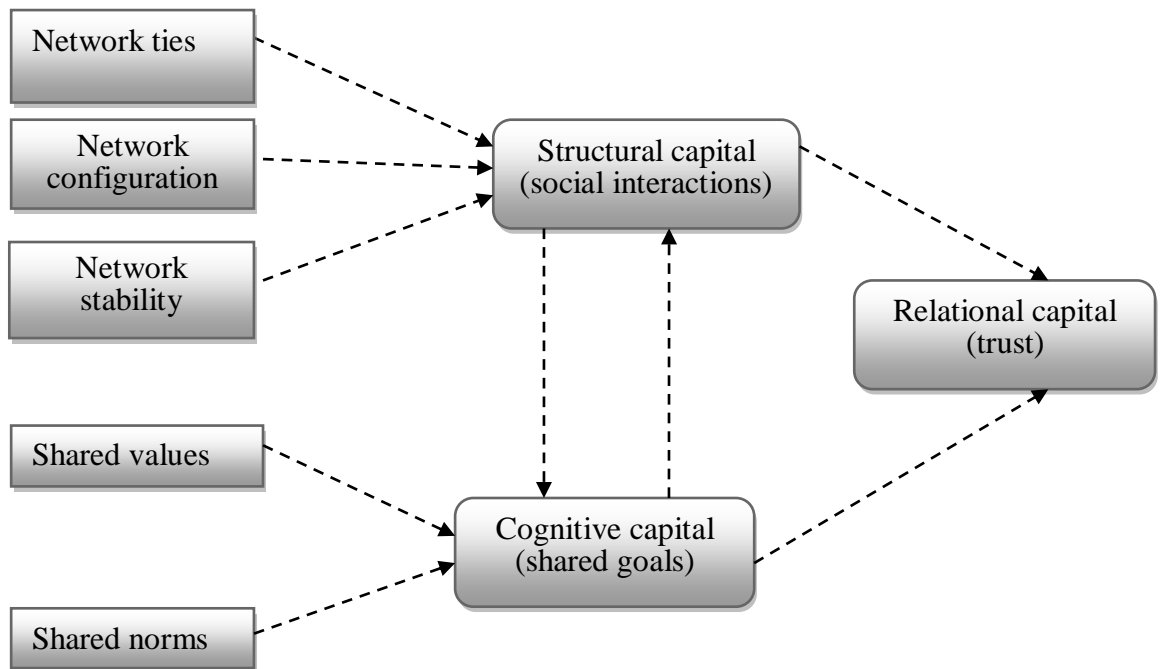
Source: the author

Figure 2-6 Social capital and value creation
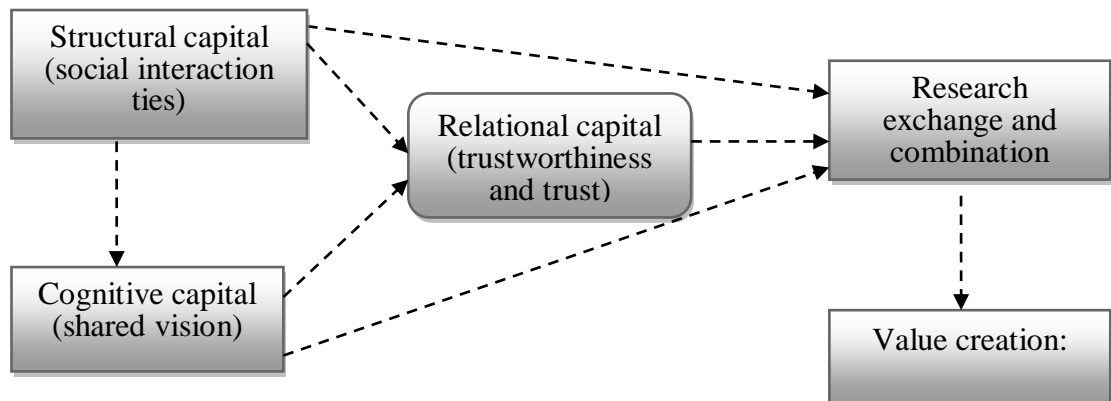
Source: Adapted from Tsai and Ghoshal (1998:466).

Figure 2-7 Social capital and growth aspiration
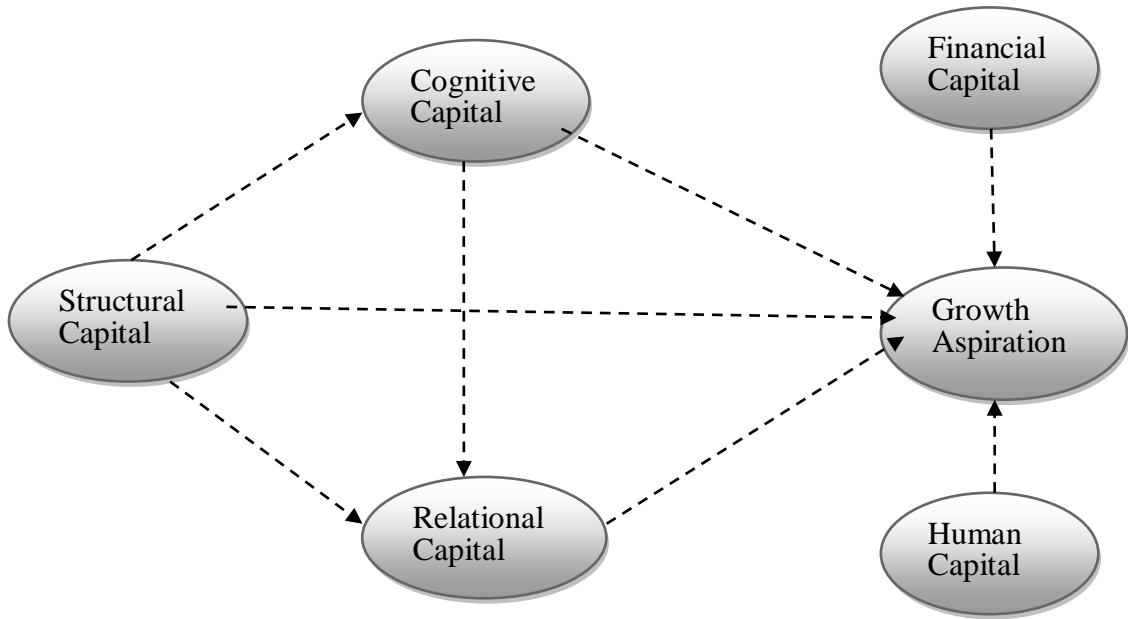
Source: Adapted from Liao and Welsch (2003:158)

Figure 2-8 Social capital and information exchange in virtual communities
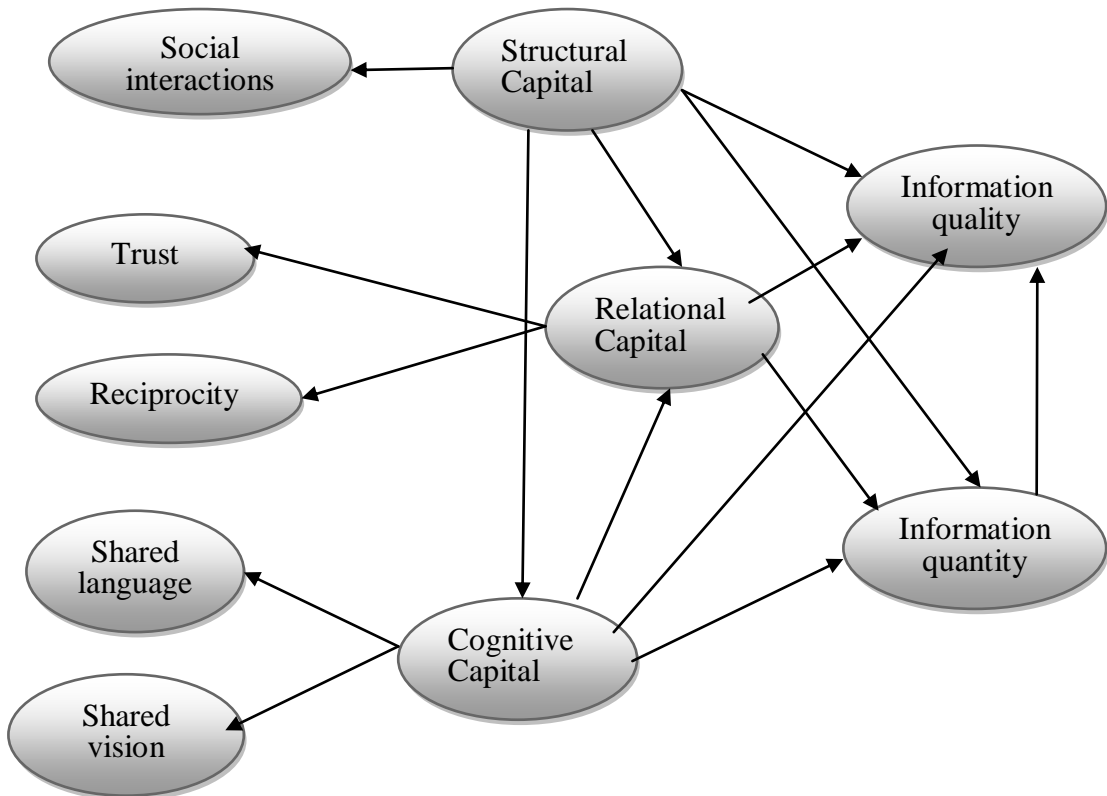
Despite the attempts of these models in establishing an integrated model for social capital, they suffer from some deficiencies. Our model aims to overcome these deficiencies and go towards developing an integrated model of intrafirm social capital. Table 2-5 illustrates comparison between our suggested model and other three models for social capital. The comparison focuses on major similarities and differences between our suggested model and the other previous social capital models.

Table 2-5 the similarities and differences between this study and similar social capital studies

Similarities	Differences
Measuring social capital as a multidimensional construct.	This study explores and operationalises the antecedents of social capital's dimensions.
Investigate : 1-the impact of structural capital on cognitive capital 2-the impact of structural capital on relational capital 3 the impact of cognitive capital on relational capital	Investigate the direct impact of cognitive capital (shared goals) on structural capital (social interactions).
Investigate the impact of social capital on organisation's performance.	Investigate the indirect effects of structural and cognitive capital on relational capital
Adopted the same methodological approach (quantitative)	Identify the structures of intrafirm social capital dimensions using EFA.
Using a survey method to collect data .	Using SEM and regression analysis
Using SEM as a multivariate statistical technique	An attempt to establish an integrated model of intrafirm social capital.

According to Table 2-5 our model is tested like other models through quantitative methodological approach and use survey method to collect research primary data. In addition our model likes other models measured social capital as a multidimensional construct. On the other hand our suggested model differs from other famous models in some aspects which represent the main contributions for this study. Firstly, this model includes the antecedents of social capital dimensions. Secondly, it investigates the direct impact of cognitive capital (shared goals) on structural capital (social interactions). Thirdly, it investigates the indirect effects of structural and cognitive capital on relational capital. Finally, this model represents one of the first attempts to establish an integrated model of intrafirm social capital.

2.4 Summary

Social capital is a-a dynamic concept -embodies all actual or potential resources that aim at building social networks among network members, which creates and mobilises their network connections in order to establish trust among network members. Social capital can be applied in two contexts: within the organisation (intrafirm social capital) or outside the organisation (interfirm social capital). This study focuses mainly on intrafirm social capital. Social capital literature presented three dimensions that constitute social capital: structural, cognitive and relational. These dimensions are working in a synergetic way.

Structural capital dimension, which is manifested in social interactions among network members, is affected by types of social ties (network ties), structure of these ties (network configuration) and the efficient of these ties (network stability). In this study social interactions refer to the extent to which employees within an organisation interact with each other in terms of communication, cooperation, collaboration, affiliation and social support and sharing knowledge. In addition, network ties describe degree of intensity of connection among employees. Furthermore, network configuration reflects a degree of connectivity (easy reach) among employees and level of accessibility (easy access) to all organisation databases. Finally, network stability describes a degree of consistency and reliability in information flow among network members.

Regarding cognitive capital dimension, which is manifested in shared goals among network members is derived from shared values and shared norms among network members. Shared goals in this study represent common vision, collective goals, common understanding and common meaning among employees. Shared values as an indicator of shared goals reflect degree of sharing the same beliefs, work values and attitudes among employees. Shared norms as an antecedent of shared goals define as the degree of obligation to common behaviour standards and work rules within a network. According to literature, structural capital and cognitive capital represent the main predictors of relational capital (in terms of trust). Relational capital is considered as collective assets that organises and directs the organisation's relationship with the environment. Trust among employees is the indicator of relational capital. Trust is defined as the perceived ability and willingness of the other party to behave in ways that consider the interest of both parties in the relationship.

This chapter also explore the different interrelationships among social capital dimensions. This chapter identified four direct relationships between the social capital dimensions. These relationships investigate the mutual positive effects between structural and cognitive dimensions, the impact of structural on relational dimension and the positive impact of cognitive on relational dimension. To sum up, this chapter provided a theoretical framework of intrafirm social capital and the sub-factors of each dimension of social capital. The following chapter (Chapter 3) discusses the perceived value as a result of adopting intrafirm social capital within an organisation from the organisation's viewpoint.

Chapter 3 Organisational Perceived Values

This chapter explores the values that organisations gain as a result of adopting social capital. The chapter is organised in three parts. The first part represents the introduction of this chapter. This introduction displays the values of adopting social capital and describes the core meaning of perceived value concept. This chapter talks about two main values: customer satisfaction and customer commitment, which were discussed in parts two and three. The second part discusses in depth customer satisfaction concept (definitions, benefits and measurements). On the other hand, the third part argues comprehensively the customer commitment concept (definitions, benefits, dimensions and measurements).

3.1   Introduction

Many scholars agree that both intrafirm and interfirm perspectives of social capital create values to an organisation (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Tsai, 2000; Yli-Renko *et al.*, 2001; Chua, 2002; Watson and Papamarcos, 2002; Requena, 2003; Hatzakis *et al.*, 2005; Inkpen and Tsang, 2005; Wasko and Faraj, 2005; Chiu *et al.*, 2006; Hsieh and Tsai, 2007; Chow and Chan, 2008; Villena *et al.*, 2010). As we mentioned earlier in chapter two this study focuses on the values that social capital creates within an organisation (intrafirm social capital). Adopting intrafirm social capital facilitates actions that improve internal organisation processes (Adler and Kwon, 2002). It facilitates information flow, knowledge sharing (Nahapiet and Ghoshal, 1998; Burt, 2000; He *et al.*, 2009), improving creativity (Perry-Smith and Shalley, 2003; Arregle *et al.*, 2007), supporting coordination of activities and projects across various functional units (Hitt *et al.*, 2002), developing innovation (Tsai and Ghoshal, 1998; Rothaermel, 2001) and encouraging employees to share their special expertise, which in turn helps to minimise duplication of effort and further enhances organisation performance (Henderson and Clark, 1990; Yli-Renko *et al.*, 2002). Accumulation of social capital within an organisation provides employees with the confidence to perform their jobs as expected (Kingshott, 2006) and helps them to work in more effective ways to serve customers (Davis *et al.*, 2000; Merlo *et al.*, 2006). Therefore, intrafirm social capital facilitates actions that improve employees' practices (Adler and Kwon, 2002).

Furthermore, Tornow and Wiley (1991:105) mention that effective employees' practices have a positive impact on customer service improvement.

A review of the literature shows that perceived value concept could be understood as a consequence of a trade off between what has been done and what has been received as recommended by Johnson *et al.* (2006), Moliner *et al.* (2006) and Eakuru and Nik Mat (2008). This study describes organisational perceived values as the values that an organisation receives from adopting intrafirm social capital from the organisation's perspective. Several scholars reported that effective organisation processes increase customer service improvement, which enhance organisational values in terms of customer satisfaction and customer commitment (Patterson and Spreng, 1997; Cronin *et al.*, 2000; Tam, 2000; Gill *et al.*, 2007). Customer service improvement is affected by the quality of staff (competency) in interaction with customers and the quality of internal processes (reliability) in iterative work activities (Ballantyne, 1997:345). Intrafirm social capital is one of the concepts that improve internal processes and the competencies of service providers through supporting the open communication, exchanging resources and sharing goals among employees. This improvement in customer service increases customer satisfaction and customer commitment (Woodruff and Gardial, 1996; Philips, 2007).

According to customer-organisation relationship in service literature, this relationship is characterised by strong interpersonal relationships between service providers and customers (Fitzgibbon and White, 2005; Michalski, 2004; Menon and O'Connor, 2007; N'Goala, 2007). According to those personal connections service providers could be the appropriate persons to perceive customer satisfaction and customer commitment as recommended by Keiningham *et al.* (2007). Therefore, this study adopts customer satisfaction and commitment as expected organisational perceived values as a result of adopting social capital. The next sub-sections discuses these main issues of customer satisfaction and customer commitment.

3.2   Customer Satisfaction

During the last four decades, satisfaction has been considered as one of the most significant theoretical as well as practical topics for most marketers (Jamal, 2004; Molina *et al.*, 2007). It is one of the most widely researched topics in marketing and has

become a major goal for many organisations (Pappu and Quester, 2006). It has been discussed extensively as a vital component of a firm's marketing concept during the past two decades (Anderson and Sullivan, 1993; Walter *et al.*, 2003; Pappu and Quester, 2006; Kau and Loh, 2006). Yim *et al.* (2004) consider it as an expected outcome of successful application of the marketing concept. Customer satisfaction reflects the major goal for any marketing plans that organisation use (Fournier and Mick, 1999).

Moreover, customer satisfaction has attracted researchers and practitioners as an outcome of quality and as a key mechanism for listening to customers (Baker and Crompton 2000; Feng and Morrison, 2007). Satisfaction is one of the basic factors that ties customer with an organisation (Oliver, 1980; Kim *et al.*, 2008). It reflects the customer's positive feelings towards the organisation's services (Cronin *et al.*, 2000; Kim *et al.*, 2008) and is considered as a basic determinant of a long term relationship between organisation and customers in future (Ranaweera and Prabhu, 2003; Zhang and Prybutok, 2005; Bergeron *et al.*, 2008). Customer satisfaction is a multifaceted construct and has been defined in various ways (Kanji and Moura, 2002; Fecikova, 2004; Dimitriades, 2006).

3.2.1 Satisfaction Definitions

Molina *et al.* (2007:257) report that "*no single definition of satisfaction has been unanimously accepted by literature related to the matter*". They add that "*all definitions proposed, however, agree that the concept of satisfaction implies the necessary presence of a goal the consumer wants to achieve*". According to literature, there are three viewpoints in defining customer satisfaction: subjective, objective and composite. The subjective viewpoint of customer satisfaction reflects an emotional state that occurs in response to an assessment of the social interaction experience that the customer has with the service providers (Crosby *et al.*, 1990; Roman and Ruiz, 2005; Chang, 2007). Similarity, Anderson and Narus (1984:66) defines satisfaction as a "*positive affective state resulting from the appraisal of all aspects of a firm working relationship with another firm*". It also views as "*the positive affective state which is derived from the degree to which the expectations of interacting parties in a working relationship are met*" (Leonidou *et al.*, 2008:95). Similarity, Roberts *et al.* (2003: 175) see it as "*the cognitive and affective evaluation based on personal experience across all ...episodes within the relationship*". Others define it as "*the emotional state that occurs as a result*

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of a customer's interactions with the firm over time" (Verhoef, 2003:33) or an emotional response to purchase situations (Chang and Chen, 2008). In conclusion the previous definitions reflect the emotional side of satisfaction. Meanwhile, there is another viewpoint in defining satisfaction that reflects an objective viewpoint of satisfaction.

The objective view of customer satisfaction describes the state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service (Blanchard, 2007). It is a comparison between the level of the customer's expectation and the perceived performance (Eakuru and Nik Mat, 2008). In the same direction, Ural (2007) mentions that customer satisfaction is the result of matching between the degree of interactions between customer and service providers and expectations for performance. In this regards Kotler and Clarke (1987) reveal that customer's expectations are formed on the basis of past experience with similar situations or recommendations from peers, relatives or friends. Satisfaction can also be defined as a post-choice evaluative judgment concerning a specific purpose decision (Floh and Treiblmaier, 2006). It refers to "*the extent to which a product's perceived performance in delivering value matches a buyer's expectations*" (Armstrong and Kotler 2003:10). Moreover, Oliver (1997: 28) considers satisfaction as "*the consumer's fulfillment response, the degree to which the level of fulfillment is pleasant or unpleasant*". Gupta and Zeithaml (2006) also define it as the consumer's judgment that a product or service meets or falls short of expectations. This viewpoint represents the logical (economic) side of customer satisfaction.

Finally, the composite viewpoint (overall satisfaction) encompasses two dimensions: economic and non-economic (psychological or social satisfaction) as recommended by Geyskens and Steenkamp (2000), Del Bosque Rodrguez *et al.* (2006) and Cater and Zabkar (2009). The economic dimension describes the evaluation performed by a customer of the economic results, which derived from his or her relationship with an organisation, such competitive prices and discounts (Geyskens and Steenkamp, 2000). On the other hand, the non-economic or social dimension of satisfaction is defined as a customer's evaluation of the psychosocial aspects of his or her relationship with organisation. The elements of this dimension are represented in social contact, communication or shared values between organisation and customers. These elements lead to effective interactions between customers and service providers (Scheer and Stern,

1992). Effective interactions engender an effective exchange that reflects good psychological behaviour between service providers and customers (Gassenheimer and Ramsey, 1994; Del Bosque Rodrguez *et al.*, 2006).

Moreover, an effective customer - organisation relationship enhances customer satisfaction and thus enhances the performance of firms (Caceres and Paparoidamis, 2007). Service providers are responsible for improving customer relationships through enhancing service quality, which enhances consumer satisfaction (Eraqi, 2006). Jain and Jain (2006) indicate that an effective interaction between service providers and customers during moments of truth or service encounters develops personal friendships between them. The composite viewpoint considers customer satisfaction as a mixture between the objective and subjective viewpoints. Therefore, this study adopts composite perspective of customer satisfaction that define satisfaction as the overall state (emotional and rational) that occurs as a result of a customer's interactions with the firm over time. Selecting the composite view is due the desire to measure all dimensions of customer satisfaction: subjective and objective in one measure. Despite the importance attached to customer satisfaction and the large number of customer satisfaction studies in marketing literature, to date there is no agreement between scholars about how customer satisfaction could be accumulated.

3.2.2   Accumulation of Customer Satisfaction

In one of the most important studies that aims to interpret accumulation of customer satisfaction Meng *et al.* (2008) summarise most of theories, which have been introduced in the literature and clarify the reasons behind customer satisfaction. These theories are: expectancy disconfirmation; assimilation or cognitive dissonance; contrast; assimilation contrast; equity; attribution; comparison level; generalised negativity; and value percept. Oh and Parks (1997) reveal that the expectancy disconfirmation model has received the widest acceptance among customer satisfaction theories. According to the expectancy disconfirmation theory, customers feel satisfied when the benefits received match their requests and the proposed value (tangible and intangible benefits) reaches to them (Jain and Jain, 2006). Thus, customer satisfaction can be based on evaluations of the tangible features of product and the related attributes such as delivery, service, or communication (Wilson, 1995; Ural, 2007). Woodruff (1997) has argued that customer

satisfaction is affected basically by total value received by the customer in terms of product and service quality and effective interaction.

A good relationship between organisation and customer also affects the total value received by the customer (Ravald and Grönroos, 1996). Payne and Holt (2001:168) suggest the need to look at "*total episode value*" which is described as a function of "episode value" and "relationship value" in the following equation:

Total episode value= $\dfrac{(\text{episode benefits} + \text{relationship benefits})}{(\text{episode sacrifice} + \text{relationship sacrifice})}$

According to the equation, an effective relationship has a strong impact on total episode value that the customer receives. Therefore organisations should maintain good relationships with customers. This equation is also related to the equity concept, where the customer always compares the benefits of a relationship with the sacrifice involved in this relationship. Therefore, customer will feel positively (satisfaction) if the total relationship benefits are greater than total relationship sacrifices. The total value that customers perceived is composed of two elements; a transactional exchange value and relational value (Grönroos, 1997).

Regards to the relational benefits, a good relationship with customers is likely to have an effect on customer satisfaction for at least three reasons. Firstly, it enables firms to customise their offerings for each customer. By collecting information about customers' preferences and wants, organisations can discover hidden patterns for their customers. This information helps firms customise their offerings according to the tastes of their customers. Secondly, it allows firms to improve the reliability of consumption experiences by facilitating the timely and accurate processing of customer orders. Thirdly, it also helps firms in managing customer relationships more effectively across the different stages of the relationship (Reinartz *et al.*, 2004).

The viewpoint of total episode value for justifying customer satisfaction is compatible with the viewpoint of the expectancy disconfirmation theory developed by Oliver (1980). In the service sector the interpersonal interaction is a more important contributor than the core service (financial products and services) to customer satisfaction (Menon and O'Connor, 2007). Leonidou *et al.* (2008:95) reveal that *"satisfaction usually develops in the short run and is based on an evaluation of the outcomes of past*

interactions, which can be rewarding, profitable, and instrumental, or frustrating, problematic and inhibiting". Therefore customers should feel that the organisation really cares about them and make conscious efforts to reflect this care in its practices (Jain and Jain, 2006).

Respect to a transactional exchange value dimension, customer satisfaction develops over time and is determined by product/service performance or perceived quality rather than preliminary expectations (Beloucif *et al.*, 2004). It is related basically to the customer's expectations, which originate from the customer's beliefs that accumulate over time and reflect the level of organisation performance (Oliver, 1980). Overall customer satisfaction develops over customer experience and is accumulated through service quality and specific service satisfaction (Ndubisi, 2006). It is determined by the level of interactions between service providers and customers, the core service (products and services) that organisation introduces and the organisation itself (Crosby and Stevens, 1987; Caceres and Paparoidamis, 2007).

Moreover, new interaction experiences between customer and an organisation can update the customer's satisfaction level and may modify the effect of prior satisfaction levels (Mazursky and Geva 1989; Mittal, Kumar, and Tsiros 1999). Organisations can also improve customer satisfaction by understanding service quality dimensions (Chiou and Droge, 2006). In conclusion, there are two main reasons behind accumulation of customer satisfaction; transactional exchange values (tangible and intangible) and relational benefits (positive experience between customer and organisation over history of interactions). Customer satisfaction as one of the strategic goals for an organisation achieves a competitive advantage for organisations.

3.2.3   Advantages of Customer Satisfaction

Satisfied customers are the foundations for improving the economic and financial performance of organisations (Beloucif *et al.*, 2004; Pappu and Quester, 2006). Developing customer satisfaction can be considered as the first step to any business organisation's survival (Kau and Loh, 2006). Satisfied customers also support organisation growth, enhance its profitability and improve its competitive position in marketplace (Jain and Jain, 2006). Reichheld and Sasser (1990) report that a 5% increase in customer satisfaction can produce a profit increase of 25 % to 85%.

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Customer satisfaction has a significant influence on the economic performance of companies through reducing or eliminating the negative impact of customer complaints and enhances customer loyalty and usage behaviour (Bolton 1998; Fornell 1992; Bolton, Lemon *et al.*, 2004). Moreover, it also reduces costs related to warranties, complaints, defective goods and field service costs (Fornell, 1992) and increases organisation values (Anderson *et al.*, 2004; Mithas *et al.*, 2005).

Moreover, customer satisfaction is the major determinant in developing the future relationship between a customer and an organisation (Roberts *et al.*, 2003; Lages *et al.*, 2007). It is likely to reduce the risk that the buyer perceives when purchasing a new product (Kaufman *et al.*, 2006). It also enhances the probability of future transactions (Heide and Miner 1992). Rhodes *et al* (2008) demonstrate that increased customer numbers, increased repeat orders and reduced customer complaints are the major indicators of customer satisfaction. Despite the positive impact of satisfaction on organisation's position in marketplace, the factors, which can lead to unsatisfied customers, are often unavoidable due to human and non-human errors. Dissatisfied customers can contribute to a rise in customer complaints and bad word-of-mouth (Kau and Loh, 2006). Zemke (1999) finds that unsatisfied customer may transmit his or her bad experience with the service provider to 10 to 20 other people. Therefore an organisation should periodically measure the level of customer satisfaction.

3.2.4 Customer Satisfaction Measurement

Many researchers have attempted to build up theoretical and methodological frameworks to measure customer satisfaction in a more consistent way (Wong and Law, 2003; Meng *et al.*, 2008). Hoest and Knie- Andersen (2004) identified two issues that need to be explained when investigating customer satisfaction in service sector. The first issue is whether satisfaction is conceptualised as facets (focusing on specific trait for the service) or overall (aggregating all service traits). The second matter is whether it is viewed as transaction-specific (encounter satisfaction or satisfaction on moment of truth) or as cumulative (satisfaction over time). According to literature, customer satisfaction had been conceptualised in two different ways: transaction-specific and cumulative (Fornell, 1992; Chang and Chen, 2008; Cater and Zabkar, 2009). Anderson (1973) defines transaction-specific customer satisfaction as a post-choice evaluative result of a specific purchase occasion. Meanwhile, a cumulative customer satisfaction is

an overall evaluation based on the overall experience with the products of a specific firm over time (Oliver, 1980; Anderson and Srinivasan, 2003). Most customer satisfaction studies tend towards a cumulative view of satisfaction, which measure the general level of satisfaction based on all experiences with the firm (Garbarino and Johnson, 1999).

However, Eichorn (2004) demonstrates that a cumulative view of customer satisfaction metrics includes three key dimensions: customer orientation, products and customer service. The first dimension is customer orientation, which refers to professionalism and genuine concern for customers. The second one is the function quality and availability of the product. Finally, the level of customer service refers to the response time and resolution of the problems or complaints. Despite a large number of customer satisfaction studies, there are some difficulties related to these studies. These difficulties represent in the distinction between satisfaction and perceived emotional value, the distinction between customer satisfaction as related to tangible products and as related to service experiences and problems in measuring satisfaction (Lim *et al.*, 2006; Feng and Morrison, 2007). As regards to the first issue, there is debate in the satisfaction literature about the distinction between satisfaction and perceived emotional value. For example, Sweeney and Soutar (2001) argue that perceived emotional value can be generated in any stage of a consumption experience without actual use of a product/service. Meanwhile satisfaction is stimulated after actual experience of a product/ service. In addition, Lim *et al.* (2006) reveal that customer satisfaction in the post-consumption phase is the expected positive outcome of the customer's perceived emotional value in each stage of experience of the service.

On the other hand, many scholars focus more on the second matter, which is the distinction between customer satisfaction as related to tangible products and as related to service experiences (Veloutsou *et al.*, 2005). This distinction is due to the unique characteristics of services, such as the inherent intangibility and perishability of services, as well as the inability to separate production and consumption (Dimitriades, 2006). Moreover, most customer satisfaction metrics depend on the values and desires of customers instead of satisfaction based on expectation to make judgments and decisions (Cronin *et al,* 2000; Payne and Holt 2001; Feng and Morrison, 2007). In addition, most satisfaction studies concern on the viewpoint of customers rather than managers, although managers are the appropriate persons for measuring customer satisfaction

(Gupta and Zeithaml, 2007). Keiningham *et al.* (2007: 363) stated that *"even without a precise definition of the term, customer satisfaction is clearly understood by respondents, and its meaning is easy to communicate to managers."*

Therefore, this study adopts a cumulative view to measure customer satisfaction. The current study also depends on Egyptian financial service managers who conduct directly with customers as the appropriate persons to perceive a cumulative view of satisfaction. These managers are the appropriate persons that can identify the antecedents and consequences of customer satisfaction. One of the most important consequence or satisfaction is customer commitment. Several scholars reveal that satisfied customers are most likely to be committed customers (Abdul-Muhmin, 2005; Menon and O'Connor, 2007). Thus the next sub-sections discuses in-depth customer commitment.

3.3   Customer Commitment

Relationship marketing (RM) suggests that an organisation seeks to establish, maintain, and enhance valued relationships with customers and other partners (King and Burgess, 2008). Morgan and Hunt (1994) summarise all possible relationships between an organisation and its environment. They reveal that organisations should have mutually beneficial partnerships with internal (e.g. employees, functional departments, business units) and external parties (e.g. customers, suppliers, competitors, government). Customer commitment in service firms is one of the hottest topics in relationship marketing literature (Coyle-Shapiro and Morrow, 2006). It is an indicator of shifting from the transactional view of exchange to the relational view in the marketing discipline (Gundlach *et al.*, 1995:78). In recent years; a significant body of literature has been produced on the nature of service relationships (Bansal *et al.*, 2004; Gararino and Johanson; 1999). In the services marketing area, successful relationships are built basically on the mutual commitment between parties (Berry and Parasuraman, 1993). An effective relationship between organisation and customer facilitates understanding of customer needs, which engenders trust, satisfaction and commitment between them (Bauer *et al.*, 2002).

Several scholars mention that commitment is one of the most common variables to maintain valued relationships between partners (Gounaris, 2005; Coyle-Shapiro, and Morrow, 2006; N'Goala, 2007). Customer commitment is an important result of good

relational interactions between customer and organisation (Dwyer *et al.*, 1987). It represents one of the crucial relationship benefits to any organisation (Fullerton, 2005). The start point of building customer commitment is produced during the service encounter or *'moments of truth'*, which is derived from interpersonal interaction between customers and service providers (Menon and O'Connor, 2007:1). Beloucif *et al.* (2004:332) report that commitment refers to "*adaptation processes which are the result of parties' intentions to act and positive attitudes towards each other*". Commitment is not only regarded as be an important result of good relational interactions (Hennig-Thurau and Klee, 1997; Macintosh and Lockshin, 1997) but also as an expression of customers' willingness to continue with organisations (De Wulf *et al.*, 2001; Odekerken-Schroder *et al.*, 2003).

Moreover, Bennett (1996) and Liang and Wang (2006) argue that the strength of customers' commitment depends on their perceptions of efforts made by the seller and increases with the ongoing benefits added to each party. Committed customers work to maintain enduring relationship with organisation because they need to stay consistent in their commitment (Coyle-Shapiro and Morrow, 2006:419). According to the literature, commitment does not appear to be equally important for both sellers and customers. For example, Leek *et al.* (2002) demonstrate that sellers are more concerned about gaining the commitment of their customers in the relationship than vice versa. Therefore, there is a need to understand the core meaning of customer commitment from an organisation viewpoint in relationship marketing literature.

3.3.1   Customer Commitment Definitions

Commitment is a complex construct that has been defined in different ways in the marketing discipline. It is usually conceptualised as a customer's long-term orientation towards an organisation (Geyskens *et al.*, 1996) or an explicit or implicit pledge of relational continuity (Dwyer *et al.*, 1987:19). Kim *et al.* (2008:5) define commitment as "*the customer's behavioral intention to continue a business relationship*". It is also described as an enduring desire to maintain a valued relationship (Moorman *et al.*, 1992:316) through exerting maximum efforts from both customer and an organisation (Morgan and Hunt, 1994: 22). In addition, Gruen *et al.* (2000:37) see customer commitment as "*psychological attachment*" to an organisation. Customer commitment describes the emotional (affective) and cognitive incentives to maintain an ongoing

relationship and the propensity to oppose changing preferences (Pan *et al.*, 2006; Wu and Cavusgil, 2006).

Commitment has also been defined as mutuality and forsaking of alternatives (Gundlach *et al.*, 1995). It is considered as the perception of interdependence in which outcomes are expected to create benefits for both parties in the long run (Wu and Cavusgil, 2006). It defined as a force that binds an individual to a course of action of relevance to one or more targets (Meyer and Herscovitch, 2001:301). In addition, Farrelly and Quester (2005:212) focus more on the willingness of the parties to make short term investments as an effort to realise long-term benefits from the relationship. Bowen and Shoemaker (1998:15) also refer to commitment as "*the belief that an ongoing relationship is so important that the partners are willing to make short-term sacrifices to realize longing to work at maintaining the relater benefits*". All the previous definitions agree that customer commitment definition has four characteristics; enduring reflecting a desire, driven by value and willingness to make sacrifices.

Firstly, commitment is enduring (the customer will continue to work with organisation after the current transaction). Kim *et al.* (2008:5) reveal that customer commitment focuses more on a committed relationship rather than merely customer's future transactional intentions. Secondly, commitment reflects a desire (based on personal choice rather than legal obligation). Customer commitment reflects a psychological force that links customer to an organisation with which the customer does business. This psychological attachment with the organisation is governed by the quality of the relationship between them. Thirdly, commitment is driven by value (continuity of the relationship is related to special long-term benefits derived from the arrangement). The continuity of commitment is influenced by the efforts that the organisation makes to increase the value of the relationship to customers. Doucette (1997) reveal that customers will be committed to an organisation if positive returns will result from continued relationship with it.

Finally, commitment reflects the willingness of the both parties to make sacrifices to maintain these effective relationships. The social exchange and goal interdependence perspectives demonstrate that commitment requires stability and sacrifice (Yang *et al.*, 2008). Customer commitment explains great efforts that customers exert to maintain the relationship with an organisation (Fullerton, 2003; Del Bosque Rodrıguez *et al.*, 2006;

Kingshot, 2006; Yang *et al.*, 2008). The committed customer considers the relationship is worthwhile if it achieves benefits and lasts forever (Morgan and Hunt, 1994; Yang *et al.*, 2008). Commitment brings about mutual respect for service providers and customers (Lai *et al.*, 2005). It also instills confidence in service providers and engenders mutually beneficial exchanges. Moreover, it helps to establish social relationships and encourage supportive behavior between service providers and customers (Bauer *et al.*, 2002).

Morgan and Hunt (1994) identified four conditions that encourage customers to commit to an organisation. Firstly, the organisation intends to maintain a quality relationship. Secondly, the customer delivers superior benefits. Thirdly, there is a mutual trust between a customer and an organisation. Fourthly, the organisation understands the values and norms of the customer. Therefore the quality of relationship between customer and an organisation creates and maintains customer commitment, which is the main responsibility of organisations (Gounaris, 2005). Therefore, our definition should include the characteristics and the conditions that encourage customers to be more committed. Thus, this study adopts the definition of Anderson and weitz (1992:19), which considers customer commitment as *"a desire to develop a stable relationship, a willingness to make short sacrifices to maintain the relationship and a confidence in the stability of the relationship"*. Stable and enduring relationships between customers and organisation bring many advantages for organisations (Gounaris, 2005; Ivens, and Pardo, 2007).

3.3.2 Benefits of Customer Commitment

A review of the literature reveals that customer commitment adds many benefits for organisations through developing an emotional attachment between customers and service providers (Fullerton, 2005; Dimitriades, 2006). This emotional attachment increases the readiness of customers to make sacrifices for the company, such as accepting price rises and increasing their willingness to exert extra effort and time to do business with the organisation (Anderson and Weitz, 1989). In addition customers will be more willing to maintain stable and profitable relationships with an organisation (Ivens, and Pardo, 2007). Moreover, customer commitment supports a growing interest in making joint decisions that shape the future relationship between the organisation and its customers (Frazier *et al.*, 1994: 265; Bauer *et al.*, 2002).

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Customer commitment also helps in solving customer problems and reduces the organisation's opportunistic behaviour (Tellefsen and Thomas, 2005). Gounaris (2005) also reveals that customer commitment helps organisations to predict ongoing relationship performance with customers. Furthermore, customer commitment serves as an emotional bond that keeps customers with the organisation when they meet frustrations or setbacks (Day, 1995; Tellefsen and Thomas, 2005). Despite a large number of commitment studies, nevertheless, there is a great debate about the main types of customer commitment (Allen and Meyer, 1990; Gruen, 2000; Meyer and Herscovitch, 2001; Meyer *et al.* 2002).

3.3.3 Types of customer commitment

A review of the literature identifies three types of customer commitment: affective, calculative and normative (Meyer and Allen, 1991; Gruen *et al.*, 2000; Ruyter *et al.*, 2001). Firstly, affective commitment refers to the degree of a customer's emotional attachment to a particular organisation (Clarke, 2006; Ruyter, 2001; Cullen *et al.*, 2000). The affective component of customer commitment represents a cumulative function of the emotional feelings generated during each and every moment of truth or service encounter. It describes the desire to continue a relationship because of a psychological attachment, kinship or personal bond between customer and service providers (Richard *et al.*, 2007). It also reflects the relative intensity of identification and affiliation with the service provider and the involvement in the service relationship (Crosby *et al.*, 1990; Garbarino and Johnson, 1999; De Wulf *et al.*, 2001). It is not only a positive attitude towards the service provider, but it also refers to the congruence of values, affiliation, and belongingness between customer and organisation (N'Goala, 2007). Relational social norms are the essence of shaping the affective commitment of customers (Joshi and Arnold, 1997; Fullerton, 2005).

However, there are two types of affective commitment: low / negative or high / positive affective commitment. Low/ negative affective commitment occurs during moments of truth that fall below customer expectations. On the other hand, the high / positive affective commitment generated during moments of truth that are above customer expectations. Low/ negative affective commitment had a strong impact on affective commitment than high / positive affective commitment. In other words, negative interactions between service providers and customers have a stronger impact on

affective commitment than positive interactions between them. Menon and O' Connor(2007) reveal that since affective commitment is generated and fostered in the moments of truth between the service provider and the customer, it will have a positive effect on behavioural commitment .

Secondly, calculative commitment is defined as the degree to which the customer is psychologically bonded to the organisation on the basis of the perceived costs (economic, social, and status related) associated with leaving the organisation (Gruen *et al.*, 2000; Ruyter *et al.*, 2001). It is based merely on a cost–benefit analysis, separate and distinct from the relationship context (Richard *et al.*, 2007). It is also called continuance commitment, and results from an accumulation of "side bets" which would be lost if the relationship were discontinued (Meyer and Allen, 1991). According to the customer's viewpoint calculative commitment reflects the efforts that organisations make to increase the value of the relationship to customers through the trade-off between benefits and sacrifices to continue with an organisation (Soetomo, 2001). Calculative commitment is developing because of the behavioural contacts between customer and service providers. Those contacts can take many forms such as customers experiencing a need for the organisation and its services, a willingness to contact the organisation, willingness to process information about the organisation, or perhaps customers realising that the organisation is the best alternative to deal with (Bove and Johnson, 2006; Kim *et al.*, 2008).

Finally, normative dimension explains why customer should feel committed. It is defined as the degree to which a customer is psychologically bonded to an organisation on the basis of the perceived moral obligation to maintain the relationship with an organisation (Meyer and Allen, 1991). Normative commitment has received much less attention in marketing literature (Gruen *et al.*, 2000). In most service settings, consumers do not feel a moral obligation to continue the business relationship (N'Goala, 2007). In this study we ignore the items that measure normative dimension in the single construct for measuring customer commitment and just focus on measuring the items of affective and calculative dimensions. This weeding is supporting by Meyer and Allen (1997) and O'Reilly *et al.* (1991)'s earlier findings. They mentioned two reasons for this weeding: 1) the effects of normative commitment have been almost always in the same direction and weaker than the effects of affective commitment; 2) normative commitment is usually highly correlated with affective commitment (Fullerton,

2005:99). Therefore, the current study adopts the viewpoint that considers the affective and calculative as the main types of customer commitment.

3.3.4   Measurement of Customer Commitment

According to the commitment literature there are two views to measure customer commitment; multidimensional or unidimensional (Gundlach *et al.*, 1995; Verhoef *et al.*, 2002; N'Goala, 2007). The multidimensional measure include the main types of customer commitment; affective and calculative as separate constructs(Anderson and Weitz, 1989; Meyer and Allen, 1991; Ruyter *et al.*, 2001; Gutiérrez *et al.*, 2004; Colquitt *et al.*, 2007). The unidimensional view of customer commitment reflects a single construct that include the mixture items of affective and calculative commitment (Geyskens *et al.*, 1996; Gounaris, 2005; Keh and Xie, 2009). However, most buyer–seller commitment research has focused on a single construct when measuring customer commitment (Anderson and Weitz, 1992; Morgan and Hunt, 1994; Richard *et al.*, 2007). This study adopts the unidimensional view for two reasons. Firstly, this study depends on the service providers to perceive customer commitment, so it will be more logic and easy to use the unidimensional rather than the multidimensional viewpoint. Secondly, the single construct measurement items encompass mixed measures from both affective and calculative commitment. Thus, this study operationalises customer commitment through a single construct that encompasses a mixture of affective and calculative measurement items from the perspective of service providers in the Egyptian financial service institutions.

3.4   Summary

This chapter has explored the values that organisations gain as a result of adopting intrafirm social capital. Intrafirm social capital establishes trust among employees. This trust derived from improving social interactions and shared goals among employees. Intrafirm social capital facilitates actions that improve internal organisation processes that improve employees' practices. Effective employees' practices have a positive impact on customer service improvement. The improvement in customer service affects positively on customer satisfaction and customer commitment. Intrafirm social capital enhances technical and functional service quality, which represent the main reasons for customer satisfaction. This study defines customer satisfaction as the overall state

(emotional and rational) that occurs as a result of a customer's interactions with the firm over time. This chapter introduced some theories that explore how customer satisfaction is accumulated. This study adopted the expectancy disconfirmation theory to explain how customer satisfaction is accumulated.

Furthermore, this chapter investigated the issues related to measurements of customer satisfaction. Customer satisfaction maintains the long term relationship between customers and organisations, which enhance customer commitment. Customer commitment is defined as a desire to develop a stable relationship, a willingness to make short sacrifices to maintain the relationship and a confidence in the stability of the relationship. This chapter explore multidimensionality issue of customer commitment. This chapter identified two main dimensions for operationalising commitment: affective and calculative. The two dimensions represented the main components of the composite measure of customer commitment. The affective component of customer commitment represents a cumulative function of the emotional feelings generated during each and every interaction with an organisation. On the other hand, calculative commitment is defined as the degree to which the customer is psychologically bonded to the organisation on the basis of the perceived costs (economic, social, and status related) associated with leaving the organisation. A review of the literature shows that enhancing customer satisfaction and commitment is essential to increase customer loyalty and retention. Thus, the next chapter (Chapter 4) discuss CRM and its measurements (customer loyalty and customer retention).

Chapter 4 Customer Relationship Management

This chapter outlines different aspects of CRM in literature that help in identifying the main dimensions of CRM performance. This chapter consists of six essential parts. The first section investigates the evolution of CRM concept. The second part of the chapter discusses the different viewpoints for CRM definitions. The third part handles the different dimensions of CRM while the fourth section explores the benefit of adopting CRM. The fifth division presents the main dimensions for CRM performance. This chapter identifies two main dimensions for measuring CRM performance: customer loyalty and customer retention. This chapter discusses in depth the various perspectives in defining customer loyalty, the factors that constitute this dimension and the main advantages for making customers loyal. Finally this chapter is ending with exploring the main issues of customer retention as a second main dimension of CRM performance. It investigates the different viewpoints in defining customer retention. It also examines the main dimensions and benefits for customer retention. Moreover, this chapter explores the main indicators for measuring customer retention from the organisation's perspective

4.1   Introduction

The philosophy of relationship marketing has changed from investing in acquisition new customers to encourage existing ones to be more loyal and retainable towards an organisation (Berry, 1995). Many scholars have demonstrated that keeping existing customer is more profitable than acquiring new potential ones (Reichheld and Sasser, 1990; Agrawal, 2004; Len and Wang, 2006; Manrai and Manrai, 2007). Cockburn (2000) reveals that a five percent increasing in customer loyalty could increase an organisation's profitability by more than 50 per cent. Jones (2003) also demonstrates that 80% of firm profits come from 20% of its customers and attracting new customer costs up to ten times as much as keeping existing ones. While Rosenberg and Czepiel (1983) and Ndubisi (2003) report that acquiring new customer costs 5 to 6 times more than retaining an existing one. In addition, Reichheld and Sasser (1990) show that a

service company could double its profits through increasing customer retention rate by 5 per cent.

The main purpose for any business is to create and retain customer (Obeng and Loria, 2006; Zineldin 2006). It is the customer who determines why businesses exist (Drucker, 1954; Eid, 2007). Therefore, marketing ideas always focus on customers, because they are the lifeblood of any organisation. Without customers, there are no sales, no profit and no good position for the organisation in the market place. The association between an organisation and its customers enhances the organisation's competitive advantages and increase its market value (Gupta and Zeithaml, 2006). Evidence of the vital nature of the association between an organisation and its customers comes from a worldwide survey of 681 senior executives conducted by "The Economist" during October-December 2002. The results indicated that 65% of the respondents considered customers as their central focus over the next three years, whereas only 18% gave the priority to shareholders (Ittner and Larcker, 1996).

Moreover, many scholars show that building and enhancing long-term relationships with customers generates positive returns to an organisation (Dick and Basu 1994; Grossman, 1998; Garbarino and Johnson 1999; Oliver, 1999; Jones, 2003). Effective relationships with customers encourage customers to be more loyal and retainable (Chen and Popovich, 2003; Yim *et al.*, 2004; Eid, 2007). Keeping profitable customers increases the customer's life time cycle, which increases the organisation's profit (Peelen *et al.*, 2006; Minima and Dawson, 2007; Teng *et al.*, 2007). Good relationships with customers are a critical issue for all types of organisations: industrial or service (Stern, 1997; Leonard, 1995; Sibley, 1999; Jones, 2003; Javalgi *et al.*, 2005; O'Loughlin *et al.*, 2004; Laing and Lian, 2005; Menon and O'Cnnor, 2007). Quality of relationships with customers in the service sector is more crucial than in the industrial sector, because of the unique characteristics of services (Grönroos, 1982; Zeithaml *et al.*, 1985). Moreover, many services require ongoing membership and interpersonal relationships between customers and service providers (Lovelock, 1983; Berry 1995; Gwinner *et al.*, 1998).

Undoubtedly, organisations do their efforts to keep existing profitable customers and encourage them to be even better customers, instead of acquiring new customers, which are more costly (Geddie *et al.*, 2005). However, organisations seek to make best use of

their resources and set the appropriate policies and create innovative ideas to achieve these goals. One of these ideas is managing the relationships with customers. Managing these relationships could be done through adopting a new paradigm in marketing: Customer Relationship Management or CRM (Sin *et al.*, 2005; Eid, 2007). CRM as a new marketing paradigm appeared as a result of development marketing concepts such as transactional marketing, marketing orientation and relationship marketing. Each era of CRM evolution is characterised by different aspects. Understanding the CRM evolution helps to know how CRM had been established. The following sub-sections of this chapter discuss in depth the development of CRM concept across the different eras of marketing philosophy, definitions of.CRM, CRM dimensions, benefits of CRM and CRM performance.

4.2 Development of CRM

Because of the vital role of customers in the organisation survival, marketers seek to build strong marketing relationships with customers. These relationships should be modified according to changes in marketing ideas, which occur as a result of environmental changes (Karkostas *et al.*, 2004). These relationships develop over time and take many forms. They extend from a minimum level of association to a high level of association between customers and their organisations. According to literature there are four eras representing the stages of CRM development as follows:

4.2.1 Transaction Marketing Philosophy

Transaction marketing adopted a "*product-centred*" philosophy. In a transaction marketing era, marketing activities focus on price relationship in any transaction between buyer and seller. The weak relationship between marketers and customers is the major characteristic of transactional marketing (Gummesson, 2004). In this era, marketers focus their efforts to attract a transaction customer. Such, efforts may be enough to attract new customers and execute transaction but they are not sufficient to keep customers loyal and retainable (Armstrong and Kotler, 2005:8). Executing transactions, paying more attention to an organisation value rather than customer value, ignoring building long-term relationships with customers and no enough efforts to retain customers are the main drawbacks of this philosophy. To overcome these issues, organisations switch their marketing efforts toward customer needs and focus their

efforts to satisfy these needs. According to these efforts, a new marketing concept, called a "marketing orientation" appeared.

4.2.2 Marketing Orientation Philosophy

In the marketing orientation era, organisations seek to satisfy customer needs through understanding their behaviours and wants. Marketing orientation philosophy adopted a "customer–centric" instead of a "product – centric" philosophy (Armstrong and Kotler, 2005:13). This era is characterised by increasing the efforts to attract new customers rather than keeping existing ones and focusing on an organisation value rather than customer value (Len and Wang, 2006; Agrawal, 2004). These efforts to attract new customer are more costly and less profitable than keeping exiting one (Manrai and Manrai, 2007). Customer segmentation is also one of the drawbacks of this era. Segmentation basically means dividing customers into groups according to their similar characteristics (e.g. demographic, geographic or behavioural traits) and introducing standardised activities for each segment.

Although marketers try to satisfy the needs of most customers in each segment, they cannot achieve full satisfaction of every customer because their needs are not completely homogeneous. Therefore, customers often receive most of what they want but still have to compromise on many desires (Bose, 2002). In addition, marketers put all customers in one basket and treating profitable customers as non profitable ones. This leads an organisation to allocate its marketing efforts and its resources equally to all customers. Moreover, this concept increases marketing costs. All these drawbacks encourage marketers to seek for new philosophy, which focus on establishing ongoing relationship with customers. This long term relationship creates values for all parties. Marketers called this new shift in marketing philosophy as "relationship marketing or "RM" (Berry, 1983; Morgan and Hunt, 1994).

4.2.3 Relationship Marketing Philosophy

The concept of relationship marketing or RM is also called *one to one marketing* (Bose, 2002: 90). This concept has an extended history in supplier–buyer relationships in industrial marketing, supply channel management or domination in the channel of distribution, and service providers–users relations management (Minami and Dawson,

2007). RM is directed to establish long term win-win relationships with organisation stakeholders (Gummesson, 2002:37). RM is characterised by treating each customer individually and uniquely, depending on the customer's preference. It also develops and maintains long-term relationships with customers, rather than simply perform a series of separate transactions (Berger and Naser-Bechwati, 2001). On the other hand, there are three main drawbacks of adopting relationship marketing. Firstly, it focuses on building long term relationships with internal and external stakeholders. Secondly, RM allocates organisation resources equally on profitable and non profitable customers. Thirdly, this concept did not pay attention to the customer lifetime value. The drawbacks of RM concept especially in ignoring building ongoing relationship with profitable customers encourage organisations to search for new concept. This concept is "customer relationship management".

4.2.4   Customer Relationship Management Philosophy

The term "Customer Relationship Management or CRM" emerged in the information technology (IT) vendor community and practitioner community in the mid-1990s (Payne and Frow, 2004) and its roots are derived from relationship marketing philosophy. CRM focuses on how to retain customers through effectively managing relationships with customers (Christopher *et al.*, 1991). CRM is not only a new concept but also represents a new managerial practice (Anderson and Kerr, 2002; Chen and Popovich, 2003; Wang *et al.*; 2004). CRM is the outcome of the continuing evolution and integration of marketing ideas and newly available data, technologies, and organisational approaches (Boulding *et al.*, 2005).

CRM concept has many characteristics that improve customer-organisation relationship. Firstly, CRM maximises value for both customers and an organisation. Secondly, it focuses on establishing mutually profitable long-term relationships between valuable customers and their organisations (Sin *et al.*, 2005). Thirdly, it seeks to understand customer needs and customers' purchasing behaviour (Simonson, 2005: Wu and Wu, 2005; Chang and Chen, 2008). Fourthly, it uses some technological methods to collect customer information, such as data mining and data warehousing (Yim *et al,* 2004). Fifthly, it automates organisation processes to achieve mass customisation, which in turn leads to reduce customisation costs (Chen and Popovich, 2003). Sixthly, it seeks to maximise customer lifetime value for an organisation (Pfeifer *et al.*, 2005; Ryals and

Knox, 2005). Finally, it seeks to establish strong bonds with customers to keep them loyal and increase their retention rate. In conclusion, Table4-2 summarises the main characteristics of each era of CRM development.

Table 4-1 The main characteristics of the CRM evolution

Stage / Criteria	Transactional orientation	Marketing orientation	RM	CRM
Focus:	Managing transaction.	Managing market.	Build long-term relationship with all parties.	Managing the relationship with customers.
	Product centric.	Brand – centric.	Customer- centric.	Profitable customer- centric.
	Distribute value.	Create value for organisation.	-Create mutual value between company and customers.	-Maximize the value for both parties.
Marketing tools	Mass marketing	Market segmentation	Customisation	Personalisation
Relationship form	No	specific	Business to Business and One to Business.	One to One
Outcomes:	Specific customer satisfaction.	Satisfy each customer segments.	Overall satisfaction	Satisfy each customer individually.
	Create customers for transactions.	Create customers for organisations products.	Create and retain organisations customers.	Create and retain organisation's profitable customers.
	Profits through customer volume.	Profits through customer satisfaction	Profits through customer satisfaction and retention.	Profits through satisfy and retain profitable customers

Source: The Author.

According to Table 4- 2, CRM is not only a new marketing concept but it is also a new management practice. Its roots are derived from the RM concept. It aims at building trusting and lasting relationships with profitable customers. It aims to create value for an organisation through creating value for customers. It seeks to make customers more loyal and retainable through satisfying their needs uniquely.

Although CRM had attracted many scholars in recent years, this concept suffers from two main problems. Firstly, CRM as a new marketing paradigm is still in the early development stages and needs many studies to identify its real critical success factors (Langerak and Verhoef, 2003; Yim, 2004; Avlonitis and Panagopoulos, 2005; Chan,

2005). Secondly, most of CRM initiatives make losses or at least no improvement. The reasons behind the poor results of CRM implementation is a major problem when organisations plan to adopt CRM (Payne and Frow, 2005). Therefore, there is a need for more studies that search for reasonable solutions to the poor performance of CRM projects. One of these solutions is to use social capital theory in order to improve CRM performance in service organisations. To achieve this objective the next sub-section discusses critically the CRM concept.

4.3 CRM Concept

The accurate meaning of CRM is not always clear in the literature (Nevin, 1995; Parvatiyar and Sheth, 2001). For instance, Nevin (1995) noted that the term has become a buzzword. It has been used to give different meanings. In spite of a large number of CRM studies, there is a lack of a widely accepted definition of CRM (Knox *et al.*, 2003).

Table 4-2 CRM definitions

Author/Date	CRM definition
Jackson (1985:121)	CRM means "marketing oriented toward strong, lasting relationships with individual accounts."
Day (2001:1)	"a cross-functional process for achieving a continuing dialogue with customers, across all of their contact and access points, with personalized treatment of the most valuable customers, to increase customer retention and the effectiveness of marketing initiatives"
Swift (2001:12)	"An enterprise approach to understanding and influencing customer behaviour through meaningful communication in order to improve customer acquisition, customer retention, customer loyalty, and customer profitability"
Todman (2001:287)	CRM is a strategy for maximizing customer's lifetime value by achieving two things: 1, understanding customers better. 2, interacting effectively with customers.
Anderson and Kerr (2002:2)	"CRM is a comprehensive approach for creating, maintaining and expanding customer relationships".
Dyche (2002:4)	CRM is "the infrastructure that enables the delineation of and increase in customer value, and the correct means by which to motivate valuable customers to remain loyal - indeed to buy again".
Kim *et al.* (2003: 6)	"Managerial efforts to manage business interactions with customers by combining business processes and technologies that seek to understand a company's customers".
Knox *et al.* (2003:1)	CRM is an organisation- wide process, which focuses its activities on treating different customers differently to increase value for both customers and organisation".
Wu Tie (2003:21)	"A broad approach that integrates every business process related to customers, such as sales, marketing and customer service and field support through integration of people, process and technology".

Zikmund *et al.* (2003:3)	CRM is "a business strategy that uses information technology to provide an enterprise with a comprehensive, reliable, and integrated view of its customer base so that all processes and customer interactions help maintain and expand mutually beneficial relationships"
La Placa (2004:463)	CRM is generally defined as the "management of mutually beneficial relationship(s) from the seller's perspective".
Reinartz *et al.* (2004:293)	CRM is the "systematic process to manage customer relationship initiation, maintenance, and termination across all customer contact points to maximize the value of the relationship portfolio."
Kotler and Armstrong (2005:1)	CRM as "the overall process of building and maintaining profitable customer relationships by delivering superior customer value and satisfaction."
Payne and Frow (2005:168)	"CRM is a strategic approach that is concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments. CRM unites the potential of relationship marketing strategies and IT to create profitable, long-term relationships with customers and other key stakeholders."

Source: The author.

Table 4-3 highlights main definitions of CRM, which are formulating a working definition. Those definitions, at first seem different, but actually they complete the picture for better understanding to CRM concept. After analysing CRM definitions in Table 4-3 and the relevant CRM literature, we find three aspects that constitute CRM concept: managerial nature of CRM, CRM dimensions and CRM values.

4.3.1 Managerial Nature of CRM

The managerial nature of CRM reflects whether CRM is a process, strategy, tool or comprehensive management approach. Several scholars consider CRM as a set of organisation processes or activities (Swift, 2001; Wu Tie, 2003; Kotler and Armstrong, 2005; Richard and Jones, 2006; Dyche, 2002; Knox *et al.*, 2003). Reinartz *et al.* (2004) reveal that CRM is a systematic process to manage customer relationship, while Day (2001), Zikmund *et al.* (2003) and Parvitiyar and Sheth (2001) consider it as a business strategy. In contrast, Teng *et al.* (2007) demonstrate that CRM is a technology-enabled business strategy. The main aim of this strategy is to maximise the lifetime value of customers (Todman, 2001). Others believe that CRM is a tool for improving organisation value (Rogers, 2005). Anderson and Kerr (2002) go beyond the view that CRM is just an organisation tool, process or strategy to consider it as a comprehensive approach. It is a management approach that seeks to create, develop, and enhance beneficial relationships with carefully targeted customers (Kim, *et al.*, 2003; La Placa,

2004). This comprehensive management approach encompasses three man dimensions technological, organisational and human (Kim *et al.*, 2003; Wu Tie, 2003; Gummesson, 2004; Chan, 2005; Mithas *et al.*, 2005; Sin *et al.*, 2005; Eid, 2007).

4.3.2 CRM Dimensions

Several scholars indicate that CRM has three dimensions: technological, human and organisational (Zikmund *et al.*, 2003; Yim *et al.*, 2004; Lin *et al*, 2006; Ismail *et al.*, 2007). With regards the technology dimension facilitates information flow within the context of CRM (Ahearne *et al.*, 2007). Technology – based CRM enables organisation to collect, store, analyse and share customer information (Ismaial *et al.,* 2007). Some scholars believe that technology just a tool to improve customer service (Payne and Frow, 2005; Gefen and Ridings, 2002; Ismail *et al.*, 2007). In contrast others view technology as one of CRM dimensions (Sin *et al.*, 2005; Ahearne *et al.*, 2007). According to large investments in CRM technology and the role of CRM technology in enhancing CRM performance this study adopts the viewpoint that considers technology as one CRM of dimensions.

Regarding to the human dimension in CRM, employees represent an important dimension in implementing CRM (Nairn, 2002; Shi and Yip, 2007). Employees are responsible for establishing and developing good relationships with customers. In the same view, Sin *et al.* (2004) reveal that the hardest part of becoming a CRM-oriented organisation is employees. Therefore, an organisation should employ qualified employees that support successful CRM implementation. If employees work as intended, a business can provide better customer service, increase customer satisfaction and improve organisation performance (Noone *et al.*, 2003; Eid, 2007).

Employees play two roles in implementing CRM: establishing effective social interactions within an organisation and with customers. Despite the importance of social interactions among employees in implementing CRM, prior CRM studies pay more attention to social interactions between service providers and customers (Dimitriadis and Stevens, 2008; Teng *et al.*, 2007). Social interactions among employees are the core of CRM, by which many companies are intent in developing strong social bonds among employees affect positively on customer relationship (Davis *et al.*, 2000; Thieme, 2007; Pervan *et al.,* 2009). Interpersonal interactions between employees strengthen the

linkage between them and increase cooperative behaviour among them which in turn lead to improve customer satisfaction, loyalty and retention (Ballantyne, 1997; Eichorn, 2004; Ghavami and Olyaie, 2006). Thus, the effective social interactions among employees are the corner stone to establish the effective social interactions with customers. Social interactions among employees can be developed through social capital (Lu and Yang, 2011).

Finally, the third CRM dimension is to establish effective organisation processes to serve customers. Successful organisation processes within an organisation enhances customer service and improves the customer- organisation relationship. Efficient organisation processes require integration between all activities across the firm. Such integration generates values for both firm and customers (Boulding *et al.*, 2005). This integration requires redesigning core business processes starting from the customer perspective and involving customer feedback (Chen and Popovich, 2003). Thus, CRM essentially means fundamental changes in the way that firms are organised and business processes are conducted (Agarwal *et al.*, 2004).

Although several scholars agree that integration among the three CRM dimensions enhances CRM performance most CRM attempts fail to contribute to organisational performance. For example, Reinartz *et al.* (2004) claim that up to 70% of CRM initiatives result in either losses or at least no improvement in company performance. Moreover, most of these attempts are characterised by the huge investments in these CRM projects. The poor results of CRM projects and the huge investments associated with their implementation are due to focusing basically on the technology dimension and ignoring human and organisational dimensions of the firm (Sin *et al.*, 2004; Yim *et al.*, 2004; Eid, 2007) or due to the absence of effective measures of CRM performance (Preslan, 2003; Chan, 2005). Therefore there is a need for more studies that pay more attention to human and organisational dimensions to improve CRM performance. This study focuses on exploring role of human dimension in enhancing CRM performance by adopting social capital concept. Improving CRM performance maximises CRM values for an organisation.

4.3.3 CRM Values

CRM seeks to maximise values for customers and an organisation. Rogers (2005) and Kotler and Armstrong (2005) reveal that CRM creates values for customers. Creating value for customer aims to maximise customer lifetime value (Todman, 2001), which leads to adding values to an organisation (Parvitiyar and Sheth, 2001; Knox *et al.*, 2003; Teng *et al.*, 2007). Reinartz *et al.* (2004) add that CRM seeks to maximise value of relationship portfolio. Optimising relationship portfolio means maximising the stakeholders' values (Payne and Frow, 2005). Dyche (2002) and Kotler and Armstrong (2005) mention that organisations seeks to adopt CRM to increase customer satisfaction. Richared and Jones (2006) indicate that CRM improves business performance. Swift (2001) and Parvitiyar and Sheth (2001) also demonstrate that through customer acquisition, satisfaction, commitment, loyalty and retention, CRM can enhance organisations' performance. Day (2001) reveals that CRM focuses on how to increase the effectiveness of marketing initiatives through enhancing customer retention rate. The main contributions of adopting CRM are maximising values for both customer and an organisation (Adrian and Pennie, 2004). Table 4-4 displays the values of CRM.

Table 4-3 Values of CRM

Authors/Date	Core values of CRM
Chen and Popovich (2003)	- Customer data sharing throughout the organisation resulting in: - High levels of customer service - Opportunities for cross-selling and up-selling - Vast information about customers' habits and preferences - Integrated and complete view of the customer - Improved targeting to segments and individual customers - CRM innovative technology: - Extends capability to the customer for self-service and Internet applications - Attracts existing and new customers through personalized communications and improved targeting. - Integrates customer and supplier relationships - Constructs metrics to analyse common and unique customer patterns. - Organisation performance: - Increases productivity. - Increases revenue and low operation costs.
Park and Kim (2003)	- Customer interaction simplifies customer support - Reduces transaction costs - Improves product differentiation - Improves product' pricing policy
Verhoef (2003)	- Improves customer commitment, satisfaction and loyalty. - Improves customer share development

Reinartz *et al.*(2004)	• Improves product pricing policy. • Enables segmentation based on economic value of customer. • Effective resource allocation to profitable customers.
Jones *et al.* (2005)	• Improves customization of services and product offerings to satisfy customer needs • Enhances ability to create profitable long-term partnerships • Improves salesperson capabilities and skills.
Eggert *et al.*(2006)	• Enhances service support. • Improves product quality and delivery performance. • Increases supply-chain efficiencies via personal contact. • Improves supplier know-how.
Ozgener and Iraz (2006)	• Gathering and integrating information on customers. • Nurturing and maintaining company's customer base. • Developing a closer relationship with customers. • Increasing customer satisfaction. • Reducing customer acquisition costs. • Ensuring sustainable competitive advantage. • Maximizing profitability due to increased sales • Increasing customer loyalty as a result of more • Enabling micro-segmentation of markets according to customers' needs and wants. • Collaborating with customers for joint value-creation. • Acquiring well-accepted outcomes of data-mining activities. • Supporting effective sales efforts through better management of the sales process.
Ahearne *et al.* (2007).	• Increases productivity of sales force • Increases technical and market knowledge of a salesperson • Increases salesperson's ability to identify profitable customers • Improves the presentation skills of salespeople
Eid (2007)	• Improves customer's experience • Creates more customer satisfaction. • Increases customer loyalty • Improves sales
Teng *et al.*(2007)	• Increases plant revenue. • Reduces engineering lead-time. • Reduces labour cost. • Offers better quality products. • Organises the firm a much more systematic approach.

Source: The author.

Based on Table 4-4, Chen and Popovich (2003) reveal that CRM enables organisations to collect a huge amount of information about customers' habits and preferences. This information encourages organisations to understand the purchasing behaviour of their customers. In addition, customer information system helps an organisation to segment customers on the basis of their economic value (Reinartz *et al.*, 2004). Market segmentation supports an organisation to make an effective resource allocation to profitable customers and improves customisation of services and provides product offerings to satisfy customer needs (Jones *et al.*, 2005). CRM also facilitates sharing information between an organisation and its customers, which in turn leads to improve

product differentiation and enhance product pricing policy (Park and Kim, 2003). Moreover, CRM supports customisation process that introduces many offerings to satisfy differentiated needs for customer at low cost (Chang and Chen, 2008).

CRM also enhances services support, improves product quality and delivery performance (Eggert *et al.*, 2006) and achieves high levels of customer services (Chen and Popovich, 2003). The interaction with customers simplifies customer support and reduces transaction costs (Park and Kim, 2003). Verhoef (2003) added that interaction improves customer share development. It will also improve the customer's experience (Eid; 2007). The key focus of CRM is profitable customers; therefore resource allocation will be done in an effective way (Tanner *et al.*, 2005). CRM improves employees' capabilities and skills to create profitable long-term partnerships with customers (Johen *et al.*, 2005). CRM creates positive customer behaviour through increasing customer satisfaction, commitment and loyalty (Verhoef, 2003; Tanner *et al.*, 2005; Eid, 2007). In addition, establishing customer -supplier relationships and personalised communications helps organisations in attracting new customers and retaining existing ones (Eid, 2007). It also ensures sustainable competitive advantage (Ozgener and Iraz, 2006).

After an in depth discussion to CRM concept through reviewing the presented definitions in Table 4-3 and CRM values in Table 4-4, this study defines CRM as a comprehensive management approach that establish and manage ongoing customer relationships through effective integration among organisation resources: technological, organisational and human in a synergetic way in order to maximise values for both customer and an organisation. Despite the large number of CRM studies there is a shortage in CRM studies that identified the measures of CRM performance. The reliable and appropriate measures for CRM performance reflect the real outcomes for CRM implementation. Therefore, the following section discusses in depth the measures of CRM performance.

4.4   CRM Performance

The CRM performance concept refers to the extent to which organisations succeed or fail in achieving CRM goals (Kim *et al.*, 2004; Eid, 2007). Gupta and Zeithaml (2006) identify two main approaches to measuring CRM performance: financial (profit, sales

growth and return on investments or ROI) or behavioural (satisfaction, loyalty, retention). According to Table 4-5 there is no agreement between scholars about unified measures of CRM performance. A review of the literature identifies two main approaches to assess CRM performance: behavioural and composite measure. The behavioural measures include customer satisfaction or customer loyalty or customer retention or any mixture from any of them (Chen and Popovich, 2003;Verhoef, 2003; Kim *et al.*, 2004; Yim *et al.*, 2004; Jayachandran *et al.*, 2005; Peelen *et al.*, 2006; Eid, 2007; Richard *et al.*, 2007). On the other hand, the composite measure adopts mixture from behavioural and financial measures (Ryals and Payne, 2001; Croteau, 2003; Minima and Dawson, 2007; Kim and Kim, 2009).

Table 4-5 displays some features of CRM studies that evaluate CRM performance with behavioural or composite measures. Regarding to CRM studies that assess CRM performance by behavioural measures are characterised by using quantitative methodology, employing survey method to collect data and applying different multivariate statistics such as exploratory factor analysis, confirmatory factor analysis and structural equation modelling or regression models (Yim *et al.*, 2004; Eid, 2007). On the other hand, CRM studies that evaluate CRM performance with composite measures are characterised by using qualitative methodology, employing interviews and case studies to collect data and applying content analysis and conceptualisation to analyse data. Regarding to a large number of CRM studies there is a shortage in CRM performance studies. Thus, there is a need for more studies towards identifying the appropriate measures of CRM performance

Table 4-4 Some studies related to CRM performance

Author/s	Research problem/ aim	Methodological approach	CRM measures	Data analysis	Relevant findings	Journal
Ryals and Payne (2001)	Reports on a study of the adoption and use of CRM in the financial services sector.	*Interview :* semi-structured, in-depth interviews, 11 financial services organisations (banking and building societies, fund management and insurance)	1.-Customer acquisition rates, 2. customer retention, 3.Number of products held per customer 4.Customer satisfaction, 5. profitability	Detailed examination of the tapes and transcripts, frequency counting, emphasis placed on the issues by the respondents during the interview and Likert scales were used on some specific questions	*Results:* 1. Explore role of IT on CRM. 2. Discuss Relationship marketing and CRM terminology. 3. Identify the framework of CRM adoption. 4. Identify the measures of CRM performance.	Journal of Strategic Marketing, 9(?), pp. 3–27.
Chen and Popovich (2003)	Identify an integrated and balanced approach to CRM implementation	Theoretical	1.Customer retention 2.Relationship development	-	*Results:* CRM implementation required three dimensions: technology, process and people	Business Process Management Journal, 9(5), pp. 672-688.
Croteau, A.(2003)	Explore the critical success factors for CRM.	*Survey:* A total of 941 questionnaires sent to firms from financial service sector in Japan, 132 were delivered, with response rate 14.03%.	CRM impact: 1.Satisfaction 2.Retention 3.profitability	1.Confirmatory factor analysis (CFA) CFA Model fit: matched Convergent & discriminant validity: are matched 2.Structural equation modelling	*Significant effects:* 1. Operational perceived benefits→ CRM impact (+). 2. Strategic perceived benefits→ CRM impact (+). 3. Top management support → CRM impact (+). 4. Knowledge management capabilities → CRM impact (+).	Canadian Journal of Administrative Sciences, 20 (1), pp.21-34.

				(SEM) using PLS	
Verhoef, P. (2003)	investigates the differential effects of customer relationship perceptions and relationship marketing instruments on customer retention and customer share development over time	*Survey:* A total of 1986 questionnaires sent to firms from financial service sector in Japan, 1128 were delivered, with response rate 14.03%.	1.Customer retention .	1.Confirmatory factor analysis (CFA) CFA Model fit: Chi-square/df (217.4. /51)=4.26 GFI 0.98 AGFI 0.97 RSEAMA = 0 .04 CFA Model fit: matched Convergent & discriminant validity: are matched 2.Structural equation modelling (SEM) using PLS	*Significant effects:* 1.Satisfaction→ customer retention (+) 2. Satisfaction→ customer retention (+) 3. Satisfaction→ customer retention (+) 4.Loualty programs→ customer retention	Journal of Marketing, 67 (4),pp. 30–45
Kim *et al.*(2004)	Develops and empirically tests a model to evaluate a manufacturer's strategy which provides customer relationship management (CRM) technology to its exclusive retailers.	*Survey:* A total of 263 questionnaires sent to firms from the owners of small, exclusive retailers of the largest home Appliance manufacturer operating in Korea, 199 were delivered, with response rate 76%.	CRM Performance: 1.Customer satisfaction 2.Customer loyalty	1.Confirmatory factor analysis (CFA) CFA Model fit: matched Convergent & discriminant validity: are matched 2.Structural equation modelling (LISREL 8.3) using	*Significant effects:* CRM Implementation Intensity → CRM Performance (+)	Communications of the Association for Information Systems, 14(?), pp.632-652.

				Amos -SEM Model fit Chi-square/df (30.02. / 8)= 3.75 GFI 0.96 CFI 0.95 RMR = 0 .069		
Yim *et al.* (2004)	The effect of CRM dimensions on customer satisfaction and retention.	*Survey:* A total of 1,223 questionnaires from firms in *Business Directory of Hong Kong from* general managers or similar-level senior managers were sent, 215 were delivered, with response rate 17.6%.	1.Customer satisfaction 2.Customer retention	1.Confirmatory factor analysis (CFA) CFA Model fit: matched Convergent & discriminant validity: are matched 2.Structural equation modelling (LISREL 8.3) using Amos -SEM Model fit Chi-square/df (317. / 164)= 3.75 GFI= 0.92 AGFI= 0.90 RMSEA = 0.045	*Significant effects:* 1.Focusing on Key Customers → Satisfaction (+) 2. Managing Knowledge → Satisfaction (+) 3. Managing Knowledge → Retention (+) 4. Organizing Around CRM → Retention (+) 5. Satisfaction → Retention (+) 6. Retention → Sales Growth (+)	Journal of Personal Selling & Sales Management, vol. XXIV (?), pp. 263–278.
Jayachandran *et al.* (2005)	The Impact of CRM on customer retention	*Survey:* A total of 172 questionnaires were sent to (marketing, sales, or customer service executive) in firms from service	Customer relationship performance 1.Customer satisfaction 2.Customer retention	1.Confirmatory factor analysis (CFA) CFA Model fit: matched Convergent & discriminant	*Significant effects:* 1.Relational information processes→ Customer relationship performance (+) 2.Relational information processes→ CRM technology use	Journal of Marketing,. 69 (4), pp. 177–192.

		industry in USA, 124 were delivered, with response rate 72%.		validity: are matched

2.Regression analysis models | →Customer relationship performance (+) | |
Peelen *et al.*(2006)	Determine the impact of CRM dimensions on CRM success	*Qualitative study:* Case studies (analysing eight Dutch companies implement CRM) into successful CRM practitioners to create research propositions. *Survey:* 250 online questionnaires from Dutch companies.	CRM metrics: 1.Satisfaction 2.loyalty)	Structural equation modelling (SEM) using Liseral -SEM Model fit AGFI 0.85 GFI 0.88	*Significant effects:* 1. Client oriented→ CRM metrics (+). 2. Customer management→ CRM metrics (+).	NRG Working Paper no. 06-09
Eid, R. (2007)	Establish an integrated model of successful CRM implementation in Banks	*Survey:* A total of 312 questionnaires from banks, 159 were delivered, with response rate 50.96%.	Customer retention	1.Exploratory factor analysis 2.Confirmatory factor analysis (CFA) CFA Model fit: matched 3.Structural equation modelling using Amos -SEM Model fit Chi-square/df = 3.645 GFI= 0.98 AGFI= 0.82 Cfi 0.99 RMSEA = 0.044	*Significant effects:* 1. Relationship quality→ customer retention (+) 2. Transaction quality→ Customer retention (+) 3. Reduced transactions costs→ Customer retention (+) 4. Strategic factors → Customer retention (+) 5. Tactical factors→ Customer retention (+) 6. Operational factors→ Customer retention (+)	The Service Industries Journal, 27(8), pp.1021–1039
Minima and	Investigate the impact	*Survey :*	1.Return on equity	Structural equation	*Significant effects:*	Journal of

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Dawson(2007)	of CRM process on Loyalty development and financial return	A total of 550 questionnaires sent to firms from financial service sector in Japan, 233 were delivered, with response rate 42.4%. After cleaning to obtain fully completed returns from relevant firms, 141 responses were used.	(ROE) 2.Loyalty	modelling (SEM) using Amos -SEM Model fit Chi-square/df (41.42. /32)= 1.3, p>0.01 AGFI 0.91 GFI 0.95 RMR = 0 .73	1. Relationship orientation → CRM Implementation(+) 2. CRM implementation→ ROE (+). 3. CRM Implementation → Loyalty → Customisation (+)	Retailing and Consumer Services, 15 (?) 375‑385
Richard *et al.*(2007)	Explore the linkage between CRM technology adoption and B2B relationships.	*Interview :* 20 semi-structure interviews conduct through marketing and sales managers, and their respective customers, from a variety of New Zealand companies.	CRM performance: 1.Satisfaction 2.Loyalty 3.Retention	Each transcript was coded, data displays constructed and the results analysed for common themes and insights within and between the cases.	*Results:* 1. Firm orientation (market orientation and technology orientation) affect on relationship strength (trust, commitment and communications quality. 2. CRM technology adaptation affect on relationship strength. 3. Relationship strength affect on relationship performance (satisfaction, loyalty and retention).	Total Quality Management, 18(8), pp. 927–945.
Kim and Kim (2009)	Design a customer relationship management (CRM) scorecard to diagnose and assess a firm's CRM practice	*Qualitative method* In-depth interviews with practitioners in a retail bank in Korea - Secondary data analysis *Quantitative method* 1. Survey. Sample for both qualitative	Organisational Performance's perspective: 1.Shareholder value 2. Profitability 3.customer equity Customer perspective:	*Qualitative* -Content analysis. *Quantitative* 1.KPI feasibility test, 2. Pairwise comparison of KPIs measurement.	This study identifies four perspectives to measure comprehensive measure CRM scorecard: organisational performance, customer, process and infrastructure.	Industrial Marketing Management, 38(4), pp.477-489.

| | | and quantitative are from CRM manager, staff members, the employees working at customer contact point like tellers, private bankers, and the sales force | 1.Satisfaction
2.Loyalty
3. Customer value.
Process perspective:
1.customer retention
2. Customer acquisition | | | |

Source: The author

This study adopts the behavioural approach to assess CRM performance for two reasons. Firstly, Wang *et al.* (2006:182) argue that "*CRM performance should ultimately be measured in terms of customer behavior*" since "*customer behaviors represent the current and future value of customers to a firm*". Secondly, there is a scarcity in CRM studies, which measure CRM performance through behavioural measures in less developed countries such as Egypt (Ghavami and Olyaei, 2006). Based on Table 4-5, there are three main dimensions of the behavioural CRM performance measure: satisfaction, loyalty and retention or any combinations of these constructs. The current study adopts customer loyalty and retention as the main dimensions of CRM performance as recommended by Chen and Popovich (2003). This study weeds out customer satisfaction as one of CRM performance measures for two reasons. Firstly, customer satisfaction reflects the temporary mood of customers, which is not necessarily reliable over time and inconsistent to evaluate CRM performance in the long run (Minami and Dawson, 2008). Secondly, this study adopts customer satisfaction as an antecedent for customer loyalty and retention as recommended by Abdul-Muhmin (2005), Gustafsson *et al.* (2005), Chen and Quester (2008) and Sweeney and Swait (2008).

Despite the important role of loyalty and retention as measurements of CRM performance at theoretical level, practitioners face challenge in achieving them in real world. The evidence comes from Cooil *et al.* (2007:6) who state that "*a worldwide survey of chief executive officers conducted by the Conference found that customer loyalty and retention was the most important challenge that chief executive officers believed they faced*". Therefore there is a need for more empirical studies that cover the different issues of loyalty and retention as measures for CRM performance. These studies should focus on how to set reliable and valid measures of loyalty and retention that cover all issues of both notions. Thus, the next sub-sections discusses in depth customer loyalty and customer retention as behavioural measures of CRM performance

4.4.1 Customer Loyalty Concept

Customer loyalty has attracted several scholars in relationship marketing area in recent years (Hennig-Thurau *et al.*, 2002; Eakuru and Nik Mat, 2008). Cooil *et al.* (2007:67) argue that customer loyalty "*is an important strategic objective of managers around the*

world". Nowadays, loyalty is an important concept in the service industries and considered as the main strategic goal of service organisations (Oliver, 1999; Eakuru and Nik Mat, 2008). Loyalty is about building and sustaining a relationship with customers (Chow and Holden, 1997). The interpersonal relationship between the service provider and customer is one of the main determinants of personal loyalty (Keh and Xie, 2008). Personal loyalty reflects a strong positive attitude between customer and service provider (Bove and Johnson, 2006). Personal loyalty enhances loyalty to the organisation in long run (Zeithaml *et al.,* 1996; Lim *et al.*, 2006). Paison (2007) also asserts that customer loyalty is affected by the products or services delivered by the company and by the relationships with organisation staff. It has been proven that great service is still the primary motivator to make customers loyal to an organisation (Ghavami and Olyaie, 2006).

Furthermore, organisations can also strengthen customer loyalty through adding credibility to their brand loyalty (Upton, 2007). In the same line, Lovelock *et al* (1999) reveal that customers will continue to be loyal to a particular firm if they feel and realise that better value is being offered. In financial service institutions, product value and a high quality relationship between service providers and customer are one of the vital ways to build loyal customers (Ndubisi *et al.*, 2005). Customer loyalty is crucial in enhancing organisation profits (Eakuru and Nik Mat, 2008), contributing in their success (Oliver, 1997) and enabling them to compete successfully in the marketplace (Kau and Loh, 2006:103). To gain a better understanding of loyalty and its impact on organisation performance, the following sub-sections discusses the different types of loyalty.

4.4.1.1 *Types of loyalty*

It is recognised in the literature that there are three different types of customer loyalty: attitudinal, behavioural and composite (Reynolds and Arnold, 2000; Bowen and Chen, 2001; Zins, 2001; Yang and Peterson, 2004; Fullerton, 2005; Dimitriades, 2006; Jones and Taylor, 2007; Eakuru and Nik Mat, 2008). The next sub-sections discuss in-depth the different types of loyalty.

Ghavami and Olyaie (2006) describe attitudinal loyalty as customers' faithfulness toward a specific business and product brand. Similarity, Lin and Wang (2006) regard attitudinal loyalty as the customer's favourable attitude toward a specific organisation, resulting in repeat purchasing behaviour. Stone *et al.*, (2000:102) also refer to attitudinal loyalty as "*a physical and emotional commitment given by customers in exchange for their needs being met*". Moreover, the attitudinal view of loyalty reflects customers' desire to keep on a long term relationship with an organisation (Yang and Peterson, 2004). Attitudinal loyalty also encourages customers to be more tied to an organisation and more resistant to competitors' attempts to attract them (Gundlach *et al.*, 1995). It also makes customers more satisfied with the organisation's services and more resistant to search for alternatives (Dick and Basu, 1994; Caceres and Paparoidamis, 2005; Eakuru and Nik Mat, 2008). It also creates customers' positive attitudes towards specific organisation (Fitzgibbon and White, 2005). Moreover, attitudinal loyalty reflects the level of psychological attachment and attitudinal advocacy between customer and organisation (Chaudhuri and Holbrook, 2001; Rauyruen and Miller, 2007; Čater and Čater, 2010).

Furthermore Ganesh *et al.* (2000), consider attitudinal loyalty is an active state, which make loyal customer as promoters (positive word of mouth) and advocators on an organisation when others criticise it. Jones and Taylor (2007) point out that attitudinal loyalty can be conceptualised in terms of relative attitude (appraisal of organisation's service; strength and the degree of differentiation from rivals' services), willingness to recommend (talk positively about the organisation and defend it when others criticise it) and altruism (the willingness of customers to support service providers in delivering service). For example in Egypt as one of the Middle East countries, customers consider loyalty as a continuity to do business with a specific organisation, even when it may not have the best product, price or delivery service (Elsharnouby and Parsons, 2010). Therefore, measuring attitudinal loyalty helps an organisation to identify loyal and non loyal customers (Bennett and Rundle-Thiele, 2002). The ability to identify both types help organisation to identify rate of customer acquisition (Fitzgibbon and White, 2005). It also helps an organisation to understand the behaviour of loyal customers.

4.4.1.1.2   Behavioural Loyalty

Behavioural loyalty reflects customers' intention to stay with specific organisation but without a guarantee that customer has a positive attitude toward this organisation. Fitzgibbon and White (2005) argue that behavioural loyalty may occur because of habit or the difficulty of switching to competitors. The behavioural perspective also refers to the customer's intention to stay with a specific organisation, repurchase more and resistance to shifting to competitors (Yang and Peterson, 2004). Ganesh *et al.* (2000) demonstrate that behavioural loyalty represents the passive perspective of loyalty. They add that passive loyalty reflects the willingness of customers to stay with an organisation and not switch to competitors even under less positive conditions. Jones and Taylor (2007) mention that the behavioural perspective of loyalty can be conceptualised in terms of repurchase intentions (customer's intention to make his/her next purchase from a specific organisation), switch intentions (customer's aim to end a relationship with a specific organisation) and exclusive intentions (customer's intention to offer all of his or her investments to a specific organisation). Furthermore, the behavioural perspective describes the readiness of customers to return and to perform partnering activities with an organisation (Bowen and Shoemaker, 2003; Čater and Čater, 2010).

4.4.1.1.3   Composite Customer Loyalty

The composite view of loyalty is a mixture of the attitudinal and behavioural perspectives. It combines the advantages of the previous viewpoints, which increase the prognostic power of loyalty (Pritchard and Howard, 1997; Dimitriades, 2006). The composite view of customer loyalty reflects the unidimensional of customer loyalty. Regarding composite loyalty perspective Dimitriades (2006:785) views loyal customers as "*those customers, who hold favorable attitudes toward an organisation, recommend the organisation to other consumers and exhibit repurchases behavior*". This study adopts the composite viewpoint in defining loyalty. The composite view of customer loyalty in this study is manifested in word of mouth (Zeithaml *et al.*, 1996; Jones, 2003; Fullerton, 2005; Dimitriades, 2006; Johnson *et al.*, 2006; Mattila, 2006), advocacy intentions (Bettencourt, 1997; Eisingerich and Bell, 2007), altruism (Price *et al.,* 1995; Jones and Taylor, 2007), exclusive intentions (Reynolds and Beatty , 1999; Reynolds and Arnold, 2000) and switching intention, (Zeithaml *et al.*, 1996; Fullerton, 2005). To

improve customer loyalty, organisations should realise the benefits of customer loyalty to an organisation.

4.4.1.2 *Benefits of Customer Loyalty*

A loyal customer considers as a valuable organisation asset that can support the organisation's growth and profit (Anderson and Mittal, 2000). Loyal customers "*are inclined to forgive customer-service mishaps, display decreasing sensitivity to price, and disseminate positive word-of-mouth about the business to others*" (Yang and Peterson, 2004:802). Loyalty encourages customers to spend more on company products and services (Bowen and Chen, 2001; Fecikova, 2004; Dimitriades, 2006). Customer loyalty also increases organisation profits, reduced the cost of business operation by five to six times and attracting new customers through word-of-mouth (Rosenberg and Czepiel, 1983; Ndubisi, 2003; Ndubisi *et al.*, 2005). Word-of-mouth describes all forms of informal communications between existing customers and potential ones (Hennig-Thurau *et al.*, 2002).According to Upton (2007), organisations can benefit by gaining an edge over their competition, differentiating themselves while building loyalty with their customers.

Loyalty also encourages customers to increase their volume of business with their organisations (Roig *et al.*, 2006; Eakuru and Nik Mat, 2008). The core advantage of loyalty is its ability to generate repeat purchasing regardless of situational influences and marketing efforts (Gupta and Zeithaml, 2006). Furthermore, loyalty reduces the cost of marketing for the organisation, as loyal customers need less marketing efforts than new ones (Dawkins and Reichheld, 1990). Loyal customers contribute to company profitability through word- of- mouth that enhances the organisation's reputation which in turn leads to increases the organisation's sales (Bowen and Chen, 2001; Fecikova, 2004; Dimitriades, 2006:783). In conclusion, customer loyalty increases the economic value of existing customers and encourages gaining new customers through positive word- of- mouth. Positive word- of- mouth encourages existing customers to stay with organisation and reduces the costs of attracting new ones (Reichheld, 1996). Furthermore, Mithas *et al.* (2005) reveal that loyal customers increase repurchase rate, secure future revenues and enhance customer retention.

4.4.2 Customer Retention

While serving customers will remain the central focus of all organisations' activities, keeping profitable customers will remain the main method of their survival (Jain and Jain, 2006). Customer retention in service organisation is a topic that has attracted several scholars' attention (Farquhar, 2005; Ghavami and Olyaei, 2006; Kassim and Souiden, 2007; Richard *et al.*, 2007). Despite a large number of customer retention studies, few of them have been empirically investigated how to operationalise retention as a separate construct from behaviour loyalty (Farquhar, 2005:1030). For better understanding to the nature of customer retention, we review the different facets of this concept in the literature.

Customer retention refers to customers' readiness to maintain and invest in the relationship with an organisation (Hennig-Thurau and Klee, 1997; Gounaris, 2005; Richard *et al.*, 2007). In the same view, Keiningham *et al.* (2007: 364) see customer retention as "*customers' stated continuation of a business relationship with the firm*". Kassim and Souiden (2007:219) also define customer retention "*as the future propensity of the customers to stay with their service providers.*" Furthermore, customer retention is the probability of a customer being "alive or repeat buying from a firm (Gupta and Zeithaml, 2006:722). According to the previous definitions, customer retention is an outcome of a successful relationship between a customer and an organisation. This successful relationship is characterised by willingness of customers to stay longer, buy more and invest more with specific organisation. All these definitions focus only on the outputs (outcomes) of customer retention and ignore the factors that establish customer retention.

According to customer retention's contributors such as Reichheld and Kenny (1990), Reichheld and Sasser (1990); Gummesson (1994), Bitner (1995); Cravens *et al.* (1996), Lewington *et al.* (1996); Zeithaml and Bitner (1996); Gronroos (2000), Clarke (2002), Babakus *et al.* (2003), Langerak and Verhoef (2003) and Farquhar (2005:1032), they support five main factors that establish and maintain customer retention. Firstly, managers' vision, which reflects his/her ability in establishing priorities, making strategic choices and holding up service quality with a long-term view. Secondly, the organisation structure, which supports relational rather than transactional exchanges, reflects the cohesion within an organisation and focuses on customer orientation.

Thirdly, organisations should keep the harmony between employees' efforts and its strategies to create and maintain efficient networks with customers. Fourthly, an organisation should have efficient and reliable information systems that collect, store and analyse customer information such as data mining. Fifthly, the skills, abilities, tools and motivation that employees have. In conclusion, we can categorise the factors that develop customer retention into three main elements: using information technology, role of employees and organisational structure. This study focuses on the role of employees in enhancing CRM performance generally and customer retention especially through establishing social capital within an organisation. Improving customer retention generates many benefits to an organisation.

4.4.2.1 *Benefits of Customer Retention*

Several scholars agree that improving customer retention generates positive returns to an organisation (Grossman 1998; Garbarino and Johnson 1999; Oliver 1999; Ryals and Payne, 2001; Jones, 2003; Kassim and Souiden, 2007; Minami and Dawson, 2008). Customer retention also aims to reduce or eliminate profitable customers switching to competitors or to achieve "zero defections" of profitable customers (Reichheld, 1996; Farquhar, 2005). In addition, customer retention is a key driver of firm profitability (Reichheld and Kenny, 1990; Reichheld, 1996; Reichheld *et al.*, 2000; Keiningham *et al.*, 2007) through increasing customer lifecycle (Schneider and Bowen, 1999). Retaining customers is much cheaper than acquiring new ones (Fitzgibbon and White, 2005:218). Attracting new customers is ten times more costly than keeping current ones (Chettayar, 2002). Retained customers reduce the costs of advertising, personal selling, explaining business procedures and costs of inefficient dealings with new clients (Kassim and Souiden, 2007:218). Despite the importance of customer retention, however, there are difficulties in identifying reliable and valid measurements for customer retention (Tellis, 1988; Kassim and Souiden, 2007).

4.4.2.2 *Measurement of Customer Retention*

Although Wang *et al.* (2006:182) indicate that customer behaviour is the best way to measure CRM performance; most CRM studies have faced problems in measuring customer retention in the context of behavioural measurement (Ranaweera and Prabhu, 2003; Gupta and Zeithaml, 2006). Kassim and Souiden (2007:219) report that "*where*

measures of customer retention have been sought, operationalisation has, however, proven difficult because customer retention involves behaviour over time". Most of those difficulties are due to measuring customer retention as a behavioural dimension of loyalty (Chen and Popovich, 2003; Yim *et al.*, 2004; Bohling *et al.*, 2006; Ghavami and Olyaei, 2006; Obeng and Loria, 2006) .These difficulties should encourage scholars to conduct more studies to develop valid and reliable measurements for customer retention.

Although customer retention had been measured from both the firm and customer perspectives (Jutla *et al.*, 2001; Eid, 2007; Richard *et al.*, 2007), there is a confusion in operationalising customer retention. Ghavami and Olyaei (2006:20) identify three indicators for measuring customer retention. These indicators are: staying longer, buying more and buying more frequently from a specific organisation. In addition, customers can express their retention in many ways, such as continuing to purchase from a specific company or by increasing business in the future through continued purchasing (Kassim and Souiden, 2007:218). Customer retention has also been measured in term of the enduring relationship between customer and organisation (Menon and O'Connor, 2007). In the same view, Ranaweera and Prabhu (2003: 87) measure customer retention through the propensity of customers to leave the organisation.

Moreover, customer retention has been measured in terms of customer equity (Hennig-Thurau *et al.*, 2002; Macintosh, 2002) or customer lifetime value (Berger, 1998). Jones (2003) reveals that customer equity, return on relationships and customer lifetime value help in developing and operationalising customer retention. According to the previous discussion to CRM performance measurement, all these measures are financial measurements that collect through secondary data. These financial measures are more acceptable to measure organisation performance than customer retention. Therefore there is a need for behavioural measures of customer retention (primary data such as a questionnaire) from an organisation's perspective. These measures should reflect the customer retention.

A review of the literature identifies two main indicators that are appropriate to perceive customer retention. These indicators are related to long life cycle of customer or customer's staying longer (Menon and O'Connor, 2007; Ranaweera and Prabhu, 2003) and investing more in the future (Eisingerich and Bell, 2007; Auh *et al.*, 2007; Ivens and

Pardo, 2007). If an organisation adopts customer retention strategy, which reflects these indicators this means that this organisation achieves an acceptable level of customer retention. In the following section we discuss briefly each indicator of customer retention measurement.

4.4.2.2.1   Long Life Cycle of Customer

An organisation encourages customers to stay longer through adopting two main managerial applications such as personalisation (Kennedy, 2006; Vesane, 2007) and customisation (Srinivasan *et al.*, 2002: Mithas *et al.*, 2005; Chang and Chen, 2008).

4.4.2.2.1.1   Personalisation

Personalisation means treating each customer as a market segment through satisfying each customer's needs uniquely and individually. The rationale behind adopting personalisation is the great diversity in the needs, wants, and resources of customers which makes customer behaviour less predictable and forecasting less accurate (Vesane, 2007). Jeff Bezos, the CEO of Amazon.com, said, *"Our vision is that if we have 20 million customers, then we should have 20 million stores"* (Gray and Byun, 2001:21). Personalised customer service reflects the confidence in keeping customers with an organisation for a long time. An organisation needs an effective data repository that helps in personalised services through understanding customer needs and behaviour (Richards and Jones, 2008).

Payne and Frow (2005) reveal that understanding customer needs and setting the appropriate retention strategies requires an efficient and reliable data repository. They add that the data repository provides a powerful corporate memory of customers, an integrated enterprise- wide data store that is capable of relevant data analyses (p: 173). A quality information system for customers is more important in service organisations to analyse the patterns of customer purchasing behaviour (Berry and Parasuraman, 1997). An organisation database is one of the essential methods to strengthen emotional affinity between the organisation and customers through collecting consolidated information about different aspects of customers, which is used to interact socially with customers such as sending greetings on birthdays, wedding anniversaries, festivals and other special occasions (Jain and Jain, 2006). Obtaining and continually updating this information shows that customers have decided to stay with an organisation. In addition,

service firms work hard to get closer to customers by taking care of the personalisation process through adopting mass customisation (Hart, 1995). The appropriate CRM technology gives further support to customised products and services (Sabri, 2003; Chen and Ching, 2004).

4.4.2.2.1.2 Customisation

Customisation is defined as the ability of a company to fit or tailor products and services (Srinivasan *et al.*, 2002: Chang and Chen, 2008). Customisation is a reflection of the customer-centric philosophy (Steger-Jensen and Svensson, 2004). It focuses basically on what the customer actually needs (Tsai and Huang, 2007). It enhances the perceived quality of products and services from a customer's perspective (Mithas *et al.*, 2005). Adopting CRM helps in informing companies of specific customer desires, which in turn support customised products and services (Richards and Jones, 2008). Customisation may provide superior values to an organisation if its offers fit the preferences and needs of its customers (Simonson, 2005: Chang and Chen, 2008). Customised offerings reduce costs (mass production) and increase profits (Jackson, 2007). Moreover, customisation process is a future plan that reflects an effective strategy for customer retention.

To achieve personalisation and customisation of services for customers, an organisation should calculate customer lifetime value. Customer lifetime value or "CLV" is defined as "*the present value of all future profits obtained from a customer over the life of his relationship with a firm*" (Gupta and Zeithmal, 2006:724). Customer lifetime value describes the method of customer selection and marketing resource allocation (Venkatesan and Kumar, 2004). Calculating CVL helps the organisation to identify its profitable customers and to make strong relationship with them (Kumar *et al.,* 2004; Yim *et al.*, 2004; Pfeifer *et al.*, 2005; Ryals and Knox, 2005). Identifying profitable customers helps organisations in tailored offerings and allocates resources effectively (Sin *et al.*, 2004). One of the main advantages of calculating customer lifetime value is to identify the most profitable customer segments (Payne and Frow, 2005). This method helps organisations to recognise the high value customer segment and provides a framework for improving organisation- customer relationships (Minami and Dawson, 2008:4). Calculating CLV helps the organisation to segment customers. Profitable customers can be segmented according to different criteria, such as consumption rate,

revenue generation and profit potential (Jain and Jain, 2006). Customer segmentation also helps an organisation to personalise its services according to customers' requirements. In conclusion, efficient customisation process and personalisation encourage customers to stay longer and invest more in an organisation's products.

4.4.2.2.2   *Invest More in the Future*

Retained customers have the willingness to invest more funds in their organisation in future (Auh *et al.*, 2007; Ivens and Pardo, 2007). Geyskens *et al.* (1996) argue that retained customers trust more in the organisation performance and have the intention to invest more in their future products. Customer retention, frequently operationalized as repurchase intentions, is perhaps the most important dependent variable in relationship marketing research (Morgan and Hunt, 1994; Fullerton, 2005). Repurchase intentions are conceptualised as clients' willingness to invest more with, and try other services of, the service firm in the future (Eisingerich and Bell, 2007). Therefore, based on a review of the literature, the current study measures customer retention through some indicators such as long customer lifetime cycle, personalise services, customised service and investing more in the future. Those indicators exemplify that an organisation has set future plans, which ensure that customers will stay with it for a long time in future. These indicators could be appropriately perceived by managers that have direct contact with customers. This study measures customer retention in Egyptian financial institutions from managers' perspective as recommended by Eid (2007).

4.5   Summary

CRM had been developed chronologically through four stages: transactional, marketing orientation, relationship marketing and customer relationship management. CRM is defined in this study as a comprehensive management approach that establishes and manages ongoing customer relationships through effective integration to organisation resources: technological, organisational and human in a synergetic way in order to maximise values for both customer and an organisation. This definition reflected the managerial nature of CRM concept. It also identified three dimensions for effective CRM implementation: technological, human and organisational. In addition CRM is one of the management concepts that creating values both customer and an organisation.

This chapter also explore the appropriate method for measuring CRM performance. CRM performance represented the indicators of successful implementation for CRM. This chapter identified two measures of CRM performance: customer loyalty and customer retention. There are three viewpoints to define customer loyalty: attitudinal, behavioural and composite. These viewpoint reflected types of loyalty. This thesis adopted the composite perspective of customer loyalty. Composite customer loyalty view is defined as clients' willingness to recommend the organisation to others, advocate for organisation, assist organisation in service delivery, depend on organisation for most of their investments and resistance to switch to rivals. Customer loyalty is one of the antecedents of customer retention.

Customer retention is defined as customers' stated continuation of a business relationship with the firm. One of the debated issues in CRM literature is how to measure customer retention. This study identified two main indicators that are appropriate to perceive customer retention: staying longer and investing more with an organisation. Because this study depends on managers' perspective to perceive customer loyalty and retention, this study identifies two indicators for perceiving customer' staying longer: personalisation and customisation.

Chapter 5 Conceptual Model Development

This chapter outlines a research framework based on findings of the previous chapters. This chapter consists of five main sections. The first section justifies the theoretical rationale behind this study. The second part discusses the social capital dimensions and gives an explanation of their origin. It also explores the antecedents of social capital dimensions and the interrelationships between these dimensions. The third section concerns on the perceived value that organisations probably gain as a result of applying social capital. The fourth section presents the relationships between these perceived values and CRM performance. The final section contains a summary of the research model that includes both research variables and hypotheses.

5.1 Introduction

The preceding chapters (chapters 2, 3, 4 and 5) presented an in-depth literature review on the main issues related to this research and the development of a conceptual model that integrate social capital with CRM in one framework. These chapters indicated well-known dimensions of social capital, organisational perceived values (customer satisfaction and customer commitment) and CRM performance (customer loyalty and retention). Social capital dimensions represent the independent variables for the current study. Customer satisfaction and commitment are the mediating research variables, whereas loyalty and retention as CRM performance are the dependent research variables.

5.2 The Theoretical Rationale behind this Study

The social capital concept has received substantial research attention (Hsieh and Tsai, 2007; He *et al,* .2009; Villena *et al,* .2010). While research on CRM has advanced, new social context theories have introduced contributions in developing and enhancing the relationship with customers (Ozgener and Iraz, 2006; Eid, 2007; Kim and Kim, 2009). Social capital theory (SCT) shows theoretical promise in explaining the social psychological processes that help in developing trust among network members through establishing interpersonal relationships among them (Nahapiet and Ghoshal, 1998; Lu and Yang, 2011). To date, various aspects of social capital are being researched.

However, most social capital literature has presented social capital as unidimensional (Smith, 2002; Watson and Papamarcos.2002; Kerpelman and White, 2006; Krause *et al.*, 2007; Potts, 2007; Tokman, 2007). On the other hand, a limited number of scholars have paid attention to social capital as a multidimensional concept and its role in adding values to an organisation (Tasi and Ghoshal, 1998; Chua, 2002; Sporleder and Moss, 2002; Watson and Papamarcos, 2002; Liao and Welsch, 2003; Edelman *et al.*, 2004; Newell *et al.*, 2004; Inkpen and Tsang, 2005; Presutti *et al.*, 2007; Chow and Chan, 2008; He *et al.*, 2009). Moreover, there are also limited numbers of theoretical and empirical studies that explore the antecedents of social capital dimensions. Despite the important role of social capital and CRM concepts in strengthening the relationships between an organisation and its customers, there is a shortage of studies, which integrate social capital and CRM frameworks. Therefore, the current study aims to identify and investigate the antecedents of social capital dimensions and explore the impact of social capital on CRM performance through the mediating roles of customer satisfaction and customer commitment.

5.3 Social Capital Dimensions

Since Nahapiet and Ghoshal (1998) have proposed three theoretical dimensions of social capital, a limited numbers of scholars have been attracted to explore the interrelationships among these dimensions theoretically (Nahapiet and Ghoshal, 1998; Adler and Kwon; Inkpen and Tsang, 2005) or empirically (Tsai and Ghoshal, 1998; Liao and Welsch, 2003; Presutti *et al.*, 2007; He *et al.*, 2009). In addition, there is a lack of social capital studies that explore the antecedents of social capital dimensions (Putnum, 1995; Nahapiet and Ghoshal, 1998; Inkpen and Tsang, 2005; Lee, 2008). Thus, one of the main aims of this study is to explore the predictors that constitute social capital dimensions and the mutual effects among these dimensions.

5.3.1 Structural Capital Dimensions

Structural capital involves the pattern or structure of the overall network of relationships (Granovetter, 1992; Tasi and Ghoshal, 1998; Liao and Welsch, 2003). Although structural capital has been extensively studied under the social capital notion (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Liao and Welsch, 2003, 2005; Lee, 2008) there is a deficiency of studies that explore antecedents of structural capital. Some

scholars pay attention to those precursors theoretically (Nahapiet and Ghoshal, 1998; Bolino *et al.*, 2002; Kumar and Worm, 2003; Hatzakis *et al.*, 2005; Montazemi *et al.*, 2008). However, there is a need for empirical studies that investigate the predictors of structural capital.

The theoretical foundations for the factors that constitute structural capital can be derived from the perspective of social network theory, social exchange theory, Burt's theory (1992) of structural holes, social resource theory and social capital theory (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Inkpen and Tsang, 2005; Hatzakis *et al.*, 2005; Lee, 2008). According to the literature in Chapter Two, intrafirm structural capital in this study is measured in terms of social interactions among employees, which are manifested in open communication, cooperation, collaboration, sharing knowledge, affiliation and social support among employees as recommended by Putnam (1995), Tasi and Ghoshal (1998), Yli-Renko *et al.* (2001), Liao and Welsch (2003, 2005), Chiu *et al.* (2006), Taylor (2007), Ramström (2008) and Lu and Yang (2011). Regarding the earlier discussion to structural capital antecedents in section 2.3.5 in Chapter Two, structural capital encompasses three basic dimensions: network ties (Granovetter, 1973; Carpenter and Weslphal, 2001; Nguyen *et al.*, 2003; Lomi and Pattison, 2006; Sequiera *et al.*, 2007; Fliaster and Spiess, 2008), network configuration (Krackhardt, 1989; Ibarra, 1995; Hamblen, 2003; Sulkarni *et al.*, 2004; Orlowski and Wessaly, 2005) and network stability (Maglaras, 1998; Hicklin, 2004; Jurado and Carplo, 2005). Therefore, the current study employs network ties, network configuration and network stability as antecedents of structural capital within an organisation.

Regarding network ties, they refer to the strength of links among network actors (Nahapiet and Ghoshal, 1998; Balkundi and Kilduff, 2005; Wasko and Faraj, 2005; Cummings and Higgins, 2006; Lee, 2008) that shape the relationships among network members (Granovetter, 1985; Adler and Kwon, 2002; Chiu *et al.*, 2006; Fliaster and Spiess, 2008) and develop social interactions within an organisation (Anderson *et al.*, 1994; Yli-Renko *et al.*, 2001; Ramström, 2008). Network ties in the current study are manifested in terms of the strength of ties among employees. A strong social tie is one of the systematic methods to develop social interactions within an organisation (Anderson *et al.*, 1994; Yli-Renko *et al.*, 2001; Ramström, 2008). Strong social ties facilitate inter -member social interactions and support knowledge exchange within an

organisation (Inkpen and Tsang, 2005), assist access to the whole organisational resources (Haythornthwaite, 2002) and provide the opportunity to combine and exchange knowledge among employees (Tsai and Ghoshal, 1998; Chiu *et al.*, 2006). From the literature, social ties can be strengthened within an organisation through frequent contacts, intimacy and high level of resource exchange among employees (Granovetter, 1982; Garton *et al.*, 1997; Wellman, 2001; Cummings and Higgins, 2006; Rau *et al.*, 2008; Fliaster and Spiess, 2008; He *et al.*, 2009; Hossain and de Silva, 2009).

Frequent contacts reflect regular and intense contacts among employees. Frequent contacts strength social ties among employees, which improve information and knowledge sharing (Burt, 2000; Helmsing, 2001; Lin, 2001), establish greater assistance among employees (Reagans and McEvily, 2003), minimise the level of friction among employees (Katsikeas, 1989; Boyle *et al.*, 1992; Uzzi, 1997; Oke, *et al.*, 2008), encourage employees to support each other (Miller and Lefcourt, 1982; Hu and Smith, 2004), foster exchange of advices among them (Hu and Smith, 2004; He *et al.*, 2009), enable employees to discuss their social and personal matters freely with their colleagues (Ritter *et al.*, 2002; Hu and Smith, 2004) and foster cooperation among employees (Krackhardt, 1992; Becerra and Gupta, 2003; Wasko and Faraj, 2005).

Intimacy reflects the quality of interactions and relationships among employees (Rau *et al.* (2008). Intimacy is derived from continues motivation to emotional closeness and open communication. Intimacy among employees reproduces feelings of closeness and emotional bonding, involving strength of liking and moral support (Tolstedt and Stokes, 1983; Rau *et al.*, 2008). Therefore, high level of intimacy establishes strong social ties (e.g. friendship) among employees. Moreover, strong ties enable employees to share their best practices and expertise (Perry-Smith and Shalley, 2003; Tiwana and McLean, 2005). People with strong social ties are more willing to be helpful in transferring knowledge (He *et al.*, 2009). Strong social ties are characterised by high level of resources exchange (Balkundi and Kilduff, 2005). They foster cooperation among employees (Krackhardt, 1992; Becerra and Gupta, 2003; Wasko and Faraj, 2005). They encourage employees to support each other (Miller and Lefcourt, 1982; Hu and Smith, 2004) and foster exchange of advices among them (Hu and Smith, 2004; He *et al.*, 2009). Therefore, strong ties facilitate social interactions within an organisation (Burt, 2000; Helmsing, 2001; Lin, 2001; Inkpen and Tsang, 2005). We expect network ties develop social interaction among employees.

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Thus, we suggest the following hypothesis:

H1: Network ties and structural capital are positively related.

Social interactions within a network are also affected by the way which network actors are configured or structured (Granovetter, 1973; Burt, 1992; Nahapiet and Ghoshal, 1998; Huysman and De Wit, 2004; Inkpen and Tseng, 2005; Wasko and Faraj, 2005; Chow and Chang, 2008; Lee, 2008; Smith and Lohrke, 2008). Network configuration describes the level of connection and accessibility among network members that engenders social interactions (Coleman, 1990; Nahapiet and Ghoshal, 1998; Tsai, 2000; Kilduff and Tsai, 2003; Inkpen and Tsang, 2005; Bartol and Zhang, 2007; Lee, 2008). These social interactions create an integrative structure (Germain, 1996; Sciulli, 1998; Reagans and Zukerin, 2001; Janz and Prasarnphanich, 2003).

The integrative structure reproduces a high degree of connectivity, closure (Faust, 1997; Frank, 2002; Costenbader and Valente, 2003; Gomez *et al.*, 2003; Hossain and Wu, 2009) and easy access to relevant information within an organisation (Nahapiet and Ghoshal, 1998; Kilduff and Tsai, 2003; Jayachandran *et al.*, 2005; Butler and Purchase, 2008). The integrative structure enhances the level of connectivity among employees and facilitates access to any database within an organisation. It encourages mutual learning among employees, develop coordination and expand communication channels to exchange relevant expertise and knowledge (Janz *et al.,* 1997; Janz and Prasarnphanich, 2003; Chen and Huang, 2007). It also encourages interrelation and integration among organisational departments and subunits (Germain, 1996; Sciulli, 1998).

The integration among organisational departments and subunits facilitates exchange and cooperative actions (Butler and Purchase, 2008). Cooperative actions encourage employees to accept different viewpoints and develop common interests that, in turn, foster sharing resources (Tsai and Ghoshal, 1998; Tsai, 2002). These cooperative actions encourage information flow among all the organisation's touch points (Burt, 2000) and provide relevant employees with required information when they need (Berger *et al.,* 2002). They also support front offices by a customer data depository and software that helps respond to customer requests (Berger *et al.*, 2002; Jayachandran *et al.*, 2005) and reduce the barriers in the intra-functional communication (Chen and

Quester, 2008) and allows employees to have contacts to higher levels of hierarchy (Seibert *et al.*, 2001). Therefore the effective organisational structure support social interactions among employees in terms of open communication, cooperation, collaboration, social support and exchanging resources (Janz *et al.*, 1997; Reagans and Zukerin, 2001; Tsai, 2000; Janz and Prasarnphanich, 2003; Chen and Huang, 2007; Chen and Quester, 2008). Consequently, we put forward the following hypothesis:

H2: Network configuration and structural capital are positively related.

Finally, network stability describes the consistency of information flow within an organisation (Fischer, 1982; Burt, 2000; Inkpen and Tsang, 2005; Cummings and Higgins, 2006; Stanko *et al.*, 2007). The consistency of information flow within an organisation improves social interactions among employees (Lai and Wong, 2002; Kim *et al.*, 2004; Cummings and Higgins, 2006; Eng, 2006; Lai and Lee, 2007). This consistency strengthens the linkages between organisation units, enhances the coordination and improvements between them (Deeter-Schmelz, 1997; Walker *et al.*, 1997; Szymanski and Henard, 2001 Eng, 2006), increases the employees' willingness to exchange their technical, operational and strategic information (Bowersox *et al.*, 1999), encourages exchange of information and knowledge (Stanko *et al.*, 2007) and fosters reciprocity among employees (Newcomb, 1961). Deeter-Schmelz (1997) reveals that consistency of information flow between organisation units is valuable because it drives from various functional departments and reflects different professional viewpoints. Furthermore, Walker *et al.* (1997) report that stable of information flow within organisations leads quickly to establish norms of cooperation that reduces the structural holes in an organisation (Eng, 2006).

Stable of information flow enhances coordination between organisation units, which improves organisation's internal functions (Szymanski and Henard, 2001; Ismail *et al.* (2007), increases employees' willingness to exchange their technical, operational and strategic information (Bowersox *et al.,* 1999; Richards and Jones, 2008). Network stability increases confidence in reliability and integrity among employees (Morgan and Hunt, 1994), encourages exchange of information and knowledge among employees within an organisation (Stanko *et al.,* 2007). Stable of information flow among employees establishes long and lasting relationships, which in turn lead to foster reciprocity among them (Newcomb, 1961). The willingness of employees maintains

ongoing relationships and creates a unity of interest and solidarity among employees (Noordewier *et al.*, 1990; Heide and John, 1992). Therefore, the development of structural capital relies to stability of networks within an organisation. Based on these observations, we suggest:

H3: Network stability and structural capital are positively related.

5.3.2   Cognitive Capital Dimensions

As we mentioned earlier in section 2.3.2 in Chapter Two, cognitive capital represents the second dimension of social capital. In this study cognitive capital is operationalised in terms of shared goals (Tasi and Ghoshal, 1998; Kumar and Worm, 2003; Chiu *et al.*, 2006; Krause *et al.*, 2007; Chow and Chan, 2008; Villena *et al.*, 2010). Despite the important role of cognitive capital in enhancing social interactions and trust among network members (Tsai and Ghoshal, 1998; Chiu *et al.*, 2006; Presutti *et al.*, 2007; Chow and Chang, 2008), few studies pay attention to its antecedents (Lee, 2008). Consistent with the literature, cognitive capital is composed of two basic elements: shared values and shared norms (Schermerhorn *et al.*, 2003; Hatzakis *et al.*, 2005; Sagnak, 2005; Lai and Lee, 2007; Powers and Reagan, 2007; Taylor, 2007; Valentine and Fleischman, 2007; Montazemi *et al.*, 2008; He *et al.*, 2009).

Shared values in the current study are operationalised in terms of common work values (Rokeach, 1973; Ouchi, 1981; Meglino *et al.*, 1989; Hult and Ferrell, 1997; Russell and Werbel, 1997; Merlo *et al.*, 2006; Taylor, 2007; Brown and Trevino, 2009), common beliefs (Nystrom, 1990; Adkins and Ravlin, 1996; Sagnak, 2005) and common attitudes among employees (Harrington and Preziosi, 1998; Nall, 2002) that facilitate establishing common goals within an organisation (Posner *et al.*, 1985; Meglino *et al.*, 1991; McDonald and Gandz, 1992; Hyde and Williamson, 2000; Sagnak, 2005). Shared values among employees increase the cooperation among their efforts, which in turn leads to effective attainment of their shared goals (Meglino *et al.*, 1991). Shared values among employees improve their practices within an organisation through increasing the degree of responsiveness among them, which supports achieving organisational goals (Posner *et al.*, 1985). Employees who share the collectivist culture such as Middle East region (e.g. Egypt) accept their collective goals more easily (Ouchi, 1981; Taylor, 2007). In addition, organisational values, which derived from employees' values, have positive

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impact on employees' collective goals (Waltner, 1999; Ruppel and Harrington, 2001; Lai and Lee, 2007). Thus, we propose the following hypothesis:

H4: Shared values and cognitive capital are positively related.

With respect to shared norms, several scholars report that shared norms represent the second dimension of cognitive capital (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Schermerhorn *et al.*, 2003; Huysman and De Wit, 2004; Inkpen and Tsang, 2005; Liao and Welsch, 2003; 2005; Sherif *et al.*, 2006; Mukherji *et al.*, 2007; Presutti *et al.*, 2007; Durlauf and Blume, 2008). In this study, common norms are manifested in adherence to behaviour standards and work rules (Deeter-Schmelz, 1997; Nahavandi and Malekzadeh, 1999; Brown and Trevino, 2009) that facilitate developing common goals among employees within an organisation (Vecchio 1991; Sherif *et al.*, 2006; Mukherji *et al.*, 2007; Durlauf and Blume, 2008).

Mukherji *et al.* (2007) reveals that employees with common norms can agree on collective goals easily. Shared norms also facilitate developing common behaviours among employees and help in overcoming pervasive problems of collective actions (McAdams, 1997). Shared norms also enhance cohesiveness, unity, and equitable sharing of future benefits and burdens among employees (Sherif *et al.*, 2006). The function of shared norms among employees is to coordinate their interactions that support achieving common goals (Durlauf and Blume, 2008). Shared norms also establish a common obligatory behaviour (behaviour standards and work rules) within an organisation (McAdams, 1997; Adams *et al.*, 2001; Deshpande *et al.*, 2007; Deshpande and Joseph, 2008). This common obligatory behaviour enhances the organisation's ability to adapt to environment changes, enhance employees' willingness to share information and expertise, improves intrafirm relationships and helps to achieve collective goals (Alder and Kwon, 2002; Inkpen and Tseng, 2005; Sherif *et al.*, 2006; Durlauf and Blume, 2008). Therefore, shared norms develops cognitive capital among employees. Thus, we suggest the following hypothesis:

H5: Shared norms and cognitive capital are positively related.

5.3.3   The Mutual Effects among Structural Capital and Cognitive Capital

Based on the previous discussion in section 2.3.4.1 in Chapter Two, this study sets the theoretical foundations for the mutual positive link between structural capital and cognitive capital. Structural capital facilitates development of cognitive capital among employees within an organisation (Anderson and Narus, 1990; Heffner and Rentsch, 2001; Koskinen *et al.*, 2003; Wasko and Faraj, 2005; Powers and Reagan, 2007; Chen and Huang, 2007; Chow and Chan, 2008; Ramström, 2008; Yang *et al.*, 2008). In addition, social interactions among employees encourage new employees to understand and share goals with old employees (Van Maanen, 1976; Louis, 1980; Heffner and Rentsch, 2001).

Moreover, Rentsch (1990) mentioned that social interactions between employees are likely to develop similar interpretations of organisational goals. Furthermore, informal social interactions may shape and sometimes create new sets of goals, and practices for organisations (Stites-Doe, 1994). Moreover, the direct relationship between structural capital and cognitive capital has been studied in some social capital studies. For example, Liao and Welsch (2003, 2005) and Lu and Yang (2011) indicate that structural capital was found to be positively related to cognitive capital. Therefore we can suggest that structural capital affect positively on cognitive capital. Thus, we propose the following hypothesis:

H6: Structural capital and cognitive capital are positively related.

Regarding to the direct impact of cognitive capital on structural capital, it has not been explored yet in social capital literature. The current study is one of the first studies that empirically investigate the impact of cognitive capital on structural capital. Chiu *et al.* (2006) reveal that people with common interests, goals or practices engage in social interactions. Krause *et al.* (2007) also demonstrate that shared goals create continued social interactions. In the same view, social interactions require development of a shared understanding among employees (Symon, 2000). Furthermore, Taylor (2007) indicates that cognitive capital enhances social interactions within an organisation by creating common goals and objectives among its departments. Moreover, shared goals represent one of the key factors in designing a system for inter-organisational coordination (Whetten, 1977; Murray and Kotabe, 2005) and increasing the willingness of employees

to share knowledge (Chow and Chan, 2008). According to the positive relationship between structural capital and cognitive capital, we suggest the following hypothesis:

H7: Cognitive capital and structural capital are positively related.

5.3.4 Relational Capital Antecedents

Relational capital is the third dimension of social capital. According to Tsai and Ghoshal (1998), Liao and Welsch (2003, 2005) and Lu and Yang (2011), structural and cognitive capital are the origins of the emergence of relational capital. The current study adopts the viewpoints of many scholars, which assert that trust is the major form of relational capital. The direct relationship between structural capital and relational capital has been studied by some scholars, such as Tasi and Ghoshal (1998), Liao and Welsch (2003) and Lu and Yang (2011). For example, Tasi and Ghoshal (1998), Liao and Welsch (2003) and Butler *et al.*, (2006) reveal that structural capital has a positive and significant impact on relational capital. Similarity, Lu and Yang (2011) argue that structural capital has a positive influence on trust in relationships between employees. Moreover, the network literature has documented the influence of social interactions on trust among network actors (Dahab, 1996; Smith, 2002; Dhanaraj, 2004; Ping Li, 2007). In the same line, Lawson *et al.* (2008) argue that personal interactions within an organisation support creation of relational capital. In addition, social interactions and additional feedback among employees create trust within an organisation (Powell *et al.*, 2006). Development and progress in social interactions among employees foster trusting relationships among them (Gabarro, 1978; Granovetter, 1985; Gulati, 1995; Liao and Welsch, 2005; Kuo *et al.*, 2008). Therefore, we propose:

H8: Structural capital and relational capital are positively related.

Regarding to the positive relationship between cognitive capital and relational capital, many authors demonstrate that cognitive capital has an impact on relational capital (Tsai and Ghoshal, 1998, Liao and Welsch, 2003; Lu and Yang, 2011). For example Tsai and Ghoshal (1998) revealed that cognitive capital affect positively on relational capital. In the same view, Liao and Welsch (2003, 2005) and Lu and Yang (2011) support the positive and significant link between cognitive capital and relational capital. Furthermore, Miretzky (2002) asserts that common goals within organisations have a positive impact on trusting relationships among employees. Establishing trusting

relationships needs sharing in common goals among network members (Betts, 2002). Based on these discussions, we put forward this hypothis:

H9: Cognitive capital and relational capital are positively related.

As mentioned earlier in the previous chapters, there is a lack of social capital studies that explore how social capital can add values to an organisation. Furthermore, there is a scarcity in studies that integrate social capital with the CRM framework. Therefore, the following section of this chapter will investigate the impact of social capital on CRM performance through the mediating roles of organisational perceived values (e.g. customer satisfaction and customer commitment).

5.4 The Organisational Perceived Values of Adopting Social Capital

As we mentioned earlier in Chapter Three, relational capital is the major outcome of social capital (Tasi and Ghoshal, 1998; Liao and Welsch, 2003; Johnston *et al.*, 2004; Inkpen and Tsang, 2005; Chou, 2006; Cousins *et al.*, 2006; Merlo *et al.*, 2006; Kaasa, 2008; Lawson *et al.*, 2008). Moreover, structural capital and cognitive capital are the origins of relational capital. In this study the financial managers in Egypt are the appropriate research targets to perceive the organisational values of adopting social capital within organisations through two main signs: customer satisfaction and customer commitment. Customer satisfaction is considered as a main sign of a positive reaction of customers to successful implementation of intrafirm social capital. In addition, customer satisfaction and customer commitment represent the mediating variables between social capital (independent variables) and CRM performance (dependent variables). The following segment explores the theoretical foundations of the proposed relationships for the research model.

5.4.1 Social Capital and Customer Satisfaction

Social interactions among employees indirectly affects customer satisfaction through enhancing the level of customer service (Davis *et al.*, 2000). Chen and Huang (2007:107) reveal that "*everyone in the company can improve the behaviour, satisfaction, and profitability of the customer*". Social interactions within an organisation supports coordination between departments, which in turn leads to improve internal organisational processes (Tsai and Ghoshal, 1998; Yli-Renko *et al.*, 2001;

Sirmon *et al.*, 2007; De Clercq *et al.*, 2009) and supports customer service (Hill *et al.*, 2009:188). They encourage employees to depend on their colleagues to provide them with information on unfamiliar issues that enhance their performance in serving customers (Thieme, 2007).

Moreover, structural capital in terms of social interaction within an organisation improves the efficiency of internal communication, which in turn improves the efficiency of technical problem-solving within an organisation (Cohen and Levinthal, 1990). It achieves cross-functional team effectiveness (Hargadon and Sutton, 1997; Hogel *et al.*, 2003; Young, 2005) and increase the competencies of employees, which in turn supports a high quality task performance. Social interactions among employees also supports employees to feel more comfortable, which in turn enhance operations' effectiveness and improve relationships with customers (Yang *et al.*, 2008). Liu (2007:15) adds that in service organisations the integration between front-office and back-office help in redesigning organisation's internal process and support satisfying customer needs. Moreover, Ballantyne (1997) revealed that the quality of staff (competency) and the quality of internal processes improve customer service, which is the main foundations of customer satisfaction (Donavan and Hocutt, 2001:300). Tornow and Wiley (1991:105) mentioned that organisational service practices have a positive impact on customer satisfaction.

Moreover, social interactions among employees can promote join efforts and create more positive attitudes among them (Dirks and Ferrin, 2001). Positive attitudes among employees increase their satisfaction. Employees who are satisfied with their work have a positive impact on customer satisfaction (Ballantyne, 1997). In addition, Eichorn (2004:45) reports that satisfied employees *"perform better and treat customers better, internally and externally, ultimately leading to better overall customer satisfaction"*. All the previous discussion proves that social interactions among employees enhances customer service that leads to develop customer satisfaction. Therefore, customer satisfaction could be affected by the joint efforts of employees, which derived from mutual social interactions among them. We expect structural capital to enhance customer satisfaction. Thus, we suggest the following hypothesis:

H10: Structural capital and customer satisfaction are positively related.

In the same line, relational capital (in terms of trust among employees) which is derived from the integration between social interactions and congruence of goals among them (Tasi and Ghoshal, 1998; Liao and Welsch, 2003, 2005, Lu and Yang, 2011) is basically responsible for improving employees' performance within an organisation. Enhancing the performance of employees contribute to establishing positive customer behaviour such as customer satisfaction (Menon and O'Connor, 2007; Leonidou *et al.,* 2008). According to the literature, trust among employees affects positively on customer satisfaction (Davis *et al.*, 2000; Merlo *et al.*, 2006).

There is an ample evidence of the direct relationship between trust among employees and customer satisfaction in the service literature (Rich, 1997; Davis *et al.*, 2000; Merlo *et al.*, 2006). For example, Merlo *et al.* (2006: *1217*) reveal that "*the development of a trusting culture is likely to facilitate the propensity of employees to support each other and to cooperate in the pursuit of customer satisfaction".* They add that a trust culture means development of trust among employees. Davis *et al.* (2000) also find that in service organisations high levels of trust between managers and service providers increased customer satisfaction. Furthermore, Pervan *et al.* (2007) assert that within organisations high level of trust among employees is likely to have a positive impact on the customer service. Quality customer services create positive interaction experiences between customer and an organisation that improve customer satisfaction level and may modify the effect of prior satisfaction levels (Mazursky and Geva 1989; Mittal, Kumar, and Tsiros 1999). Therefore, organisations can improve customer satisfaction through establishing trust relationships (relational capital) among employees that improving service quality and as a result customer service. Thus, we suggest the next hypothesis:

H11: Relational capital and customer satisfaction are positively related.

5.4.2 Customer Satisfaction and CRM Performance

As we mentioned earlier in section 4.4 in Chapter Four, customer loyalty and retention represent the main behaviour measures of CRM performance. The relationships between customer satisfaction and both loyalty and retention represent one of the debated issues in the organisation- customer relationship in service organisations. A review of the literature identifies two viewpoints on this controversial matter; the traditional and the recent. The traditional viewpoint shows direct and strong

relationships between satisfaction and both loyalty and retention. This viewpoint considers satisfaction as either an antecedent (predictor) of loyalty and retention (Oliver 1997; Fecikova, 2004; Kim *et al.*, 2004; Dimitriades, 2006; Lim *et al.*, 2006; Ellis, 2007; Eakuru and Nik Mat, 2008) or as a concept that has a positive impact on both of loyalty and retention (Zeithaml *et al.*, 1996; Bloemer *et al.*, 1999; Oliver, 1999; Cassel and Eklof, 2001; Berrli *et al.*, 2004; Farquhar, 2005; Cai and Xu, 2006; Chen and Quester, 2008). The logic behind traditional viewpoint supposes that satisfied customers are less price sensitive, less influenced by competitors, likely to buy additional products and/or services and will stay loyal longer (Beloucif *et al.*, 2004; Dimitriades, 2006; Ndubisi, 2006; Keiningham *et al.*, 2007).

On the other hand, the recent viewpoint believes that customer satisfaction does not guarantee customer loyalty (Jones and Sasser, 1995; Kim, 2003) or customer retention (Reichheld and Aspinall, 1993; Caceres and Paparoidamis, 2007) and there is a need for customer commitment as a mediation between them (Fullerton, 2005; Dimitriades, 2006; Roig *et al.*, 2006; Kassim and Souiden, 2007). For example, Jones and Sasser (1995:91) note that "*merely satisfying customers…is not enough to keep them loyal*". Kim (2005) also mentions that a large number of satisfied customers could easily leave for an organisation's rivals. In one of the sound studies that support the recent viewpoint, Xerox Corporation in 1991 found that "*satisfied customers were not behaving the way they were expected: they were not coming back to Xerox to repurchase*" (McCarthy, 1997: 13). Recent studies have been built upon customer commitment as a key mediator of the relationship between customer satisfaction and customer loyalty (Fullerton, 2005; Dimitriades, 2006).

Moreover, Kassim and Souiden (2007) point out that satisfaction does not always lead to retention. For example, Reichheld and Aspinall (1993) also reveal that a satisfied customer is not necessary to be a retainable one. Despite the importance of customer satisfaction in developing the relationship between customer and organisation, there is no assurance that satisfied customers will automatically be retainable ones (Caceres and Paparoidamis, 2007). Moreover, the integration between customer commitment and both customer loyalty and retention gives well understanding to customer behaviour (Zins, 2001; Verhoef, 2003; Fullerton, 2005; Gounaris, 2005; Dimitriades, 2006). Therefore, the current study investigates the two viewpoints to identify if satisfaction by itself does directly lead to customer loyalty and retention or if customer commitment as

a mediating variable is necessary to transform satisfied customers to loyal and retainable ones.

5.4.2.1 *Direct Impact of Customer Satisfaction on CRM Performance*

This sub- section discusses the first viewpoint, which considers customer satisfaction is by itself directly leads to customer loyalty and retention and that there is no need for customer commitment as a mediating variable to improve CRM performance.

5.4.2.1.1 *Customer Satisfaction and Customer Loyalty*

A review of the literature shows that customer satisfaction has a positive impact on customer loyalty (Johnson and Fornell, 1991; Zins, 2001; Wang *et al.*, 2004; Maths *et al.*, 2005; Chiou and Droge, 2006; Xu *et al.*, 2006; Caceres and Paparoidamis, 2007; Chen and Quester, 2008; Sweeney and Swait, 2008). For example, some consider a loyal customer as one of the desirable results of customer satisfaction (Biong, 1993; Rayner, 1999; Ryan and Bailey *et al.*, 2001; Abdul-Muhmin, 2005). Others view complete satisfaction is an antecedent of customer loyalty (Jones and Sasser, 1995; Farquhar, 2005). Furthermore, Rauyruen and Miller (2007) reveal that satisfaction has a positive and significant impact on both attitudinal and behavioural loyalty. Similarity, Sweeney and Swait (2008) reveal that satisfaction has a positive impact on loyalty (word of mouth). Rao (2005) also mentions that positive word of mouth has a strong positive impact on customer loyalty in collectivist Middle-Eastern cultures. Sanzo *et al.* (2003:331) report that "*continued satisfaction normally generates loyalty, which, in the end, converts customers into the best promoters of the company's quality and products.*" Thus, customers become "*loyal because they are satisfied and thus want to continue the relationship*" (Cai and Xu, 2006:277). Consequently, we put forward the following hypothesis:

H12: Customer satisfaction and customer loyalty are positively related.

5.4.2.1.2 *Customer Satisfaction and Customer Retention*

Satisfaction is a major driver of customer retention (Fornell *et al.*, 1996; Oliver 1997; Chen and Quester, 2008). Farquhar (2005:1031) reports that "*customer satisfaction, leading to favourable assessments of service quality, is considered an antecedent to*

retention". In the same view, Customer retention is one of the desirable consequences of customer satisfaction (Ganesan, 1994; Abdul-Muhmin, 2005; Gustafsson *et al.*, 2005). Retention is "*believed to be a function of existing customers' level of satisfaction*" (Kau and Loh, 2006:103). Furthermore, customer care and customer satisfaction are among the major antecedents of customer retention (Reichheld, 1996; Gupta and Zeithaml, 2006; Ellis, 2007). Wang *et al.* (2004) also assert that customer satisfaction has a positive and significant impact on customer retention. Moreover, Kotler expresses the relationship between satisfaction and retention concisely: "*The higher the customer satisfaction, the higher the retention*" (2003: 41). Ranaweera and Prabhu (2003:85) also state that the higher the level of satisfaction the higher level of customer retention. Accordingly, the researcher suggests the following hypothesis:

H13: Customer satisfaction and customer retention are positively related.

5.4.2.2 *The Indirect Impact of Customer Satisfaction on CRM Performance*

The following sub-section discusses the second viewpoint, which considers that customer satisfaction is not able by itself to make customers more loyal and retainable and there is a need for customer commitment as a mediating variable. Therefore, in the following discussion, this study explores the role of customer commitment as a mediating variable among customer satisfaction and CRM performance. This discussion presents three causal relationships between customer satisfaction and both loyalty and retention through the mediating role of commitment.

5.4.2.2.1   Customer Satisfaction and Customer Commitment

Many scholars point out that customer satisfaction has a positive impact on customer commitment (Sharma and Patterson, 2000; Wonglorsaichon, 2002; Abdul-Muhmin, 2005; Dimitriades, 2006; Evanschitzky *et al,* 2006; Menon and O'Connor, 2007). Moliner *et al.* (2007:198) also report that there is a direct correlation between the level of customer satisfaction and the degree of commitment. Furthermore, Customer satisfaction is an antecedent of affective commitment (Gustafsson *et al.*, 2005; Johnson *et al.*, 2006; Menon and O'Connor, 2007). Satisfaction is likely to increase a customer's willingness to continue with an organisation and make customers more satisfied with organisation services (Liang and Wang, 2006). Moreover, customer satisfaction reduces

the probability of ending the relationship with an organisation (Ndubisi, 2006). Customer satisfaction also leads to the development of commitment, which is the key for keeping a long-term relationship with an organisation (Anderson and Narus, 1990; Narayandas and Rangan, 2004; Powers and Reagan, 2007). Satisfied customers are motivated to continue the relationship, whereas dissatisfied customers may terminate the relationship (Parvatiyar and Sheth, 2001). In addition, Akarapanich (2006) exemplifies that satisfaction is found to be a key mediating factor in determining customer commitment. Based on this discussion to the link between customer satisfaction and customer commitment, we propose the following hypothesis:

H14: Customer satisfaction and customer commitment are positively related.

5.4.2.2.2   *Customer Commitment and Customer Loyalty*

Several scholars reported that customer commitment has a positive relationship with customer loyalty (Morgan and Hunt 1994; Garbarino and Johnson 1999; Luarn and Lin, 2003; Fullerton, 2005; Caceres and Paparoidamis, 2007; Richard *et al.*, 2007; Eakuru and Nik Mat, 2008). For example, Commitment is closely related to customer loyalty (Gundlach *et al.*, 1995; Dimitriades, 2006; Rauyruen and Miller, 2007). Customer commitment also is one of the drivers of customer loyalty (Fullerton, 2003; Gustafsson *et al.*, 2005). Customer commitment to service providers leads to positive outcomes such as loyalty (Jones, 2003). As we mentioned earlier in section 4.4.1.1.3 in Chapter Four, customer loyalty in this study is operationalised in terms of customer advocacy and switching intentions. Based on the literature, affective commitment has a great impact on customer advocacy (Menon and O'Connor, 2007). In addition, customer advocacy and acquiescence are desirable consequences of customer commitment (Price and Arnould, 1999; Sargeant and Woodliffe, 2005). Fullerton (2005) also reports that affective commitment has a negative impact on switching intentions and positive impact on advocacy intentions. In addition, both affective and continues commitment have positive effects on both attitudinal and behavioural loyalty (Bansal *et al.*, 2004; Evanschitzky *et al.*, 2006; Johnson *et al.*, 2006; Mattila, 2006). The positive link between customer commitment and customer loyalty put forwards the following hypothesis:

H15: Customer commitment and customer loyalty are positively related.

5.4.2.2.3   Customer Commitment and Customer Retention

Customer commitment has a direct positive impact on customer retention (Johnson *et al.*, 2006; Richard *et al.*, 2007). For example, customer retention is an indicator of customer commitment (Lacey, 2007). Ruyter *et al.* (2001) demonstrate that commitment is one of the factors that have a strong impact on customer retention. In the same view, Crutchfield (2001) indicates that commitment has a positive and significant effect on retention. Moreover, affective commitment has a positive impact on customer retention (Verhoef, 2003). Similarity, Hansen *et al.* (2003) indicate that an affective commitment to service firm has a positive and significant effect on retention. Gounaris (2005) also states that an affective commitment encourages customers to remain with a specific organisation and invest more in its products. Furthermore, Gustafsson *et al.* (2005) also report that an affective commitment provides economic incentives that positively affect customer retention. Additionally, Malewicki (2005) support the positive impact of both calculative and normative commitment on retention. Accordingly, we present this hypothesis:

H16: Customer commitment and customer retention are positively related.

5.5   The Relationship among CRM Dimensions

As we mentioned earlier in Ch. 4, one of the debated issues in an organisation- customer relationship is operationalising customer retention as a behaviour loyalty. Therefore, this study is one of the first studies that conceptualise customer loyalty and customer retention as two different constructs. Customer loyalty is conceptualised as a composite construct that includes two dimensions: attitudinal and behavioural, while customer retention is measured through two indicators of the effective customer retention strategy that the organisation adopts. The indicators of this strategy reflect the level of customers' actual staying and investing more with an organisation in the future. Consistent with the relationship between loyalty and retention in the literature, several scholars reveal that customer loyalty has a positive impact on customer retention (Kumar and Shah, 2004; Wang *et al.*, 2004; Farquhar, 2005). For example, Keiningham *et al.* (2007:362) state that *"loyal customers are reported to have higher customer retention rates"*. Customer loyalty also encourages employees to remain with an organisation (Murphy, 1998; Farquhar, 2005). Furthermore, Kumar and Shah (2004)

and Wang *et al.* (2004) reveal that loyalty has a positive and significant impact on customer retention. So, we can suggest this hypothesis:

H17: Customer loyalty and customer retention are positively related.

In conclusion, the following Figure 5-1 shows the proposed relationships between research variables. These relationships constitute the research hypotheses which aim to achieve research objectives and also answer the research questions as illustrated in Table 5-1.

Table 5-1 Summary of research objectives

Objective	Description
1	To explore the level of social capital and CRM in the Egyptian financial sector.
2	To identify the sub- factors of social capital dimensions (structural, cognitive and relational) in the Egyptian financial sector.
3	To examine the relationship between social capital dimensions in the Egyptian financial sector.
4	To investigate the impact of social capital dimensions on customer satisfaction and customer commitment in the Egyptian financial sector.
5	To explore the link between social capital and CRM performance (customer loyalty and retention) in the Egyptian Financial sector.

Figure 5-1 The proposed research model

Social Capital Dimensions → Organisational Perceived Values → CRM Performance

Objective 2   **Objective 3**   **Objective 4**   **Objective 5**

Network ties — H1 → Structural Capital: "*Social interactions*"

Network configuration — H2 →

Network stability — H3 →

Shared Values — H4 → Cognitive Capital: "*Shared goals*"

Shared Norms — H5 →

H6, H7 (between Structural Capital and Cognitive Capital)

Structural Capital — H8 → Relational Capital: "*Trust*"

H10 → Customer Satisfaction

H9, H11

Relational Capital: "*Trust*" → Customer Satisfaction

Customer Satisfaction → H14 → Customer Commitment

H12 → Customer Loyalty

H13 → Customer Retention

H15, H16, H17

Customer Commitment → Customer Loyalty / Customer Retention

Source:The author.

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5.6 Summary

In this chapter, based on the literature reviews reported in the three previous chapters, the research framework was presented. This chapter developed a conceptual model that integrates social capital with customer relationship management. This chapter set the theoretical foundations of the proposed research model. It also developed in order the proposed research relationships in the proposed research model in this study. The current chapter established sixteen hypotheses by which to address answers for the research questions. These relationships explored the antecedents of structural capital, cognitive capital and relational capital. These relationships also determined the interrelationships among social capital dimensions: structural, cognitive and relational. In addition this chapter set the theoretical foundations for the impact of social capital on customer satisfaction. It also provided the theoretical basis for the impact of social capital on CRM performance (customer loyalty and customer retention) through the mediating role of customer satisfaction and customer commitment. In addition, this chapter outlined the relationship among CRM dimensions. Finally, the hypotheses regarding to each stage are presented in an attempt to find out answers to the research questions. The next chapter (Chapter 6) discusses the appropriate methodology to test the research hypotheses.

Chapter 6 Research Methodology

This chapter focuses on the theory of the research and the methodological approach. it outlines different levels of stages of the adopted methodology. The first section describes the different assumptions of research paradigm of the study. The second part focuses on the type of research methodology. The third section explores the research approach whereas section four explores the research strategy. Moreover, research choice is discussed in section five. Section six discusses the different views of data collection. Data collection includes exploring research sample, questionnaire design and administrating questionnaire. Section seven presents different methods of analysing data.

6.1 Introduction

This chapter discusses issues related to the chosen philosophical position of the study, as well as the research approaches, the research strategies, and the methods of collecting and analysing data to enable the researcher to achieve the objectives of the study. These issues are addressed after taking into account:

- The research objectives
- The research questions and
- The appropriate theoretical and contextual frameworks.

Nachmias and Nachmias (1992:21) describe research as "*the overall scheme of scientific activities in which scientists engage in order to produce knowledge; it is the paradigm of scientific inquiry*". Therefore, the research process is an attempt to increase the sum of knowledge by discovering new facts or relationships through a process of systemic scientific inquiry. Thus, Sekaran (2003:3) believes that the main aim of research is to find answers or solutions to problems through an organised, critical, systematic, scientific, data-based inquiry or investigation. Collis and Hussey (2003: 2) mention that the main purposes of research are to review and synthesise existing knowledge, generate new knowledge, examine some existing situations or problems and give solutions. Respect to this study, the main aim is to enhance the performance of CRM. This study adopts social capital concept to enhance CRM performance. This study aims to explore to what extent social capital can remedy the poor performance of

CRM in business environment. To answer this question and achieve research objectives, our process should follow scientific steps. Figure 6-1 is a good starting point to illustrate overview of the research methodology processes, which we should select from. Figure 6-1 summarise all possible types of research paradigms. It also mentioned the different types of research methodologies. Moreover, this figure displays all types of research approaches, strategies and choices. It also illustrates the time horizon and the methods of collecting data. The in-depth discussion for the literature in chapters 2, 3, 4 and 5 helps in selecting the appropriate research paradigm, research methodology, research approach, strategies, and data collection methods for this study. Thus, this study will discuss in details all possible research steps as shown in Figure 6-1 to identify the appropriate research process for this study.

Figure 6-1 The different alternatives of research process

Determine the type of research philosophy/ paradigm

Interpretivism.

Positivist

Pragmatism

Inductive Approach

Abductive Approach

Deductive Approach (testing hypotheses)

(Case study, ethnography, Grounded theory &Action research) strategies

(Experiment &Survey) strategies

Research choices

Time horizon: Longitudinal

Multi Methods

Mixed Methods

Mono methods

Time horizon: Cross sectional

Data collection methods: Quantitative or Qualitative

Data Analysing Methods

Interpretation & discussion of research results

6.2 The Research Paradigm (Philosophy)

Malhotra and Briks (2003:136) view a paradigm as "*a set of assumptions consisting of agreed- upon knowledge, criteria of judgment, problem fields and ways to consider them*". The research paradigm is an accepted belief system that guides researchers to focus on important, legitimate and reasonable facts, when they conduct their researches (Tashakkori and Teddlie, 1998; Sarantkos, 2005:30). It is also defined as "*the process of scientific practice based on people's assumptions about the world and the nature of knowledge*" (Collis and Hussey, 2003:45). Therefore, the research paradigm offers a framework comprising an accepted set of theories, methods and ways of defining data.

There are three basic assumptions that underlay a research paradigm. These assumptions aim to answer three questions. Firstly, how can the researcher gain knowledge (epistemology)? Secondly, what is the viewpoint of the researcher toward the nature of reality (ontology)? Finally, how can research values affect research design and interpretation of results (axiology)? Each assumption has an influence on the way in which the researcher thinks about the research methodology (Saunders *et al.*, 2007:102). Identifying the research paradigm helps in selecting the appropriate research choice and research methodology, in order to achieve a high level of validity and reliability of research results (Creswell, 1998: 94; Collis and Hussey, 2003; Creswell and Plano Clark, 2007: 23; Saunders *et al.*, 2007: 101). The sub- sections below discuss each assumption.

6.2.1 The Ontological Assumption

The ontological assumption is concerned with the nature of reality (Saunders *et al.*, 2007:108). Sarantakos (2005:30) indicates that there are two viewpoints on ontology: objectivity and subjectivity. Objectivism is the position that social entities exist in reality external to social actors (Sarantakos, 2005; Saunders *et al.*, 2007). It means that the researcher will not be influenced by the opinions or beliefs of the participants. This viewpoint puts a lot of limits on the role of participants in the research process and interpretation of its results. On the other hand, subjectivism reflects the view that social phenomena are created from the perceptions and consequent actions of participants

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(Saunders *et al.*, 2007:108). This means that the respondents' opinions can build or at least modify the author's beliefs. The subjectivist considers reality as the outcome of social interaction between the participants (Collis and Hussey, 2003:48). Tashakkori and Teddlie (1998:7) demonstrate that objectivism represents a single view of reality, whereas subjectivism reflects multiple views of realities. Sarantakos (2005:42) summarised the differences between the two viewpoints in the following table.

Table 6-1 The major differences between views of reality

Criterion	Objectivity	Subjectivity
Reality	-Found "out there", to be "found". -Perceived through the senses. -Perceived uniformly by all. -Governed by universal laws. -Based on integration.	-Found in people's minds. -Perceived not through senses only. -Perceived differently. -Created, constructed not found. -Interpreted differently by people.

Source: Adapted from Sarantakos (2003:42)

According to Table 6-1, the objectivist viewpoint depends on existing theories that have been established and tested in previous studies. These theories set predetermined laws and logic in building research relationships. The integration between these theories explores new casual relationships among these theories. On the other hand, subjectivism creates and constructs new laws, which are derived from the minds of participants rather than existing theories. In this study, adopting the objectivist viewpoint is most appropriate to answer the research questions and to achieve the research objectives, because this study aims to integrate two well established and tested theories: social capital and relationship marketing. The objectivist viewpoint in this study investigates the impact of social capital on CRM performance through the mediating roles of customer satisfaction and customer commitment, the items of which are based on prior literature in these areas.

6.2.2   The Axiological Assumption

Axiology is a second assumption that explores the researcher's values and their roles in making their judgments towards the research type and methods (Heron, 1996:12). The researcher can adopt one of two axiological viewpoints: value- free or value-involvement. The value- free viewpoint means that the researcher's values are far away from the research process and interpretation of the results. On the other hand, the value-involvement viewpoint reflects the involvement of researcher's values in the research

process and interpretation of the results (Saunders *et al.*, 2007:110). The axiological assumption is related directly to the ontological assumption. The value- free viewpoint is compatible with the objectivist viewpoint. On the other hand, the subjectivist viewpoint describes a high degree of involvement of the researcher's values in the research process (Creswell, 1994: 76; Tashakkori and Teddlie, 1998:7; Collies and Hussey, 2003:48). In this study we adopt the *value- free* viewpoint. This study adopts well established and tested theories to build research model. The casual relationships in the research model are affected by prior studies in the literature. Moreover, data collection will be through a questionnaire, which is characterised with a low level of interaction with participants and low bias. Thus, there is no chance of the researcher's values to playing a role in this stage.

6.2.3 The Epistemological Assumption

Epistemology focuses on the relationship between the researcher and what is being researched (Saunders *et al.*, 2007:108). This relationship can be established through answering two questions; how can the researcher know the world, and what is considered acceptable knowledge from the view of the researcher and the discipline? (Miller and Brewer, 2003: 94; Walliman, 2006: 15). In simple words, epistemology helps the researcher to identify, what is the starting point of research process. There are two viewpoints of research epistemology: positivism (depending on existing theories) or interpretivism (gathering ideas and information to generate and build new theory). As we mentioned earlier in chapters 2, 3, 4 and 5, the current study depends on existing theories such as social capital, network, social exchange, Burt, social process, social cognition, expectancy disconfirmation and relationship marketing to build the theoretical foundation of the proposed research model. Our research epistemology depends basically on the objectivist ontological viewpoint and the value- free axiological viewpoint. The ontological, axiological and epistemological assumptions determine the research paradigm (Creswell, 1994:5). According to the literature, there are three types of research paradigms: positivism (Collis and Hussey, 2003; Walliman, 2006; Saunders *et al.*, 2007), interpretivism (Tashakkori and Teddlie, 1998; Sarandakos, 2005) and pragmatism (Jick, 1979; Howe, 1988; Tashakkori and Teddlie, 2003). Table 6-2 describes the characteristics of the common types of research paradigms in social and behavioural research projects.

Table 6-2 Characteristics of common types of research paradigms

Paradigm	Positivism	Pragmatism	Interpretivism
Methods	-Quantitative	Quantitative+ Qualitative	Qualitative
Approach(Logic)	Deductive	Abductive = (Deductive + Inductive)	Inductive
Epistemology	-Objective point of view. (Knower and Known are dualism).	-Both Objective and Subjective points of view	-Subjective point of view. (Knower and known are inseparable).
Axiology	-Inquiry is value free	-Values play a large role in interpreting results	-Inquiry is value - bound
Ontology	-Naive realism	-Accept external reality. Choose explanations that best produce desired outcomes	-Relativism
Causal linkages	-Real causes temporally precedent to or simultaneous with effects.	-There may be causal relationships, but we will never be able to pin them down.	-All entities simultaneously shaping each other. It's possible to distinguish causes from effects.

Source: Adapted and extended from Tashakkori and Teddile (1998:23)

According to Table 6-2, positivism is "*a philosophy of language and logic consistent with an empiricist philosophy of science*" (Malhotra and Briks, 2003:136). Positivism considers knowledge as phenomena that are observable and measurable (Collis and Hussey, 2003:47). The positivistic paradigm uses quantitative and experimental methods through establishing causes and effects between the variables and links them with existing theory to test hypotheses by using highly structured methodology (Collis and Hussey, 2003: 53; Walliman, 2006: 15). Statistical analysis plays an important role in this paradigm because it gives a chance for generalising research findings (Creswell, 1994: 5; Collis and Hussey, 2003: 48). In the positivistic paradigm, the research is undertaken, as far as possible, in a value-free way (Saunders *et al.*, 2007:103). Positivism indicates that researchers are separated from what is being researched and they are able to keep a suitable distance from the research objects (Denzin and Lincoln, 1994: 108). It explores the interrelationship between research objects with a fixed research design (Sarantakos, 2005:31).

On the other hand, the interpretivists believe that inquiry is value- bound (Tashakkori and Teddlie, 1998:10). In the interpretivism view the researcher's values determine what are accepted as facts and the interpretations, which are drawn from them. The

interpretation of research findings will be in accordance with the researcher's own set of meanings (Saunders *et al.*, 2007:106). Interpretivists suppose that researchers are concerned with that which is being researched (Collis and Hussey, 2003:48). The research design in the interpretivistic paradigm is characterised by flexibility and its design, methods and process are open to change (Sarantakos, 2005:45). The interpretivistic paradigm uses qualitative methods such as interviews, focus groups and ethnography.

The pragmatic paradigm is a mixture of the advantages of the interpretivistic and positivistic approaches. These two approaches complement each other (Howe, 1988; Jick, 1979). This composite approach gives the researcher the flexibility to use both positivistic and interpretivistic approaches parallel or sequentially (Tashakkori and Teddlie, 2003:21). Pragmatists argued that *"quantitative methods are not necessarily positivist, nor are qualitative techniques necessarily phenomenological"* (Onwuegbuzie and Leech, 2005:378). Kumar (1999:12) believes that no matter what paradigm the researcher works within, the researcher should hold on to certain values regarding the control of bias, and the maintenance of objectivity in terms of the research process and the conclusions drawn. Figure 6-2 summarises the link between ontological and axiological assumptions and research paradigms.

Figure 6-2 the effect of ontological and axiological assumptions on research paradigm
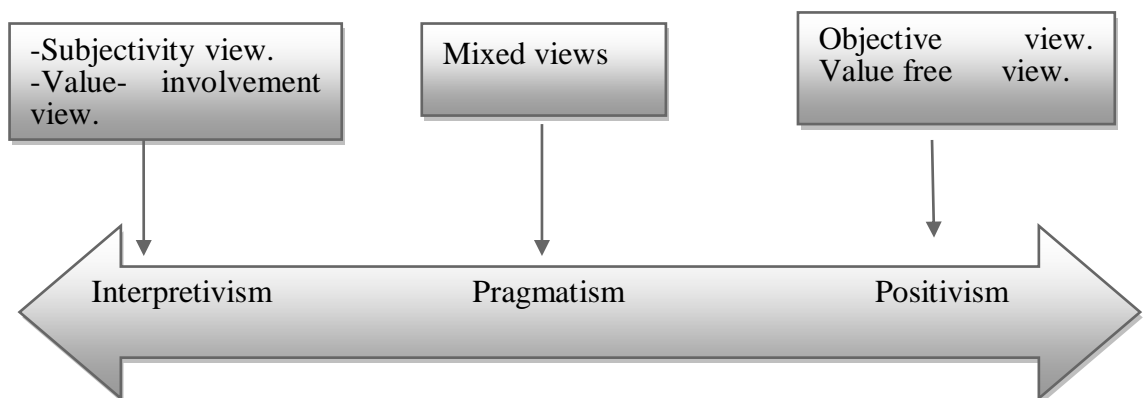
Source: The author.

Based on Figure 6-2 the positivism paradigm is related with objective ontology assumption, the value free view of axiological assumption and the positivistic epistemology. Respect to interpretivism paradigm it includes subjective ontology

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assumption and the value involvement view of axiological assumption and the interpretivistic epistemology. Finally, the pragmatism paradigm is a mixture from positivism and interpretivism paradigms. According to the previous discussion of paradigm types, the current study depends testing existing theories to develop the proposed research model. Thus, this study adopts the value free view, objective and positivistic assumptions. Therefore, this study adopts the positivistic paradigm such as many studies in social capital and CRM as Tsai and Ghoshal (1998), Inkpen and Tsang (2005), Liao and Welsch (2005), Peelen *et al.* (2006), Eid (2007), Minima and Dawson (2007) and Lu and Yang (2011).

This study adopts positivistic paradigm because this study adopts existing and well established and tested theories such as social capital theory with relationship marketing. In this study the positivistic paradigm helps to explore the casual link between social capital, organisational perceived values and CRM performance. In addition, it explores empirically the antecedents of social capital dimensions (Tsai and Ghoshal, 1998; Liao and Welsch, 2003, 2005). However, the selected research paradigm should be translated into an appropriate research methodology for achieving the research objectives. The following sub-section discusses the types of research methodology.

6.3   The Methodological Assumption (Quantitative vs. Qualitative Research)

Research methodology is a research strategy that translates research paradigm into guidelines that help a researcher to conduct the research (Sarandakos, 2005:30). It is a strategy of action that links methods to outcomes, governs research choice and determines the appropriate research methods (Creswell, 2003:5). Kerlinger (1986:279) asserted that research methodology design refers to a plan, structure and strategy of obtaining answers to research questions or problems. The research plan included research hypotheses, which represent the causal relationships between research variables (Thyer, 1993:94). The research plan should achieve four criteria; validity, objectivity, accuracy and economy (Kumar, 1999:74). Several scholars mentioned that research methodologies in the social and behavioural sciences can be classified into two types: quantitative and qualitative (Creswell, 1994:5; Bryman, 1988: 94; Sarantakos, 2005:30; Bryman and Bell, 2007: 28). Table 6-3 illustrates the main assumptions underlying these two methodologies.

Table 6-3 Assumptions of quantitative and qualitative methodologies

Assumption	Question	Quantitative	Qualitative
Ontological	What is the nature of the reality?	Reality is objective and singular, apart from the researcher	Reality is subjective and multiple as seen by participants in a study
Epistemological	What is the relationship of the researcher to that researched?	Natural science model; Researcher is independent from that being researched	Interpretivism; Researcher interacts with that being researched
Methodological	What is the process of the research?	Deductive process; testing of theory Cause and effect Static-design categories isolated before study Context-free Generalisations leading to prediction, explanation and understanding	Inductive process; generation of theory Mutual simultaneous shaping of factors Emerging design-categories identified during research process Context- bound patterns, theories developed for understanding
Axiological	What is the role of values?	Value-free and unbiased	Value-laden and biased
Data	What is the nature of data?	Hard, reliable	Rich, deep

Source: Adapted from Creswell (1994: 5).

With respect to Table 6-3 quantitative methodology adopts the objectivist viewpoint, whereas the subjectivist viewpoint is related to qualitative methodology (Neuman, 2006:153). A quantitative methodology is characterised by being value- free and unbiased from the researcher (Bryman and Bell, 2003:25). On the other hand, qualitative methodology gives the researcher's values a big role in interpreting the research results (Creswell, 1994: 76; Collis and Hussey, 2003: 48). A quantitative methodology is suitable for the positivistic paradigm, whereas an interpretivistic paradigm is associated more with a qualitative methodology (Bryman and Bell, 2007: 28). The results of a quantitative methodology can be generalised and use as a tool for prediction, explanation and understanding. Sarantakos (2005:134) mentioned that choice of a methodology is governed by some factors such as research paradigm, compatibility with the research theoretical goals and a research object, overall purpose of the project, nature of expected outcomes and an appropriate research approach. Because this study adopts the positivistic paradigm through depending on tested and well established

theories a quantitative methodology is used to achieve the research objectives. Selecting the appropriate methodology is affected by the research approach (Bryman, 1988; Neuman, 2006; Sarantakos, 2005; Punch, 1998). Thus there is a need to discuss in depth the types of research approaches

6.4   Research Approach

Research approach focuses on how the research project will engage in the use of theory (Creswell, 1994; Collis and Hussey, 2003; Saunders *et al.*, 2007). A review of the literature identifies two main research approaches; the deductive and the inductive. Miller and Brewer (2003:67) define the deductive approach as "*an approach to data analysis, explanation and theory that sees empirical social research as conducted on the basis of a hypothesis derived from social theory which is then tested against empirical observation and the subsequently used to confirm or refute the original theoretical proposition*". Saunders *et al.* (2007:117) mention that the deductive approach has three basic characteristics. Firstly, it aims to explain the causal relationships between variables. Secondly, it collects quantitative data. Finally, its results can be generalised.

In addition, Bryman and Bell (2003:80-81) state that deductive reasoning is characterised by causality, generalisation, concern for measurement and replication. On the other hand, deductive approach suffers from the following critiques:

- It is a fixed and rigid design, as scientific research principals should be applied to all phenomena that are the focus of investigation regardless of the nature of the phenomenon.
- The measurement process possesses an artificial sense of precision and accuracy.
- The reliance on instruments and procedures hinders the connection between research and everyday life.
- The analysis of relationships between variables creates a static view of social life that is independent of people's lives.

On the other hand, inductive research is "*the study, in which theory is developed from the observation of empirical reality*" (Collies and Hussey, 2003:15). This approach tries

to build theory. In this approach, the researcher collects interview data and after analysing these data he/she will be able to build the theory. The inductive approach gives researcher the flexibility to interact with respondents and discuss with them the issues the researcher may face in interpreting the research results. The qualitative study depends on inductive approach. The inductive approach is more flexible than deduction, as the latter has a tendency to build a rigid methodology that does not allow alternative explanations of what is going on (Saunders *et al.*, 2007:118).

A major strength of the inductive approach is the depth to which explorations are conducted and descriptions are written, usually resulting in sufficient details for the reader to grasp the idiosyncrasies of the situation (Bryman and Bell, 2003:293). They add that the inductive approach also focuses on research process, has a high degree of flexibility and limited structure. One of the most common drawbacks of the inductive approach is the effect of the researcher's opinion in collecting data and in interpretation the results, which we call "personal biasing" (Newman, 2003). Maxwell (1996: 65) mentioned that "*the close relationship between the researcher and the participants can affect not only on research design but also researcher interpretations and participants responses*". These relationships establish bonds with the research participants. The effect of this relationship is called *reflexivity*.

Atkinson *(1983:18)* uses the term reflexivity to label the recognition that the researcher is inextricably part of the phenomena studied. Bryman and Bell (2003:298) state that the inductive approach suffers from the following critiques; too subjective, difficult to replicate, problems of generalisation and lack of transparency. In conclusion, the inductive approach suffers from many problems, which can affect the research results and these problems can be solved by using the deductive approach. Figure 6-3 shows the relationships between research paradigms, methodologies and approaches.

Positivistic Paradigm   ⟷   Pragmatic Paradigm   ⟷   Interpretivistic Paradigm

Deduction   .   Induction

Quantitative Methodology   ⟷   Mixed methodology   ⟷   Qualitative Methodology
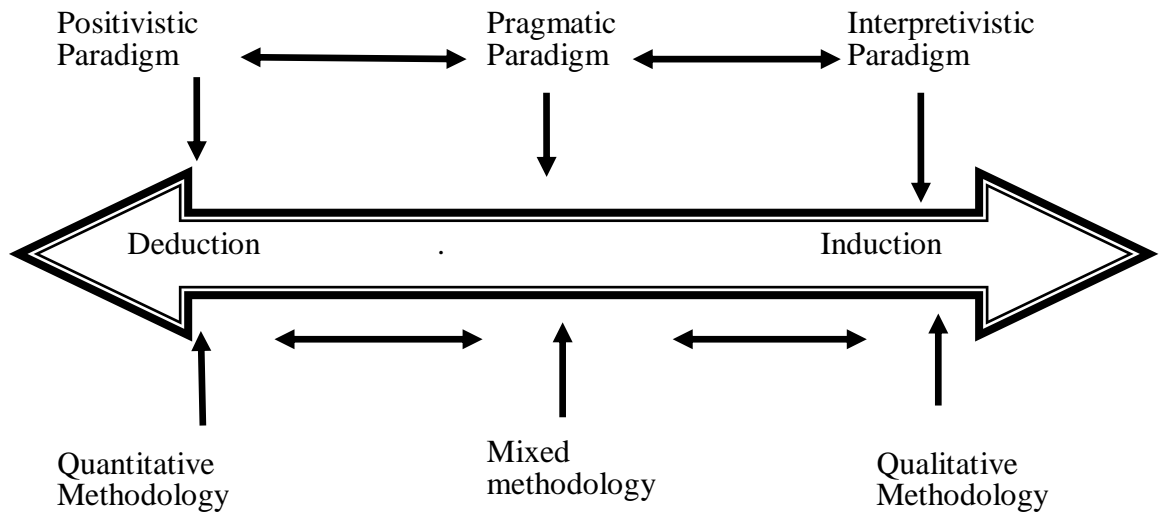
Source: The author.

Creswell (1994) mentioned that selection of a research approach depends on some criteria such as wealth of literature on the research topic, time constraints and nature of the audience. The deductive approach will be favourable if there is a wealth of literature that will help in building a theoretical framework and hypotheses. It will also fit in case of time constraint, as it can be quicker to complete than inductive. It used with a quantitative methodology which seeks to test well established theories through building cause and affect relationships (Punch, 1998; Sarantakos, 2005). The inductive approach will fit in case of scarcity of literature on the research topic or some of the research variables. It used with a qualitative methodology which aims to generating theory for understanding specific phenomenon (Bryman, 1988; Neuman, 2006). Therefore, the current study depends on the deductive approach, as the theoretical foundations of the research model are based mainly on the wealth of social capital, CRM, satisfaction and commitment literature. In addition time constraint is another motivator to adopt the deductive approach.

6.5 Research Strategy

Research strategy is "*a general plan of how the researcher is going to answer the research questions*" (Saunders *et al.*, 2007:131). It provides the researcher with a specific direction for procedures to conduct the research (Creswell, 2003:13). Both the research paradigm and research topic have important effects on research design (Collis and Hussey, 2003:113). Similarity, Nachmias and Nachmias (1992:98) mentioned that research design enables the investigators to come up with solutions to these problems.

This study could be classified as a survey strategy. A survey is defined as "*a research technique in which information is gathered from a sample of people by use of questionnaire or interview; a method of data collection based on communication with representative sample of individuals*." (Zikmund, 2003:175). Survey studies are characterised by low cost, save time, are easy to standardise and allow easy comparison. They provide an accurate means of assessing information about a population, are efficient and give the researcher more control over the research process (Saunders *et al.*, 2007:138; Zikmund, 2003:175). The main drawbacks of survey strategy are the limited ranging of the collected data compared to other research strategies such as case studies, interview bias and questionnaire errors.

To overcome the above problems with survey method this study sets the questionnaire questions in a way that prevents bias and a pilot study is conducted to discover the common errors that may be in the questionnaire design. In addition, the questionnaire is translated into Arabic (the native language of the research sample) and the questions are posed in the in simplest form. The survey strategy is chosen for many reasons. Firstly, the aim of this study is to test the integration of many existing theories such as social capital, social exchange and relationship marketing. It is also intended to explore the impact of social capital on CRM performance (loyalty and retention) by using a questionnaire to collect information from Egyptian financial services institutions (target population). Therefore, this structure is close to the survey structure, which is mentioned above.

Secondly, this study depends on a cross-sectional design in collecting data and this design is more appropriate to a survey strategy (Bryman and Bell, 2003:48). Thirdly, most social capital and CRM studies used survey methods such as questionnaire and interviews. Finally, the current study seeks to establish association between social capital variables (independent variables), customer satisfaction and commitment (mediating variables) and CRM performance (dependent variables). Such investigation is at the core of correlational surveys, which search for relationships between different variables based on a theoretical context (Punch, 1998:78; Bryman and Bell, 2003:48; Collis and Hussey, 2003: 66; Neuman, 2006:276). This study depends on correlational

survey[7] as defined by Collis and Hussey (2003: 66). The research strategy is one of the determinants of selecting the appropriate research choice.

6.6 Research Choice

The research choice describes the appropriate methods of collecting and analysing data (Saunders *et al.*, 2007: 145). There are three research choices among which the researcher can choose; mono method, multi-methods and mixed methods (Tashakkori and Teddlie, 1998: 17-19). Mono methods involve using only a single (quantitative or qualitative) technique of data collection and single procedure for data analysis. Such an approach is used exclusively within only one specific paradigm (positivistic or interpretivistic) and one data source (quantitative or qualitative). In multi-method studies, the researcher can use more than one research method or data collection technique (i.e. two qualitative or two quantitative strands) in one study to achieve the research objectives (Saunders *et al.*, 2003:99).

Mixed research methods [8] (triangulation) combine the qualitative and quantitative methods into the research methodology of a single study or in a multi-phased study within the different stages of the research process (Johnson and Onwuegbuzie, 2004: 20). As a result of adopting the positivist paradigm and a quantitative methodology in the current study we employ a survey (questionnaire) as an appropriate mono method for this study. Therefore, this study depends on a survey instrument (questionnaire) to collect information about social capital dimensions and their sub-factors from managers of Egyptian financial service institutions. Moreover, information is collected about the values that the organisation gains as a result of adopting social capital within the organisation and the impact of social capital on CRM performance.

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[7] There are two main types of survey (Collis and Hussey, 2003: 66): the descriptive survey "is concerned with identifying and counting the frequency of a specific population, either at one point in time or at various times for comparison. The other type of survey is the correlational (analytical) survey where the intention is to determine whether there is any relationship between different variables".

[8] The term mixed methods (triangulation) in this study cover two terms: mixed method studies.

6.7 Time Horizon

The time element is one of the most important matters in setting a research plan. According to the literature, there are two types of research plan; cross-sectional and longitudinal studies. Cross sectional studies are the most commonly used in social sciences. This design is most suitable for studies that aim at finding out the prevalence of a phenomenon, situation, problem, attitude or issue, by taking a cross-section of the population (Kumar, 1999:81). They are designed to obtain information on variables in different contexts but at the same time (Lewis, 2003; Smoekh and Lewin, 2005:216). This design collects data to answer a research question over a period of days or weeks or months (Sekaran, 2003:135).

Several authors indicate that cross-sectional samples are frequently used in research efforts to generalise research results (Anderson and Narus, 1990; Ganesan, 1994; Ulaga and Eggert, 2001; Merlo *et al.*, 2006; Eid, 2007). This design is related particularly to the survey strategy. Cross- sectional design has three issues; weak internal validity, high variation in cross-sectional data and stronger relations that are identified between the investigated constructs (Nachmias and Nachmias, 1996:131). Geyskens *et al.* (1998) revealed that the variation issue in cross-sectional data and high correlation between the investigated constructs are far from problematic. In contrast to cross-sectional studies, longitudinal studies are used to collect data over time perhaps months or years. Longitudinal study *"is a study of variable or a group of subjects over time"* (Collis and Hussey 2003). The purpose of longitudinal studies is to investigate continuity of response and to monitor changes that occur over time (Zikmund, 2003:187; Smoekh and Lewin, 2005:217). It is useful in many situations such as identifying patterns of change in relation to time and in collecting factual information on a continuing basis (Kumar, 1999:86). Moreover, collecting data at more than one point may be the best method to answer the research question (Sekaran, 2003:135).

The current study depends on collecting data at one time using cross sectional design, because this research uses a correlational survey method. By using correlational survey this study investigates the effect of social capital on CRM performance through the mediating roles of customer satisfaction and customer commitment in a snap shot of time. Time constraint is another reason to choose cross sectional research, as the researcher has a specific period of time in which to collect data (Saunders *et al.*,

2007:148). In this study data are collected through three months from August to October 2009. The questionnaires are drop and collect by hand for all research targets (managers of Egyptian financial institutions) in the main branches for all Egyptian financial institutions (Banks, Brokerage firms and Insurance companies) in the largest cities in Egypt such as Cairo, Alexandria, Tanta and Mansoura. They were told to leave an interval of a maximum of 4 week between delivering the questionnaire and collecting it. After choosing a suitable design according to time element, we should select the appropriate methods to collect research data.

6.8 Data Collection

Undoubtedly, the proper selection of these methods is vital to achieve the research goals (Collis and Hussy, 2003:150). The current study depends on a quantitative method, which is consistent with the positivism philosophy, deductive approach and quantitative methodology adopted. Quantitative methods collect data in the form of numbers. The purpose of quantitative methods is to generate accurate measurements of social actions, which can be described by the accumulation of statistical data (Punch, 1998:88). The main advantages of collecting data through quantitative methods are the relative ease, low cost and the analytical and predictive power which can be gained from statistical analysis. On the other hand, the issues of sample representativeness, errors in measurement and quantification, and the danger of reductionism represent the major drawbacks of collecting data through quantitative methods. These drawbacks may contribute to a narrower and less "real" interpretation of a phenomenon (Collis and Hussey, 2003:162). There are two sources to obtain quantitative data: secondary and primary (Saunders *et al.*, 2007). The following section presents an insight into the nature of this method, and in depth discussion of these methods in the context of this research study.

6.8.1 Secondary Data Collection

Secondary data collection represents the data which are used before in other studies. Secondary data in this study is collected through literature through journal articles related to social capital (e.g. Table 2-2) and CRM (e.g. Table 4-5). In addition, secondary data also collected through internet (information about Egyptian financial institutions statistics), abstracted published by relevant journal and conferences and

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public sheets company reports (brokerage firms, banks and insurance companies).such as Figures 1-2 and 1-3. These information are published for public, ease to use and less costly. The collected information is necessary to build the theoretical foundations to research constructs and explore the research gap.

6.8.2 Primary Data Collection

These data are collected only for this study. There is two basic ways of collecting primary data: survey and experiments. The current study depends on the survey method rather than experiment because of time and cost constraints. The following section presents a discussion of survey method in the context of this research study.

6.8.2.1 *Survey Method*

Questionnaire is a general term to include all techniques of data collection in which research targets respond to the same set of questions in a predetermined order. It is an efficient way of collecting responses from a large sample prior to quantitative analysis (Nachmias and Nachmias, 1992:216; Punch, 1998:88). Saving money, saving time, reduction in biasing error, greater anonymity and considered answers and consultations represent the main advantages of questionnaires (Nachmias and Nachmias, 1992:216; Collis and Hussey, 2003:174).

An efficient survey is characterised by simple questions, no opportunity for probing, no control over who fills out the questionnaire and low response rate (Nachmias and Nachmias, 1992:216). The survey method is used in this research to assess the research variables: social capital dimensions, satisfaction relationship, commitment relationship and CRM performance (loyalty and retention). Surveys are extensively used in social capital studies (Tsai and Ghoshal, 1998; Vainino, 2003, Liao and Welsch, 2003, 2005) and CRM studies (Yim *et al.*, 2004; Sin *et al.*, 2005; Eid, 2007). Time constraint, cost and low response rate represent the most important drawback of a survey.

6.8.2.1.1 *Collecting Survey Data:*

There are several methods to collect data through survey method. Table 6-4 displays the major features of survey types

Table 6-4 Features of survey types

Features	Mail questionnaire	Web survey	Telephone interview	Face-to-face interview	Drop and collect
Cost	Cheap	Cheapest	Moderate	Expensive	Moderate
Speed	Slowest	Fastest	Fast	Slow to moderate	Fast
Length (number of questions)	Moderate	Moderate	Short	Longest	Long
Response rate	Lowest	Moderate	Moderate	Highest	highest

Source: Adapted from Lancaster (2005:188) and Ibeh and Brock (2004)

Based on Table 6-4 there are four criteria to select survey type: cost, speed, length and response rate. According cost, mail questionnaire is the best, whereas web survey is preferable in speed. In case of length survey face-to-face interview is favourable, while high response rate can be achieved through face-to-face interview or drop and collect method. Moreover, select one of this method is also affected by constraints such as research environment (such as education level, development of the country, availability of infrastructures internet and effective postal system). Due to research logistic constraints in developing countries (e.g. Egypt), this study used the drop and collect method to deliver and collect questionnaires to ensure a high response rate and overcome the logistic constraints in Egypt environment. This method is adopted as recommended by Ibeh and Brock (2004) for the following reasons:

❖ The survey is conducted in one of the less developed countries (Egypt), where the infrastructure of telephone, post and e –mail are not effective to achieve an acceptable response rate.

❖ The drop and collect method achieves a high response rate and this is critical for this study, where we use a census.

❖ This method gives the researcher the chance to check the answers quickly and this may help in avoiding any basic problems such as missing values.

6.8.2.1.2   The Relevant Population

A population is a set of all objects that have common predetermined characteristics, which the researcher wishes to examine with respect to some research problem (Sekaran, 1984: 267; Nachmias and Nachmias, 1996:216; Kumar, 2000). This study focuses on

personal financial services in Egypt. These institutions are: banks**,** brokerage firms and insurance companies. These institutions are regulated by the Central Bank of Egypt, Insurance Supervisory Authority, and Capital Market Authority. In this study, the research population was selected from CRM managers in these institutions. They are the managers who are deal directly with customers, so they are the appropriate persons to realise the impact of social and trusting relationship within the organisation on customer behaviour and CRM performance. This phenomenon is not documented in the financial services in marketing literature. Therefore this study undertakes a census survey.

6.8.2.1.3   Research Sample

To ensure that the data collected would provide a reliable basis for drawing assumptions, making recommendations and supportive decision (De Vaus, 1996; Bryman and Cramer, 1997), a large and adequate sample size should be taken to remove bias and to meet the criteria of analytical methods (Hair *et al.*,2006; Field, 2005). There are two main approaches to determine the appropriate number of respondents: census for small populations and sample for large populations. Israel (1992:2) revealed that the census approach is attractive for small populations (e.g., 200 or less). He added that there are three basic advantages to census. Firstly, a census eliminates sampling error and provides data on all the individuals in the population. Secondly, the costs of questionnaire design and developing the sampling frame are "fixed," that is, they will be the same for small and large samples. Finally, virtually the entire population would have to be sampled in small populations to achieve a desirable level of precision (sampling error).

The alternative is to collect information from only some people in the group (sampling) in such a way that their responses and characteristics reflect those of the group from which they are drawn. This procedure is much cheaper, faster and easier than surveying all members of a group and common practice in research. There are two broad types of samples; probability (e.g. simple random sampling, systematic sampling; stratified random sampling, cluster random sampling, area sampling or multi-stage random sampling) and non-probability such as convenience sampling and purposive sampling (Rossi *et al.*, 1983; Sekaran, 1984; Nachmias and Nachmias, 1996; Olsen, 1999; Punch, 1998; Zikmund, 2003; Sarantakos, 2006; Smoekh and Lewin, 2006).

However, Bryman and Cramer (1997) emphasise that the size of the sample has to be related to the size of the population. One of the most frequently asked questions in the context of sampling is "how large should a sample be?" The required sample size depends on two key factors; degree of accuracy we require for the sample, and the extent to which there is variation in the population in regard to the key characteristics of the study (De Vaus, 1996:70). The current study adopts the census method to collect data because of the small size of the research population (208 cases), and because SEM as an expected multivariate procedure to analyse data requires at least 150 cases to give valid results (Hair *et al.*, 2006). Moreover, the census method is characterised by a low degree of sample error and variation, which give more validity to research results (Neuman, 2006:242). Table 6-5 illustrates the categorisation of the research sample (main branches of the Egyptian financial service institutions).

Table 6-5 Classification of the research target

Type of financial institutions	Number of cases	Source
Insurance Companies	25	Egyptian Insurance Supervisory Authority[9]
Banks	39	Central bank of Egypt[10]
Brokerage Firms	144	The Egyptian Exchange[11]
Total	208	

Source: The author

Our research targets in those companies are the managers who are in direct contact with customers. In each institution, a single informant was asked to answer all questionnaire questions. Respondents were identified by two criteria; more than five years experience in his /her position in the company and working in the main branch. Because of the second criterion, the entire population was 208 cases from the Egyptian financial sector. To collect the required data from research targets we should design a research questionnaire.

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[9] The annual report for Egyptian Insurance Supervisory Authority at 2009, website: www.eisa.com.eg.

10The annual report for Central Bank of Egypt at 2009, website: info@cbe.org.eg.

11 The annual report for the Egyptian Exchange at 2009, website: www.egyptse.com.

6.8.2.1.4 Questionnaire Design

Designing a questionnaire is the process of obtaining the required information from respondents. Questionnaire content should be clear, simple, reliable and valid (Nachmias and Nachmias, 1996; Punch, 1998; Malhotra and Briks, 2003; Neuman, 2006). Zikmund (2003) mentioned that good questionnaire should be characterised by two things: relevance and accuracy. Relevance means that no unnecessary information is collected and all required information to solve the research problem is obtained. Accuracy of a questionnaire means that the information is reliable and valid. Neuman (2006:278) reported that the researcher should work hard when writing survey questions to avoid jargon and technical terms, eliminate ambiguity in questions that may lead to confusion, avoid leading (do not make respondent aware of the answer that the researcher wants) and loaded questions, avoid overlapping or unbalanced response and avoid double negatives.

Based on the major contributions of many scholars in enhancing questionnaire design, the researcher in designing a survey should be clear about the information needed, take care in choice of question wording and take the steps to simplify the questionnaire. These criteria could be met through various techniques such as back translation (from English to Arabic and visa-verse) as recommended by Douglas and Craig (2007) and employing a pre- test to prove face validity and after that pilot –test of the questionnaire to increase the content validity (Neuman, 2006).

Translation

The instrument was originally in English. Back-translation was carried out (Douglas and Craig, 2007). Three highly qualified Egyptian academic staff translated the questionnaire from English to Arabic. In addition two other Egyptian academic staff made the back translation from Arabic to English. The versions were consistent. No differences were uncovered between the original and translated instruments.

Pre-Test Study

Five academics checked the scale indicators for face validity and provided comments that we used to revise the scales. The academics members whom conduct in the preliminary questionnaire have a wide experience in designing and refining

questionnaires. A comprehensive pretest, including qualitative interviews was also carried out to ensure the understandability of the items. Some modifications such as: clarified ambiguous wordings, clarified unclear meanings, eliminating some items because of duplication, combining some questions to give the full meaning to some items and to reduce the length of the questionnaire were made at this stage. According to pre-test number of questionnaire items were reduced from 247 to 195. After pre- test stage we go forward to pilot study phase.

Pilot Study

Prior to designing the questionnaire an intensive study of the literature was undertaken to identify existing measures of related constructs. The measurement items for this study were developed by adopting measures that had been validated in prior studies, modifying them to fit our context of intrafirm social capital and the organisation's perspective of customer satisfaction, customer commitment and CRM performance (customer loyalty and retention). Moreover, some new items were developed to operationalise some constructs based on our understanding of those constructs and on the results of interviews with the sample of research targets during the pre- test stage. The initial structure of the research questionnaire included 195 items to measure research constructs. In order to purify the instrument and make its items more relevant to practices in Egypt, the instrument was piloted with 19 of managers in financial institutions (area supervisors in insurance companies, customer service Heads in banks and brokerage firms).

The pilot respondents provided positive feedback on the content validity of the measures. The main aims for pilot – testing are to assess the scale items' face validity, and to provide feedback on the content (content validity), design, length and instructions for completion. The feedback helped to clarify and improve the items. They were asked to fill out the questionnaire and, at the same time, to comment on its questions. Their comments were written down and led to a complete revision of the questionnaire in order to increase its understandability. Their feedback resulted in several changes in content and length. Pilot interviews eliminate many irrelevant items and modify many other items to fit the Egyptian environment. The total items of final questionnaire reduced to 112 items that are fit to measure research variables in Egypt

business environment. Thus, there is a need to explore the research instrument development measures.

Research Instrument Development – Measures

We developed 112 items as final items to measure the constructs of this study through a sample of research targets from Egyptian financial firms engaged in customer relationship management. Table 6-7 lists the definitions of the variables and the key issues used in the present study. Furthermore, Tables 6-8, 6-9 and 6-10 illustrate the operationalisation of the data collection instrument. Table 6-8 displays 74 items which were used to measure social capital dimensions and their sub- factors, whereas Table 6-9 shows 18 items, which were used to measure the perceived value (customer satisfaction and customer commitment) as a result of adopting social capital within the organisation. Moreover Table 6-10 illustrates 20 items, which were used to measure CRM performance (customer loyalty and customer retention).

A five-point Likert scale was used for attitudinal items anchored by 1 = "strongly disagree" and 5 = "strongly agree". Likert scales are often used in survey research, in which people express attitudes or other responses in terms of ordinal-level categorise that are ranked along a continuum (Neuman, 2006:207). This study used a five- point scale because most social capital, satisfaction, commitment and CRM studies that measure the same constructs use this scale (Liao and Welsch, 2005; Lim *et al.*, 2006; Eid, 2007; Yang *et al.*, 2008). The Five-point scale is preferable because it is easy to construct and administer and easy to understand by respondents (Neuman, 2006: 211). It takes a shorter time to answer than other types of likert scale (e.g. seven or ten- point scales) by respondents. It also gives more space in the questionnaire for respondents, which makes them more comfortable in reading the questionnaire and they can concentrate better when answering in answer the questions compared to a seven or ten-point scale. Some items were slightly modified to fit our study setting.

Table 6-6 Definitions of research variables

Constructs	Definitions	Key issues and References
1.Structural capital (social interaction)	Social interaction describes a collection of behaviours (Bitner, 1992:61; Zemke and Shoemaker, 2007:929) derived from "interaction with and identification with other members of the organization" (Sheldon, 1971: 144).	Open communication (Hoegl *et al.*, 2003; Ramström, 2008), cooperation (Hooper and Hannafin ,1991 ; Yli-Renko *et al.*, 2002; Contreras-Castillo *et al.*, 2004; Wasko and Faraj, 2005;Powers and Reagan, 2007), collaboration (Johnson *et al.*, 1985; Northrup, 2001; Kreijns *et al.*, 2003; Ku *et al.*, 2007), affiliation and social support (Johnson and Johnson, 1989; Contreras-Castillo *et al.*, 2004; Herington et al, 2009; De Clercq *et al.*, 2009) and sharing knowledge (Tsai and Ghoshal, 1998; De Clercq and Sapienza, 2006; Chen and Huang, 2007) among organisation members.
1.1 Network Ties	Network ties reflect the shape of relationship and the intensity of connection among organisation members (Granovetter, 1982, Tsai and Ghoshal, 1998; Adler and Kwon, 2002; Inkpen and Tsang, 2005; Chiu *et al.*, 2006; Fliaster and Spiess, 2008).	Type and strength of ties among organisation members through assessing : degree of frequent contacts, intimacy and level of exchange resources (Granovetter, 1973, 1982, 1985; Tsai and Ghoshal, 1998; Adler and Kwon, 2002; Inkpen and Tsang, 2005; Chiu *et al.*, 2006; Fliaster and Spiess, 2008).
1.2 Network Configuration	Network configuration describes the level of connection and accessibility among organisation members (Coleman, 1990; Nahapiet and Ghoshal, 1998; Kilduff and Tsai, 2003; Inkpen and Tsang, 2005; Bartol and Zhang, 2007).	Degree of connectivity (*easy reach*) among organisation members (Kilduff and Tsai, 2003) and level of accessibility (*easily access*) to all organisation databases (Nahapiet and Ghoshal, 1998; Bartol and Zhang, 2007).
1.3 Network Stability	Network stability describes the consistency of information flow among organisation members (Fischer, 1982; Deeter-Schmelz, 1997; Burt, 2000; Inkpen and Tsang, 2005; Cummings and Higgins, 2006; Eng, 2006; Stanko *et al.*, 2007).	Flowing information and the consistency of those flowing among organisation members (Deeter-Schmelz, 1997; Burt, 2000; Lai and Wong, 2002; Kim *et al.*, 2004; Inkpen and Tsang, 2005; Cummings and Higgins, 2006; Stanko *et al.*, 2007).
2.Cognitive Capital(Shared goals)	Shared goals are defined as "the degree of unity principals and agents feel toward common organisational goals" (Mukherji *et al.*, 2007:955).	Common vision (Merlo *et al.*, 2006; Tsai and Ghoshal, 1998), collective goals (Clark, 2006; Chow and Chan, 2008), common understanding and meaning (Das and Teng, 1998; Tsai and Ghoshal, 1998; Liao and Welsch, 2005; Merlo *et al.*, 2006; Samaddar *et al.*, 2006; Mukherji *et al.*, 2007; Oke, *et al.*, 2008) among organisation members.
2.1 Shared Values	Shared values refer to the degree of sharing the same beliefs, work values and attitudes among	Common work values (Rokeach, 1973; Meglino *et al.*, 1989; Taylor, 2007; Brown and Trevino, 2009), common beliefs (Nystrom, 1990;

	organisation members (Adkins and Ravlin, 1996; Nystrom, 1990; Nall, 2002; Sagnak, 2005).	Adkins and Ravlin, 1996; Sagnak, 2005) and common attitudes (Nall, 2002) among organisation members..
2.2 Shared Norms	Shared norms are defined as the degree of obligations with common behaviour standards (Deeter-Schmelz, 1997:167).and work rules (Nahavandi and Malekzadeh ,1999:243) within organisation	Degree of obligation with behaviour standards and work rules within organisation (McAdams, 1997; Nahavandi and Malekzadeh, 1999; Adams *et al.*, 2001; Deshpande *et al.*, 2007; Ramasamy and Yeung (2009).
3.Relational Capital (Trust)	Trust is defined as "the perceived ability and willingness of the other party to behave in ways that consider the interest of both parties in the relationship" (Seines and Sallis, 2003:84)	Degree of confidence in good intention, competencies, credibility (Rotter, 1967; Moorman *et al.*, 1992; Swan *et al.*, 1999; Seines and Sallis, 2003; Chiu *et al.*, 2006; Moliner *et al.*, 2006) and cooperative behaviour (Fukuyama, 1995; Yang *et al.*, 2008) of organisation members.
4.Customer Satisfaction	Customer satisfaction is defined as the overall state (emotional and rational) that occurs as a result of a customer's interactions with the firm over time (Geyskens and Steenkamp, 2000; Verhoef, 2003; Cater and Zabkar, 2009).	Overall customer satisfaction: -Assertion of technical service quality*(Sharma and Patterson, 1999; Rossiter, 2002; Jarvis *et al.*, 2003; Chen and Quester, 2005; Eisingerich and Bell, 2007), - Assertion of functional service quality: responsiveness, empathy , politeness, interactional justice and pay personnel attention (Parasuraman *et al.*, 1988; Smith *et al.* ,1999 ; Yavas, 2006; Auh *et al.*, 2007; Jayawardhena *et al.*,2007; Eisingerich and Bell, 2007; Chen and Quester, 2008)
5.Customer Commitment	Customer commitment is defined as "a desire to develop a stable relationship and a willingness to make short sacrifices to maintain the relationship and a confidence in the stability of the relationship" (Anderson and weitz, 1992:19).	Overall commitment: emotional attachment (Hennig-Thurau, 2004; Mattila; 2004; Fullerton, 2005; Dimitriades, 2006), willingness to make long term relationship (Werner, 1997; Feng and Morrison, 2007; Ivens, and Pardo, 2007) and willingness to make short sacrifices to maintain this relationship (Mowday *et al.*, 1979; Anderson and Weitz, 1989; Rodrıguez *et al.*, 2006)
6.Customer Loyalty	Customer loyalty is defined as clients' willingness to recommend the organisation to others, advocate for organisation, assist organisation in service delivery, depend on organisation for most of their investments and resistance to switch to rivals (Zeithaml *et al.*, 1996; Fullerton, 2005; Johnson *et al.*, 2006; Eisingerich and Bell, 2007; Keiningham *et al.*,	Word of mouth (Zeithaml *et al.*, 1996; De Ruyter *et al.* 1998; Jones, 2003; Fullerton, 2005; Johnson *et al.*, 2006; Mattila, 2006), Advocacy intentions (Bettencourt, 1997; Eisingerich and Bell, 2007), Altruism (Price *et al.*, 1995; Jones and Taylor, 2007), Exclusive intentions (Morgan and Hunt, 1994; Ennew and Binks, 1996; Beatty, 1999; Reynolds and Arnold, 2000) and Switching intention (Zeithaml *et al.*, 1996; Fullerton, 2005).

Construct	Items	Key sources
7.Customer Retention	Customer retention is defined as "customers' stated continuation of a business relationship with the firm" (Keiningham *et al.*, 2007:364).	2007; Jones and Taylor, 2007). Invest more in the future (Bergeron, 2004; Gounaris, 2005; Bergeron *et al.*, 2008), segment market according to the economic value of customers (Parvatiyar and Sheth, 2000, 2001; Reinartz *et al.*,2004; Tanner *et al.*,2005; Eid,2007), building customer database (Garbarino and Johnson, 1999; Ranaweera and Neely, 2001; Farquhar, 2005), long customer lifetime cycle (Day,2000; Jayachandran *et al.*,2005; Ozgener and Iraz, 2006) and personalisation (Croteau and Li ,2003; Zikmund *et al.*,2003;Jones_*et al.*,2005; Richards and Jones,2008).

Table 6-7 Social capital operationalisation

Construct	Items	Key sources
1.Structural Capital (Social interactions):		
	A. Our employees express their problems freely with their direct supervisors.	Aspinwall and Taylor, (1992); Wiesenfeld *et al.*, (2001).
	B. Open communication makes our employees feel closer to each other.	Anderson and Narus (1990); Contreras-Castillo *et al.*, (2004); Herington et al, (2009).
	C. Collaboration enables our employees to learn from each other.	Coleman, (1988); Burt, (1992); Bontis, (1996) + Field work
	D. Our supervisors share their knowledge with their subordinates.	Seines and Sallis,(2003); Lin and Lee, (2005); Chen and Huang, (2007). + *Field work*
	E. Our employees cooperate when handling customer requests.	Hooper and Hannafin (1991), Kreijns *et al.*,(2003); Zwick,(2004)
	F. Our supervisors encourage employees' elaboration and questioning about the work's key issues.	Liaw and Huang (2000), Northrup (2001); Kreijns *et al.*, (2003).
	G. Our employees discuss the key issues in depth with their supervisors.	Sivadas and Dwyer (2000); Chiu *et al.*, (2006);Chen and Huang,(2007); Huang *et al.*,(2008) + Field work
	H. Exchanging knowledge takes place frequently and informally among employees.	Van Maanen, 1976; Heffner and Rentsch, (2001); Bonner and Calantone, (2005)
	I. Our employees collaborate when solving customer' problems.	Johnson *et al.*, (1985); Kreijns *et al.*,(2003)
1.1Network Ties		
	A. The strength of relationships between employees allows them to discuss their new ideas freely.	Gruen *et al.*,(2000); Kilpatrick, (2002);. Auh *et al.*,(2007); He *et al.*,(2009);
	B. The relationships between our employees are characterised by high degree of emotional closeness.	Uzzi (1997); Bhatt and Troutt, (2005); Philippe and Seiler, (2006).
	C. The strength of relationships between employees enables them to	Perry-Smith and Shalley, (2003); Tiwana and McLean,

	share their best practices and expertise with their colleagues.	(2005); Hossain and de Silva,(2009)
	D. The strength of relationships between employees enables them to seek advice from their direct supervisors when necessary.	Miller and Lefcourt, (1982); Hu and Smith, (2004); He *et al.*,(2009)
	E. The strength of relationships between employees enables them to initiate informal face-to-face conversations with each other.	Cummings and Higgins, (2006); Wu *et al.*, (2008).
	F. The strength of relationships between employees encourages them to support each other.	Miller and Lefcourt,(1982); Hu and Smith,(2004). + <u>Field work</u>
	G. The strength of relationships between employees reduces the level of friction among them.	Boyle *et al.* ,(1992) and Uzzi (1997); Oke, *et al.*,(2008)
	H. The strength of relationships between employees enables them to communicate directly with their supervisors without prior appointments.	Levin and Cross, (2004); Kankanhalli *et al.*,(2005). + <u>Field work</u>
1.2 Network Configuration:		
	A. The front offices and back offices are linked by communication networks.	Teng *et al.* (2002); Bhatt and Troutt, (2005) + <u>Field work</u>
	B. Our employees can easily access to company's database.	Carter *et al.*. (2001); Bhatt and Troutt, (2005)
	C. Our employees have interactive communications with their colleagues via (face to face, phone, internet, etc.).	Berger *et al.* (2002), Jayachandran *et al.*,(2005)
	D. Our information system is user-friendly.	Davenport and Prusak's (1998); Youndt and Snell ,(2004)
	E. Our organisation system needs ID and password to access in.	Ferrell and DeBord, (2003);Calik and Balta, (2006); Liu,(2007); McNally, (2007)
	F. Our departments are linked by communication networks.	Nieminen, (1974); Frank,(2002)
	G. Our company support employees by a customer data repository.	Berger *et al.* ,(2002); Jayachandran *et al.*,(2005) + <u>Field work</u>
	H. Our front offices have direct contact with their supervisors.	Nieminen, (1974); Frank,(2002), Borgatti (2005)
	I. Use advanced information system helps employees to reach and access to each touch point in organisation.	Alavi and Leidner (2001); Lai and Lee,(2007)
1.3 Network Stability		
	A. Our IT staff regularly updates our information system to support the reliability of information flow among employees.	Lee and Choi (2003); Ismail *et al.*,(2007) + Field work
	B. Our company has an efficient information system.	Reichheld and Sasser,(1990); Lewington *et al.*, (1996); Farquhar, (2005)
	C. Our information system provides employees with in-depth information.	Kim,(2003); Wolfinbarger and Gilly (2003)
	D. Our company regularly monitors and reviews information flow within its entire networks.	Sink, (1991); Ring and Van de Ven, (1994); Clarke,(2006)
	E. Our information system provides employees with easily-	Venkatesh and Davis (1996); Kim *et al.*, (2004) + <u>Field work</u>

	understood information to carry out their duties.	
	F. Our information system maintains information flow among employees.	Szymanski and Henard , (2001) ;Ismail *et al.*,(2007)
	G. Our information system provides all departments with prompt and timely information.	Eichorn, (2004) ;Lawson *et al.*,(2008); Wu,(2008) + <u>Field work</u>
	H. Our information system is very useful when dealing with customer requests.	Thompson *et al.*, (1991); Kim *et al.*, (2004)
	I. Information system architecture in our company can be modified without disrupting information flow within the firm.	Goodhue *et al.*,(1992); Madnick, (1995); Bhatt and Troutt,(2005)
2. Cognitive Capital (Shared goals):		
	A. Our employees have common understanding for how to achieve organisation goals.	Hult and Ferrell, (1997); Tsai and Ghoshal, (1998); Merlo *et al.*,(2006); Puhakka, (2006) + <u>Field work</u>
	B. Our employees share the same business language.	Tsai and Ghoshal, (1998); Liao and Welsch,(2005); Oke, *et al.*,(2008)
	C. Our departments have a commonality of purpose.	Uzzi (1997); Leana and Van Buren, (1999); Inkpen and Tsang,(2005)
	D. Our employees are enthusiastic about pursuing the collective goals of the whole organisation.	Tsai and Ghoshal, (1998); Chow and Chan,(2008), Ko *et al.*,(2008)
	E. Our employees work towards attaining common goals.	Boyle *et al.* (1992) and Uzzi (1997); Oke, *et al.*,(2008)
	F. Customer orientation is the main goal for our company.	Nahapiet and Ghoshal ,(1998); Jayachandran *et al.*,(2005); Chiu *et al.*,(2006) + <u>Field work</u>
	G. Our departments support each other to achieve organisation goals.	Katsikeas (1989), Oke *et al.*,(2008)
	H. Our employees share the same interpretation for organisation goals.	Achrol, (1997); Tsai and Ghoshal, (1998)
	I. Our departments have consistent ideas about what the organisation should be trying to achieve.	Weick, (1995); Clarke , (2006); Krause *et al.*,(2007) .
2.1Shared Values:		
	A. Our employees have common beliefs.	Iacobucci and Hibbard, (1999); Lacey,(2007)
	B. Our employees have positive attitudes toward organisation.	Johnson and Johnson, (1999); Kreijns *et al.*, (2003); Philippe and Seiler, (2006).
	C. The similarity in work values among employees facilitates doing work.	Caldwell *et al.* (1990); Clarke,(2006) + <u>Field work</u>
	D. Our employees share the work value of organisation achievements.	Meglino, (1987b);Chatman (1991); O'Reilly *et al.*, (1991);
	E. Our employees share the value of maintaining long- term	Weick and Roberts ,(1993); Moorman, (1995); Day,(2000);

	relationship with customers.	Jayachandran *et al.*,(2005) + <u>Field work</u>
	F. Our employees encourage collectivism work value.	Ouchi, (1981); Hult and Ferrell, (1997); Merlo *et al.*,(2006); Taylor, (2007)
	G. Our employees use common terms or jargons which our customers understand.	Nahapiet and Ghoshal, (1998); Chua,(2002) ; Chiu *et al.*,(2006); King and Burgess, (2008)
	H. A 'team spirit' exists among employees.	Hult and Ferrell, (1997); Merlo *et al.*,(2006)
	I. Our employees are open- minded and accept different viewpoints and opinions.	Rokeach,(1973); Meglino *et al.*, (1989)
	J. Our employees share the same business values.	Weick, (1995); Iacobucci and Hibbard, (1999); Krause et al,(2007) ;Lacey,(2007)
2.2 Shared Norms:		
	A. Our employees believe that they have a responsibility for the future development of the firm.	Kaplan and Norton, (1996) ; Brewer and Speh (2000); Chang,(2007)
	B. Our employees are expected to comply with the law and professional standards.	Adams *et al.*, (2001); Deshpande and Joseph (2009.). + <u>Field work</u>
	C. Our employees are adhered to follow ethical principals in serving customers.	Ravlin and Meglino, (1987b); Ramasamy and Yeung (2009)
	D. Our employees never act opportunistically with their colleagues.	Zaheer *et al.* (1998); Yli-Renko *et al.* (2001); Wu ,(2008)
	E. Our employees believe that adopting corporate social responsibility helps achieve organisation's goals.	Anderson, (1994); Lindgreen *et al.*,(2009)
	F. Our employees act within the standards defined by the organisation's regulations.	Aupperle *et al.* (1985) ; Ramasamy and Yeung, (2009)
	G. Our employees believe that respecting organisation's rules helps achieve organisation's goals.	Maignan, (2001); Ramasamy and Yeung, (2009)
	H. Our employees believe that following ethical standards help in achieving organisation goals.	Akaah, and Lund, (1994); Epstein *et al.*, (1994); Ramasamy and Yeung, (2009) + <u>Field work</u>
	I. Our employees are obligated with the organisation's rules.	O'Reilly *et al.*, (1991); Brown and Trevino,(2009)
	J. The adherence to organisational rules is the most efficient way to do work.	Deshpande and Joseph, (2008); Mesmer-Magnus *et al.*, (2008).
3.Relational Capital (Trust):		
	A. Our back offices respond promptly to front offices' explanation and questioning.	Kankanhalli *et al.*,(2005); He *et al.*,(2009) + Field work
	B. Our employees always depend on their colleagues' suggestions and recommendations when service encounter.	Crosby *et al.* (1990); Garbarino and Johnson (1999); Sivadas and Dwyer (2000)
	C. Our employees have confidence in their colleagues' abilities and skills to do the work.	Crosby *et al.* (1990); Garbarino and Johnson (1999); Sivadas and Dwyer, (2000)

Construct	Items	Key sources
	D. Our employees never act opportunistically.	Zaheer *et al.* (1998) ; Yli-Renko *et al.* (2001); Requena (2003) Wu *et al.*,(2008)+ Field work
	E. Our employees frequently exchange valuable information with their colleagues.	Hardin, (2004) ;Zolin *et al.*, (2004) + Field work
	F. Our employees are helpful when responding to their colleagues' requests.	Parasuraman *et al.*,(1985); Cronin *et al.*,(2000) ; Yang *et al.*,(2008)
	G. Our employees are faithful to their colleagues.	Doney and Cannon (1997); Yli-Renko *et al.*, (2001); De Clercq *et al.*,(2009)
	H. Our employees can be counted on to do what is right for their colleagues.	Morgan and Hunt (1994); Doney and Cannon (1997) ;Bergeron *et al.*, (2008) + Field work
	I. Our employees trust each other because that is the best and easiest way to get the work done.	Kale *et al.*,(2000); Yang *et al.*,(2008)
	J. Our employees are trustworthy.	Dyer and Singh (1998); Bergeron *et al.*, (2008);Lawson *et al.*, (2008)

Table 6-8 Organisational Perceived Values (customer satisfaction and customer commitment) operationalisation

Construct	Items	Key sources
4. Customer Satisfaction		
	A. Our employees deal promptly with customers' complaints.	Jarvis *et al.*, (2003); Chen and Quester, (2005, 2009)
	B. Our employees are approachable and easy to contact.	Parasuraman *et al.*,(1985); Cronin *et al.*,(2000) + Field work
	C. Our employees put a lot of effort into their jobs to satisfy customers' needs.	Peccei and Rosenthal, (1997); Merlo *et al.*,(2006)
	D. Our employees respond quickly to our customers' needs.	Bardy and Cronin, (2001); Ofir and Simonsons, (2001)
	E. Our service delivery process is easy to understand.	Rossiter,(2002); Jarvis *et al.*, (2003); Chen and Quester, (2008) + Field work
	F. Our employees respond politely to our customers' requests.	Parasuraman *et al.*,(1988); Kassim and Souiden,(2007); González *et al.*,(2007)
	G. Our employees do their best to perform the service close to customers' specifications.	Price and Arnould, (1999); Moliner *et al.*,(2006); González *et al.*,(2007)
	H. There are frankness and clarity of our organisation' services that offers to customers.	Siguaw *et al.* (1998) ; Flavian and Guinalıu (2006)
	I. Our employees give customers the appropriate personnel attention.	Hartline and Ferrell (1996); Verhoef, (2003); Eisingerich and Bell, (2007)
5. Customer Commitment		
	A. Our employees exert maximum effort to introduce the best	Saxe and Weitz (1982); Bergeron *et al.*,(2008) + Field work

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Construct	Items	Key sources
	financial products to our current customers.	
	B. Our company is always committing to fulfill its agreements with customers.	Brewer and Speh (2000); Gounaries,(2005); Chang,(2007)
	C. Our company deserves stable relationships with our customers.	Gundlach *et al.*, (1995); Mukherjee and Nath,(2003); Kingshot, (2006)
	D. Our customers can make sacrifices to help our company (e.g. raises in prices, effort, time... etc).	Anderson and Weitz ,(1989); De Wulf and Odekerken-Schroeder (2003); Yang *et al.*, (2008) + Field work
	E. Our customers maintain personal relationships with our employees.	Scheer and Stem, (1992); Kim and Frazier, (1997); Roman and Ruiz,(2005)
	F. Our customers always behave in a way that maintains a close relationship with our company.	Anderson and Weitz (1989); Del Bosque Rodrıguez *et al.*, (2006)
	G. Our company introduces better offers and prices than competitors do.	Brewer and Speh (2000); Gonzales *et al.*,(2007) ;Tokman *et al.*,(2007)
	H. The good reputation of our company encourages our customers to be committed.	Anderson and Weitz (1992);Tellefsen and Thomas, (2005); Moliner *et al.*,(2007) + Field work
	I. It is easier to persuade our existing customers with new services rather than new potential customers.	Meyer and Allen (1991) ;Geyskens *et al.* (1996) ; Moliner *et al.*,(2007)

Table 6-9 CRM performance operationalisation

Construct	Items	Key sources
6. Customer Loyalty		
	A. Our existing customers defend our company when others criticise us.	Bettencourt, (1997); Eisingerich and Bell, (2007)
	B. Our company acquires new customers thanks to its current customer.	Zeithaml *et al.*,(1996); Fullerton,(2005); Johnson *et al.*, (2006); Mattila,(2006).
	C. Our customers feel loyal to the service provider in our company.	Ribbink *et al.*,(2004); Floh and Treiblmaier,(2006); Auha *et al.*,(2007);Ndubisi *et al.*(2007).
	D. Our existing customers are active in recommending products and services of this firm.	Wang et al (2004); Wang et al (2006).
	E. Our existing customers prefer our company above other competitors.	Kumar *et al.* (1994);Gounaris, 2005); Eid,(2007) + Field work
	F. Our existing customers assist our service providers in delivering services.	Price *et al.*, (1995); Jones and Taylor, (2007)
	G. Our existing customers encourage their relatives and friends to deal with our company.	Zeithaml *et al.*,(1996); Jones,(2003); Johnson *et al.*, (2006); Eisingerich and Bell,(2007)

	H. Our customers consider our company as the first alternative for most of their financial investments.	Reynolds and Beatty , (1999); Reynolds and Arnold, (2000) + Field work
	I. Our existing customers give good references to potential customers because of word of mouth.	Fullerton, (2005); Johnson *et al.*, (2006); Dimitriades, (2006)
7. Customer Retention		
	A. Our company systematically attempt to customise products/services based on the value of the customer.	Chen and Popovich ,(2003); Reinartz *et al.*,(2004)
	B. Our customers have long lifetime cycle with our company.	Ganesan, (1994); Ivens, and Pardo, (2007) + Field work
	C. Our company segments market according to the economic value of customers.	Parvatiyar and Sheth, (2001); Tanner *et al.*, (2005)
	D. Our existing customers set their future financial plans with our company for next three years.	Boulding *et al.* (1993); Eisingerich and. Bell, (2007)
	E. Our company maintains an interactive two-way communication with our customers.	Barnes. (1997); Reinartz *et al.*,(2004) + Field work
	F. Our existing customers increase their investments in the new financial products of our company this year.	Ribbink *et al.*,(2004); Floh and Treiblmaier ,(2006); Flavian and Guinalıu (2006); Auha *et al.*,(2007); Ndubisi *et al.*(2007)
	G. Our company achieves better customer attraction and retention of target customers than competitors.	Winer (2001); Richards and Jones,(2008)
	H. Our company provides customers with "one-to-one" experience.	Croteau and Li (2003); Richards and Jones,(2008)
	I. Our company systematically attempts to manage the expectations of high value customers.	Park and Kim, (2003); Reinartz *et al.*,(2004)
	J. Our existing customers plan to invest more in the next year.	Kumar *et al.* (1994); Zeithaml *et al.* (1996); Gounaris, (2005); Auh *et al.*, 2007). + Field work
	K. Our company consolidates critical information about each customer.	Garbarino and Johnson, (1999); Farquhar, (2005); Eid,(2007)**.**

6.8.2.1.5   Questionnaire Structure

The definitive questionnaire includes a set of variables, based on the proposed research model. These were measured to investigate the impact of social capital on CRM performance (customer loyalty and retention) through the mediating roles of customer satisfaction and customer commitment within Egyptian financial service institutions. The questionnaire was designed to in four-parts. The first part is a nominal scales, whereas the remainder are five-point Likert scale, as attached in Appendix A.

Basic Information

This part of the questionnaire was used to collect basic information about respondent characteristics including age, gender, experience and educational background, as well as organisational characteristics including number of employees, industry sector and ownership structure.

Factors Constituting Social Capital

This part of the questionnaire was developed based on the three contextual factors, namely structural capital, cognitive capital and relational capital. Structural capital (social interaction) includes three sub-factors; network ties, network configuration and network stability. Structural capital includes nine items for measuring open communication, cooperation, collaboration, affiliation and social support and sharing knowledge. Network ties include eight items for measuring type and strength of ties among employees. Network configuration includes nine items for measuring degree of connectivity among employees and accessibility to all organisation databases. Network stability also includes nine items for measuring the consistency of flowing information among organisation members.

On the other hand, cognitive capital includes two sub-factors; shared values and shared norms. Cognitive capital (shared goals) uses nine items to measure common purpose, understanding, vision and meaning among employees. Shared values include ten items to measure common work values, common beliefs and common attitudes among employees. Shared norms also include ten items for measuring the degree of obligation toward behaviour standards and work rules within the organisation. Finally, relational

capital (trust) uses nine items to measure good intention, competence, credibility and cooperative behaviour of employees. Further, the executives interviewed in the pre-test stage all suggested that this approach was appropriate for assessing social capital dimensions and their sub- factors.

Organisational Perceived values (customer satisfaction and commitment)

This part of the questionnaire emphasizes the organisational perceived values, which derived from adopting social capital. It includes two constructs; customer satisfaction and customer commitment. Firstly, customer satisfaction uses nine items to measure the level of technical service quality and functional service quality that customers received in terms of responsiveness, empathy, politeness, interactional justice and paying personnel attention. Secondly, customer commitment includes nine items to measure emotional attachment, willingness to make short- term sacrifices and willingness to make a long term relationship with this company.

CRM Performance

The final part of the questionnaire is used to measure customer loyalty and retention from organisation's perspective. Customer loyalty includes nine items for measuring word of mouth, advocacy intentions, altruism, exclusive intentions and switching intention. In addition, customer retention uses eleven items to measure personalisation, willingness to invest more in the future, market segmentation according to the economic value of customers, availability of customer database and long customer lifetime cycle. Furthermore, the effective questionnaire should achieve two basic requirements; reliability and validity of measurements.

6.8.2.1.6   Reliability

Reliability means consistency, which can be of two types; consistency over time and internal consistency (Punch, 1998:99). Reliability over time means stability of measurements over time, which means that the same instrument will give the same scores under the same circumstances but at different time. Collis and Hussey (2003) assert that reliability can be evaluated through the use of test-retest method, split halves method or internal consistency. The scales were evaluated for reliability using the Cronbach's alpha which is an internal consistency method based on the

recommendation of Malhotra and Birks (2003). They argue that the Cronbach's alpha is a measure of internal consistency reliability that is the average of all possible split-half coefficients resulting from different splittings of the scale items. According to Hair *et al* (2006), Nunnally (1978) the lower limit for Cronbach's alpha is 0.70. Further analysis of the scales will use by examining the corrected item-total correlation among construct items, which should be above 0.5. The reliability tests are related more with exploratory factor analysis.

6.8.2.1.7   Validity

Validity is the second central concept in measurement. It means the extent to which an instrument measures what should be measured (Punch, 1998:100). There are three approaches to validation of an instrument; content validity, criterion- related validity and construct validity. Content validity defines as a subjective but systematic evaluation of the representativeness of the content of a scale for measuring the task at hand (Malhotra and Birks, 2003). Criterion validity examines whether the measurement scale performs as expected in relation to other selected variables as meaningful criteria. According to Hair *et al.* (2006) construct validity is the extent to which measured items actually reflect the theoretical latent construct those items are designed to measure. Malhotra and Birks (2003) identified convergent validity and discrimant validity as the main aspects of construct validity. The construct validity and its aspects will in-depth discuss with confirmatory factor analysis.

6.8.2.1.8   Questionnaire Administration

After refining the questionnaire design, the definitive questionnaire was administrated. The final version of the questionnaire was administrated to 208 of the main branches of Egyptians financial services firms. The final questionnaire and a covering letter stating the purpose of the study and ensuring confidentiality of the responses were delivered to those firms by using the drop and collect method in delivering questionnaire. They were told to leave an interval of a maximum of 4 weeks between delivering the questionnaire and collecting it. To increase the response rate three phone calls to each research target had been done to follow- up. Moreover, respondents were promised anonymity.

6.9 Analysing Data

The quantitative data was analysed through two levels of analysis: data analysis preparation and multivariate analysis. Data analysis preparation investigates some issues such as missing values, outliers, normality and multicollinearity, which will discuss in-depth in the next chapter. Data analysis preparation also includes sample description and measures the differences between groups or variables (e.g. T-test and ANOVA). On the other hand, multivariate analysis such as reliability, factor analysis, structural equation modelling and regression models are used to investigate the direct and indirect effects between the variables of the proposed research model. The following section discusses in-depth the main multivariate statistics in the current study; exploratory factor analysis (EFA), confirmatory factor analysis (CFA), structural equation modelling (SEM) and regression models.

6.9.1 Exploratory Factor Analysis (EFA)

Exploratory factor analysis is a statistical approach that can be used to analyse interrelationships among a large number of variables and to explain those variables in terms of their common underlying dimensions (Hair *et al.*, 2006:17). Field (2005:619) reported that EFA is mainly used to understand the structure of a set of variables, construct a questionnaire to measure underlying variables and reduce a dataset to a more manageable size while retaining as much of the original information as possible. It achieves two main outcomes; data summarising and data reduction (Hair *et al.*, 2006:109). Data summarising aims to set the appropriate structure of research variables under specific logic factors. On the other hand, data reduction is a process of eliminating uncorrelated items and reduces the number of items within each variable. There are two main issues that affect EFA's results; the appropriate number of variables for each proposed factor and the appropriate sample size (Field, 2005; Hair *et al.*, 2006; Tabachnic and Fidell, 2007). Regarding the first issue, the appropriate number of variables should be at least five variables for each construct. With respect to sample size, it must have more observations than variables and the recommended sample size should be at least fifty observations and one hundred or more is preferable.

In this study, the main objective of this analysis was to create a structure of the sub – factors of social capital dimensions, organisational perceived values dimensions and

CRM performance dimensions through grouping those variables in some set of factors that achieve a considerable level of correlation. In addition it reduces the number of variables tested in the questionnaire to a more manageable and parsimonious set. Moreover the equally important objective is to create a set of factors to be treated as uncorrelated variables as an approach to handling multicollinearity.

6.9.1.1 *Factor Extraction*

The mechanism of EFA depends basically on the factor extraction process. There are numerous procedures for factor extraction, such as principal components, principal factors, maximum likelihood factoring, image factoring, alpha factoring, and unweighted and generalised (weighted) least squares factoring (Field, 2005; Hair *et al.*, 2006; Tabachnic and Fidell, 2007). Hair *et al.* (2006:118) and Tabachnic and Fidell (2007:633) reported that principal components and principal factors are the most commonly used. Principal components is used when the objective is to summarise most of the original information (variance) in the minimum number of factors for prediction purposes, whereas principal factors is used primarily to identify underlying factors or dimensions that reflect what the variables share in common (Field, 2005: 638; Hair *et al.*, 2006:117; Tabachnic and Fidell, 2007:635).

A shapely debated issue among scholars is which method is preferable. Hair *et al.* (2006:119) mentioned that here are two main viewpoints. The first one supports using principal components rather than principal factors because the latter analysis suffers from two basic problems; factor indeterminacy (several different scores can be calculated from a single factor model result, which leads to difficulty in obtaining one single unique solution for this analysis) and sometimes the communalities (shared variance) are not estimable or may be invalid, requiring the deletion of the variable from analysis. The second viewpoint is that in most applications, both component analysis and common factor analysis arrive at essentially identical results if the number of variables exceeds 30 or the communalities exceed .60 for most variables. Therefore, in this study, the principal components method was used throughout to ensure consistency in factors. To help decide how many factors we need to represent data or when to end the extraction process and evaluating the final number of factors to be extracted, there are a number of criteria that should be calculated such as communalities, eigenvalues, percentage of variance and scree plot.

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Communality is a measure of the association between an original variable and all other variables included in the analysis (Field, 2005:630; Hair *et al.*, 2006:117). Communalities can range from 0 to 1 where 0 indicates that the common variance factors explain none of the variance, and 1 indicates that all the variance is explained by the common factors. The existence of high communalities is a sign of high degree of confidence in the factor solution (Norusis, 1993; Hair *et al.*, 2006). Meanwhile, an eigenvalue is the standard variability in the total data set (equal to the numbers of variables included), which is accounted for by an extracted factor in factor analysis. Only those factors that account for variances greater than 1 should be included (Norusis, 1993; Hair *et al.*, 2006). Eigenvalues greater than 1 are considered significant. Using eigenvalue for establishing a cut-off is most reliable when the number of variables is between 20 and 50 (Hair *et al.*, 2006:120).

Moreover, the percentage of variance criterion is an approach based on achieving a specified cumulative percentage of total variance extracted by successive factors (Hair *et al.*, 2006:120). In natural science 95% of the total cumulative variances represent a satisfactory threshold to accept an EFA solution, whereas in social science the satisfactory cut-off point is 60% or less (Hair *et al.*, 2006:120). The scree plot method also produces a descending graph plotting the amount of variance accounted for (in eigenvalues) by the factors initially extracted. The plot usually shows two distinctive slopes, one steep slope of the initial factors and a gentle one of the subsequent factors (Bryman and Cramer, 1990). After extraction, factor rotation is used to improve the interpretability and scientific utility of the solution (Tabachnic and Fidell, 2007:637).

6.9.1.2 *Factor Rotation*

The objective of all rotation methods is to obtain some theoretically meaningful factors and to facilitate easy interpretation (Hair *et al.*, 2006:126). Factor rotation also highlights the number of factor communalities of each variable, the percentage of the total variance explained (eigenvalues) and the factor loading. According to the literature, there are two main methods for rotation; orthogonal or oblique rotation (Field, 2005; Hair *et al.*, 2006; Tabachnic and Fidell, 2007). Orthogonal rotation is related to the personal components method, while oblique rotation is basically conducted with principal factor. Orthogonal solutions maintain interdependence between rotated factors and offer ease of interpreting, describing, and reporting results (Tabachnic and Fidell,

2007:637). On the other hand, oblique rotation allows correlated factors instead of maintaining independence between the rotated factors and interpreting rotation results is more complex (Hair *et al.*, 2006:127).

Regarding the decision as to which rotation method to use, Hair *et al.* (2006:127) reported that orthogonal rotations are utilised more frequently because the analytical procedures for performing oblique rotations are not as well developed and are still subject to some argument. In the same line, Field (2005:637) recommended use of the orthogonal approach if the researcher expects the factors to be independent. Thus in this study the orthogonal approach was employed because the theoretical foundations for the research model suppose the interdependency of the research variables. Moreover, it is compatible with the personal component method adopted. Orthogonal rotation encompasses three basic methods; Varimax, Quartimax and Equmax. The varimax method is the most commonly used method in social science. It attempts to minimise the number of variables that have high loading on each factor. Therefore, this study adopted the varimax method.

6.9.1.3 *Assess the Model Fit*

To assess the model fit, the researcher should consider two basic signs: Barlett's Test (BTS) and Kaiser-Meyer-Olkin (KMO) for EFA solution. Barlett's Test (BTS) is a statistical test for the correlation among variables. It should be significant ($p < .05$) for the factor analysis to be considered appropriate (Field, 2005; Hair *et al.*, 2006; Tabachnic and Fidell, 2007). KMO is a measure of sampling adequacy. It represents the ratio of the squared correlation between variables to the squared partial correlation between variables (Field, 2005:640). The sum of squared partial correlation coefficient between all pairs of variables ranges from 0.0 to 1.0. Small values indicate that factor analysis is not valid since correlations between pairs of variables cannot be explained by the other variables. Kaiser (1974) characterises KMO measures in the 0.90s as marvellous, in the 0.80s as meritorious, in the 0.70s as middling, in the 0.60s as mediocre, in the 0.50s as miserable, and below 0.50 as unacceptable. However, according to Hair *et al.* (2006:115), the measure should be greater than 0.50 for a satisfactory factor analysis.

6.9.1.4 *Interpretation Results and Factor Naming Process*

The final step is the interpretation of the factors. Most interpretations are based on the factor loading values. Hair *et al.* (1995) define factor loading as "*correlation between the original variable and the key to understanding the nature of a particular factor*". Squared factor loadings indicate what percentage of the variance in an original variable is explained by a factor. To identify the factor, it is necessary to group the variables that have large loadings for the same factors. One convenient strategy is to sort the factor pattern matrix, so that variables with high loading on the same factor appear together (Norusis, 1993). Comfrey (1973) suggested useful guidelines for this purpose. He added that any loadings greater than + or − 0.71 is excellent, + or − 0.63 is very good, + or- 0.55 is good, + or- 0.45 is fair, and + or-0.32 is poor. In this study, loading below 0.6 was ignored, since that higher loading provides a clearer guide to what the factor is measuring (Rees, 1996).

6.9.2 Structural Equation Modelling

Structural Equation Modelling (SEM) has become one of the techniques that attract many researchers across different disciplines and increasingly in the social sciences (Chow and Chan, 2008; Hooper *et al.*, 2008; Oke *et al.*, 2008; Totterdell *et al.*, 2008; Čater and Čater, 2010). It is an ideal technique to test multiple and interrelated dependence relationships among the constructs for model building (Hair *et al.*, 1998; Byrne, 2006; Pervan *et al.*, 2007; Tabachnic and Fidell, 2007; Chen and Quester, 2008). It is a statistical methodology that takes a confirmatory (hypothesis- testing) approach to the analysis of a structural theory bearing on some phenomenon (Byrne, 2006:3). It is the only analysis that allows complete and simultaneous tests of all relationships for complex and multidimensional phenomenon (Tabachnic and Fidell, 2007:679). It has unique characteristics that are not found in the other multivariate techniques. Table 6-11 shows the differences between SEM and other multivariate procedures.

According to the literature, there are many issues debated among scholars regarding the use of SEM as a multivariate procedure in data analysis (Byrne, 2006; Hair *et al.*, 2006; Pervan *et al.*, 2007; Tabachnic and Fidell, 2007).

Table 6-10 The differences between SEM and other multivariate procedures

SEM methodology	Other multivariate procedures
It takes a confirmatory approach in analysing data	They take an exploratory approach to the data analysis
It provides explicit estimates of the error variance parameters	They are incapable of either assessing or correcting for measurement error (e.g. regression or the general linear model)
It uses both observed and unobserved variables in data analysis	The former methods to analyse data are based only on observed measurements
It is easy and widely applied method that can investigate both of direct and indirect effects among constructs in one shot.	They cannot measure the indirect effect between model relationships

Source: Adopted and modified from Byrne (2006:4)

Those issues are related to the appropriate sample size, the appropriate fit indices, the recommended cut-off values for fit indices and the compromise between testing theory and achieving model fit. Firstly, identifying the appropriate sample size of SEM is affected by some factors such as normality of data, estimation technique, model complexity and missing data. Table 6-12 summaries the effect of those factors in determining the sample size.

Table 6-11 factors affect on sample size in SEM

Factor	Effect
Multivariate distribution	Deviations from normality require 15 respondents for each parameter estimated in the model.
Estimation technique	-There are many techniques for SEM estimation; ordinary least square (OLS), Maximum likelihood (ML),and asymptotically distribution free (ADF) - ML is the most common SEM estimation. - ML has proven fairly robust to violations to the normality assumption -The appropriate sample size for ML procedure should range from 150 to 400.
Model complexity	The more model complexity, the larger sample size required.
Missing data	The higher the percentage of missing data, the larger sample size needed.

Source: Adapted from Hair *et al.* (2006)

Secondly, regarding selecting the appropriate fit indices, Crowley and Fan (1997) and Hooper *et al.* (2008) indicate that there are no golden rules for assessment of model fit.

Hair *et al.* (2006:752) point out that "*the researcher should report at least one incremental index and one absolute index, in addition to the x^2 value and the associate degree of freedom.*" They add that at least one of the indices should be a badness- of- fit index (RMR or RMSEA). Tabachnic and Fidell (2007) reveal that often multiple indices are required and it is the responsibility of the researcher to identify the appropriate fit indices. Furthermore, Hooper *et al.* (2008:56) reveal that reporting a variety of indices is necessary because different indices reflect a different aspect of model fit. However, it is the researcher's responsibility to select the appropriate measures and assess the fit by admittedly subjective standards to decide whether the model is acceptable (Hair *et al.*, 2006). According to the previous discussion, the current study uses at least one index from each category in addition to the Chi-square /df ratio to assess the good fit of research model.

According to the literature, there are three basic measurements for model fit; absolute fit measures, incremental fit indices and parsimony fit indices. Table 6-13 illustrates the description of those fit measures. Based on Table 6-13, we use Chi-square /df, GFI, AGFI, RMR and RMSEA as indices to assess the absolute fit value to our proposed model whereas CFI, NFI and RFI indices use to measure the incremental fit for our model. Moreover, this study depends on PCFI and PNFI as parsimonious fit measures. One of the most debated issues in measuring goodness of model fit is whether we can depend on the chi-square test as the sole measure of a model fit or not. Reliance on the chi-square test as the sole measure of a model fit is not recommended because the test is sensitive to sample size (Hair *et al.*, 2006:747). Therefore, it is more logical to depend on the Chi-square /df ratio, which is less sensitive to sample size. Another important issue is related to using RMSEA as one of the favourable fit measures in SEM. Although many scholars recommend depending on RMSEA as one of the basic measures for goodness of model fit (Tabachnic and Fidell, 2007; Chow and Chan, 2008; Hooper *et al.*, 2008), Hair *et al.* (2006:748) indicate that "*an empirical examination of several measures found that RMSEA was best suited use in a confirmatory or competing model strategy as sample become larger than 500 respondents.*" Therefore, in this study those issues were taken into consideration when assessing the fit of the research model.

Table 6-12 Classes for fit indices

Fit measure	Description	Type of indices
Absolute fit measures	-They provide the most basic assessment of how well the researcher's theory fits the sample data. -They don't explicitly compare goodness of fit of a specified model to any other model. -Useful to assess the fit of a single model.	1. **Chi-square /df** (Chi-square/degree of freedom) use to quantify the differences between the observed and estimated covariance matrix. 2. **GFI** (Goodness-of-Fit Index) represents the squared residuals from prediction compared with actual data. 3. **AGFI** (Adjusted Goodness-of-Fit Index) is an extension of GFI, adjusted by the ratio of degrees of freedom for the proposed model to the degrees of freedom for the null model. 4. **RMR** (Root Mean Residual) is an average of the residuals between observed and estimated input metrics. 5. **RMSEA** (Root Mean Square Error of Approximation), similar to RMR, is the discrepancy per degree of freedom, yet measures discrepancy in terms of the population, not just the sample used for estimation.
Incremental fit measures	-They assess how well a specified model fits relative to some alternatives baseline model. -They represent the improvements in fit by the specification of related multi-item constructs. -Useful to assess the fit of a single model.	1. **CFI** (Comparative Fit Index) represents the relative improvement in fit of the hypothesized model over the null model, **CFI** provides an unbiased estimate of its corresponding population value, and is less sensitive to the sample size. 2. **NFI** (normed fit index) is a relative comparison of the proposed model to the null model.
Parsimonious fit measures	-They provide information about which model among A set of computing models is best, considering its fit relative to its complexity. -They are not useful to assess the fit of a single model, but are quite useful in comparing the fit of two models, one more complex than the other	1. **PNFI** (*Parsimony Normed Fit Index*) is an extension of NFI by multiplying it times to parsimony ratio or PR (the ratio of degrees of freedom used by a model to the total degrees of freedom available). 2.**PCFI** (*Parsimony Comparative Fit Index*) adjusts the CFI using PR.

Source: Adopted from Hair *et al.*, (2006:746-750) and Tabachnic and Fidell (2007:718-720)

Thirdly, with respect to the recommended cut-off values for fit indices Hair *et al* (2006:751) revealed that "no single "magic" values distinguish good models from the bad ones. Moreover, there is no agreement between scholars about what are the objective cut-off values suggesting good model fit for a given fit statistics (Hair *et al.*, 2006; Tabachnic and Fidell, 2007). Table 6-14 illustrates the recommended –cut –off values for those fit measures.

Table 6-13 The recommended cut -off values for SEM fit indices

Fit index	Recommended cut-off value from literature	References
Absolute fit measures:		Bagozzi and Yi, (1988);Joreskog and Sorbom (1993); Bagozzi and Baumgartner,(1994); Baumgartner and Homburg, (1996); Etezadi-Amoli and Farhoomand (1996) ; Hennig-Thurau *et al.*,(2002); McKinney *et al.* (2002); Kim, (2003); Liang and Wang, 2004; Abdul-Muhmin, (2005); Roh *et al.*,(2005); Wu and Wu, (2005); Tabachnic and Fidell , (2007); Chow and Chan, (2008); Hooper *et al.*, (2008); Oke *et al.*, (2008); Totterdell *et al.*, (2008); Čater and Čater, (2010)
Chi-square/df	≤ 5	
GFI	$\geq .90$	
AGFI	$\geq .80.$	
RMR	$\leq .05$	
RMSEA	≤ 1.00	
Incremental fit measures:		
NFI	$\geq .90$	
CFI	$\geq .90$	
Parsimonious fit measures:		
PCFI	>0.5	
PNFI	$>0.5.$	

Source: Adapted from literature

Finally, SEM is not to get a good fit for the proposed model; it is used to test theory. SEM models are not developed without prior knowledge of, or hypotheses about, potential relationships among variables (Tabachnic and Fidell, 2007:682). Hair *et al.* (2006:754) report that the researcher should be sure that all model specifications should be done to best approximate the theory to be tested rather than hopefully increase model fit. This study adopts the second-order hypothesised structural model to test existing theory and compromise between testing theory and achieving model fit. The second-order hypothesised structural model support in specifying and identify the factors of each CFA model (Byrne, 2006; Hair *et al.*, 2006; Pervan *et al.*, 2007; Tabachnic and Fidell, 2007). Therefore, the researcher should be aware of how to make a compromise

between validating theory and getting an acceptable model fit. In conclusion, the quality of SEM results is affected by four basic elements: the fit indices, significant of the path coefficients, the accepted level of square multiple correlations and the matching between SEM results and validating existing theory. Before running SEM assessing unidimensionality of research constructs should be done through using conformitory factor analysis.

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is suggested as a precise method to test the unidimensionality and validity of measurements (Gerbing and Anderson, 1988; Yang and Peterson, 2004; Tellefsen and Thomas, 2005; Wu and Wu, 2005; Hair *et al.*, 2006). CFA gives strong support for how well the measured items represent the constructs (Hair *et al.*, 2006:770). Whilst exploratory factor analysis (EFA) gives support for the reliability of research constructs, CFA supports the validation of those constructs. EFA aims to identify set of variables and on which factors each variable will load highly while CFA tests how well our specification of the factors matches reality (the actual data). The adequacy of the measurement models was evaluated on the criteria of overall fit with the data, convergent validity and discriminate validity (Liang and Wang, 2004).

According to the overall fit with the data we use the same criteria discussed before in the SEM section (same fit measures). With respect to convergent validity, it describes the extent to which indicators of a specific construct converge or share a high proportion of variance (Hair *et al.*, 2006:771). Convergent validity can be assessed by four criteria (Fornell and Larcker 1981; Anderson and Gerbing, 1988; Kim, 2003; Liang and Wang, 2004; Tellefsen and Thomas, 2005; Hair *et al.*, 2006; Tabachnic and Fidell, 2007; Chow and Chan, 2008; Hooper *et al.*, 2008; Čater and Čater, 2010). Firstly, factor loading for an item is at least 0.5 and significant. Secondly, construct reliability is a minimum of 0.7. Thirdly, average variance extracted (AVE) for a construct is larger than 0.5. Finally, by comparing the coefficient and standard error of each item in the model (the ratio should be greater than two times).

Discriminant validity is the distinctiveness of two conceptually similar constructs (Hair *et al.*, 2006). There are two criteria to assess the discriminant validity among constructs (Kim, 2003; Yang and Peterson, 2004; Wu and Wu, 2005). Discriminant validity among

factors exists firstly when the alpha coefficients are greater than their correlation coefficients (Gaski, 1984; Eisingerich and Bell, 2007) and secondly, when the square root of AVE of each construct is generally higher than the correlations between it and any other constructs in the model (Fornell and Larcker, 1981; Hair *et al.*, 2006; Wang *et al.*, 2006; Coltman, 2007). This study adopts separate CFA for research constructs. This method is favourable after adopting exploratory factor analysis as recommended by Eid (2007) and. Carrington (2009).

6.9.3 Regressing Analysis

Regression has become one of the most widely used techniques in the analysis of social science data. It is a powerful tool for summarising the nature of the relationship between variables and for making predictions of the likely values of the dependent variable (Bryman and Cramer, 2001; Hair *et al.,* 2006). There are two kinds of linear regression; simple and multiple (Kinnear and Gray, 1999). In the simple, two variable regression, the values of one variable (the dependent variable, y) are estimated from those of another (the independent variable, x) by a linear (straight line) equation. In multiple regression, the values of one variable (the dependent variable, y) are estimated from those of two or more other variables (independent variables, X1, X2,………….., Xn). Using regression models to test research hypotheses, there are two statistical tests: 1) for overall equation, and 2) for each regression coefficient (Bryman and Cramer, 2001; Cohen and Cohen, 1983; Eye and Schuster, 1998; Freund and Wilson, 1998; Hair *et al.*, 1998; Kinnear and Gray, 1999; Remenyi *et al.*, 1998; Weisberg, 1980).

To obtain quality outputs for regression analysis, we should check some issues such as sample size, statistical power for regression models, generalisability and outliers, normality, linearity, singularity and multicollinearity. Regarding sample size, Hair *et al.* (2006:197) indicate that the minimum ratio of observations to variables is 5:1, but the preferred ratio is 15:1 or 20:1. Moreover, the degree of generalisability is represented by the degrees of freedom, which is affected by sample size. The higher the sample size, the higher the degree of freedom. The larger the degrees of freedom, the more generalisable are the results (.Hair *et al.,* 2006:197). Furthermore, we can assess the power of regression models through calculating R^2 for each model. The estimated regression function describes the nature of the relationship between independent and dependent variables. In addition, it determines the strength of relationship between the

variables. This is measured by the coefficient of determination, denoted by R^2. This measure reflects the percentage of the total variation in the dependent variable that is 'explained' by the variation in the independent variable. The R^2 statistic ranges from 0.00 to 1.00. On the other hand, the degree to which two or more independent variables are related to the dependent variable is expressed in the correlation coefficient R, which is the square root of R^2. The value of R can range from -1.00 to $+1.00$. The value of -1.00 represents a perfect negative correlation, while a value of $+1.00$ represents a perfect positive correlation. If $R = 0$, then there is a lack of correlation between the independent variable and the dependent variable.

There are three main assumptions that should be met in order to achieve high quality outputs for regression analysis; linearity, homoscedasticity, normality and multicollinearity (Hair *et al.*, 2006:189). Firstly, linearity represents the degree to which the change in the dependent variable is associated with the independent variable. Linearity can be measured through residual scatterplots in the SPSS package. Secondly, homoscedasticity reflects the presence of equal variances. Through using the SPSS package we can identify the problem of homoscedasticity (presence of unequal variances) by using residual scatterplots tests. The assumption of homoscedasticity is the assumption that the standard deviations of errors of prediction are approximately equal for all predicted dependent variables scores. Heteroscedasticity also does not invalidate the analysis so much as weaken it (Tabachnic and Fidell, 2007:127).

Thirdly, the normality assumption is necessary for obtaining quality data and we can measure it through skewness and kurtosis tests, and histogram diagram which are available in the SPPS package. Finally, multicollinearity reflects the high correlation between independent variables that may affect negatively on the sign of relationship between variables. Multicollinearity issues can be measured through the variance inflation factor or VIF, which are available in the SPPS package. The main purposes of regression models are to assess the impact of social capital on CRM performance through the mediating role of customer satisfaction and customer commitment. Regression model results in this study are used to give support to SEM results.

Figure 6-3 The Methodology Process of Thesis

The research philosophy/ paradigm
Positivistic

The research approach:
Deductive Approach: testing hypotheses
(H1………..H16)

The research Strategy:
Correlational Survey

The research choice:
Mono method (Quantitative)

The Time horizon of Research:
Cross sectional

Data collection methods:
Quantitative (Survey)

Data Analysing Methods:
Univariate analysis
Multivariate analysis:
EFA, CFA, SEM and Regression Models

6.10 Summary

This chapter has provided a detailed discussion of the research design and methodology. Perspectives of research design were elaborated to clarify the assumptions that underlie the methodology. The choice of methodology was justified and subsequent procedures were highlighted to provide an integrated discussion and conclusive statements, which will guide the next phase of the research process. The positivistic paradigm was the appropriate paradigm that explores the causal relationship between two established and tested theories; social capital and relationship marketing in one framework. Thus, the quantitative approach was adopted to collect and analyse data. This allowed richness of data and comprehensive treatment of different elements that constitute the whole process of integrating social capital with the CRM framework.

This chapter also examined the study instruments used in this research. The researcher used a survey questionnaire as the main method throughout this study. This chapter has defined the questionnaire, justified its use as the main source of data collection and explained the process of its construction. The content validity of the questionnaire was considered through the interviews with a group of research targets. Limitations of using the questionnaire as a data collection method were also discussed. This chapter explained the measurement issues of research variables. After explaining the structure and administration of questionnaire, the chapter justify the use of measurement validity and reliability of research variables. The structure and the distribution of questionnaire were also discussed in this chapter. Furthermore, the chapter explained the scanning exercise used to identify and select companies that met to research criteria. In this study adopts the Census method was used to collect survey data because of the small population size.

This chapter also touched on the SPSS package and AMOSv6 which have been used in the computation of the data. The statistical analysis techniques employed were Factor Analysis (EFA) and structural equation modelling (SEM) encompassing two steps: confirmatory factor analysis and causal relationship test. Moreover, Regression Analysis was used to confirm the SEM results. These techniques were discussed in-depth. For example the assumptions, advantages, cut-off values, mechanism and assessment of the EFA, SEM and Regression models were discussed in details. To sum

up, this chapter has set the foundation for data collection. The following chapter (Chapter 7) discusses analysis of data from the survey.

Chapter 7 Research Results

This chapter sets out the findings by presenting the quantitative analysis of the data obtained from the questionnaire survey. This analysis proceeds in four phases. Firstly, preliminary analysis is presented including exploring the response rate of the research sample, describing the characteristics of the research sample and assessment of missing values, outliers and data normality. Moreover, non-response bias tests are conducted. Secondly, exploratory factor analysis is reported for independent variables: structural capital, cognitive capital, relational capital, mediating variables (customer satisfaction and customer commitment) and dependent variables that represent CRM performance (customer loyalty and customer retention) to reduce the data and explore the structure of the research factors. Thirdly, separate confirmatory factor models are constructed for all research constructs. Fourthly, the results of CFA models are used in structure equation modelling. The aim of this phase is to assess the relationships among social capital dimensions (independent variables), customer satisfaction and customer commitment (mediating variables) and CRM performance (customer loyalty and customer retention) as dependent variables. Finally, regression models are used to test the research hypotheses for confirmation of the SEM findings.

7.1   Introduction

This chapter displays the findings of this study. These findings represent the answers for the research questions. Therefore, the following sub-sections present all research findings.

7.2   Univariate Analysis of the Data

Univariate analysis was performed to help in exploring the distribution of companies and the survey response rate and investigate the characteristics of research target. In addition, we should assess some issues that can affect on the quality of multivariate tests such as missing values, outliers, linearity, homoscedasticity, normality and multicollinearity. Thus, these analyses represent a good starting point to understand the characteristics of the research sample and to clarify the research data to be more suitable for multivariate tests such as EFA, CFA, SEM and regression analyses.

7.2.1 Sample Characteristics

Respect to response rate of the research sample, 208 questionnaires was sent to all main branches for the Egyptian financial institutions. Responses were obtained from 203 firms with a response rate of 97.5%. 2 cases from insurance and brokerage firms were excluded because of missing information (Johnson and Wichern, 2001). Thus, a total of 201 cases (with a usable rate of 96.6 %) were utilised for analysis purposes. Table 7-1 highlights the distribution of companies and the survey response rate.

Table 7-1 Distribution of companies and survey response summary

Sector / Statistics	Insurance	Banking	Brokerage	Total
Original sample	25	39	144	208
Census : distribution of institutions	25	39	144	208
Response received	24	37	143	204
Usable response	23	37	141	201
Response rate (%)	92	94.87	97.9	96.6

Details of the response against the three selected samples presents in Table 7-2. Based on Table 7-2 the sample respondents reflect 37 banks, 141 brokerage firms and 23 insurance firms accounting for 18.4%, 70% and 11.6% of the sample respectively. 115 companies owned by the private sector (57%), 5 public firms (2.5%) and 81 foreign investment firms (40.5%). Relating to organisation size, 153 companies had 100- 300 employees (76%), 45 companies had more than 300 employees (22.4%) and 3 companies had fewer than 100 employees (1.6%). Regarding the sex of the respondents, 64% were male and 36% female. According to the respondents' experience, 50.7% had 7-10 years experience; 28.9% has more than 10 years of experience and 20.4% had less than 7 years of experience. With respect to the respondents' degree, 51.7% had an undergraduate degree and 48.3% were post graduates.

Table 7-2 Characteristics of research sample (N =201)

Basic information	Variables	Usable cases	Response rate (%)
A. Respondent characteristics			
Gender			
	Male	129	64.2
	Female	72	35.8
Age			
	Under 30 yrs	14	7
	30-40	41	20.4
	41-50	96	47.8
	51-60	50	24.8
Experience years			
	Less 5 yrs ago	10	5
	5- 7 yrs	31	15.4
	7-10 yrs	102	50.7
	More than 10 yrs	58	28.9
Education			
	University graduate	104	51.7
	Diploma	45	22.4
	Master	31	15.4
	Doctorate	21	10.4
B. Organizational characteristics			
Organisation size			
	Under 100 employees	3	1.5
	100-200	70	34.8
	201- 300	83	41.3
	More than 300	45	22.4
Institution type			
	Insurance firms	23	11.4
	Banks	37	18.4
	Brokerage firms	141	70.1
Type of ownership			
	Public sector investment	5	2.5
	Private sector investment	115	57.2
	Foreign investment	81	40.3

7.2.2 Assessment of Missing Values

Satisfactory statistical results can only be derived from high quality data. Data quality could be violated by some issues such as missing values, outliers, linearity, homoscedasticity, normality and collinearity. Tabachnick and Fidell (2007:62) indicate that missing data is one of the most pervasive problems in data analysis. They add that the pattern of missing data is more important than amount missing and therefore randomly missing data is less serious than nonrandomly missing. Hair *et al.* (2006:55) reveal that missing data under 10% for an individual case or observation can generally be ignored if it is randomly missing. As a result of adopting the drop and collect method

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in collecting survey information, the researcher was able to check questionnaires during the collection stage and this helped in avoiding any missing values. To evaluate missing values issues this study used both exclude cases listwise and excludes cases pairwise methods separately to check the percentage of missing values and the result in both cases was zero per cent.

7.2.3   Assessment of Outliers

Outliers are observations with a unique combination of characteristics identifiable as definitely different from the other observations (Hair *et al.*, 2006:73). There are four reasons that could lead to outliers: error in entry data, missing values specification, extraordinary observations for which the researcher has no explanation and observations that fall within the ordinary range of values on each of the variables (Hair *et al.*, 2006:74; Tabachnick and Fidell, 2007:73). Outliers can be assessed in a univariate or multivariate context. In a univariate context the current study checked the outliers by calculating descriptive statistics through two basic techniques: Boxplot and 5% Trimmed Mean. Firstly, the Boxplot results showed that there were few (less than 3%) outliers among the variables and they were randomly distributed. Secondly, the 5% Trimmed Mean technique within SPSS aims to remove the top and bottom 5 per cent of research cases and recalculate new mean value. If the original mean value is very similar to new trimmed mean value, these cases can be retained in the data file. Our research results showed that all original mean and new trimmed mean values for all variables were very similar, which indicated no serious problem with outliers.

Alternatively, Hair *et al.* (2006:75) assert that multivariate outliers can be assessed by using the Mahalanobis distance method (D squared /number of variables). They add that the ratio of (D squared /number of variables) should be less than 2.5 in small samples (80 cases) and from 3 to 4 for large sample (greater than 200). The results of Mahalanobis distance method in the current study reveal that all outliers were randomly distributed. Case number 181 is the only case that had a ratio greater than 4 while cases 28 and 97 had ratios lower than 3.5. The other cases had ratios lower than 3. This study also checked univariate outliers by using z-score[12] as recommended by Tinsely and Brown (2000). Our findings showed that all z-score values are less than 3.29 at p<

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[12] Z- score = (each score value- mean)/ standard deviation

0.001 as recommended by Tinsely and Brown (2000). Therefore, our results indicate no serious issues of outliers in our data set.

7.2.4 Assessment of Linearity and Homoscedasticity

The residual scatterplots test from SPSS package was used to assess linearity and homoscedasticity problems. The residual was nearly rectangularly distributed with a concentration of scores along the center. Thus, these findings show that no significant deviations from homoscedasticity and linearity, which can affect multivariate tests (especially regression).

7.2.5 Assessment of Normality

The results of skewness and kurtosis were used to assess normality of data (Field, 2005; Hair *et al.*, 2006; Tabachnick and Fidell, 2007). Hair *et al.* (2006:80) point out that in most cases assessing and achieving univariate normality for all variables is adequate and there is no need for multivariate normality because it is difficult to test. The normal distribution of data could be affected by sample size (Field, 2005; Hair *et al.*, 2006; Tabachnick and Fidell, 2007). Hair *et al.* (2006:80) explained that sample size can affect normality where "*what might be considered unacceptable at small sample sizes will have a negligible effect at larger sample size*". They add that small significant departure from normality can be neglected with a sample size of 200 or more.

Skewness is a statistic needed to determine the degree to which a distribution of cases approximates a normal curve, since it measures deviations from symmetry. Kurtosis is a statistic needed to identify the peakedness of data distribution (too peaked or too flat). The significance of the skewness and kurtosis was examined by computing a z- score for each variable. Hair *et al.* (2006:82) and Tabachnick and Fidell (2007:80) indicate that the accepted *z* values are ± 1.96 at a significance level of 95% , ± 2.58 at a significance level of 99% and ± 3 at a significance level of 99.9%. The cut of value of significance level in this study is 95%. According to all z- scores for skewness and kurtosis for all variables are negative and exceeded 1.96. The results of z- score tests for kurtosis and skewness show no significant departure from normality. However, this study uses the maximum likelihood estimation method (ML) to calculate SEM. The ML method is relatively unbiased to these small departures from normality (Bollen, 1989).

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Moreover, statistical tests for histogram diagrams will be favourable to assess normality problem in large sample (more than 200) as recommended by Hair *et al.* (2006) and Tabachnic and Fidell (2007). Histogram diagrams for all research variables prove that the distribution of scores are normal, thus, there is no significant deviation from normality.

7.2.6   Assessment of Multicollinearity

The issue of multicollinearity occurs when any single independent variable is highly correlated with a set of other independent variables (Kim, 2003). This study uses the variance inflation factor or VIF and Durbin Watson for assessing multicollinearity (Hair *et al.*, 2006). The results of variance inflation factor (VIF) confirm that multicollinearity is not a problem for the independent variables for this study. Our results prove that VIF values for the independent variables in our multiple regression models are less than 5 as recommended by Roig *et al.* (2006). Hair *et al.* (2006:230) reported that VIF greater than 5 means a multicollinearity problem where the correlation between independent variables will be more than 0.9. Moreover, the Durbin-Watson statistics for all regression models in this study are near of 2, which indicate non-autocorrelation between residuals (Field, 2005).

7.2.7   Non-Response Bias Tests

We conducted univariate analysis (e.g. independent samples t-test, analysis of one variance: ANOVA) and multivariate analysis (e.g. multivariate analysis of one variance: MANOVA) to examine the non-response bias and responding sample representativeness. The results of the above tests found no significant difference at 95% confidence for any attitudinal items in relation to categorical items (e.g. early and late respondents, gender, age, education level of respondents, respondents' experience, firm type, firm size and firm's ownership).

7.3   Multivariate Analysis of Research Variables

The current study conducted a set of multivariate analyses to investigate the proposed relationships among research variables. To achieve this goal, EFA, CFA, SEM and regression models were used.

7.3.1 Results of Exploratory Factor Analysis (EFA)

An exploratory factor analysis (with Varimax rotation) was performed to assess the structures of the research constructs and examine whether the items for each construct share a single underlying factor (i.e. constructs are unidimensional). Prior to building a measurement model, EFA models in this study were used to assess (a) structures of social capital dimensions and their sub- factors, (b) organisational perceived values constructs and (c) CRM performance factors, to produce a concise set of classification dimensions. This section presents the results of EFA models.

7.3.1.1 *Results of EFA for Social Capital*

Based on the research hypotheses and the interrelationships among social capital dimensions, three sets of exploratory factor analysis were conducted separately to identify the structures of structural capital, cognitive capital and relational capital.

7.3.1.1.1 *Results of EFA for Structural Capital*

As mentioned earlier in Ch.6, this study uses the principal component method for factor extraction and varimax orthogonal rotation to get the best solutions. The first exploratory factor analysis produced a four-factor solution, representing *social interactions , network ties, network configuration and network stability*. A four-factor structure is suggested using the criterion of an eigenvalue greater than 1 and the extracted factors account for 67% per cent of the total variance. Table 7-3 contains a summary of the descriptive statistics, factor analysis and reliability analysis for structural capital. The correlation matrix showed many correlations of r = 0.3 or greater and this indicates fit of data for factor analysis (Pallant, 2005). Bartlett's test of sphericity is significant which implies the presence of non-zero correlation among the 35 items and a high level of homogeneity among variables (Field, 2006). Bartlett's test of sphericity shows an approximate Chi square of 7195.2 with 595 df and significance 0.000. The overall measure of sampling adequacy (KMO) is 0.96 which is higher than the cut-off point of 0.5 as recommended by Field (2005) and Hair *et al.* (2006). Overall, these data satisfy the fundamental requirements for factor analysis (Hair *et al.*, 2006).

To assess the unidimensional nature of the scale items we used principal component loadings as recommended by Carmines and Zeller (1979). Factor loadings were all

higher than 0.6 on their own factors as recommended by Hair *et al.* (2006). Nine items were dropped from the total of 35 items because of cross-loadings and low factor loadings. The factor loadings for retained items within social interaction, network ties, network configuration and network stability factors ranged from 0.68 to 0.76, 0.63 to 0.73, 0.61 to 0.71 and 0.65 to 0.74 respectively. Cronbach Alpha values scores for the four factors reflect satisfactory internal consistency for those items. The reliability scores of all averaged scales (Cronbach Alpha or α) of social interaction, network ties, network configuration and network stability exceed 0.94, which is above the usual cut-off level of 0.7 as recommended by Nunnally and Bernstein (1994). Internal reliabilities of each construct (Cronbach's alpha) are ranged from 0.93 to 0.95, all exceeding the minimum criterion of 0.60 (Bagozzi and Yi, 1988).

Moreover, the Corrected Item- Total Correlation (CITC) was used as one indicator of internal consistency within variables' items, which reflects the degree of correlation between each item and the total score. CITC was used to evaluate whether all measures demonstrated a dominant loading on the hypothesised factor and did not have significant cross-loadings. The results of CITC ranged from 0.79 to 0.86, 0.73 to 0.91, 0.74 to 0.88 and 0.74 to 0.86 for social interaction, network ties, network configuration and network stability respectively. Those results are satisfactory and are above the threshold of 0.4.as recommended by Nunnally and Bernstein (1994).

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Table 7-3 Statistical summary: Descriptive statistics, factor analysis and reliability analysis for Structural Capital

Factors and Variables	Descriptive Statistics		Factor Loading	Components		&	Reliability	
	M	S.D	1	2	3	4	CITC	α
Social interaction (structural capital)								**0.946**
SC8 Exchanging knowledge takes place frequently and informally among employees.	4.0	.74	.76				.84	.936
SC2 The open communication makes our employees feel closer to each other.	4.0	.63	.75				.82	.938
SC3 The collaboration enables our employees to learn from each other.	4.0	.73	.74				.86	.934
SC5 Our employees cooperate when handling customer requests.	4.1	.76	.73				.85	.936
SC7 Our employees discuss the key issues in depth with their supervisors.	4.1	.70	.72				.85	.935
SC4 Our supervisors share their knowledge with their subordinates.	4.1	.69	.68				.79	.941
Network ties								**0.948**
NT7 The strength of relationships between employees reduces the level of friction among them.	4.2	.69		.73			.86	.936
NT3 The strength of relationships between employees enables them to share their best practices and expertise with their colleagues.	4.2	.71		.72			.91	.93
NT5 The strength of relationships between employees enables them to initiate informal face-to-face conversations with each other	4.1	.72		.69			.87	.935
NT6 The strength of relationships between employees encourages them to support each other.	4.2	.69		.66			.87	.936
NT 4 The strength of relationships between employees enables them to seek advice from their direct supervisors when necessary	4.2	.68		.65			.81	.943
NT 8 The strength of relationships between employees enables them to communicate directly with their supervisors without prior appointments	4.0	.71		.63			.73	.951
Network configuration								**0.95**
NC5 Our organisation system needs ID and password to access in.	4.1	.71			.71		.88	.936
NC4 Our information system is user-friendly.	4.2	.67			.70		.89	.935
NC2 Our employees can easily access the company's database.	4.1	.71			.69		.86	.938
NC1 The front offices and back offices are linked by communication networks.	4.2	.66			.66		.88	.938
NC7 Our company supports employees by a customer data repository.	4.0	.69			.65		.83	.943
NC8 Our front offices have direct contact with their supervisors.	4.0	.73			.61		.74	.95

	Mean	SD					CITC	α
Network stability								**0.95**
NS5 Our information system provides employees with easily- understood information to carry out their duties.	4.1	.70				.74	.79	.945
NS7 Our information system provides all departments with prompt and timely information.	4.0	.71				.73	.74	.948
NS4 Our company regularly monitors and reviews information flow within its entire networks.	4.1	.72				.68	.86	.940
NS1 Our IT staff regularly updates our information system to support the reliability of information flow among employees	4.0	.77				.68	.79	.945
NS3 Our information system provides in-depth information about our existing customers.	4.1	.69				.67	.78	.946
NS6 Our information system maintains information flow among employees	4.0	.72				.67	.86	.940
NS8 Our information system is very useful when dealing with customer requests.	4.1	.71				.66	.85	.940
NS9 Information system architecture in our company can be modified without disrupting information flow within the firm	4.1	.69				.65	.86	.940
% of Cumulative variance			19.4	36.8	52.5	67.2		

Kaiser-Meyer-Olkin (KMO) Measure Sampling Adequacy = **0.96,** *Bartlett test of sphericity* = **7195.2 with df 595,** *Bartlett test, significance* = **0.000**
Note: CITC = Corrected Item-Total correlations, **α** = Cronbach's Alpha.

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Table 7-4 Statistical summary: Descriptive statistic, Factor analysis and reliability analysis for Cognitive Capital

Factors and Variables	Descriptive Statistics		Factor Components &Loading			Reliability	
	M	S.D	1	2	3	CITC	α
Shared Goals							**0.95**
SG1 Our employees have common understandings toward organisational goals.	4.1	.68	.76			.89	.934
SG 6 Customer orientation is the main goal of our company.	4.2	.72	.75			.85	.939
SG 3 Our departments have a commonality of purpose.	4.0	.70	.75			.81	.944
SG 9 Our departments have consistent ideas about what the organisation should be trying to achieve.	4.1	.70	.74			.84	.94
SG 4 Our employees are enthusiastic about pursuing the collective goals of the whole organisation.	4.1	.70	.70			.79	.947
SG 7 Our departments support each other to achieve organisation goals.	4.0	.76	.76			.87	.937
Shared Values							**0.95**
SV8 A 'team spirit' exists among employees.	4.0	.68		.74		.79	.945
SV5 Our employees share the value of maintaining long- term relationship with customers.	4.0	.65		.74		.86	.939
SV9 Our employees are open- minded and accept different viewpoints and opinions.	4.1	.63		.73		.83	.942
SV6 Our employees encourage collectivism work value.	4.1	.64		.72		.81	.944
SV3 The similarity in work values among employees facilitate doing work.	4.1	.66		.72		.83	.942
SV7 Our employees use common terms or jargons which our customers understand.	4.1	.65		.71		.84	.942
SV2 Our employees have positive feelings toward the organisation.	4.1	.63		.67		.85	.940
Shared Norms							**0.956**
SN6 Our employees act within the standards defined by the organisation's regulations	4.1	.67			.71	.85	.949
SN9 Our employees are obligated to follow organisation's rules.	4.1	.67			.68	.88	.947
SN3 Our employees are obligated to follow ethical principals in serving customers.	4.2	.66			.68	.79	.954
SN2 Our employees are expected to comply with the law and professional standards.	4.2	.70			.68	.89	.945
SN10 Our employees believe that adherence to organisational rules is the most efficient way to do work.	4.0	.68			.66	.83	.951
SN7 Our employees believe that respecting the organisation's rules helps in achieving organisation's goals.	4.0	.72			.654	.86	.948
SN4 Our employees never act opportunistically with their colleagues.	4.0	.62			.650	.83	.951
% of Cumulative variance			20	39.9	58.5		

Kaiser-Meyer-Olkin (KMO) Measure Sampling Adequacy = **0.955**   *Bartlett test of sphericity* = **50956.2** *with df* **406**   *Bartlett test, significance* = **0.000**

7.3.1.1.2   Results of EFA for Cognitive Capital

The second exploratory factor analysis produced a three-factor solution, representing shared goals, shared values and shared norms with eigen-values greater than 1.00. Those factors explain 58.5% of the total variance of the cognitive capital model. Table 7-5 gives a summary of some descriptive statistics, factor analysis and reliability analysis for the second EFA model. As shown in Table 7-4, the result of EFA solutions matches the essential requirements for factor analysis. Firstly, the correlation matrix shows many correlations of r = 0.3 or greater among matrix items. Secondly, Bartlett's test of sphericity showed an approximate Chi square of 50956.2 with 406 df and significance 0.000. Thirdly, the overall measure of sampling adequacy (KMO) is 0.96 which is above the cut-off point of 0.5 as recommended by Hair *et al.* (2006). According to the previous results our sample data meet the fundamental requirements for factor analysis. The model extracts 9 items from a total of 29 items with cross-loadings and low factor loadings. The factor loadings for retained items within shared goals, shared values and shared norms ranged from 0.74 to 0.76, .67 to .74 and .65 to .71 respectively, which are above the usual cut-off level of 0.6. Internal reliabilities of each construct (Cronbach's alpha) are ranged from 0.93 to 0.95, all exceeding the minimum criterion of 0.60. The reliability scores of averaged scales of shared goals, shared values and shared norms exceed 0.95, which is above the usual cut-off level of 0.7. The CITC among variables ranged from 0.79 to 0.89, 0.79 to 0.86, and 0.79 to 0.89 for shared goals, shared values and shared norms respectively.

7.3.1.1.3   Results of EFA for Relational Capital

The third exploratory factor analysis produced a one factor solution, representing trust. The accumulative variance for this model is 66%, which means that the trust factor explains 66% of total variance of relational capital. Table 7-6 highlights a summary of some descriptive statistics, factor analysis and reliability analysis for EFA relational capital. According to Table 7-5, the results of the EFA solution matched the vital requirements for factor analysis. Firstly, the correlation matrix showed many correlations of r = 0.3 or greater among matrix items. Secondly, Bartlett's test of sphericity showed an approximate. Chi square of 1878.284 with 45 df and significance 0.000. Thirdly, the overall measure of sampling adequacy (KMO) was 0.95 which is

above the cut-off point of 0.5. According to the previous results our sample data satisfy the fundamental requirements for factor analysis. The model extracts 3 items from a total of 10 items with low factor loadings. The factor loadings for retained items within trust factor are ranged from 0.87 to 0.93, all exceeding the minimum loading criterion 0.6. The reliability score of averaged scales of trust (Cronbach's alpha) is 0.97 which is above the usual cut-off level of 0.7. CITC values are satisfactory and range from 0.84 to 0.92, all exceeding the minimum loading criterion of 0.40.

Table 7-5 statistical summary: Descriptive statistic, factor analysis and reliability analysis for Relational Capital

Factors and Variables	Descriptive Statistics		Factor Components & Loading	Reliability	
	M	S.D	1	CITC	α
<u>Trust</u>					**968**
TRS8 Our employees can be counted on to do what is right for their colleagues.	4.1	.69	.93	.92	.961
TRS1 Our back offices respond promptly to front offices' explanation and questioning.	4.1	.69	.93	.91	.961
TRS6 Our employees are helpful when responding to their colleagues' requests.	4.1	.68	.92	.90	.962
TRS5 Our employees frequently exchange valuable information with their colleagues.	4.1	.68	.92	.89	.963
TRS10 Our employees are trustworthy.	4.1	.67	.91	.89	.963
TRS3 Our employees have confidence in their colleagues' abilities and skills to do the work.	4.0	.70	.89	.86	.965
TRS9 Our employees trust each other because that is the best and easiest way to get the work done	4.1	.67	.87	.84	.967
% of Cumulative variance			**66.279**		

*Kaiser-Meyer-Olkin (KMO) Measure Sampling Adequacy = **.948** Bartlett test of sphericity = **1878.284 with** df **45** Bartlett test, significance = **.000***

7.3.1.2 *EFA Results for Organisational Perceived Values Model*

According to the theoretical foundations for this study, an organisation can gain value as a result of adopting social capital. The 18 perceived value items (two 9-item measures) were factor analysed with principal component extraction and a varimax rotation. A two-factor structure is suggested using the criteria of an eigenvalue greater than 1 and the extracted factors account for 60.8 per cent of the total variance. The solution produced two factors to represent the two constructs (customer satisfaction and customer commitment). Table 7-6 displays some descriptive statistics, factor loading and reliabilities measurements for the two factors of the perceived value model.

The adequacy of the research sample for this factor analysis meets the fundamental requirements. Bartlett's test of sphericity shows an approximate Chi square of 3597.322 with df 153 and significance 0.000. The overall measure of sampling adequacy (KMO) is 0.96 which is above the cut-off point of 0.5. Factor loadings for items are ranged from 0.69 to 0.82, all exceeding the minimum loading criterion of 0.6 (Nunnally and Bernstein, 1994). Factor loadings are all higher than 0.5 on its each items' own factors and therefore each item loaded higher on its associated construct than on any other construct. Moreover, most of the correlation values among construct items are ≥ 0.3. Internal reliabilities of each construct range from 0.73 to 0.89, all exceeding the minimum criterion of 0.60. Reliability estimates for the scales are uniformly high with Cronbach's alpha coefficients ranging from 0.92 to 0.96. CITC values range from 0.73 to 0.89 which are above the usual cut-off level of 0.4. All the previous results give strong support for the EFA solution for the perceived value model.

Table 7-6 Statistical summary: Descriptive statistic, factor analysis and reliability analysis for Perceived values

Factors and Variables	Descriptive Statistics		Factor Components & Loading		Reliability	
	M	S.D	1	2	CITC	α
Customer Satisfaction						**.961**
SAT4 Our employees respond quickly to our customers' needs.	4.1	.67	.76		.89	.952
SAT9 Our employees give customers the appropriate personal attention.	4.1	.65	.75		.89	.952
SAT7 Our employees do their best to perform the service close to customers' specifications.	4.0	.70	.74		.79	.96
SAT5 Our service delivery process is easy to understand.	4.2	.65	.73		.85	.955
SAT1 Our employees deal promptly with customers' complaints.	4.2	.66	.71		.85	.955
SAT2 Our employees are approachable and easy to contact.	4.1	.68	.70		.87	.954
SAT6 Our employees respond politely to our customers' requests.	4.2	.67	.69		.89	.952
Customer Commitment						**.953**
COM8 The good reputation of our company encourages our customers to be committed.	4.2	.62		.82	.82	.944
COM9 It is easy to persuade our existing customers with new services rather than new potential customers.	4.2	.64		.81	.81	.943
COM7 Our company introduces better offers and prices than competitors do.	4.2	.61		.80	.80	.942
COM5 Our customers keep a personal relationship with our employees.	4.2	.65		.77	.77	.948
COM1 Our employees exert maximum effort to introduce the best financial products to our current customers.	4.2	.65		.75	.75	.949
COM2 Our company is always committed to fulfil its agreements with customers.	4.1	.67		.77	.74	.948
COM4 Our customers can make sacrifices to help our company (e.g. rise in prices, effort, time... etc).	4.2	.62		.73	.73	.949
% of Cumulative variance			**33.74**	**60.82**		

*Kaiser-Meyer-Olkin (KMO) Measure Sampling Adequacy = **0.958**   Bartlett test of sphericity = **3597.322 with df 153** Bartlett test, significance = **0.000***

7.3.1.3 *Results of EFA for CRM Performance Model*

According to the theoretical foundations for this study, CRM performance could be measured behaviourally through two dimensions: customer loyalty and customer retention. 20 items were factor analysed with principal component extraction and a varimax rotation to explore the structure of CRM performance. A two-factor structure is suggested using the criterion of an eigenvalue greater than 1.00 and the extracted factors account for 55.9 per cent of the total variance. Table 7-7 shows some descriptive statistics, factor loading and reliability measurements for the two factors of the CRM performance model. The solution was set to two factors to represent the two constructs customer loyalty and customer retention. Bartlett's test of sphericity reveals that an approximate Chi square of 3597.322 with df 190 and significance 0.000. The overall measure of sampling adequacy (KMO) is 0.95 which is above the cut-off point of 0.5. The model's results give strong support to the research sample adequacy.

Factor loadings of each item range from 0.69 to 0.82, all exceeding the minimum loading criterion of 0.6. Moreover, most of the correlation values among construct items are ≥ 0.3. Internal reliabilities of each construct range from 0.92 to 0.96, all exceeding the minimum criterion of 0.60. Reliability estimates for the scales are consistently high with Cronbach's alpha coefficients ranging from 0.95 to 0.96. All the previous results give strong support for the EFA solution for the perceived value model. CITC values range from 0.81 to 0.91, which are above the usual cut-off level of 0.4.

Table 7-7 Statistical summary: Descriptive statistic, factor analysis and reliability analysis for CRM performance

Factors and Variables	Descriptive Statistics		Factor Components & Loading		Reliability	
	M	S.D	1	2	CITC	α
Customer Loyalty						**.954**
LOY9 Our existing customers give good references to potential customers because of word of mouth.	4.2	.63	.82		.83	.948
LOY7 Our existing customers encourage their relatives and friends to deal with our company.	4.1	.63	.79		.91	.941
LOY1 Our existing customers defend our company when others criticise us.	4.1	.67	.77		.89	.942
LOY3 Our customers feel loyal to the service provider in our company.	3.9	.74	.75		.83	.948
LOY2 Our company acquires new customers thanks to its current customers..	4.1	.67	.74		.82	.949
LOY8 Our existing customers consider our company as the first alternative for most of their financial investments.	4.2	.63	.69		.82	.948
LOY5 Our existing customers prefer our company above other competitors.	4.0	.67	.68		.81	.95
Customer Retention						**.962**
RET7 Our company achieves better customer attraction and retention of target customers than competitors	4.2	.61		.78	.87	.955
RET10 Our existing customers plan to invest more in the next year.	4.2	.62		.76	.88	.955
RET2 Our customers have a long lifetime cycle with our company.	4.3	.62		.76	.88	.955
RET5 Our company maintains an interactive two-way communication with our customers.	4.2	.62		.74	.87	.955
RET8 Our company provides customers with "one-to-one" experience.	4.2	.62		.74	.86	.956
RET3 Our company segments the market according to the economic value of customers.	4.2	.64		.74	.86	.956
RET11 Our company consolidates critical information about each customer.	4.2	.64		.69	.84	.958
% of Cumulative variance			28.016	55.933		

Kaiser-Meyer-Olkin (KMO) Measure Sampling Adequacy = **0.95**   *Bartlett test of sphericity* = **3597.322 with df 190**   *Bartlett test, significance* = **0.000**

7.3.2 Structural Equation Modelling (SEM)

The properties of the proposed research relationships were then tested with structural equation modeling (SEM). SEM estimates multiple and interrelated dependence relationships (Hair *et al.*, 2006), thus being an ideal technique to test the hypotheses, given the complex relationships among research variables (Kim, 2003). The most important advantages of using SEM are its ability to examine the overall data fit to the hypothesised model and the advantage of considering measurement unreliability when estimating the relationships among variables (Maruyama and McGarvey, 1980; Chang and Chen, 2008). The two-step procedure of structural equation modeling proposed by Anderson and Gerbing (1988) is used to test the model and hypotheses. The measurement model is established by conducting a confirmatory factor analysis to explore the unidimensionality of research constructs, and the structural model analysis is conducted to test the relationship among research variables. Both the measurement model and the structural model are assessed using AMOS v6.0 by the maximum likelihood method (Arbuckle, 2003; Chang and Chen, 2008).

Following the recommendation of MacKenzie and Lutz (1989), each construct is represented with a single index that is equal to the average score on the construct scale. Consistent with extant structural equation modeling articles such as Yang and Peterson (2004), Eid (2007) and Chen and Quester (2008), we measure variables in the research model based on the average of the items used to represent it. A composite score has the advantage over an individual single question. For example, Judd *et al.* (1991) demonstrate that when an individual indicates his or her own attitude (or opinion) relating to an object on some scales, a substantial element of intuitive judgement is involved, no matter how precise the rating instructions and no matter how well trained the individual. Such judgement in the use of rating scales makes the ratings vulnerable to bias. Averaging the scores for several variable items reduces this bias. Moreover, measurement error in an individual question is minimised by aggregating individual questions into a composite score. In addition, the composite score method is used to overcome the problem of small sample size (Yang and Peterson, 2004; Eid, 2007; Chen and Quester, 2008; Chow and Chan, 2008; Guo *et al.*, 2008). The current study has eighty one indicators representing twelve constructs. Using SEM with individual indicators would require a sample of more than eight hundred cases. however, by using

composite score, we have twelve parameters which require at least one hundred and twenty cases with a ratio of 10:1 for (cases / parameter numbers), which fits our sample. In the following section we display the results of CFA models for the research constructs.

7.3.2.1 *Confirmatory Factor Analysis*

CFA is a tool that enables us to confirm or reject our preconceived theory (Hair *et al.*, 2006: 770). CFA is used to provide a confirmatory test of how measured variables logically and systematically represent constructs involved in a theoretical model. CFA was suggested as a more precise method to test the unidimensionality and validity of the measurements (Gerbing and Anderson, 1988). The adequacy of the measurement models is evaluated on the basis of criteria such as overall fit with the data and measuring the unidimensionality of research constructs. In line with the previous discussion in section 6.9.2.1 of the methodology chapter, model fit was assessed through the recommended fit indices, such as Absolute Fit Measures (e.g. Chi square/df, GFI, RMR), Incremental Fit Measures (e.g. CFI, NFI, AGFI) and Parsimony Fit Measures (e.g. PCFI and PNFI). At least one index from each category was used, in addition to the Chi-square /df ratio, to assess the good fit of the research model as recommended by Hooper *et al.* (2008), Hair *et al.* (2006) and Tabachnic and Fidell (2007). For evaluation of the constructs' unidimensionality, this study uses two criteria: convergent and discriminant validity.

To assess the validity of CFA model, the literature suggests that a good model fit is characterised by chi-square/degrees of freedom (x^2/df) less than 5 (Etezadi-Amoli and Farhoomand, 1996; McKinney *et al.*, 2002; Roh *et al.*, 2005; Totterdell *et al.*, 2008; Chow and Chan, 2008), root mean square residual (RMR) less than 0.05 (Bagozzi and Yi, 1988; Henry and Stone, 1994; Hair *et al.*, 2006), GFI (Etezadi-Amoli and Farhoomand , 1996; Hair *et al.*,2006; Chow and Chan,2008), CFI and NFI (Bentler, 1990; Hair *et al.*,2006; Chow and Chan,2008; (Keh and Xie, 2008; Yang *et al.*, 2008) exceeding the minimum criterion of 0.90 and PCFI and PNFI (Hair *et al.*,2006; Chow and Chan,2008) greater than 0.5. Our rule for assessing goodness of model fit was to use at least one measure from each category (absolute fit measures, incremental fit measures and parsimony fit measures) that achieve the required thresholds for these

measurements. If the CFA model reflects accepted indices of model fit this mean the measurement of these are equivalent to evaluate the model constructs.

Convergent validity in this study was assessed by four criteria: factor loading for an item is at least 0.7 and significant, construct reliability is a minimum of 0.7, average variance extracted (AVE) for a construct is larger than 0.5 and an item's coefficient is more than twice its standard error (Anderson and Gerbing, 1988). With respect to discriminant validity, there are two criteria to assess the discriminant validity among constructs. Firstly, discriminant validity among factors exists when the alpha coefficients are greater than their correlation coefficients (Gaski, 1984; Eisingerich and Bell, 2007). Secondly, the square root of AVE of each construct is generally higher than the correlations between it and any other constructs in the model. A confirmatory factor analysis (CFA) in this study was performed on the reduced data set from the exploratory factor analysis for research variables.

In the current study a confirmatory factor analysis (CFA) with reflective indicators (Bollen and Lennox, 1991) was performed (Anderson and Gerbing, 1998). We used a first- order CFA model with covariances as input and the maximum likelihood method in AMOSv6 to estimate coefficients. Figure 7-1 displays the CFA results of the research model. These results represent the logic measurements for the research constructs.

Figure 7-1 CFA results for the research model
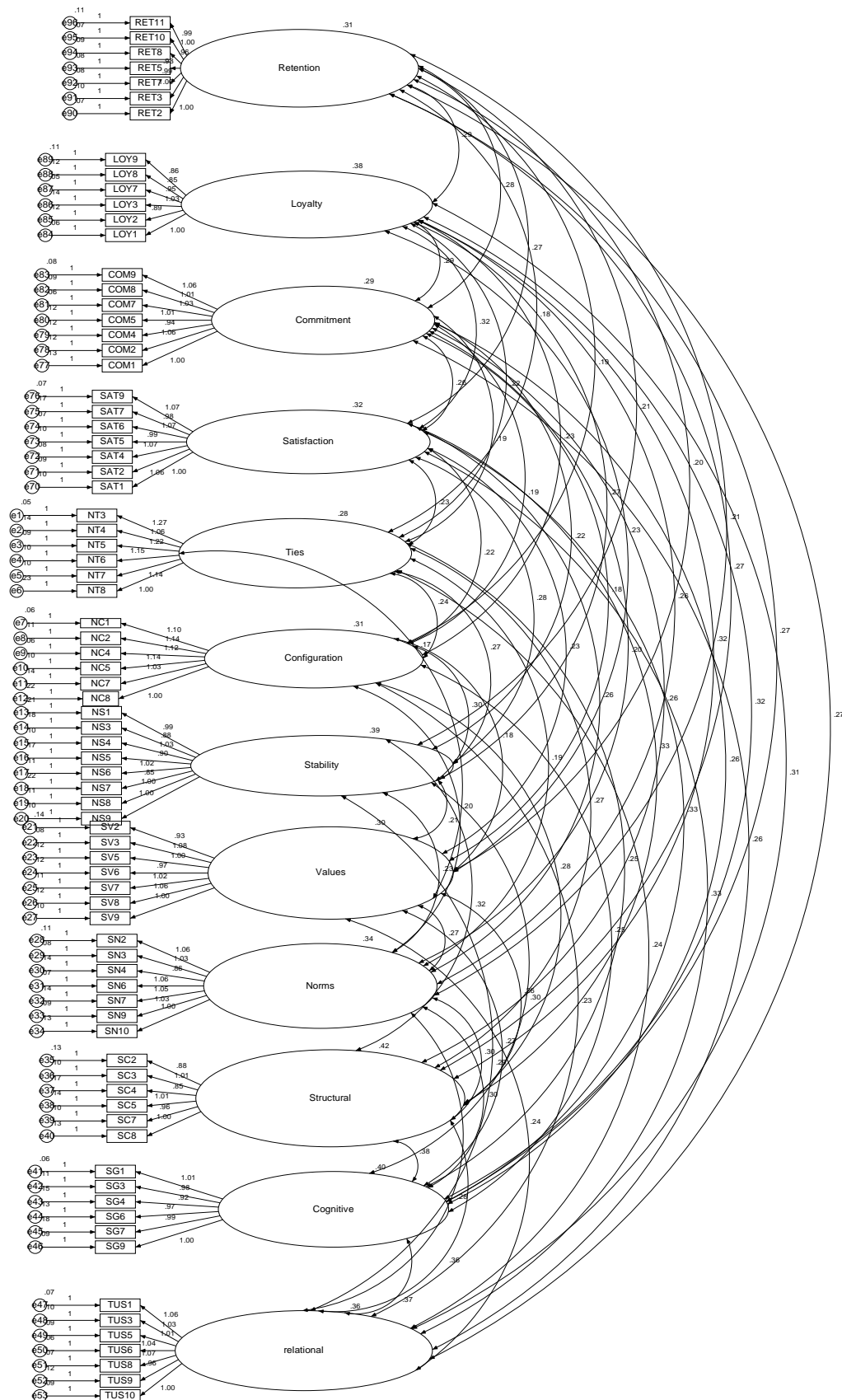
The results of the confirmatory procedure in Table 7-8, revealed the following fit-statistics: x^2/df = 1.79, GFI = 90, RMR = 0.016, CFI=0.93, NFI=0.91, PCFI = .84 and PNFI=0.74. Taken together, and given the complexity of the model, these statistics indicate an acceptable fit of the model (Avlonitis and Panagopoulos, 2005).

Table 7-8 Measurement model results: confirmatory factor analysis

Model		Obtained fit indices						
		AFM			IFM		PFM	
	x^2/df	GFI	RMR	CFI	NFI	PNFI	PCFI
Overall Model	1.79	.90	.016	.93	.92	.74	.84
		Suggested fit indices						
	≤ 5	≥ .90	≤ .05	≥ .90	≥ .90	> 0.5	> 0.5

Regarding to the complexity of the model, using full observed variables models rather full latent variable models and for more confirmation to the unidimensionality (convergent and discriminant validity) of research variables, we run separated CFA models for all research constructs (independent, mediating and dependent) as recommended by Eid (2007) and Carrington (2009). Therefore twelve separate CFA models were run (eight for independent variables, two for mediating and two for dependent variables).

7.3.2.1.1   CFA- Independent Variables

Based on EFA results for social capital as independent variable in section 7.3.3.1, we obtained three basic models. The first model is related to structural capital and its antecedents (network ties, network configuration and network stability). The second one reflects the cognitive dimension of social capital and its antecedents (shared values and shared norms). Finally, the third model represents the relational dimension and include only one deconstruct (trust). The next sub-sections present the findings of CFA models for social capital dimensions and their antecedents.

a. CFA- Results for Structural Capital Model

There are two aspects of model evaluation: an evaluation of the structural model and an evaluation of the measurement model. The structural model evaluation investigates the goodness of model fit. In evaluating the measurement model unidimensionality, convergent validity, average variance extracted and discriminant validity should be assessed.

I. Evaluating the structural model

Two evaluate the structural model of structural capital; four separate CFA models were run to assess the unidimensionality of structural capital and its antecedents (network ties, network configuration and network stability). Table 7-9 displays the fit indices for the four constructs. Based on Table 7-9, the network ties model reveals that the absolute fit measures are $(x^2/df = 3.7)$, (GFI= .95) and (RMR =.009) which meet the recommended cut-off values for model fit $(x^2/df \leq 5)$, (GFI $\geq$ .90) and (RMR $\leq$ .05). Regarding the incremental fit measures, (CFI=.98) and (NFI=.97) are exceeding the minimum criterion of 0.90. Finally, Parsimony Fit Measures also support the goodness of model fit, as (PNFI= 0.58) and (PCFI= 0.59) exceed the threshold of 0.5.

Table 7-9 Summary of model fit indices for structural capital

Model	Obtained fit indices						
	AFM			IFM		PFM	
	x^2/df	GFI	RMR	CFI	NFI	PNFI	PCFI
Network Ties	3.7	.95	.009	.98	.97	.58	.59
Network Configuration	5.4	.92	.010	.97	.96	.58	.58
Network Stability	4.3	.90	.016	.96	.94	.67	.68
Social Interactions	3.1	.96	0.01	.98	.97	.58	.59

As shown in Table 7-9, multiple indicators of model fit were used to assess the network configuration model. The first indicator x^2/df (5.4) was slightly more than the cut-off point of 5. Although the x^2/df index did not meet the threshold, the other absolute fit indices (GFI = 0.92 which is greater than threshold of 0.90 and RMR= 0.01 which is less than the minimum criterion of 0.05) met satisfactory results. Furthermore, CFI and NFI are greater than the recommended cutoff- value of 0.9. Moreover, PNFI and PCFI are above the threshold of 0.5. The selected indices for the structure model of network configuration with the expectation of x^2/df ratio fall within the accepted thresholds, indicating that the structural model lacks an adequate fit; however, the other fit statistics used in assessing a model, namely, goodness of fit and baseline comparison, indicate an acceptable fit and these are all above the recommended thresholds. Therefore, it was reasoned that the model fits the data reasonably well.

The structural model results for network stability indicated reasonable overall fits between the model and the observed data. As shown in Table 7-9, x^2/df (4.3), GFI (.90), RMR (.016), CFI (.96), NFI (.94), PNFI (.67) and PCFI (.68) indicate an acceptable fit as they all fit the required thresholds. Finally measures indicate a good overall fit of the

structural model to the data for the social interactions construct. The proportion between the chi-square value and degrees of freedom is within an acceptable range (x^2/df =3.1). GFI = 0.96 which exceeds the cut-off values. RMR is (0.01), which shows a good fit. All other relevant measures (CFI=0.98; NFI=0.97; PNFI=0.58; PCFI= 0.59) are also within an acceptable range. The findings of this model prove an acceptable level of fit.

II. Evaluating the Measurement Model

To evaluate the measurement model for the constructs of structural capital, convergent and discriminate validity should be assessed.

Convergent Validity

Convergent validity was assessed through four criteria. Firstly, factor loadings should be greater than 0.7. Secondly, construct reliability should exceed 0.7. Thirdly, average variance extracted (AVE) should be above the cutoff- value of 0.5. Fourthly, an item's coefficient should be more than twice its standard error. The standardised loadings of manifest variables onto construct and their error variances were checked to ascertain whether they meet the acceptable thresholds or not. The results are presented in four tables represented the four factors that constitute CFA structural capital model , each table highlighting a particular construct and its related items with their respective factor loading (FL), standard error (SE), critical ratio (CR) and variance extracted (R^2); and the associated error and its standard error and critical ratio. The following section displays the assessment convergent validity for structural capital constructs.

Network Ties

Table 7-10 highlights selected data from the AMOS output relating to the construct of network ties. These data were used to assess convergent validity for network construct.

Table 7-10 Selected AMOS output relating to Network Ties

	FL	Est.	SE	CR[***]	R^2	Err.	Est.	SE	CR[***]
NT3 ← NT	0.96	1.00			0.92	e1	0.041	0.007	5.65[**]
NT4 ← NT	0.83	.82	0.045	18.4[***]	0.69	e2	0.147	0.016	9.18[***]
NT5 ← NT	0.91	.96	0.038	25.1[***]	0.83	e3	0.086	0.011	8.04[***]
NT6 ← NT	0.88	.89	0.040	22.3[***]	0.78	e4	0.105	0.012	8.63[***]
NT7 ← NT	0.89	.89	0.039	22.7[***]	0.79	e5	0.099	0.012	8.54[***]
NT8 ← NT	0.74	.77	0.054	14.4[***]	0.55	e6	0.231	0.024	9.54[***]

-FL-Factor loading[13], SE- standard error, CR -Critical Ratio, *** P<0.001

According to Table 7-10, all the error variances are positive so there is no identification problem related to negative variances. With respect to convergent validity, it was assessed through four criteria. Firstly, factor loadings for network ties items are significant at the 0.001 level and ranged from 0.74 to 0.96, all exceeding the minimum criterion of 0.7. Secondly, construct reliability [14] (CR) for network ties is 0.97, which is above the cut-off value 0.7. Thirdly, AVE[15] for the network ties construct is 0.76, which exceeds the minimum threshold of 0.5. Finally, examining estimated standardised coefficients and standard errors reveals NT4 (.82 and .045), NT5 (.91 and .038), NT6 (.88 and .04), NT7 (.89 and .039) and NT8 (.77 and .054), thus indicating that their estimated pattern coefficients exceeded more than fourteen times the standard error. The indicator NT3 was fixed at a coefficient weight of 1.00 in order to identify the model; hence no standard error was estimated. It can therefore be argued using Anderson and Gerbing's (1988) criterion that this construct shows convergent validity.

Network Configuration

Table 7-11 displays selected data from the AMOS output relating to the construct of network configuration.

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[13] FL= Standardised Regression Weights or the square root of Squared Multiple Correlations in AMOS outputs.

[14] CR= $\dfrac{(\text{Squared sum Factor loadings for construct items})}{(\text{Squared sum Factor loadings for construct items}) + (\text{Sum of the estemation error variance for a construct})}$

[15] Average variance extracted (AVE) = $\dfrac{\text{Sum factor loadings for construct items}}{\text{Number ofconstruct items}}$

Table 7-11 Selected AMOS output relating to Network Configuration

	FL	Est.	SE	CR***	R^2	Err.	Est.	SE	CR***
NC1 ← NC	0.92	1.00			0.85	e1	0.066	0.009	7.28***
NC2 ← NC	0.89	1.035	0.051	20.3***	0.80	e2	0.109	0.013	8.30***
NC4 ← NC	0.93	1.021	0.043	23.8***	0.86	e3	0.057	0.009	6.68***
NC5 ← NC	0.90	1.043	0.050	21.3***	0.81	e4	0.094	0.012	7.80***
NC7 ← NC	0.84	.943	0.053	17.7***	0.71	e5	0.138	0.016	8.81***
NC8 ← NC	0.76	.909	0.063	14.4***	0.58	e6	0.226	0.024	9.42***

*** P<0.001.

Based on Table 7-11, all the error variances are positive so there is no identification problem related to negative variances. The indicator NC1 has a fixed regression weight of 1.00 resulting in no associated standard error or critical ratio. The critical ratios associated with the other indicators are all significant at the 0.001 level. With respect to the four criteria for assessing convergent validity, all of them are achieved at a satisfactory level. Firstly, the loadings of the indicators for network configuration are appropriate as they all exceed 0.5. Secondly, construct reliability (CR) for network ties is 0.98, which is above the cut-off value 0.7. Thirdly, AVE for network configuration is 0.77, exceeding the minimum threshold of 0.5. Finally, estimated standardised coefficients and respective standard errors for indicators are: (NC2; .1.035, .051), (NC4; 1.021, .043), (NC5; 1.043, .05), (NC7; .94, .053) and (NC8; .91, .063) thus confirming that their estimated pattern coefficient exceeds more than fourteen times the standard error. Based on the previous results, the network configuration construct exhibits adequate convergent validity.

Network Stability

Selected information from the AMOS output relating to the third construct of structural capital is presented in Table 7-12. In this indicator NS1 had a fixed coefficient weight of 1.00; hence, no standard error was estimated. All the error variances are positive so there is no identification problem related to negative variances. The critical errors associated with the factor loadings and error terms are all significant at the 0.001 level.

Table 7-12 Selected AMOS output relating to Network stability

	FL	Est.	SE	CR***	R^2	Err.	Est.	SE	CR***
NS1 ← NS	.80	1.00			.64	e1	0. 213	. 023	9.131***
NS3 ← NS	.79	.889	.07	12.7***	.64	e2	0. 182	. 020	9.212***
NS4 ← NS	.89	1.038	.069	15.1***	.79	e3	0. 107	. 013	8.106***
NS5 ← NS	.80	.911	.07	13.03***	.65	e4	0. 172	. 019	9.140***
NS6 ← NS	.90	1.042	.068	15.2***	.81	e5	0. 101	. 012	8.065***
NS7 ← NS	.75	.859	.073	11.8***	.56	e6	0. 224	. 024	9.406***
NS8 ← NS	.89	1.020	.068	15.1***	.79	e7	0.103	.013	8.024***
NS9 ← NS	.90	1.013	.067	15.2***	.81	e8	0.096	.012	7.941***

*** $P<0.001$.

The loadings for the indicators for the network stability construct are appropriate as they all exceed 0.5. Construct reliability for the network stability factor is 0.97, which exceeds the threshold of 0.7. AVE for network stability is 0.71 which exceeds the recommended cut-off value. The estimated standardised coefficients and respective standard errors for indicators are (NS3; .889, .07), (NS4; 1.038, .069), (NS5; .911, .07), (NS6; 1.042, .068), (NS7; .859, .073), (NS8; 1.02, .068) and (NS9; 1.013, .067); thus their estimated pattern coefficients exceed more than twelve times than their standard errors (the ratio should be ≥ 2). Therefore the results of factor loading, construct reliability, AVE and the ratio between estimated coefficients and their standard errors indicate adequate construct validity.

Social Interactions

Social interactions as the fourth construct in the structural capital model shows satisfactory convergent validity among its indicators, as shown in Table 7-13. SC2 item has a fixed coefficient weight of 1.00 so no standard error was estimated. All the error variances are positive so there is no identification problem related to negative variances. The critical errors associated with the factor loadings and error terms are all significant at the 0.001 level. The loadings for the indicators of social interactions construct are appropriate as they all exceed 0.5. Construct reliability for the network stability factor is 0.97, which is above the cut-off value 0.7. AVE for network stability is 0.74, which meets a satisfactory level. The estimated standardised coefficients and respective standard errors for indicators are (SC3; 1.148, .069), (SC4; 0.970, 07), (SC5; 1.158, .073), (SC7; 1.104, .066) and (SC8; 1.138, .072), thus indicating that their

estimated pattern coefficients are more than thirteen times their standard errors. Therefore the requirements for satisfactory convergent validity are achieved.

Table 7-13 Selected AMOS output relating to social interactions

	FL	Est.	SE	CR***	R^2	Err.	Est.	SE	CR***
SC2 ← SC	.84	1.00			.71	e1	.132	.015	8.647***
SC3 ← SC	.90	1.148	.069	16.717***	. 81	e2	.105	.014	7.744***
SC4 ← SC	.80	0.970	.070	13.843***	. 64	e3	.170	.019	9.014***
SC5 ← SC	.87	1.158	.073	15.797***	.75	e4	.143	.017	8.314***
SC7 ← SC	.89	1.104	.066	16.665***	.80	e5	.099	.013	7.783***
SC8 ← SC	.87	1.138	.072	15.835***	.75	e6	.136	.016	8.295***

*** $P<0.001$.

Discriminate Validity

Correlation matrix and square root of AVE were used to assess the discriminant validity of constructs. To meet the requirements for satisfactory discriminant validity, the square root of AVE of each construct should be higher than the correlations between any combinations among any two pairs of constructs in the model as recommended by Fomell and Larcker (1981). This indicates that each construct should share more variance with its items than it shares with other constructs. Before we start in assessing discriminant validity for research constructs, Table 7-14 showed the correlation matrix among these constructs.

Table 7-14 Correlation matrix for research variables

Var.	NT	NC	NS	SC	SV	SN	CC	RC	SAT	COM	LOY	RET
NT	1.00											
NC	.78**	1.00										
NS	.79**	.82**	1.00									
SC	.73**	.70**	.66**	1.00								
SV	.59**	.56**	.56**	.61**	1.00							
SN	.62**	.58**	.60**	.65**	.82**	1.00						
CC	.61**	.57**	.57**	.75**	.62**	.75**	1.00					
RC	.51**	.48**	.47**	.71**	.53**	.56**	.75**	1.00				
SAT	.60**	.57**	.55**	.73**	.63**	.66**	.78**	.77**	1.00			
COM	.49**	.46**	.45**	.67**	.51**	.54**	.72**	.63**	.82**	1.00		
LOY	.52**	.48**	.48**	.72**	.55**	.58**	.76**	.67**	.80**	.79**	1.00	
RET	.48**	.44**	.44**	.66**	.50**	.52**	.70**	.62**	.79**	.74**	.82**	1.00

** Correlation is significant at the 0.01 level (2-tailed).
* NT= network ties, NC= network configuration, NS= network stability, SC social interaction, SV= shared values, SN=shared norms, CC= cognitive capital, RC= relational capital, SAT= customer satisfaction, COM= customer commitment, LOY=: customer loyalty and RET= customer retention.

Table 7-15 illustrates that the square root of the average variance extracted (AVE) for network ties, network configuration, network stability and social interactions are greater than any correlation between any combinations among any two pairs of those constructs. As shown in Table 7-15, this requirement was met for the network ties, network configuration, network stability and social interaction constructs examined in this study, thereby confirming the discriminant validity of those four constructs.

For example, in assessing discriminant validity between NT and NC, the square roots of the average variance extracted from these two constructs are 0.87 and 0.88 and the correlation estimate is 0.78, indicating discriminant validity. In the assessment of discriminant validity between NC and NS, the square roots of the average variance extracted for both of them are 0.88 and .84 respectively, with a correlation estimate between them of 0.82, indicating satisfactory discriminant validity. All other assessments between any two pair of constructs revealed that the square root of the average variance extracted for each construct was higher than the correlation estimated between those constructs, supporting discriminant validity. Moreover, the alpha coefficients for NT, NC, NS, and SC (which ranged from 0.94 to 0.95) are greater than their correlation coefficients (ranging from 0.44 to 0.82) and other correlations with any pair of the other constructs in the current study confirmed that discriminant validity is supported for all constructs as recommended by Gaski (1984) and Eisingerich and Bell (2007).

Table 7-15 Composite Cronbach alphas, correlation matrix and average variance extracted (AVE) for structural capital factors and other research variables

Var.	α	AVE	NT[*]	NC[*]	NS[*]	SC[*]
NT	.94	0.76	**0.87**			
NC	.94	0.77	.78[**]	**0.88**		
NS	.95	0.71	.79[**]	.82[**]	**0.84**	
SC	.95	0.74	.73[**]	.70[**]	.66[**]	**0.86**
SV	.95	0.75	.59[**]	.56[**]	.56[**]	.61[**]
SN	.95	0.76	.62[**]	.58[**]	.60[**]	.65[**]
CC	.96	0.77	.61[**]	.57[**]	.57[**]	.75[**]
RC	.97	0.82	.51[**]	.48[**]	.47[**]	.71[**]
SAT	.96	0.78	.60[**]	.57[**]	.55[**]	.73[**]
COM	.95	0.75	.49[**]	.46[**]	.45[**]	.67[**]
LOY	.95	0.76	.52[**]	.48[**]	.48[**]	.72[**]
RET	.96	0.78	.48[**]	.44[**]	.44[**]	.66[**]

* *Correlation is significant at the 0.01 level (2-tailed), α= Composite Cronbach *Alpha.*

-Diagonal elements (in bold) are the square root of the average variance extracted (AVE). Off-diagonal elements are the correlations among constructs. For discriminant validity, diagonal elements should be larger than off-diagonal elements.
[*] *NT, NC, NS and SC represent structural capital and its dimensions*

b. CFA- Results for Cognitive Capital Model

In evaluating the measurement model for cognitive capital the constructs of shared values; shared norms and shared goals were also assessed on the basis of goodness of model fit, convergent validity and discriminant validity.

I. Evaluating the Structural Model

Like structural capital, we conduct three unidimensional CFA models for the structural model of cognitive capital and its antecedents. Table 7-16 displays summary for model fit indices for cognitive capital constructs. As shown in Table 7-16, multiple indicators of model fit were used to assess the cognitive capital model. The requirements for adequate model fit were achieved for all the three CFA models within cognitive capital structure. The structural model results for shared values indicated a reasonable overall fit between model and its observed data. As shown in Table 7-15, x^2/df (4.8), GFI (.91), RMR (.013), CFI (.96), NFI (.95), PNFI (.63) and PCFI (.64) indicate an acceptable fit, as they all are above the required thresholds. The structural model for shared norms also provides satisfactory results for model fit. All fit measurements showed acceptable overall fits between the model and the observed data. The x^2/df (2.47), GFI (.95), RMR (.01), CFI (.99), NFI (.98), PNFI (.65) and PCFI (.66) fall within the accepted thresholds, indicating that the structural model achieved adequate fit. Finally, shared goals model met the accepted requirements for model fit. All fit indices are satisfactory: (x^2/df; 2.47, GFI; .95, RMR; 0.01, CFI; 0.99, NFI; 0.98, PNFI; 0.65 and PCFI; 0.66) all fall within the recommended thresholds. Therefore, it was reasoned that the three models fit the data reasonably well.

Table 7-16 Summary for model fit indices for cognitive capital constructs

Model	Obtained fit indices						
	AFM			IFM		PFM	
	x^2/df	GFI	RMR	CFI	NFI	PNFI	PCFI
Shared values	4.8	0.91	.013	0.96	0.95	.63	.64
Shared norms	2.47	0.95	.010	0.99	0.98	.65	.66
Shared goals	3	0.96	.008	0.98	0.98	.59	.59

II. Evaluating the Measurement Model

This evaluation focuses on assessing both convergent validity and discriminant validity for cognitive capital and its antecedents.

Convergent Validity

In this section the assessment for the convergent validity of the constructs that constitute cognitive capital model was presented The results are presented in three tables, represented the three factors that constitute the cognitive capital model, each table highlighting a particular construct and its related items with their respective factor loading (FL), standard error (SE), critical ratio (CR) and variance extracted (R^2); and the associated error and its standard error and critical ratio.

Shared Values

Table 7-16 highlights selected data from the AMOS output relating to the construct of shared values. These data were used to assess the convergent validity of the shared values construct. According to Table 7-17, all the error variances for shared values indicators are positive so there is no identification problem related to negative variances. All four criteria that the current study adopted to assess convergent validity are achieved. Firstly, factor loadings for shared values items are significant at the 0.001 level and range from 0.81 to 0.89, all exceeding the minimum criterion of 0.7. Secondly, construct reliability for shared values is 0.88, which is above the cut-off value 0.7. Thirdly, AVE for shared values is 0.75, exceeding the minimum threshold of 0.5. Finally, examining estimated standardised coefficients and standard errors revealed that SV3 (1.151 and .074), SV5 (1.081and .075), SV6 (1.042 and .074), SV7 (1.093 and .075), SV8 (1.145 and .078) and SV9 (1.081 and .072) thus indicating that their estimated pattern coefficient exceeded more than fourteen times the standard error (the ratio should be ≥ 2). The indicator SV2 was fixed at a coefficient weight of 1.00 in order to identify the model; hence no standard error was estimated. It can therefore be argued that this construct shows convergent validity.

Table 7-17 Selected AMOS output relating to shared values

	FL	Est.	SE	CR***	R²	Err.	Est.	SE	CR***
SV2 ← SV	.81	1.000			.71	e1	.135	.015	9.015***
SV3 ← SV	.89	1.151	.074	15.525***	.80	e2	.088	.011	7.977***
SV5 ← SV	.85	1.081	.075	14.499***	.64	e3	.113	.013	8.617***
SV6 ← SV	.84	1.042	.074	14.040***	.75	e4	.122	.014	8.813***
SV7 ← SV	.86	1.093	.075	14.561***	.80	e5	.113	.013	8.588***
SV8 ← SV	.86	1.145	.078	14.668***	.75	e6	.120	.014	8.534***
SV9 ← SV	.88	1.081	.072	15.044	.78	e7	.093	.011	8.322***

*** P<0.001.

Shared Norms

The indicators of shared norms supported its convergent validity. The evidence is derived from Table 7-18, which presents selected AMOS output relating to the construct of shared norms. In this indicator SN2 had a fixed coefficient weight of 1.00; hence, no standard error was estimated. All the error variances are positive so there is no identification problem related to negative variances. The critical errors associated with the factor loadings and error terms are all significant at the 0.001 level. The loadings for the indicators for the shared norms construct are appropriate as they all exceeded 0.5. Construct reliability for shared norms factor is 0.89, which exceeds the threshold of 0.7. AVE for shared norms is also 0.77 which is above the cut-off value of 0.5. Moreover, the estimated standardised coefficients and respective standard errors for indicators are:(SN3; .966, .050), (SN4; .809, .054), (SN6; 1.012, .049), (SN7; .981, .059) and (SN9; .97, .05), (SN10; .94, .056), thus indicating that their estimated pattern coefficients exceeds by more than fourteen times their standard errors(the ratio should be ≥ 2). Therefore the requirements for satisfactory convergent validity are achieved.

Table 7-18 Selected AMOS output relating to shared norms

	FL	Est.	SE	CR***	R²	Err.	Est.	SE	CR***
SN2 ← SN	.88	1.000			.77	e1	.105	.012	8.503***
SN3 ← SN	.90	.966	.050	19.241***	.81	e2	.081	.010	8.177***
SN4 ← SN	.80	.809	.054	14.864***	.64	e3	.142	.015	9.243***
SN6 ← SN	.93	1.012	.049	20.622***	.86	e4	.065	.009	7.450***
SN7 ← SN	.84	.981	.059	16.572***	.71	e5	.148	.017	8.922***
SN9 ← SN	.89	.968	.052	18.785***	.79	e6	.090	.011	8.382***
SN10 ← SN	.85	.943	.056	16.761***	.72	e7	.131	.015	8.919***

*** P<0.001.

Shared Goals

Shared goals as the third construct in the structural capital model prove satisfactory convergent validity among its indicators as shown in Table 7-19. SG1 item had a fixed coefficient weight of 1.00 so no standard error was estimated. All the error variances are positive so there is no identification problem related to negative variances. The critical errors associated with the factor loadings and error terms are all significant at the 0.001 level. The loadings for the indicators for shared goals construct are appropriate as they all exceed 0.5. Construct reliability for the shared goals factor is 0.88, which is above the cut-off value of 0.7. AVE for shared goals is 0.76, which exceeds the recommended threshold of 0.5. Moreover, the estimated standardised coefficients and respective standard errors for indicators are (SG3; .976, .047), (SG4; .915, .051), (SG6; .981, .049), (SG7; .967, .058) and (SG7; .998, .045), thus representing that their estimated pattern coefficients exceed by more than sixteen times their standard errors (the ratio should be ≥ 2). Therefore the requirements for adequate convergent validity are attained. Since the indicators for cognitive capital constructs meet the requirements of convergent validity, we go on to assess the discriminant validity of those factors.

Table 7-19 Selected AMOS output relating to cognitive capital

	FL	Est.	SE	CR***	R^2	Err.	Est.	SE	CR***
SG1 ← CC	.94	1.00			.87	e1	.059	.009	6.807***
SG3 ← CC	.88	.976	.047	20.721***	.78	e2	.109	.013	8.362***
SG4 ← CC	.83	.915	.051	17.846***	.70	e3	.148	.017	8.953***
SG6 ← CC	.87	.981	.049	19.997***	.78	e4	.122	.014	8.538***
SG7 ← CC	.81	.967	.058	16.733***	.67	e5	.196	.022	9.121***
SG9 ← CC	.90	.998	.045	22.089***	.81	e6	.092	.012	7.962***

*** P<0.001.

Discriminant Validity

Based on Table 7-20, diagonal elements (in bold) are the square roots of the average variance extracted (AVE). Off-diagonal elements are the correlations among constructs. All values of diagonal elements are greater than the off- diagonal elements, so supporting discriminant validity. For example, in assessing discriminant validity between SV t and SN, the square roots of the average variance extracted from these two

constructs are 0.86 and 0.87 and the correlation estimate between them is 0.82, which confirm discriminant validity.

Table 7-20 Correlation matrix and average variance extracted (AVE) for cognitive capital factors and other research factors

Var.	α	AV	NT	NC	NS	SC	SV*	SN*	CC*
NT	.94	0.76	**0.87**						
NC	.94	0.77	.78**	**0.88**					
NS	.95	0.71	.79**	.82**	**0.84**				
SC	.95	0.74	.73**	.70**	.66**	**0.86**			
SV	.95	0.75	.59**	.56**	.56**	.61**	**0.86**		
SN	.95	0.76	.62**	.58**	.60**	.65**	.82**	**0.87**	
CC	.96	0.77	.61**	.57**	.57**	.75**	.62**	.75**	**0.88**
RC	.97	0.82	.51**	.48**	.47**	.71**	.53**	.56**	.75**
SAT	.96	0.78	.60**	.57**	.55**	.73**	.63**	.66**	.78**
COM	.95	0.75	.49**	.46**	.45**	.67**	.51**	.54**	.72**
LOY	.95	0.76	.52**	.48**	.48**	.72**	.55**	.58**	.76**
RET	.96	0.78	.48**	.44**	.44**	.66**	.50**	.52**	.70**

Correlation is significant at the 0.01 level (2-tailed).

*SV, SN, CC represent cognitive capital and its dimensions

Moreover, with respect to discriminant validity assessment for SV and CC, the square roots of the average variance extracted for both constructs are 0.86 and 0.88 respectively, with the correlation estimate between them being 0.62, indicating discriminant validity. All assessments between any other two constructs showed square roots of the average variance extracted higher than the correlation estimated between those constructs. Moreover, the alpha coefficients for SV, SN and CC, which range from 0.95 to 0.96, are greater than their correlation coefficients that ranged from 0.59 to 0.83 confirming that discriminant validity is supported for all constructs.

c. CFA- results for Relational Capital Model

I. Evaluating the structural Model

The relational capital model presented one factor; trust. In evaluating the measurement model for relational capital the constructs of trust is evaluated on the basis of goodness of model fit, convergent validity and discriminant validity. The structural model results for trust indicated reasonable overall fits that reflect the fitness of observed data to the research model and give strong validity for the results.

Table 7-21 Summary of model fit indices for relational capital

Model	Obtained fit indices						
	AFM			IFM		PFM	
	x^2/df	GFI	RMR	CFI	NFI	PNFI	PCFI
Relational capital	2.67	0.95	0.007	0.99	0.98	.65	.66

As shown in Table 7-21, all fit measurements demonstrate acceptable overall fits between the model and the observed data. The x^2/df (2.67), GFI (.95), RMR (.007), CFI (.99), NFI (.98), PNFI (.65) and PCFI (.66) fall within the accepted thresholds, indicating that the structural model achieved adequate fit. With respect to convergent validity, the results are presenting in one table represented the only factor that constitutes the relational capital model. Table 7-22 highlights selected data from the AMOS output relating to the construct of trust. These data are used to assess convergent validity. According to Table 7-21, all the error variances for trust indicators are positive so there is no identification problem related to negative variances.

Table 7-22 Selected AMOS output relating to relational capital

	FL	Est.	SE	CR***	R^2	Err	Est.	SE	CR***
TUS1 ← RC	.93	1.00			.87	e1	.063	.008	8.031***
TUS3 ← RC	.88	.954	.047	20.453***	.77	e2	.114	.013	9.018***
TUS5 ← RC	.90	.954	.043	22.357***	.81	e3	.086	.010	8.689***
TUS6 ← RC	.92	.970	.041	23.849***	.85	e4	.071	.008	8.344***
TUS8 ← RC	.94	1.01	.040	25.391***	.88	e5	.059	.008	7.865***
TUS9 ← RC	.85	.887	.047	19.008***	.73	e6	.122	.013	9.210***
TUS10 ←RC	.90	.945	.042	22.342***	.81	e 7	.084	.010	8.692

*** P<0.001.

All four criteria that the current study adopted to assess convergent validity are achieved. Firstly, factor loadings for shared values items are significant at the 0.001 level and range from 0.85 to 0.94, all exceeding the minimum criterion of 0.7. Secondly, construct reliability for shared values is 0.91, which is above the cut-off value 0.7. Thirdly, AVE for trust is 0.82 which exceeded the minimum threshold of 0.5. Finally, examining estimated standardised coefficients and standard errors revealed that TUS3 (.954 and .047), TUS5 (.954 and .043), TUS6 (.970and .041), TUS8 (1.01 and .04), TUS9 (.887 and .047) and TUS10 (.945 and .042), indicating that the estimated pattern coefficient for indicators exceeded more than nineteen times their standard errors (the ratio should be ≥ 2). The indicator TUS1 was fixed at a coefficient weight of 1.00 in

order to identify the model; hence no standard error was estimated. It can therefore be argued that this construct showed convergent validity.

Regarding discriminant validity, Table 7-23 displays the correlation matrix for the research variables and average variance extracted (AVE) for relational capital factors. The AVE value for the trust construct is greater than any correlations between this construct and any other construct in this study, thus indicating an adequate level of discriminant validity for the trust construct. In assessing discriminant validity between RC and SC, the square roots of the average variance extracted were 0.90 and 0.86 and the correlation estimate was 0.73 which supported discriminant validity. In the assessment of RC and CC, the square roots of the average variance extracted are 0.90 and 0.88 respectively with correlation estimate between the constructs being 0.75, supporting discriminant validity.

Table 7-23 Correlation matrix and average variance extracted (AVE) for Relational capital and other research factors variables

Var.	α	AV	NT	NC	NS	SC	SV	SN	CC	RC*
NT	.94	0.76	**0.87**							
NC	.94	0.77	.78**	**0.88**						
NS	.95	0.71	.79**	.82**	**0.84**					
SC	.95	0.74	.73**	.70**	.66**	**0.86**				
SV	.95	0.75	.59**	.56**	.56**	.61**	**0.86**			
SN	.95	0.76	.62**	.58**	.60**	.65**	.82**	**0.87**		
CC	.96	0.77	.61**	.57**	.57**	.75**	.62**	.75**	**0.88**	
RC	.97	0.82	.51**	.48*	.47**	.71**	.53**	.56**	.75**	**0.90**
SAT	.96	0.78	.60**	.57**	.55**	.73**	.63**	.66**	.78**	.77**
COM	.95	0.75	.49**	.46**	.45**	.67**	.51**	.54**	.72**	.63**
LOY	.95	0.76	.52**	.48**	.48**	.72**	.55**	.58**	.76**	.67**
RET	.96	0.78	.48**	.44**	.44**	.66**	.50**	.52**	.70**	.62**

** Correlation is significant at the 0.01 level (2-tailed).

* (RC*) Relational capital factors.

Moreover, the composite alpha coefficient for RC is 0.97, which is greater than the correlation coefficients, which ranged from 0.44 to 0.82, and other correlations with any other constructs in this study confirmed that discriminant validity is supported for the trust construct.

7.3.2.1.2   CFA- Mediating variables

Based on the results of the EFA model for the perceived value that managers expect as a result of adopting social capital within the organisation, there are two constructs

representing the perceived value: customer satisfaction and customer commitment. The two constructs are tested using two separate CFA models to assess their unidimensionality, convergent validity and discriminant validity. Therefore, the following section illustrates the results of the CFA models for customer satisfaction and customer commitment separately.

I. Evaluating the structural model

The structural model for customer satisfaction shows satisfactory results for model fit as shown in Table 7-25. All fit measurements confirm acceptable overall fits between the model and the observed data. The x^2/df (2.4), GFI (0.95), RMR (0.007), CFI (0.99), NFI (0.98), PNFI (0.65) and PCFI (0.66) fall within the accepted thresholds indicate that the structural model achieved adequate fit. Moreover, customer commitment showed adequate results for model fit. The customer commitment model revealed that the absolute fit measures are (x2/df = 3.9), (GFI= .93) and (RMR =.011), which meet the recommended cut-off values for model fit ((x2/df ≤ 5), (GFI ≥ .90) and (RMR ≤ 0.05).

Table 7-24 Summary of model fit indices for perceived values

Model	Obtained fit indices						
	AFM			IFM		PFM	
	x^2/df	GFI	RMR	CFI	NFI	PNFI	PCFI
Customer satisfaction	2.4	0.95	0.007	0.99	0.98	0.65	0.66
Customer commitment	3.9	0.93	0.011	0.97	0.96	0.64	0.65

Regarding the incremental fit measures, (CFI=.97) and (NFI=.96) exceed the minimum criterion of 0.90. Finally, Parsimony Fit Measures also support the goodness of model fit as (PNFI=.64) and (PCFI=.65) exceed the threshold of .5. Therefore, the obtained results of model fit indices for the factors of perceived value (customer satisfaction and customer commitment) confirmed an acceptable level of goodness of model fit.

II. Evaluating the Measurement Model

Convergent Validity

In this section we display the assessment of the convergent validity for the constructs that constitute perceived value model. The results are presented in two tables representing the two factors that constitute the perceived value model.

Customer Satisfaction

Table 7-26 highlights selected data from the AMOS output relating to the construct of customer satisfaction. These data are used to assess the convergent validity of customer satisfaction. According to Table 7-26, all the error variances for construct indicators are positive so there is no identification problem related to negative variances. All four criteria that the current study adopted to assess convergent validity are met. Firstly, factor loadings for items are significant at the 0.001 level and range from 0.80 to 0.92, all exceeding the minimum criterion of 0.7.

Table 7-25 Selected AMOS output relating to customer satisfaction

	FL	Est.	SE	CR***	R^2	Err.	Est.	SE	CR***
SAT1 ← SAT	.88	1.00			.77	e1	.101	.011	8.78***
SAT2 ← SAT	.89	1.05	.057	18.28***	. 80	e2	.095	.011	8.57***
SAT4 ← SAT	.91	1.06	.055	19.38***	. 83	e3	.075	.009	8.11***
SAT5 ← SAT	.86	.97	.057	17.13***	.75	e4	.106	.012	8.91***
SAT6 ← SAT	.91	1.06	.055	19.24***	.83	e5	.076	.009	8.18***
SAT7 ← SAT	.80	.978	.066	14.912***	.64	e6	.174	.019	9.329***
SAT9 ← SAT	.92	1.06	.054	19.655***	.84	e7	.069	.009	7.959***

*** P<0.001.

Secondly, construct reliability for customer satisfaction is 0.90 which is above the cut-off value 0.7. Thirdly, AVE for customer satisfaction factor is 0.78, exceeding the minimum threshold of 0.5. Finally, examining estimated standardised coefficients and standard errors revealed that SAT2 (1.050and .057), SAT4 (1.069 and .055), SAT5 (.971and .057), SAT6 (1.061and .055), SAT7 (.978 and .066) and SAT9 (1.068 and .054) thus indicating that their estimated pattern coefficient is more than fourteen times the standard error. The indicator SAT1 was fixed at a coefficient weight of 1.00 in order to identify the model; hence no standard error was estimated. It can therefore be argued that this construct shows convergent validity.

Customer Commitment

Table 7-26 presents selected AMOS output relating to assessment of the convergent validity of the customer commitment construct. In this indicator COM1 has a fixed coefficient weight of 1.00 hence no standard error was estimated. There is no identification problem related to negative variances, as all the error variances are

positive. The critical errors associated with the factor loadings and error terms are all significant at the 0.001 level. The loadings for the indicators for customer commitment construct are appropriate as they all exceed 0.83 rather than 0.5 as recommending in the literature. Construct reliability for the customer commitment factor is 0.89, exceeding the threshold of 0.7. AVE for customer commitment is 0.75 which is above the cut-off value of 0.5.

Table 7-26 Selected AMOS output relating to customer commitment

	FL	Est.	SE	CR***	R^2	Err.	Est.	SE	CR***
COM1 ← COM	.83	1.000			.68	e1	.133	.015	9.04***
COM2 ← COM	.85	1.056	.071	14.83***	. 71	e2	.128	.014	8.88***
COM4 ← COM	.84	0.956	.066	14.56***	. 70	e3	.114	.013	8.97***
COM5 ← COM	.84	1.010	.069	14.68***	.71	e4	.122	.014	8.93***
COM7 ← COM	.92	1.035	.061	17.02***	.84	e5	.058	.008	7.61***
COM8 ← COM	.89	1.022	.064	16.01***	.78	e6	.082	.010	8.37***
COM 9 ← COM	.90	1.071	.065	16.51	.81	e7	.076	.009	8.05***

*** P<0.001.

Moreover, the estimated standardised coefficients and respective standard errors for indicators (COM2; 1.056, .071), (COM4; .956, .066), (COM5; 1.01, .069), (COM7; 1.035, .061) and (COM8; 1.022, .064), (COM9; 1.07, .065) indicate that their estimated pattern coefficients are more than fourteen times their standard errors (the ratio should be ≥ 2). Therefore the requirements for satisfactory convergent validity are achieved.

Discriminant Validity

Regarding to the discriminant validity for both satisfaction and commitment constructs we assessed alpha coefficients, correlation coefficients and square root of average variance extracted. Based on Table 7- 27, the square root for AVEs for satisfaction and commitment range from 0.87 to 0.88, greater than their correlation coefficient (0.82) and their correlations with other constructs which ranged from 0.44 to 0.82, confirming that discriminant validity was supported for all constructs.

Table 7-27 Correlation matrix and (AVE) for perceived value constructs (satisfaction and commitment) and other research factors variables

Var.	α	AV	NT	NC	NS	SC	SV	SN	CC	RC	SAT*	COM*
NT	.94	0.76	**0.87**									
NC	.94	0.77	.78**	**0.88**								
NS	.95	0.71	.79**	.82**	**0.84**							
SC	.95	0.74	.73**	.70**	.66**	**0.86**						
SV	.95	0.75	.59**	.56**	.56**	.61**	**0.86**					
SN	.95	0.76	.62**	.58**	.60**	.65**	.82**	**0.87**				
CC	.96	0.77	.61**	.57**	.57**	.75**	.62**	.75**	**0.88**			
RC	.97	0.82	.51**	.48**	.47**	.71**	.53**	.56**	.75**	**0.90**		
SAT	.96	0.78	.60**	.57**	.55**	.73**	.63**	.66**	.78**	.77**	**0.88**	
COM	.95	0.75	.49**	.46**	.45**	.67**	.51**	.54**	.72**	.63**	.82**	**0.87**
LOY	.95	0.76	.52**	.48**	.48**	.72**	.55**	.58**	.76**	.67**	.80**	.79**
RET	.96	0.78	.48**	.44**	.44**	.66**	.50**	.52**	.70**	.62**	.79**	.74**

** Correlation is significant at the 0.01 level (2-tailed).

*SAT =satisfaction, COM= commitment.

In addition, composite alpha coefficients for SAT and COM are 0.96 and 0.95 respectively, which are greater than their correlation coefficients that ranged from 0.44 to 0.82, confirming that discriminant validity is supported for all constructs.

7.3.2.1.3   CFA- Dependent Variables

The theoretical foundations for our model suggest that CRM performance (loyalty and retention) represent the dependent variables for our study.

CFA- Results for CRM Performance Model

In evaluating the measurement model for CRM performance, the constructs of customer loyalty and customer retention are assessed on the basis of goodness of model fit, convergent validity and discriminant validity.

I. Evaluating the Structural Model

As shown in Table 7-28, multiple indicators of model fit were used to assess the CRM performance model. The requirements for adequate model fit are reached for all the two CFA models within CRM performance structure. The structural model results for customer loyalty indicated reasonable overall fits between the model and the observed data. As shown in Table 7-29, x^2/df (2.6), GFI (0.96), RMR (0.008), CFI (0.99), NFI (0.98), PNFI (0.58) and PCFI (0.59) indicate an acceptable fit, as they are all above the required thresholds.

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Table 7-28 Summary of model fit indices for CRM performance constructs

Model	Obtained fit indices						
	AFM			IFM		PFM	
	x^2/df	GFI	RMR	CFI	NFI	PNFI	PCFI
Customer Loyalty	2.6	0.96	0.008	0.99	0.98	0.58	0.59
Customer Retention	2.58	0.95	0.007	0.99	0.98	0.65	0.66

On the other hand, the structural model for customer retention also shows satisfactory results for model fit. The x^2/df (2.58), GFI (0.95), RMR (0.007), CFI (0.99), NFI (0.98), PNFI (0.65) and PCFI (0.66) fall within the accepted thresholds, indicating that the structural model for customer retention achieved an adequate fit. Therefore, it was reasoned that the two models fit the data reasonably well.

II. Evaluating the Measurement Model

Convergent Validity

The assessment for the convergent validity of the customer loyalty and customer retention constructs that constitute CRM performance are presented in two tables.

Customer Loyalty

Table 7-29 illustrates selected data from the AMOS output relating to the construct of customer loyalty. Consistent with Table 7-30, all the error variances for customer loyalty indicators are positive so there is no identification problem related to negative variances.

Table 7-29 Selected AMOS output relating to customer loyalty

	FL	Est.	SE	CR[***]	R^2	Err.	Est.	SE	CR[***]
LOY1 ← LOY	.94	1.000			.87	e1	.056	.008	6.984[***]
LOY2 ← LOY	.83	.865	.049	17.831[***]	.69	e2	.132	.015	9.063[***]
LOY3 ← LOY	.86	1.025	.052	19.666[***]	.75	e3	.140	.016	8.760[***]
LOY7 ← LOY	.94	.938	.037	25.569[***]	.88	e4	.046	.007	6.761[***]
LOY8 ← LOY	.83	.832	.047	17.617[***]	.68	e5	.125	.014	9.093[***]
LOY9 ← LOY	.84	.845	.046	18.334[***]	.71	e6	.116	.013	8.988[***]

*** P<0.001.

All four criteria that the current study adopted to assess convergent validity are achieved. Firstly, factor loadings for customer loyalty items are significant at the 0.001 level and

range from 0.83 to 0.94, all exceeding the minimum criterion of 0.7. Secondly, construct reliability for customer loyalty is 0.89. Thirdly, AVE for shared values is 0.76. Finally, examination of estimated standardised coefficients and standard errors revealed that LOY2 (.865 and .049), LOY3 (1.0251and .052), LOY7 (.839 and .037), LOY8 (.832 and .047) and LOY9 (.845 and .046), indicating that their estimated pattern coefficient exceed more than seventeen times the standard error (the ratio should be ≥ 2). The indicator LOY1 was fixed at a coefficient weight of 1.00 in order to identify the model; hence no standard error was estimated. All results are above the cut-off values for an acceptable level of convergent validity for the customer loyalty construct.

Customer Retention

The indicators of customer retention supported its convergent validity. The evidence was derived from Table 7-30, which highlights some selected AMOS output relating to the construct of customer retention. In this indicator RET2 had a fixed coefficient weight of 1.00; hence, no standard error was estimated. All the error variances are positive so there is no identification problem related to negative variances. The critical errors associated with the factor loadings and error terms are all significant at the 0.001 level. The loadings for the indicators for the customer retention construct range from 0.86 to 0.90, which exceed the threshold of 0.5 s. Construct reliability for the retention factor is 0. 91, exceeds the threshold of 0.7. AVE for customer retention is 0.78, which is above the cut-off value of 0.5.

Table 7-30 Selected AMOS output relating to customer retention

	FL	Est.	SE	CR***	R^2	Err.	Est.	SE	CR***
RET2 ← RET	.90	1.000			.81	e1	.073	.009	8.309***
RET3 ← RET	.88	1.004	.053	18.967***	. 77	e2	.093	.011	8.659***
RET5 ← RET	.89	.981	.050	19.553***	. 80	e3	.079	.009	8.494***
RET7 ← RET	.89	.990	.050	19.620***	.80	e4	.079	.009	8.474***
RET8 ← RET	.88	.966	.051	19.121***	.78	e5	.083	.010	8.617***
RET10 ← RET	.90	.990	.050	19.845***	.80	e6	.076	.009	8.403***
RET11 ← RET	.86	.979	.055	17.845***	.73	e7	.109	.012	8.918***

*** P<0.001.

Moreover, the estimated standardised coefficients and respective standard errors for indicators are (RET3; 1.004, .050), (RET5; .981, .054), (RET7; .99, .05),

(RET8; .966, .051) and (RET10; .99, .05), (RET11; .979, .055), thus representing that their estimated pattern coefficients are more than seventeen times their standard errors. Therefore the requirements for satisfactory convergent validity are achieved. After assuring that the convergent validity of the CRM performance constructs (customer loyalty and customer retention) met the requirements for satisfactory convergent validity the discriminant validity should be assessed for those factors

Discriminant Validity

For discriminant validity, diagonal elements should be larger than off-diagonal elements. All diagonal elements (in bold) are the square root of the average variance extracted (AVE). Off-diagonal elements are the correlations among constructs. According to Table 7-31, all diagonal elements exceeded all values of correlations among constructs (off- diagonal elements), thus confirming discriminant validity. Moreover, composite alpha coefficients for LOY and RET are 0.95 and 0.96 respectively which are greater than their correlation coefficients, which equal 0.82, and other correlations with any other two constructs that ranged from 0.44 to 0.82 confirmed that discriminant validity was supported for those constructs.

Table 7-31 Correlation matrix and (AVE) for CRM performance with other variables

Var.	α	AV	NT	NC	NS	SC	SV	SN	CC	RC	SA	CO	LOY*	RET*
NT	.94	0.76	**0.87**											
NC	.94	0.77	.78**	**0.88**										
NS	.95	0.71	.79**	.82**	**0.84**									
SC	.95	0.74	.73**	.70**	.66**	**0.86**								
SV	.95	0.75	.59**	.56**	.56**	.61**	**0.86**							
SN	.95	0.76	.62**	.58**	.60**	.65**	.82**	**0.87**						
CC	.96	0.77	.61**	.57**	.57**	.75**	.62**	.75**	**0.88**					
RC	.97	0.82	.51**	.48**	.47**	.71**	.53**	.56**	.75**	**0.90**				
SAT	.96	0.78	.60**	.57**	.55**	.73**	.63**	.66**	.78**	.77**	**0.88**			
COM	.95	0.75	.49**	.46**	.45**	.67**	.51**	.54**	.72**	.63**	.82**	**0.87**		
LOY	.95	0.76	.52**	.48**	.48**	.72**	.55**	.58**	.76**	.67**	.80**	.79**	**0.88**	
RET	.96	0.78	.48**	.44**	.44**	.66**	.50**	.52**	.70**	.62**	.79**	.74**	.82**	**0.89**

** Correlation is significant at the 0.01 level (2-tailed).

* LOY =customer loyalty and RET =customer retention.

In conclusion the results of CFAs for the research constructs are satisfactory and appropriate to use in the structural equation modelling to investigate the causal relationships between proposed research variables.

7.3.2.2 *Assessing Common Method Bias*

Common method variance (CMV) refers to the amount of spurious covariance shared among variables because of the common method used in collecting data (Podsakoff *et al.*, 2003; Liang *et al.*, 2007; Boyar *et al.*, 2008). In typical survey studies in which all data are self-reported and collected through the same questionnaire during the same period of time with cross-sectional research design, data are likely to be susceptible to CMV (Lindell and Whitney, 2001). CMV causes systematic measurement error and further bias the estimates of the true relationship among theoretical constructs. Potential causes for spurious correlation between self-report measures are consistency motif[16], social desirability[17], behaviour due to stimuli setting and knowledge deficiency[18] (Podsakoff *et al.*, 2003; Nandakumar *et al.*, 2010).

Doty and Glick (1998: 394) pointed out that "Common methods causes a 26% median bias in observed relationships." Likewise, Podsakoff *et al.* (2003: 880) investigate to what extent to which CMV influenced published findings. They conclude: "On average, the amount of variance accounted for when common methods variance was present was approximately 35%, versus approximately 11% when it was not present." Recognising the issue of common method bais(CMB) and its serious consequences on final findings, the present study adopted two techniques to control or minimise CMB: (1) Procedural remedies; and (2) statistical remedies as recommended by Podsakoff *et al.* (2003), Liang *et al.*, (2007) and Sharma *et al.* (2009).

a. Procedural Steps

Following Sharma *et al.* (2009), formally, Observed correlation =

Construct-level correlation + Spurious correlation due to CMV + Random error.

The observed correlation represent measured score (what actually measured), construct –level correlation describes trait score (what should be measured) spurious correlation

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[16] Consistency motif is tendency of respondents to try to maintain consistency in their responses to similar questions or to organize information in consistent ways (Podsakoff et al., 2003:881).

[17] Social desirability is generally viewed as the tendency on the part of individuals to present themselves in a favourable light, regardless of their true feelings about an issue or topic(Podsakoff et al., 2003:881)

[18] Lack of self-knowledge: Individuals often fail to accurately assess their cognitive states, such as their level of attention (Burton-Jones, 2009:460).

to CMV reflect the method bias (what shouldn't be measured). Therefore, CMV should be minimised or eliminated. The potential causes for spurious correlation between self-report measures are consistency motif, social desirability, behaviour due to stimuli setting and knowledge deficiency (Jiang *et al.*, 2002; Podsakoff *et al.*, 2003; Liang *et al.*, 2007). Burton-Jones,(2009:451) summarises these sources into two factors: rating bias and knowledge bias. The effects of CMV can be minimised or eliminated through overcoming the potential sources of CMV. A review of literature, identifies some procedures that help in eliminating or at least reducing CMV at acceptable level. This study follows most of these procedures as shown in Table 7-32. These procedures can be classified into three types: steps related to instrument design, procedure in delivery and collect instrument and issues related with rater (informant).

Table 7-32 Summary of Procedural techniques to remedy common bias problem

Element of Method	Steps used to minimize common bias method
Instrument/ **Procedure/** **Rater**	1. Careful construction and clarity of the scale items was achieved using a systematic questionnaire and measure development process (narrow constructs' definitions, use prior validated construct items from different sources, pre-test and pilot test). 2. Questionnaire items were randomized to reduce hypothesis guessing through psychological separation of questions (dependent items followed by independent items) was used in the questionnaire to minimise consistency motif problem. 3. The constructs used in this study required the respondents to report on discrete events reducing the likelihood of distorted self-reports and/or socially desirable responses (divided questionnaire into three separate parts). 4. Anonymity and confidentiality: Respondents were assured that questionnaire responses would remain anonymous through covering letter accompanying the questionnaires we clearly indicated that all replies would be treated in the strictest confidence and no names or identities of individual firms would be revealed or disclosed to third parties to minimise social desirability problem). 5. Selecting our research informants from High ranking informants (CRM managers) who possess accurate knowledge and able accurately assess their cognitive states, such as their level of attention. 6. Different sources for collecting data (brokerage firms, banks and insurance companies). 7. Improved a study's results by testing for method bias (Harman's single factor test and Common latent method factor).
Sources : Adapted from Jiang et al., (2002); Podsakoff et al., (2003); Malhotra et al. (2006); Stewart and Gosain, (2006) ; Liang et al., (2007); Boyar et al., (2008); Sharma et al, (2009); Burton-Jones, (2009); Nandakumar et al. (2010); Parayitam (2010)	

b. Statistical Techniques

Two statistical techniques were employed to assess the problem of CMB: Harman's single factor test and "Common latent method factor" (Podsakoff *et al.*,2003; Malhotra *et al.*, 2006; Burton-Jones, 2009; Sharma *et al.*, 2009). *Firstly,*Harman's single factor test was used to assess the effect of CMV through two techniques: EFA and CFA models (Podsakoff *et al.*,2003; Malhotra *et al.*, 2006; Burton-Jones, 2009; Sharma *et al.*, 2009). *Firstly,* according to Harman's single factor test with EFA all the variables of interest are entered into a factor analysis. If there is a major CMV problem the test result will indicate: (1) emergence of a single or very small number of factors from the factor analysis; and/or (2) one general factor accounting for the majority of covariance in the predictor and criterion variables (Podsakoff and Organ, 1986: 536).

81 variables were entered into one single exploratory factor model, using principal components method and unrotated solution to determine the number of factors that are necessary to account for the variance in the variables. The exploratory factor analysis carried out and revealed the presence of 27 distinct factors with eigenvalues greater than 1.0, rather than a single factor. The 27 factors together accounted for 74.9 percent of the total variance; the first (largest) factor did not account for a majority of the variance (27.79 per cent). Thus, no general factor is apparent. For more robust results for Harman's test, we run this test by using CFA model. Therefore, the 81 variables were loaded on one CFA factor model to examine if the items of research constructs constitute uni dimensional[19] model (high common variance among constructs' items) or multidimensional[20] model (low common variance among constructs' items). If common method variance is largely responsible for the relationship among the variables, the one-factor CFA model will be uni dimensional and the model will fit the data well. On other hand, if CFA model does not fit the data, thus means that CFA model is a multidimensional and the constructs' items reflect many different factors and not just one. Our CFA model showed that the single-factor model did not fit the data well, *CMIN* (10161.26), *df* (2674), *CMIN/df*= 3.8, p=.000, GFI= 0.229; AGFI= 0.26; CFI=

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[19] Unidimensional means that construct items constitute one general factor where common method variance is largely responsible for the relationship among the variables.

[20] Multidimensional means that construct items represent different factors factor where common method variance has not a serious influence on the relationship among the variables.

0.65; NFI= 0.496; RMSEA= 0.11. Therefore, these results showed that our CFA model is a multidimensional and as a result common variance is not of great concern and thus is unlikely to confound the interpretations of results.

Secondly, the "latent common variance factor method" was also employed (Podsakoff *et al.*, 2003). Through this technique items are allowed to load on their theoretical constructs, as well as on a latent common methods variance factor. *The first stage* in this analysis is to measure the fit of CFA model among the multidimensional CFA for research model before using latent common variance factor and after adding latent common factor. The results of both models show that both models show adequate model fit. This means that common variance among observed variables has not a serious influence on the significance of relationships among research hypotheses. *The second stage* aimed to identify the percentage of common variance among the observed items. Our latent common variance factor model showed that the common variance among observed items is 6.25% $(0.25)^2$, which represent low effect for common variance on research findings as recommended by Podsakoff *et al.* (2003: 880). In conclusion, the results of latent common factor suggesting that common method variance are not solely responsible for our findings.

Moreover, Boyar *et al.* (2008:231) conclude, "for direct effects, we were testing theoretically strong arguments in our hypotheses bolstered by supportive findings". They add for this reason, we were less concerned with effect sizes (which might have been inflated) than with causal relationships that were likely to be statistically significant". Also, "in modeling studies where causal relationships are emphasized, common method bias is not as a serious concern". In conclusion, the procedure techniques that had been used helped in minimiseing the impact of CMV on data collected and this is proved by applying Harman's single factor test and latent common variance factor method which show that common variance has not a serious problem in our data and as a result on our research findings.

7.3.2.3 *The Structural Model Analysis (analysis of causal relationships)*

This analysis aims to answer the research questions that in turn achieve the research objectives. Therefore, the research model in this study examines the impact of social capital on CRM performance (customer loyalty and customer retention) through the

mediating role of customer satisfaction and customer commitment. The SEM being used is the aggregate model where each construct was represented with a single index that is equal to the average score on the construct scale as recommended by MacKenzie and Lutz (1989). The aggregate model for SEM has been used intensively in marketing literature (Yang and Peterson, 2004; Gounaris, 2005; Fullerton, 2005; Chiu *et al.*, 2006; Lee *et al..*, 2006; Powell *et al.*, 2006; Eid, 2007, Eakuru and Nik Mat, 2008; Chen and Quester, 2008; Chow and Chan, 2008; Guo *et al.*, 2008; Lawson *et al.*, 2008; Wu and Wu, 2008; Yang *et al.*, 2008). The next section examines the model results in terms of its specification, its fit for data set and hypotheses testing.

a. Model Specification

The structural model consists of the covariance among the antecedents of social capital dimensions; and the correlation among social capital constructs and other manifest variables of customer satisfaction, customer commitment as mediating variables and customer loyalty and customer retention as dimensions of CRM performance. The measurement model consists of twelve manifest variables and seven error terms. The constructs are measured using multi- item scales; consequently a large number of indicators had to be dealt with. As a result, a latent variable model with multiple indicators might not be very helpful, since it is not possible to test the measurements model based on the large number of indicators, which represented the research variables, because of the lack of sufficient data to identify the model. Therefore, single-scale score indicators (i.e., the average total score in the corresponding scale) are employed to measure the manifest variables (Bollen, 1989; Merlo *et al.*, 2006; Eid, 2007). This method is appropriate to overcome the small sample size and the complexity of the proposed model. This allowed us to optimise sample size relative to parameter estimates and correct for measurement error.

b. Model Estimation and Evaluation

The data for the model was entered in AMOS v6 by using the ML estimation technique and AMOS Graphic was used to draw a path diagram identifying sixteen relationships between research variables. The fit indices of x^2/df, RMR and RMSEA were used as measures of absolute fit, CFI and NFI were used to assess incremental fit while PCFI and PNFI were used to measure the parsimony fit as recommended by Bagozzi and Yi,

(1988), Henry and Stone (1994), McKinney *et al.* (2002), Roh *et al.* (2005), Hair *et al.* (2006) and Chow and Chan (2008). Table 7-33 presents the information on selected fit indices from the output used in the evaluation of the structural model.

Table 7-33 Summary of model fit indices for the proposed research model

Research model		Obtained fit indices						
		AFM			IFM		PFM	
	x^2/df	RMR	RMSEA	GFI	CFI	NFI	PNFI	PCFI
	2.8	0.03	0.096	0.92	0.98	0.96	0.55	0.56
		Suggested fit indices						
	< 5	≤ .05	≤ 0.10	≥ 0.90	≥ 0.90	≥ 0.90	< 0.5	< 0.5

The x^2/df is 2.8 and is in an acceptable range according to the criterion ≤ 3 (Kline, 1998) and ≤ 5 (Bentler, 1989; Shumacker and Lomax, 2004; Chiu *et al.*, 2006). RMR and RMSEA, which refer to the variances and covariances jointly accounted for by the model, are 0.03 and 0.096 respectively and these values are below the established cut-off values of 0.05 and 0.10 respectively, as recommended by Bagozzi and Yi (1988), Henry and Stone (1994) and Hair *et al.* (2006).Moreover, GFI (0.92) is high the recommended cut-off value of 0.90. Regarding the incremental fit measures, CFI and NFI are 0.98 and 0.96 respectively, which exceed the cut-off value 0.90, as recommended by Bentler (1990), Hair *et al.*(2006), Chow and Chan (2008) and Yang *et al.* (2008). Finally, PCFI and PNFI as measures for parsimony fit are 0.55 and 0.56, greater than the cut-off value of 0.50 as recommended by Hair *et al.* (2006) and Chow and Chan (2008). We conclude that our findings reached an acceptable level and could be used to explain our hypotheses.

c. Hypotheses Testing

Now that the psychometric properties of the questionnaire components have been established the hypotheses outlined in chapter 6 will be tested. Hypotheses are usually tested in the form of a null hypothesis, denoted with H₀. This study either accepts or rejects the null hypothesis depending on the result of the test performed on the observed data. The path estimates in the model were used to test the hypotheses. The main determinant for accepting or rejecting hypothesis is the significance of standardised coefficient of research parameters. The levels of significance that will be used in this study are 0.05, 0.01, 0.001 being acceptable significance, strong significance and high significance respectively. Table 7-34 puts forward the results of the hypotheses testing for the SEM of the proposed research model.

According to the proposed research model, there are sixteen hypotheses representing the proposed relationships among research variables. The sixteen hypotheses illustrated in Fig 7-34 were tested simultaneously in a structural equation model using AMOS v6.0. Those relationships investigate the impact of social capital dimensions on CRM performance (customer loyalty and customer retention) through the mediating roles of customer satisfaction and customer commitment.

Table 7-34 Summary of SEM results for the proposed model

Predictor variables	Criterion variables	Hypothesised relationship		Standardised coefficient	R^2*
Network ties	Structural capital	H1	Support	.29***	.67
Network configuration		H2	Support	.14*	
Network stability		H3	Support	.13*	
Cognitive capital		H7	Support	.39***	
Shared values	Cognitive capital	H4	Support	.19***	.69
Shared norms		H5	Support	.31***	
Structural capital		H6	Support	.45***	
Structural capital	Relational capital	H8	Support	.26***	.47
Cognitive capital		H9	Support	.52***	
Structural capital	Customer satisfaction	H10	Support	.24***	.71
Relational capital		H11	Support	.23***	
Customer satisfaction	Customer commitment	H14	Support	.77***	.50
Customer satisfaction	Customer loyalty	H12	Support	.64***	.68
Customer commitment		H15	Support	.30***	
Customer satisfaction	Customer retention	H13	Rejected	.108 ^{ns}	.66
Customer commitment		H16	Support	.4***	
Customer loyalty		H17	Support	.34**	

*P< 0.05; **P< 0.01; *** P< 0.001; ns= not supported.

This study presents the research results according to the order of relationships in the proposed research model. Firstly, this study explores the sub- factors that constitute the structural capital dimension. Secondly, it looks into the predictors for developing cognitive capital among employees. Thirdly, it examines the interrelationships among social capital dimensions (structural, cognitive and relational). Fourthly, it investigates the impact of relational capital on customer satisfaction as one signs of organisational perceived values for adopting social capital. Finally, it examines the relationships between the mediating variables (satisfaction) and CRM performance (customer loyalty and customer retention) directly and indirectly, through the mediating role of customer commitment).

i. Antecedents of Structural Capital

With respect to the factors that develop social interactions (structural capital) among employees, Hypothesis 1 predicts a positive effect of network ties among employees on social interactions (structural capital) among them within the Egyptian financial services institutions. As expected, our results suggest a significant relationship between these two variables ($\beta=+0.29$ with $p < 0.001$). Network configuration within an organisation also has a significant positive impact on social interactions among employees ($\beta=+0.14$ with $p < 0.05$), indicating that Hypothesis 2 is strongly supported. In addition, network stability within an organisation has a positive influence on social interactions among employees ($\beta=+0.13$ with $p < 0.05$), which strongly supports Hypothesis 3.

ii. Antecedents of Cognitive Capital

Regarding the factors that affect development of cognitive capital (shared goals) among employees, our findings support the assumption that both shared values (in terms of common work values, common beliefs and common attitudes) and shared norms (adherence to behaviour standards and work rules within organisation) among employees have positive and significant impacts on shared goals (common understanding, common meaning and common vision) among them ($\beta=+0.19$ with $p < 0.001$, $\beta=+0.31$ with $p < 0.001$). Thus, Hypothesis 4 and Hypothesis 5 are powerfully confirmed.

iii. The Interrelationships among Structural Capital and Cognitive Capital

Based on the literature, there are interrelationships among the three social capital dimensions: structural, cognitive and relational). The results of our research model indicate a strong confirmation for Hypothesis 6, supporting the positive and significant effect of structural capital (social interactions) on cognitive capital (shared goals) among employees ($\beta = +0.45$ with $p < 0.001$). In addition, Hypothesis 7, which suggested a positive link between shared goals among employees and social interactions between them was supported ($\beta=+0.39$ with $p < 0.001$).

Figure 7-2 Validation of research model
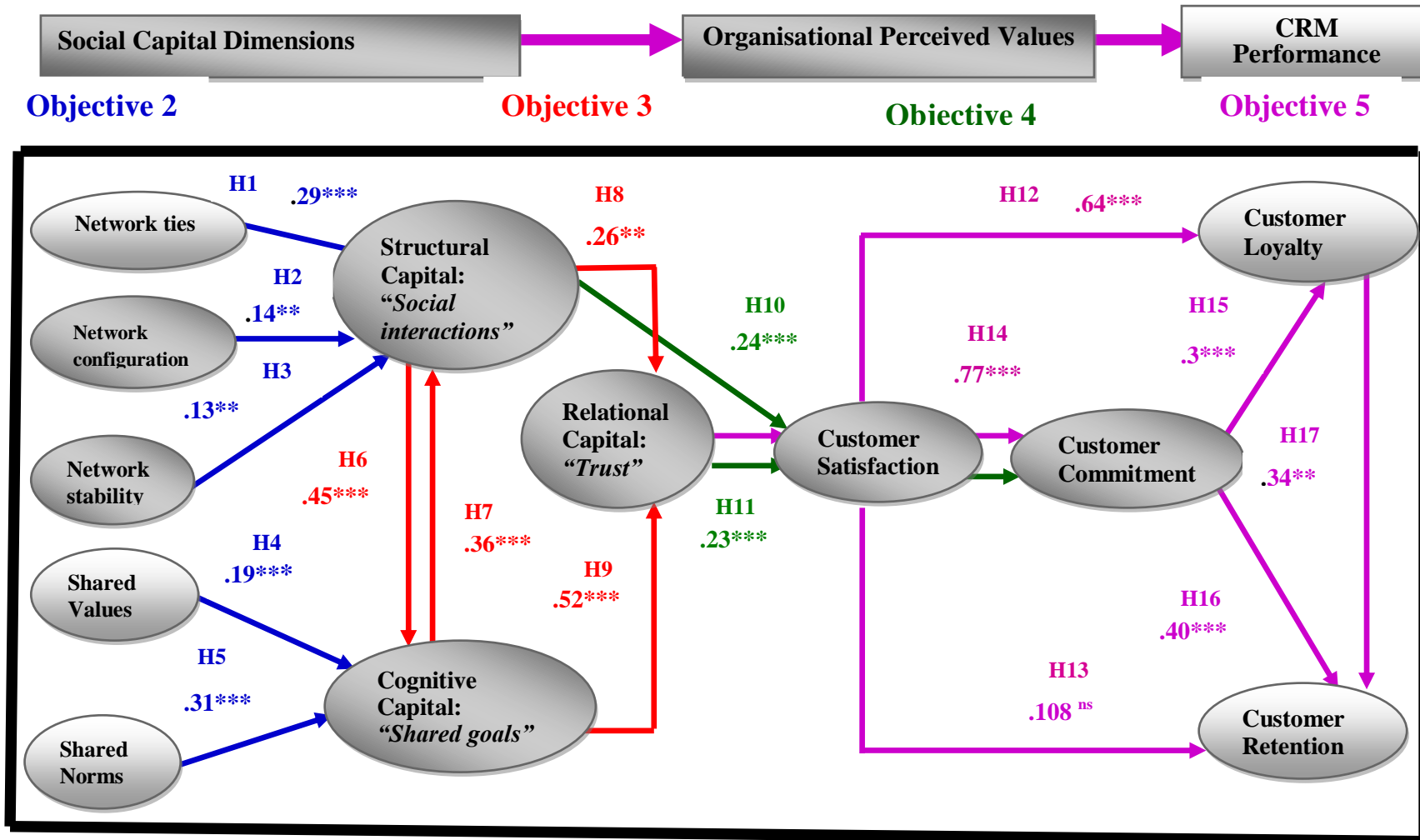
*P< 0.05; **P< 0.01; *** P< 0.001; ns= not supported.

iv.   Antecedents of Relational Capital

Consistent with the theoretical foundations for the proposed research model, we argue that structural capital and cognitive capital are the origins of relational capital. The model results support Hypothesis 8, which indicates that structural capital (social interactions) has a positive and significant influence on relational capital (trust relationship) within an organisation ($\beta= +0.26$ with $p < 0.001$). Finally, our findings confirmed the repeatedly proved positive effect of cognitive capital (shared goals) on relational capital (trusting relationships) within an organisation ($\beta=+0.52$ with $p < 0.001$) which confirmed Hypothesis 9.

v.   Customer Satisfaction and its Relationship to social capital

According to the theoretical foundations for our structural model, this study proposed a positive impact for social interactions (structural capital) and trust relationships among employees (relational capital) on organisational perceived values represented by customer satisfaction. The statistical results of our model indicate a strong confirmation for the positive relationship between structural capital and customer satisfaction ($\beta=+0.24$ with $p < 0.001$) which supports Hypothesis 10. Moreover, our results prove that relational capital has a positive impact on customer satisfaction ($\beta=+0.23$ with $p < 0.001$) which support Hypothesis 11.

vi.   Customer Satisfaction and CRM Performance

There are two viewpoints that may explain the relationship between customer satisfaction and CRM performance (loyalty and retention): a direct impact for customer satisfaction on CRM performance and an indirect impact through the mediating role of customer commitment as suggested in the proposed research model.

*Direct Impact of Customer Satisfaction on CRM Performance

Our findings support the hypothesis that customer satisfaction is positively associated with customer loyalty. The results indicate a strong confirmation of the positive association between the two variables ($\beta=+0.64$ with $p < 0.001$), which supports Hypothesis 12. Contrary to expectations, our results show an insignificant direct relationship between

customer satisfaction and customer retention (β= +0.11 with p > 0.05) leading to rejection of Hypothesis 13.

*Customer Commitment as a Mediating Variable

Our results repeatedly proved the positive effect of customer satisfaction on customer commitment (*β=+0.77 with p < 0.001*), which verified Hypothesis 14. Regarding to the role of customer commitment in enhancing CRM performance (loyalty and retention) H15 states that the greater the customer commitment with an organisation, the more the former will be loyal to the latter. According to the model (*β=+0.3 with p < 0.001*), this hypothesis is fully supported. Moreover, our results indicate a strong confirmation of the positive effect between customer commitment and customer retention (*β=+0.4 with p < 0.001*), which supports Hypothesis 16.

vii.   The Relationship among CRM Dimensions

The final path coefficient between customer loyalty and customer retention was +0.18, significant at the *p < 0.01* level. This implies a positive and significant link between the two variables, which verifies Hypothesis 17.

The previous results presented the standardised direct effects among the proposed research variables, while there are indirect effects among some variables in the proposed research model. Table 7-35 illustrates both the direct and indirect effects among those variables. According to Table 7-35, structural capital has an indirect effect on relational capital through shared goals (cognitive capital) as a mediating variable. According to our results, this indirect effect increases the standardised total effects between the two variables from 0.26 to 0.60 (more than two times).

On the other hand, cognitive capital also has an indirect effect on relational capital through structural capital as a mediating role. This indirect effect increases the standardised total effects among two variables from 0.52 to 0.75. Furthermore, the relationship between customer satisfaction and customer loyalty has an indirect effect. This indirect effect increases the standardised coefficient between the two variables from 0.64 to 0.87. This indirect effect occurs through the mediating role of customer commitment. Moreover, there is an indirect relationship between customer satisfaction and customer retention through the mediating effects of customer commitment and customer loyalty that increases the

standardised total effects between the two variables from 0.11 to 0.80. If we subtract the indirect effect between customer loyalty and customer retention (0.23) from the value of the indirect effect between satisfaction and retention (0.69) we can calculate the indirect effect between satisfaction and retention through customer commitment alone (0.69- 0.23 = 0.46). Therefore, we confirm that customer satisfaction has strong indirect effect on customer retention through customer commitment (0.46) than the direct effect between them (0.11).

Table 7-35 direct, indirect and total effects among research variables

Criterion variable	Predictor variables	Direct effect	Indirect effect	Total effect
Structural capital	Network ties	.29	.06	.35
	Network configuration	.14	.03	.17
	Network stability	.14	.03	.17
Structural capital	Shared values	.00	.09	.09
	Shared norms	.00	.14	.14
Cognitive capital	Network ties	.00	.16	.16
	Network configuration	.00	.08	.08
	Network stability	.00	.07	.07
Cognitive capital	Shared values	.19	.04	.23
	Shared norms	.31	.06	.37
Relational capital	Network ties	.00	.17	.17
	Network configuration	.00	.09	.09
	Network stability	.00	.08	.08
	Shared values	.00	.14	.14
	Shared norms	.00	.23	.23
Relational capital	Structural capital	.26	.34	.60
	Cognitive capital	.52	.23	.75
Structural capital	Cognitive capital	.39	.08	.47
Cognitive capital	Structural capital	.45	.10	.55
Customer satisfaction	Structural capital	.46	.24	.70
	Cognitive capital	.00	.39	.39
	Relational capital	.23	.00	.23
Customer loyalty	Customer satisfaction	.64	.23	.87
Customer retention	Customer satisfaction	.11	.69	.80
Customer commitment	Customer satisfaction	.77	.00	.77
Customer loyalty	Customer commitment	.30	.00	.30
Customer retention	Customer commitment	.41	.10	.51
Customer retention	Customer loyalty	.34	.00	.34

Moreover network ties affect indirectly on both of cognitive capital and relational capital. Network ties affect indirectly through structural capital with (0.16) on cognitive capital and with (0.17) on relational capital. This means that strong social relationships among employees facilitate establishing common goals through enhancing social interaction among them. In addition, network ties engender trusting relationships among employees through

sharing goals and increase social interaction among them. In the same line, shared norms affect indirectly on both of cognitive capital and relational capital. Shared norms affect indirectly through cognitive capital with (0.14) on structural capital and with (0.23) on relational capital. This results reflect the role of adherence to common behaviour standards and a work rules within an organisation in enhancing social interactions among them through adopting common goals and also establish trust among them.

Finally, the assessment of the predictive power of the SEM results revealed that R^2 for the endogenous variables are as follows: structural capital (0.67), cognitive capital (0.69), relational capital (0.47), customer satisfaction (0.71), customer commitment (.50), customer loyalty (0.68) and customer retention (0.66), which indicated good predictive power for the SEM. In conclusion Table 7-36 summarise the results of testing the research hypotheses.

Table 7-36 Assessment of research hypotheses

Hypothesis	Proposed relationship	Result
1	Network ties and structural capital are positively related.	Supported
2	Network configuration and structural capital are positively related.	Supported
3	Network stability and structural capital are positively related.	Supported
4	Shared values and cognitive capita are positively related.	Supported
5	Shared norms and cognitive capital are positively related.	Supported
6	Structural capital and cognitive capital are positively related.	Supported
7	Cognitive capital and structural capital are positively related.	Supported
8	Structural capital and relational capital are positively related.	Supported
9	Cognitive capital and relational capital are positively related.	Supported
10	Structural capital and customer satisfaction are positively related.	Supported
11	Relational capital and customer satisfaction are positively related.	Supported
12	Customer satisfaction and customer loyalty are positively related.	Supported
13	Customer satisfaction and customer retention are positively related.	Not Supported
14	Customer satisfaction and customer commitment are positively related.	Supported
15	Customer commitment and customer loyalty are positively related.	Supported
16	Customer commitment and customer retention are positively related.	Supported
17	Customer loyalty and customer retention are positively related.	Supported

To give more confirmation for the SEM results we also test our research hypotheses using regression analysis models.

7.3.2.4 *Results of Regression Models*

Table 7-37 highlights selected data from the regression models output relating to the research hypotheses. Twelve regression models (three multiple models and nine simple models) were

used to explore the direct effects among variables in the proposed research hypotheses. According to the fitness of these models, all regression models in this study are significant (all *F values* are significant with p= .000). The first model investigates the positive impact of network ties, network configuration and network stability on structural capital. Our results prove that the three hypotheses in this model are confirmed. Our results show that all beta coefficients are positive and significant (β_1= *+0.42 with p=.000*; β_2= *+0.17 with p=0.038;* β_3= *+0.27 with p=0.001*), which support.H1, H2 and H3. Adjusted R^2 for model 1 indicates that network ties, network configuration and network stability explain 65 % of the variance in structural capital. The second model examines the positive effect of shared values and shared norms on cognitive capital. Our findings indicate that the two hypotheses in this model are verified. Our results reveal that all beta coefficients are positive and significant (β_1= *+0.29 with p=0.000*; β_2= *+0.55 with p=0.000*), which support both H4 and H5. Adjusted R^2 for model 2 shows that shared values and shared norms explain 63 % of the variance in cognitive capital. Furthermore, the third model examines the impact of cognitive capital and structural capital on relational capital through model 3. The findings confirm that both cognitive capital and structural capital have positive and direct impact on relational capital (β_1= *+0.73 with p=0.000*; β_2= *+0.23 with p=0.000*), which verify both H6 and H9. Adjusted R^2 for model 3 reveals that structural capital and cognitive capital explain 89 % of the variance in relational capital. Model 4 investigates the impact of structural capital and relational capital on customer satisfaction which reflect H10 and H11. Our findings confirm the positive and direct relationship among both structural and relational capital on customer satisfaction (β_1= *+0.57 with p=0.000*; β_2= *+0.47 with p=0.000*), which verify both H10 and H11. Adjusted R^2 for model 4 reveals that structural capital and cognitive capital explain 78 % of the variance in customer satisfaction. In addition, model 5 and model 6 explore the mutual effects between structural capital and cognitive capital. Our result prove that cognitive capital has a positive and significant effect on structural capital (β_1= *+0.89 with p=0.000*), which confirms H7. Adjusted R^2 for model 5 illustrates that structural capital explains 79 % of the variance in cognitive capital.

On the other hand, H8 also investigates the positive and significant impact of structural capital on cognitive capital (β_1= *+0.89 with p=0.000*), which confirms H8. Adjusted R^2 for model 6 indicates that cognitive capital explains 79 % of the variance in structural capital. H12 also investigates the positive impact of customer satisfaction on customer loyalty through model 7. The results of model 7 prove that customer satisfaction has a positive and

significant impact on customer loyalty ($\beta_1 = +0.88$ *with p=0.000*), which supports H12. Adjusted R^2 for model 7 reveals that customer satisfaction explains 77 % of the variance in customer loyalty. Similarity, model 8 examines the positive link between customer satisfaction and customer retention. Our findings illustrate that customer satisfaction has a positive and significant impact on customer retention ($\beta_1 = +0.81$ *with p=0.000*), which verify H13. Adjusted R^2 for model 8 shows that customer satisfaction explains 65 % of the variance in customer retention.

In addition model 9 investigates the direct impact of customer satisfaction on customer commitment. Our findings prove that customer satisfaction has a positive and significant impact on customer commitment ($\beta_1 = +0.82$ *with p=0.000*), which verifies H14. Adjusted R^2 for model 9 reveals that customer satisfaction explains 68 % of the variance in customer commitment. Furthermore, the positive link between customer commitment and customer loyalty is investigated through model 10. Our results support the positive and significant link between customer commitment and customer loyalty ($\beta_1 = +0.85$ *with p=0.000*), which proves H15. Adjusted R^2 for model 10 indicates that customer commitment explains 72 % of the variance in customer loyalty. Model 11 also explores the positive link between customer commitment and customer retention. Our findings supports the hypothesis that customer commitment has a positive and significant link with customer retention ($\beta_1 = +0.90$ *with p=0.000*), which confirms H16. Adjusted R^2 for model 15 shows that customer commitment explains 81 % of the variance customer retention. Finally model 12 examines the impact of customer loyalty on customer retention. Our findings prove that customer loyalty has a positive and significant impact on customer retention ($\beta_1 = +0.83$ *with p=0.000*), which confirms H17. Adjusted R^2 for model 12 indicates that customer loyalty explains 70 % of the variance in customer retention.

Table 7-37 Results of regression models

Model	Hypotheses	Variables	Beta	t-value	Sig. level	R^2	Adjusted R^2	F-ratio	VIF	Durbin Watson (DW /D-test)
Results of multiple regression models										
1		Intercept	.422	2.215	0.028	.656	.651	125.118 with *p=.000*		2.175
		Independent:								
	H1	Network ties	.43	5.863	.000				3.077	
	H2	Network configuration	.165	2.087	.038				3.597	
	H3	Network stability	.272	3.4	.001				3.674	
		Dependent: Structural capital								
2		Intercept	.439	2.198	.029	.636	.632	172.837 with *p=.000*		1. 949
		Independent:								
	H4	Shared values	.284	3.798	.000				3.004	
	H5	Shared norms	.548	7.319	.000				3.004	
		Dependent: Cognitive capital								
3		Intercept	.206	2.064	0.04	.887	.886	778.490 with *p=.000*		1. 815
		Independent:								
	H6	Structural capital	.232	4.459	.000				4.730	
	H9	Cognitive capital	.73	14.066	.000				4.730	
		Dependent: Relational capital								
4		Intercept	-.034	-.19	.849	.78	.869	375.4 with *p=.000*	2.15	2.1
		Independent:								
	H10	Structural capital	.57	12.4	.000					
	H11	Relational capital	.47	7.2	.000					
		Dependent: Satisfaction								
Results of simple regression models										
5	H7	Intercept	.467	27.246	.001	.789	.788	742.357 with *p=.000*		2.297
		Independent: Structural capital	.888		.000					
		Dependent: Cognitive capital								

6	H8	Intercept *Independent*: Cognitive capital *Dependent*: Structural capital	.444 .888	3.306 27.246	.001 .000	.789	.788	742.357 with *p=.000*		2.275
7	H12	Intercept *Independent*: Satisfaction *Dependent*: Loyalty	.694 .876	5.221 25.616	.000 .000	.767	.766	656.202 with *p=.000*		2.176
8	H13	Intercept *Independent*: Satisfaction *Dependent*: Retention	1.099 .807	6.751 19.309	.000 .000	.652	.65	372.827 with *p=.000*		1.988
9	H14	Intercept *Independent*: Satisfaction *Dependent*: Commitment	1.027 .824	6.6 20.536	.000 .000	.679	.678	421.745 with *p=.000*		1.961
10	H15	Intercept *Independent*: Commitment Dependent: Loyalty	.496 .849	3.129 22.688	.002 .000	.721	.72	514.732 with *p=.000*		2.040
11	H16	Intercept *Independent*: Commitment *Dependent*: Retention	.433 .898	3.267 28.766	.001 .000	.806	.805	827.5 with *p=.000*		1.873
12	H17	Intercept Independent: Loyalty Dependent: Retention	.819 .833	5.086 21.252	.000 .000	.694	.693	827.5 with *p=.000*		1.873

Moreover, the Durbin-Watson statistics for all regression models in this study are near to 2, which indicate non-autocorrelation between residuals (Field, 2005). According to the results of the twelve regression models in this study, we confirm that all research hypotheses are supported, which gives confirmation to the SEM results. Table 7-38 illustrates a comparison between the results of SEM and regression models.

Table 7-38 Comparison between results of SEM and regression models

Hypothesis	Proposed relationship	SEM	Regression
1	Network ties → structural capital.	Supported	confirmed
2	Network configuration. → structural capital	Supported	confirmed
3	Network stability → structural capital	Supported	confirmed
4	Shared values → cognitive capital.	Supported	confirmed
5	Shared norms → cognitive capital	Supported	confirmed
6	Structural capital → cognitive capital	Supported	confirmed
7	Cognitive capital → structural capital	Supported	confirmed
8	Structural capital → relational capital	Supported	confirmed
9	Cognitive capital → relational capital	Supported	confirmed
10	Structural capital → customer satisfaction	Supported	confirmed
11	Relational capital → customer satisfaction.	Supported	confirmed
12	Customer satisfaction → customer loyalty	Supported	confirmed
13	Customer satisfaction → customer retention.	Not Supported	confirmed
14	Customer satisfaction → customer commitment.	Supported	confirmed
15	Customer commitment → customer loyalty	Supported	confirmed
16	Customer commitment → customer retention.	Supported	confirmed
17	Customer loyalty → customer retention.	Supported	confirmed

7.4 Summary

This chapter presented the results of exploratory factor analysis (EFA), confirmatory factor analysis (CFA), structural equation modelling (SEM) and regression models. EFA results set reliable structures for social capital dimensions, organisational perceived values and customer relationship management performance. CFA contributes to social capital literature with reliable and valid measures of social capital, organisational perceived values and CRM performance. In addition, SEM validated the proposed research model. SEM investigated the direct and indirect effects between social capital and CRM performance (loyalty and retention) through the mediating role of organisational perceived values (satisfaction and commitment). Finally, our results of regression models confirmed our SEM results for the research model.

Chapter 8 Interpretation and Discussion of Key Findings

8.1 Introduction

It is hoped that the research findings presented within Chapter Seven give a better understanding of how to improve CRM performance by adopting intrafirm social capital. This chapter interprets the research findings from the survey questionnaires (Appendix A and B). It also reviews those findings alongside previous work in this field. The results presented in previous chapters were in a format related to two main objectives of the research. Firstly, this study explores factors that constitute social capital dimensions and the interrelationships among those factors. Secondly, it investigates the relationships between social capital and CRM performance (customer loyalty and customer retention) through the mediating roles of customer satisfaction and customer commitment. Similarly, in this chapter discussions are presented in a similar format on to accomplish those two objectives. The identified relationships are interpreted and discussed in the sub-sections below.

8.2   Antecedents of Social Capital Dimensions

This study addresses an important gap in the business services literature by empirically exploring the sub- factors of social capital dimensions. This study helps to address this by directly identifying the predictors of structural capital, cognitive capital and relational capital, which represent the main dimensions of social capital. It also provides strong empirical support for the existence of interrelationships between those dimensions. According to the theoretical foundations of the proposed research model, we propose three factors that may constitute structural capital (in terms of social interactions), two main antecedents for establishing cognitive capital (in terms of shared goals) and two factors that form relational capital (in terms of trust). Based on 208 usable questionnaires collected from Egyptian financial service institutions (Brokerage firms, Banks and Insurance companies) this study ran three EFA models to identify the structures of social capital dimensions (structural, cognitive and relational). Therefore, the current thesis discusses in depth the results of the EFA models for the three social capital dimensions and their antecedents.

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8.2.1 Structural Capital Antecedents

To identify the antecedents of structural capital, we initially conducted EFA using varimax rotation with 35 items to explore the structure of structural capital. This exploratory factor analysis produced a four-factor solution. The interpretation of the four-factor solution was accomplished by relating the factors produced to theoretical concepts of structural capital (Chapter 2 and 5). The first factor seems to fit very well with network ties since all its six elements are related to measuring the type and strength of social ties among employees within the organisation. This is consistent with one of the antecedents of structural capital (social interactions) suggested by Granovetter (1973, 1982), Tsai and Ghoshal (1998), Adler and Kwon (2002), Inkpen and Tsang (2005), Chiu *et al.* (2006) and Fliaster and Spiess (2008).

As we mentioned earlier at Chapter 6 this study used a five-point scale Likert for attitudinal items anchored by 1 = "strongly disagree" and 5 = "strongly agree" to measure questionnaire items. This research found that mean scores for all six items are in the upper half of the distribution (≥ 4) which supports the view that strong ties are the forms of social ties among employees within the Egyptian financial service institutions. Social ties among employees are extending from peer relationships (weak relationships) to friendship relationships (strong relationships). The friendship relationships among employees reflect strong social ties among them (Elsharnouby and Parsons, 2010). There are two viewpoints in defining social capital according to density of relationships among network actors: bonding and bridging (Putnam, 2000; Woolcock and Narayan, 2000; Adler and Kwon, 2002; Taylor, 2004; Crowe, 2007). The bonding view reflects strong ties among network members which represent the main characteristics of intrafirm social capital, whereas the bridging perspective describes weak ties among network members, which represent the main features of interfirm social capital.

Our results supported the view that strong ties are the type of relationships among employees, which reflect the bonding viewpoint of social capital within an organisation. This bonding viewpoint focuses on collective actors' internal characteristics (Adler and Kwon, 2002:21). However, our results confirm that most of the social relationships among employees in the Egyptian financial service institutions are friendship relationships. Strong friendship ties among employees enable them to share their best practices and expertise with their colleagues, initiate informal face-to-face conversations

with each other, encourage and support each other, seek advice from their direct supervisors when necessary and communicate directly with their supervisors without prior appointments, which in turn reduce the level of friction among them as proposed by Hu and Smith (2004), Kankanhalli *et al.* (2005), Oke, *et al.* (2008), Wu *et al.* (2008), He *et al.* (2009) and Hossain and de Silva (2009). However, importantly, this friendship also embraces the moral obligation of a friend to give help and perform favours to the best of their ability (Parnell and Hatem, 1999). Thus, it is expected that the giving and receiving of favours are important parts of friendship. This extends to the commercial sphere, and having a friend inside an organisation may help in receiving a better level of service (Elsharnouby and Parsons, 2010).

The second factor, network configuration, consists of six items representing degree of connectivity (easily reached) and level of accessibility (easily accessed) of all databases within organisations as proposed by Nahapiet and Ghoshal (1998), Kilduff and Tsai (2003) and Bartol and Zhang (2007). The mean scores for all six items are in the higher half of the distribution (≥ 4) which confirms that employees in the Egyptian financial service institutions have no problem in reaching easily to any touch point in the organisation and gaining access easily to any database within these organisations. The mean scores indicated that employees, especially service providers, can easily get all the information they need at any time. Owing to effective organising of employees within Egyptian financial service institutions, they have authorised permission to access the organisation database, are linked together by communication networks, are supported by a customer data repository and have direct contact with their supervisors, all of which indicate that information systems in the Egyptian financial service institutions are user-friendly as recommended by Youndt and Snell (2004), Bhatt and Troutt (2005), Frank (2002), Jayachandran *et al.* (2005) and McNally (2007).

The third factor seems to fit very well with network stability, since all its eight elements are related to evaluating the consistency of information flow among employees within the organisation as one of structural capital's precursors (in terms of social interactions) as suggested by Deeter-Schmelz (1997), Burt (2000), Lai and Wong (2002), Kim *et al.* (2004), Inkpen and Tsang (2005), Cummings and Higgins (2006) and Stanko *et al.* (2007). The mean scores for all eight items are in the upper half of the distribution (≥ 4) which confirms that Egyptian financial service institutions have efficient information systems that allow information to flow smoothly among communication channels

without disturbance. As a consequence of network stability or network efficiency, the organisation's information system provides employees with easily- understood information, prompt and timely information, reliable information flow, up-to-date information and in-depth information about existing customers, which helps employees to carry out their duties easily and to deal with customer requests in an efficient way as advocated by Lee and Choi (2003), Kim *et al.* (2004), Farquhar, (2005), Ismail *et al.* (2007) and Wu (2008).

The final factor of structural capital is manifested in open communication, cooperation, collaboration, affiliation and social support and knowledge sharing among employees as proposed by Johnson *et al.* (1985), Johnson and Johnson (1989), Hooper and Hannafin (1991), Tsai and Ghoshal (1998), Hutt *et al.* (2000), Northrup, (2001), De Clercq and Sapienza (2006), Yli-Renko *et al.* (2002), Contreras-Castillo *et al.* (2004), Wasko and Faraj (2005), Ku *et al.* (2007), Ramström (2008) and De Clercq *et al.*(2009). The scores for all six items are in the upper half of the distribution (≥4) which confirms that employees in the Egyptian financial service institutions exchange knowledge frequently and informally, learn from each other, feel close to each other, cooperate when handling customer requests, discuss key issues in depth with their supervisors and share their knowledge with their supervisors as suggested by Bontis (1996); Zwick (2004), Bonner and Calantone (2005), Chen and Huang (2007) and Herington *et al.* (2009).

Moreover, the validity and reliability of measures were assessed by CFA models and the composite Cronbach alpha (α) of each construct. The results of CFA models of the four constructs (network ties, network configuration, network stability and social interactions) meet the requirements of convergent and discriminant validity for these constructs. The four constructs also achieve a high level of reliability with composite alpha in excess of 0.95 for all constructs. As we mentioned earlier, in chapters one and two, there is a lack of social capital studies that explore theoretically or empirically the predictors of structural capital. To my knowledge, this study is one of the first studies to develop a valid and reliable scale to measure network ties, network configuration and network stability as antecedents of structural capital constructs. These scales can be used as a basis for establishing a comprehensive concept of structural capital in future studies.

According to the theoretical foundations of the proposed model in this study, we suggested three main predictors for structural capital: network ties, network configuration and network stability. We conduct SEM and regression analysis to test the impact of each of the three dimensions on establishing structural capital within the organisation. Our findings showed that strong ties are manifested in friendship relationships among employees in Egyptian financial service institutions, which in turn lead to encourage social interactions among them, which confirmed Hypothesis 1. According to Hypothesis 1, strong ties (friendship relationships) within the Egyptian financial service institutions facilitate smooth communication, cooperation, collaboration, affiliation and social support and sharing knowledge among employees. This result is in agreement with Anderson *et al.* (1994), Krackhardt (1992), Yli-Renko *et al.* (2001), Lin (2002), Balkundi and Kilduff (2005), Wasko and Faraj (2005), Cummings and Higgins (2006), Ramström (2008), Rau *et al.* (2008), Wu *et al.* (2008) and Hossain and de Silva (2009)'s earlier findings.

According to the literature, strong social ties (friendships) reflect the individual view of structural capital, which derived basically from social relationships among employees as suggested by Portes (1998), Leana and van Buren (1999) and Inkpen and Tsang (2005). This means that developing structural capital within the Egyptian financial sector happens because of the accumulation of social relationships among employees and not from the efficient organisation strategies (firm level) and this may explain the strong impact of network ties on structural capital. Our results showed that the impact of network ties on structural capital is greater than the effects of network configuration and network stability (coefficient values for the three variables are 0.29, 0.14 and 0.14 respectively).

Hypothesis 2 proposed that effective configuration of employees within organisations positively and significantly affects structural capital. In other words, effective configuration of employees (in terms of ease of connecting to each other and ease of reaching all databases within the organisation) supports social interactions among them. The findings support this hypothesis. This means that ability to reach easily and speedily reach any touch point in the organisation improves open communication, encourages cooperation and supports exchange of expertise and experience among employees. This finding is supported by Janz *et al.* (1997), Reagans and Zukerin (2001), Tsai (2002), Janz and Prasarnphanich (2003), Jayachandran *et al.* (2005), Chen and

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Huang (2007) and Chen and Quester (2008). Hypothesis 3 which concerned the link between stable information flow within an organisation and social interactions among employees is also confirmed. This consistency in information flow within the organisation facilitates open communication, social support, exchange of resources, collaboration and cooperation among employees. This finding is consistent with Newcomb (1961), Deeter-Schmelz (1997), Walker *et al.* (1997), Bowersox *et al.* (1999), Szymanski and Henard (2001), Stanko *et al.* (2007 and Richards and Jones (2008)'s earlier findings.

In conclusion, the results present empirical justification that strong ties among employees, easy connection between back-room and front-line staff (service providers), smooth access to all the organisation's databases and efficient information flow among employees through an effective information system enlarge social interactions among employees within the organisation. These social interactions are likely to improve open communication, cooperation, exchange of expertise and experience and social support among employees, which in turn enhance the internal functions in the organisation, as recommended by (REF). Our result also proved that structural capital is affected more strongly by strength of social ties (network ties) than the organising of employees (network configuration) and the stability of information flow (network stability) within the organisation. Therefore, our results confirmed the view that network ties, network configuration and network stability are the main predictors of structural capital.

8.2.2 Cognitive Capital Antecedents

Since Lee (2008:21) mentions that there is a neglect of the role of cognitive capital in developing social capital within the organisation, there is a shortage of social capital studies that pay attention to cognitive capital and its predictors. To fill this gap in literature this study tested an EFA model using varimax rotation with 29 items to explore the structure of cognitive capital and its sub-factors. The EFA results produced a three-factor solution. The understanding of the three-factor solution was accomplished by relating them to theoretical concepts of cognitive capital (Chapter 2 and 5). The first factor seems to fit very well with shared values since all its seven elements were related to measuring common work values, common beliefs and common attitudes among employees, which were considered as antecedents of cognitive capital (in term of shared goals) as advised by Meglino *et al.* (1989), Adkins and Ravlin (1996), Russell and

Werbel (1997), Nall (2002), Sagnak (2005), Taylor (2007) and Brown and Trevino (2009). The mean scores for shared values items are in the higher half of the distribution (≥ 4). These findings supports the suggestions that employees in the Egyptian financial institutions believe in team work, are faithful in customer orientation, are open- minded and accept different viewpoints and opinions, communicate smoothly with customers, have positive feelings toward the organisation and have similarity in work values that facilitate doing work as advised by Russell and Werbel (1997), Clarke 2006), Jayachandran *et al.*(2006), Philippe and Seiler (2006), Lacey (2007) and Taylor (2007).

The second factor seems to fit very well with shared norms, since all the seven elements are related to measuring the degree of obligation toward behaviour standards and work rules within an organisation, which is considered an antecedent of cognitive capital as recommended by Vecchio (1991), McAdams (1997), Nahavandi and Malekzadeh (1999), Adams *et al.* (2001), Deshpande *et al.* (2007) and Brown and Trevino (2009). The mean scores for all seven items are in the top half of the distribution (≥ 4), which confirms that employees in Egyptian financial institutions are committed to behaviour standards and work rules within the organisation. Employees with common norms acted within the standards defined by the organisation's regulations, adhered to the organisation's rules, applied ethical principals in serving customers, complied with the law and professional standards and never acted opportunistically with their colleagues as proposed by Russell and Werbel (1997), Maignan (2001), Mesmer-Magnus *et al.* (2008)., Brown and Trevino (2009) and Ramasamy and Yeung (2009). They believed that adherence to behaviour standards and a work rule within an organisation is the most efficient way to do work and helps in achieving the organisation's and personal goals.

The final factor seems to fit very well with shared goals (cognitive capital). It consists of 6 items. Cognitive capital in the current study is manifested in terms of common understanding , common meaning and common vision among employees as proposed by Hult and Ferrell (1997), Tsai and Ghoshal (1998), Sarkar *et al.* (1998), Clarke (2006), Merlo *et al.* (2006) and Chow and Chan (2008). The mean scores for all six items are in the upper half of the distribution (≥ 4). These findings confirm that employees in the Egyptian financial institutions have common understandings toward organisational goals, have a commonality of purpose, have consistent ideas about what the organisation should be trying to achieve, are enthusiastic about pursuing the collective goals of the whole organisation, supporting each other to achieve organisation goals and

consider customer orientation as the main goal of the organisation as recommended by Inkpen and Tsang (2005), Chiu *et al.* (2006), Puhakka, (2006), Krause *et al.* (2007), Chow and Chan (2008) and Oke *et al.* (2008).

The results of CFA models of the three constructs: shared values, shared norms and shared goals (cognitive capital) achieved satisfactory levels of convergent validity and discriminant validity for all three constructs. The three constructs also achieved high levels of reliability, as the composite alpha exceeded 0.95 for all constructs. To date, there is a shortage of social capital studies that investigate theoretically or empirically the sub- dimensions of cognitive capital. Therefore, our results give a valid and reliable scale to measure shared values and shared norms as predictors of cognitive capital constructs in future studies.   According to the EFA results, our proposed model suggested two hypotheses (*H4* and *H5*) to investigate the impact of shared values and shared norms on developing cognitive capital (shared goals) among employees.

The positive and significant link between shared values among employees and establishing shared goals among them is supported, which confirms Hypothesis 4. This result is compatible with the findings of Posner *et al.* (1985), Meglino *et al.* (1991), McDonald and Gandz (1992), Hyde and Williamson (2000) and Sagnak (2005). Thus, common work values, common attitudes and common beliefs among employees facilitate creating common understanding, common meaning and common vision among them. Moreover, shared norms among employees facilitate developing shared goals among them, which verifies Hypothesis 5. This means that employees who adhere to behaviour standards and work rules within the organisation are more capable of reaching common goals. This result is in agreement with the earlier findings of Vecchio (1991), McAdams (1997), Sherif *et al.* (2006), Mukherji *et al.* (2007) and Durlauf and Blume (2008).

Our expectation was that both shared values and shared norms would be positively related with shared goals among employees. The results present empirical validation that shared values (in terms of common work values, common attitudes and common beliefs) among employees and shared norms (in terms of obligation with behaviour standards and work rules within an organisation) facilitate establishing shared goals among them. Our findings also revealed that cognitive capital (shared goals among employees) is affected more strongly by shared norms (obligation with behaviour

standards and work rules within organisation) than shared values among employees (sharing common work values, common attitudes and common beliefs among employees). This suggests that in the Egyptian financial service institutions, in which employees have widely similar common norms, it will be easy to establish common goals among them. Therefore, the statistical results of this study give strong evidence that shared values and shared norms represent the main antecedents of cognitive capital.

8.2.3 Relational Capital Antecedents

According to the proposed research model, relational capital reflects the outcome of social capital. It is derived from the integration between both structural and cognitive capital dimensions within the organisation. To identify the structure of relational capital an EFA model was conducted using varimax rotation with 10 items. The result of the EFA model produced a one - factor model. The understanding of the solution was accomplished by relating it to theoretical concepts of relational capital (Chapter 2 and 5). The factor seems to fit very well with trust relationship since all its seven elements were related to measuring degree of confidence in good intention, competencies, credibility and cooperative behaviour among employees within the organisation, as advised by Moorman *et al.* (1992), Fukuyama (1995), Swan *et al.* (1999), Seines and Sallis (2003), Chiu *et al.* (2006), Moliner *et al.* (2006) and Yang *et al.* (2008).

The mean scores for the relational capital items are in the higher half of the distribution (≥4). These findings support that employees in the Egyptian financial service institutions are: trustworthy , can be counted on to do what is right for their colleagues, respond promptly to their colleagues' explanation and questioning, are helpful when responding to their colleagues' requests, frequently exchange valuable information with their colleagues, having confidence in their colleagues' abilities and skills to do the work and faith that trust among them is the best and easiest way to get the work done as suggested by Sivadas and Dwyer (2000), Zolin *et al.* (2004), Bergeron *et al.* (2008), Lawson *et al.* (2008), Yang *et al.* (2008) and He *et al.*(2009). These findings also support the viewpoint that considers trust as a broad concept that shape from mixture of three main concepts such as trustworthiness, reciprocity and friendship as recommended by Cousins *et al.* (2006), Tyler and Stanley (2007) and Kaasa (2008). Furthermore, the results of the CFA model for relational capital met the requirements of both convergent and discriminant validity of the trust construct. The trust construct also achieved a high

level of reliability, with a composite alpha of 0.97. Therefore, our results give a valid and reliable scale to measure relational capital (in terms of trust) in future studies.

According to the proposed model of this study we consider structural capital and cognitive capital to be predictors of relational capital, as suggested by Tsai and Ghoshal (1998), Liao and Welsch (2003, 2005) and Lu and Yang (2011). Our research model proposed positive and significant mutual effects between structural capital and cognitive capital. With respect to the statistical results of this study, testing of Hypothesis 6 verified the positive and significance of this relationship in the Egyptian financial sector. This result demonstrates that social interactions (in terms of open communication, cooperation, collaboration, social support and exchange of resources) have a positive impact on establishing common goals (in terms of common understanding, common meaning and common vision) among employees within the financial sector in Egypt. This result is compatible with the earlier findings of Rentsch (1990), Tasi and Ghoshal (1998), Heffner and Rentsch (2001), Bartol and Srivastava (2002), Koskinen *et al.* (2003), Liao and Welsch (2003, 2005), Wasko and Faraj (2005), Chen and Huang (2007), Ramström (2008) and Lu and Yang (2011). In addition, cognitive capital (shared goals) has a positive and significant effect on structural capital (social interactions) among employees in financial sector in Egypt, which supports Hypothesis 7. Therefore, homogeneity among employees in terms of common understanding, common vision and common meaning facilitates social interactions among employees as supported by Symon (2000), Chiu *et al.* (2006), Krause *et al.* (2007) and Taylor (2007).

Consistent with expectations, our results demonstrated that structural capital (social interactions) among employees within the Egyptian financial sector promotes relational capital (trust relationships among employees), which showed a confirmation for Hypothesis 8, as advocated by Putnam (1993), Dahab (1996), Tsai and Ghoshal (1998), Liao and Welsch (2003, 2005), Powell *et al.* (2006), Crowe (2007), Kuo *et al.* (2008), Lawson *et al.* (2008), Ramström (2008) and Lu and Yang (2011). This means that open communication, cooperation, collaboration, social support and exchange of resources (experience and expertise) among employees increase confidence in good intentions, competencies, credibility and cooperative behaviour among employees within the organisation.

The statistical testing of Hypothesis 9 confirmed the positive and direct relationship between cognitive capital and relational capital within the Egyptian financial service institutions. This result demonstrated that common goals among employees encourage trust relationships among them, consistent with the claims of Wagner (1990), Tsai and Ghoshal (1998), Betts (2002), Miretzky (2002), Fichman (2003), Liao and Welsch (2003, 2005) and Lu and Yang (2011). In other words, common understandings toward organisational goals, having a commonality of purpose, having consistent ideas about what the organisation should be trying to achieve and being enthusiastic about pursuing the collective goals and common vision among employees encourage trusting relationships among them. According to our results, structural capital and cognitive capital are the main predictors of relational capital, as supported by Tsai and Ghoshal (1998), Liao and Welsch (2003; 2005) and Lu and Yang (2011). Our findings verified that relational capital (trust relationships among employees) is affected more strongly by cognitive capital (in terms of common understanding, common meaning and common vision) than structural capital (in terms of open communication, cooperation, collaboration, social support and exchange of resources (experience and expertise) among employees.

As we mentioned earlier, in chapter 6, one of the main contributions of using SEM is its ability to identify the direct and indirect effects among constructs in the proposed hypotheses. According to the SEM results, there is a strong indirect effect between structural capital and relational capital through the mediating role of cognitive capital. In addition, there is a strong indirect impact of cognitive capital on relational capital through the mediating role of structural capital. According to our results, the indirect effect of structural capital on relational capital through the mediating of cognitive capital increased the total effect among the two variables from 0.233 to 0.68 (approximately. three times more). This result indicates that effective social interactions among employees increase trusting relationships among them if employees share common goals. On the other hand, cognitive capital also indirectly affects relational capital through the mediation of structural capital and increases the total effect among two variables from 0.73 to 0.99 (approximately 1.4 times more). This also confirms that employees with common goals will be more trusting in each other if they also interacted socially.

As we stated former, in chapters two and five, many social capital studies have supported the interrelationships between social capital dimensions. These studies identified three direct relationships among these dimensions; firstly, the direct relationship between structural capital and cognitive capital, secondly, the positive relationship between structural capital and relational capital and finally, the relationship between cognitive capital and relational capital. A review of the literature showed an absence of studies that explore the direct impact of cognitive capital on structural capital. Therefore, this study will be one of the first studies to fill this gap and investigate the direct impact of cognitive capital on structural capital. Moreover, this study is one of the first studies to examine empirically and rigorously the indirect effects between social capital dimensions. Undoubtedly, adopting social capital within organisations encourages cooperative behaviour and trusting relationships between back- room staff and front-line staff, which in turn enhance the internal functioning within the organisation yielding added positive value for the organisation, as mentioned earlier Chapter.5. Therefore the following section presents the perceived value that an organisation can attain as a result of adopting social capital within the organisation.

8.3 Organisational Values of Adopting Social Capital

A review of the literature revealed that social capital is of benefit to organisations and an important potential resource that adds value to the organisation (Nahapiet and Ghoshal, 1998; Tasi and Ghoshal, 1998; Adler and Kwon, 2002; Bresnen *et al.*, 2005). Consequently, Bresnen *et al.* (2005:236) revealed that "*a key concern in the literature on social capital has therefore been to try to understand the ways in which social capital develops and affects performance within the organization, as well as the factors that inhibit or enable its development and exploitation*". Nevertheless, few studies have investigated the role of adopting intrafirm social capital on internal process of organisation and its impact on customer service. Undoubtedly, a high level of customer service establishes satisfied and committed customers. Therefore, one of the main objectives of this study is to examine the direct impact of intrafirm social capital on customer satisfaction and the indirect impact on customer commitment. As mentioned earlier in Chapter.3, the current study suggested that customer satisfaction and customer commitment are the main perceived values of adopting intrafirm social capital from managers' perspective.

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To explore the structure of perceived value dimensions this study conducted an EFA model using varimax rotation with 18 items. The EFA result produced a two-factor solution. The understanding of the two-factor solution was accomplished by relating these factors to theoretical concepts of perceived values as a result of adopting social capital within an organisation (Chapter 3 and 5). The first factor seems to fit very well with customer satisfaction, since all its seven elements were related to perceived technical service quality and functional service quality given by service providers as suggested by Parasuraman *et al.* (1988), Sharma and Patterson (1999), Rossiter (2002), Jarvis *et al.* (2003), Yavas (2006), Auh *et al.* (2007), Jayawardhena *et al.* (2007), Eisingerich and Bell (2007) and Chen and Quester (2008). The mean scores for the seven customer satisfaction items are in the upper half of the distribution (≥ 4). These high scores confirm that customers are satisfied with the Egyptian financial sector because they respond quickly to customers' needs, give customers the appropriate personal attention, do their best to perform the service close to customers' specifications, deal promptly with customers' complaints, are approachable and easy to contact, respond politely to customers' requests and simplify the service delivery process to customers as recommended by Cronin *et al.* (2000), Ofir and Simonsons (2001), Chen and Quester (2005), Eisingerich and Bell (2007), González *et al.* (2007) and Kassim and Souiden (2007). All those attributes reflect high technical and functional service quality that Egyptian financial service institutions expected to make customer satisfied.

The second factor seems to fit very well with customer commitment, since all the seven elements were related to customers' perceived emotional attachment to the organisation, their willingness to make long term relationship and to make short sacrifices to maintain this relationship with the organisation, consistent with Anderson and Weitz (1989), Werner (1997), Hennig-Thurau (2004), Mattila (2004), Fullerton (2005), Dimitriades (2006), Feng and Morrison (2007) and Ivens and Pardo(2007). The mean scores for all seven items are in the top half of the distribution (≥ 4). These results indicate that customers are committed to Egyptian financial service institutions because they have a good reputation, introduce better offers and prices, keep personal relationships with customers, exert maximum effort to introduce the best financial products to their current customers, are always committed to fulfilling their agreements with customers and expect some sacrifices (money, effort) from their customers to maintain the valued relationship with the organisation as advocated by Roman and Ruiz (2005), Chang

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(2007), Moliner *et al.* (2007), Tokman *et al.* (2007), Bergeron *et al.* (2008) and Yang *et al.* (2008). All those attributes represent the reasons that mangers expect to increase customer commitment from the perspective of Egyptian financial service institutions.

To confirm the unidimensionality of the two constructs, the results of the CFA models of customer satisfaction and customer commitment achieved satisfactory convergent and discriminant validity for both constructs. These constructs also achieve a high level of reliability, with composite alpha in excess of 0.95 for both constructs. Therefore, our results establish valid and reliable scales to measure customer satisfaction and customer commitment constructs from the perspective of managers in Egyptian financial service institutions. To achieve one of the main aims of this study, we explore the impact of social capital represented in trust relationships among employees on customer satisfaction in the sub-sections below.

8.4   Customer Satisfaction and its Relationship to Social Capital

Despite the variety of social capital studies in different areas, there is a deficiency of studies that integrate intrafirm social capital with customer behaviours in the financial services sector (Moran, 2005; Krause *et al.*, 2007; Lawson *et al.*, 2008). In the same line, Holland and Johnsson (2003) and Johansson (2007) reveal that there is a need for more studies that give more understanding of the contribution of relational capital as an outcome of social capital in improving customer- organisation relationship. To our knowledge, there is a lack of studies that investigate the impact of social capital on customer behaviour such as customer satisfaction and customer commitment. Therefore, this study is very important as it paves the way for more studies to investigate the impact of intrafirm social capital on customer behaviour.

According to the proposed research model, intrafirm social capital has a positive effect on customer satisfaction. Social interactions (structural capital) among employees have a positive impact on customer satisfaction, as suggested by Yli-Renko *et al.* (2001), Donavan and Hocutt (2001), Pervan *et al.* (2007), Sirmon *et al.* (2007) and De Clercq *et al.* (2009) which verifies Hypothesis 10. The positive result of Hypothesis 10 demonstrates that cooperative behaviour, exchange recourses, open communication and social support between back-room staff and front- line staff in Egyptian financial service institutions have positive and significant effects on customer satisfaction.

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Moreover ,trusting relationships among employees, which are the main outcome of intrafirm social capital, positively affect customer satisfaction, as supported by Rich (1997), Davis *et al.* (2000), Eichorn (2004) and Merlo *et al.* (2006). Our results showed a positive and significant link between trusting relationships among employees and customer satisfaction, which confirms Hypothesis 11. The positive result of Hypothesis 11 demonstrates that trusting relationships between back-room staff and front- line staff in Egyptian financial service institutions has a positive and significant impact on customer satisfaction. This result is compatible with the view that trusting relationship among employees has direct and indirect effects on customer satisfaction. These results are compatible with the earlier findings of Rich (1997), Davis *et al.* (2000) and Merlo *et al.* (2006). According to the results of the proposed research model, the next sub sections discuss the impact of customer satisfaction on CRM performance.

8.5   Customer Satisfaction and CRM Performance

There is a great debate in the literature about the role of customer satisfaction in enhancing CRM performance (customer loyalty and customer retention). A review of the literature showed two viewpoints that describe this contested matter: 1) satisfaction itself leads directly to customer loyalty and retention or 2) customer commitment as a mediating variable is necessary to turn satisfied customers into loyal and retainable ones. Therefore the current study investigates the two viewpoints.

8.5.1   Direct Impact of Customer Satisfaction on CRM Performance

As we stated earlier in Chapter 4, this study adopted customer loyalty and customer retention as the main measures of CRM performance. A review of the literature found a confusion in defining and operationalising customer retention. However, most CRM studies operationalised customer retention in terms of behaviour loyalty (e.g. intention to stay and intention to invest more). Because of this interrelationship in operationalising both loyalty and retention constructs, there is a need for more studies that measure customer loyalty and retention as separate constructs. Therefore, the current study operationalised customer retention in term of actuality (customer's actual behaviour) not intentionality (behaviour loyalty) as recommended by Eid (2007). Thus, this study measured customer retention in terms of actual staying for a long time and real investment in the organisation, while customer loyalty was operationalised as a

composite construct, which encompasses a mixture of the two dimensions :attitudinal and behavioural.

To explore the structure of CRM performance, an EFA model was conducted using varimax rotation with 20 items. The EFA results produced a two-factor solution. The understanding of the two-factor solution was accomplished by relating the factors to theoretical concepts of CRM performance (Chapter 4 and 5). The first factor seems to fit very well with customer loyalty, since all its seven elements are related to measuring both attitudinal and behavioural dimensions of loyalty in terms of word of mouth, advocacy intentions, altruism, exclusivity intentions and switching intention, as advised by Zeithaml *et al.* (1996), Bettencourt (1997), Beatty (1999), Reynolds and Arnold (2000), Fullerton (2005), Mattila (2006), Jones and Taylor (2007) and Eisingerich and Bell (2007).

Moreover, the mean scores of the seven customer loyalty items are in the upper half of the distribution (≥ 3.9). These findings confirm that existing customers in the Egyptian financial institutions are loyal customers. As a consequence of customer loyalty to the Egyptian financial institutions customers give good references to potential customers through word of mouth, encourage their relatives and friends to deal with a specific company, defend the company when others criticise it, consider a specific company as the first alternative for most of their financial investments and prefer the company above other competitors as advocated by Reynolds and Arnold (2000), Dimitriades (2006), Johnson *et al.* (2006) Eid,(2007) and Eisingerich and Bell (2007). This result confirmed the loyalty of customers in the Egyptian financial service sector.

On the other hand, the second factor seems to fit very well with customer retention since all the seven elements are related to predicting customer retention through logical indicators that reflect the customer's actual stay with the organisation and greater investment in the organisation' products in future. These indicators include investing more in organisation' products in future, segmenting the market according to the economic value of customers, having an effective customer database, having a long customer lifetime cycle and personalising customer services, as recommended by Garbarino and Johnson (1999), Day (2000), Parvatiyar and Sheth (2000), Ranaweera and Neely (2001), Croteau and Li (2003), Zikmund *et al.*(2003), Bergeron (2004), Reinartz *et al.*(2004), Gounaris (2005), Farquhar (2005), Jayachandran *et al.*(2005),

Tanner *et al.*(2005), Ozgener and Iraz (2006), Eid (2007), Bergeron *et al.* (2008) and Richards and Jones (2008).

The mean scores for all seven items are in the top half of the distribution (≥ 4), which confirms that customers of the Egyptian financial service institutions are retainable. Those customers stay longer and invest more in the future with specific organisation. As a consequence of customer retention, the organisation provides customers with "one-to-one" experience, segments the market according to the economic value of customers, consolidates critical information about each customer, has a long customer lifetime cycle, increases the volume of business with its customers in future and achieves better customer attraction and retention of target customers than competitors as suggested by Tanner *et al.* (2005), Eid (2007), Ivens and Pardo (2007), Ndubisi *et al.*(2007) and Richards and Jones (2008). To verify the unidimensionality of the two constructs, the results of the CFA models for customer loyalty and customer retention achieved the suggested requirements of convergent validity and discriminant validity for both constructs. The constructs also achieve a high reliability, with composite alpha greater than 0.95 for both constructs. Therefore, our results establish a valid and reliable scale to measure customer loyalty and customer retention from the perspective of Egyptian financial service institutions. In conclusion, our results demonstrate that customer loyalty and customer retention are distinct constructs.

After confirming the reliability and validity of loyalty and retention constructs the current study investigates the relationship between customer satisfaction and CRM performance. Our results demonstrate that customer satisfaction has a positive and significant impact on customer loyalty, which supports Hypothesis 11. This result supports the idea that if the organisation introduces quality products and maintains a quality relationship with customers (in terms of responsiveness, empathy, politeness, interactional justice and paying personal attention) customers will be more loyal (in terms of talking positively about the organisation, encouraging their relatives and friends to deal with the organisation, defending the organisation and not switching to competitors). Therefore, Hypothesis 11 supports the findings of prior studies by Wang *et al.* (2004), Abdul-Muhmin, (2005), Farquhar (2005), Rao (2005), Chandrashekaran *et al.* (2007), Rauyruen and Miller (2007) and Chen and Quester (2008), which found positive and significant links between customer satisfaction and customer loyalty.

Contrary to expectations, the link between customer satisfaction and customer retention was insignificant, which indicated rejection for Hypothesis 12. This result indicated that customer satisfaction does not directly lead to customer retention as suggested by Minami and Dawson (2008)'s earlier findings. After a review of the literature, we found more evidence of similar findings. For example, Reichheld and Aspinall (1993), Caceres and Paparoidamis (2007) and Kassim and Souiden (2007) found that satisfaction did not directly influence customer retention, but did so indirectly through commitment. Therefore, this study supports the necessity of testing the impact of customer satisfaction on customer retention through the mediating role of customer commitment.

8.5.2 Customer Commitment as a Mediating Variable

As we mentioned earlier in Chapter 5, the recent viewpoint believes that customer satisfaction does not guarantee customer loyalty or customer retention and there is a need for customer commitment as a mediating variable between them (Reichheld and Aspinall, 1993; Jones and Sasser, 1995; McCarthy, 1997; Fullerton, 2005; Caceres and Paparoidamis, 2007; Kassim and Souiden, 2007). Initially, Hypothesis 13 confirmed the positive and significant link between customer satisfaction and customer commitment. This finding demonstrated that high service quality (technically and functionally) encourages customers to increase their emotional attachment and their willingness to make- short sacrifices to maintain a long- term relationship with the organisation. This finding is compatible with the results of Sharma and Patterson (2000), Abdul-Muhmin (2005), Dimitriades (2006), Caceres and Paparoidamis (2007), Menon and O'Connor (2007) and Moliner et al. (2007).

Our results showed that customer commitment has a positive and significant relationship with customer loyalty, which confirms Hypothesis 14. This result proves that customers' emotional attachment to the organisation and willingness to make short-term sacrifices to maintain a long- term relationship with the organisation encourage them to be more loyal (talking positively about the organisation, defending its performance, making purchase exclusively from this organisation and resisting switching to competitors. This result is consistent with Garbarino and Johnson (1999) Luarn and Lin (2003), Fullerton (2005), Richard et al. (2007), Eakuru and Nik Mat (2008)'s earlier findings.

The results also confirm the positive and significant link between customer commitment and customer retention, which supports Hypothesis 15. This result showed a significant and strong association between customer commitment (emotional attachment with organisation, willingness to make short-term sacrifices to maintain a long term relationship with this organisation) and customer retention (actual staying and continuing investments with this organisation for long time). This finding is compatible with the results of Crutchfield (2001), Ruyter *et al* (2001), Malewicki (2005), Johnson *et al.* (2006) and Richard *et al.* (2007). Therefore, our results support the recent viewpoint that proposes customer commitment as a mediating variable between customer satisfaction and CRM performance (customer loyalty and customer retention). Moreover our findings demonstrated that customer satisfaction has a strong indirect effect on customer loyalty and customer retention through commitment.

According to our results, the indirect effect of customer satisfaction on customer loyalty through the mediating of customer commitment increased the total effect between the two variables from 0.45 to 0.87 (approximately five times more). This result indicates that satisfied customers increase their loyalty to the organisation if they are committed to the organisation. Moreover, customer satisfaction indirectly affects customer retention through the mediation of customer commitment and customer loyalty and increases the total effect between the two variables from 0.11 to 0.8 (approximately seven times more). This finding confirms that satisfied customers become more retainable if they are committed and loyal to the organisation. After excluding the direct effect of customer loyalty on customer retention (0.11), we can confirm that customer satisfaction has a strong indirect effect on customer retention through the mediating role of customer commitment (0.52). This result also confirms that satisfied customers become more retainable if they are committed to the organisation, which supported the recent viewpoint put forward by Reichheld and Aspinall (1993), Caceres and Paparoidamis (2007), Kassim and Souiden (2007). Finally we tested the direct and positive relationship between customer loyalty and customer retention.

8.6 The Relationship among CRM Dimensions

Our results indicated that customer loyalty has a positive and significant impact on customer retention, which supports Hypothesis 16. This result is in agreement with the earlier findings of Kumar and Shah (2004), Wang *et al.* (2004) and Keiningham *et al.*

(2007). This result supports the view that customer loyalty (talking positively about the organisation, defending its performance, purchasing exclusively from this organisation and resisting switching to competitors), increases the probability of existing customers to continue with the organisation and encourages them to plan to invest for a long time in future. According to the SEM's research results, all hypotheses are confirmed except the direct impact of customer satisfaction on customer retention (Hypothesis 12) which gives strong validity to the structure of the research model. Moreover, we can confirm that adopting social capital within the organisation enhances CRM performance (customer loyal and customer retention) through the mediating roles of customer satisfaction and customer commitment in the Egyptian financial sector.

According to the previous discussion to the research results, we can summarise these results as following. Firstly, social capital is considered as an antecedent for CRM. Social capital either in interfirm and intrafirm contexts represent the human dimension of CRM. Intrafirm social capital reflects the personal interactions among employees that improve the internal process for an organisation, which in turn lead to enhance customer service that represents the main antecedent of customer satisfaction. On the other hand, interfirm social capital reflects the human interaction between employees and customers that engenders positive or negative customer behaviour. Secondly, social capital adds values for an organisation through establishing positive customer behaviours. These positive behaviours can be measured through customer satisfaction and customer commitment. Thirdly, social capital is a comprehensive model that encompasses three main dimensions: structural, cognitive and relational. Structural capital dimension is developing through integration between three factors: type of ties within a network, configuration of the network and efficient of this network. Cognitive dimension is developed though interaction between shared values and norms among network actors. Both structural capital and cognitive capital are responsible for establishing relational capital. Thus, the different dimensions of social capital are interrelated and work in synergetic way to build trust relationship among network members.

In the Egyptian financial service institutions, social capital can contribute in enhancing customer- organisation relationship. Through social capital the Egyptian financial service institutions can enhance human interactions among employees through establishing strong social ties among them. These strong social ties create friendship relationships among employees as recommended by (Elsharnouby and Parsons, 2010).

Friendship relationships among employees affect directly and indirectly on customer-organisation relationship. Thus, we can assert that human interactions among employees and with customers represent the human dimension of CRM. Enhancing human dimension of CRM can remedy the poor results of CRM initiatives. Therefore, management of the Egyptian financial service institutions should pay attention to the human dimension of CRM rather than technological dimension because it less costly.

8.7 Summary

This chapter discussed the different results of the proposed research results. Most of hypotheses of this study had been approved. These results are compatible with the theoretical foundations of this study. This study validated the proposed research model that link social capital with CRM performance (customer loyalty and retention) through the mediating roles of organisational perceived values (e.g. customer satisfaction and customer commitment).

Chapter 9 Conclusion and Recommendations

9.1 Introduction

This thesis examines empirically and rigorously the impact of social capital on CRM performance in the financial sector in Egypt. To achieve this main aim we achieve many other objectives. These objectives include exploring the predictors for each of the social capital dimensions, investigating the role of adopting social capital within an organisation in improving customer satisfaction and finally exploring the effect of customer satisfaction in enhancing CRM performance. The thesis was presented in three main parts. Part one, consisting of four chapters (1, 2, 3 and 4), which presented the overall theoretical background of the related subject. Part two consisted of two chapters (5 and 6) aims at presenting the research questions, hypotheses, variables, framework and the methodology of the research. The final part (chapters 7, 8 and 9) was concerned with the presentation of the empirical aspect of the research, as well as the findings and conclusion of the thesis.

This thesis makes explicit contributions towards knowledge. First it presents an overview of the research objectives and findings in section 9.2 as well as the contributions of the study to research and theory (section 9.3). Section 9.4 discusses the research implications and finally limitations and suggestions for future research are outlined in section 9.5.

9.2 Overview of study aim, objectives and achievement

The main aim of this research was to develop a framework that explains the impact of intrafirm social capital on CRM performance in the Egyptian financial service institutions. To achieve this aim this research has carried out a comprehensive investigation using a multidisciplinary approach towards social capital and relationship marketing. Since social capital and CRM are driven by a social exchange process, this study has paid particular attention to various theories that underpin the theoretical foundations to the proposed model of this study such as social network, social capital, cognition and relationship marketing. The theoretical foundations of this study were developed from an extensive literature review (Chapters 2, 3, 4). A review of the literature gives better understanding to the key concepts of this study and supports the proposed hypotheses between variables. In this study the constructs and hypotheses were developed based on relationships between social capital and

CRM performance (Chapter 5). While Chapter 6 sets out the methodology used to test the hypotheses, Chapter 7 provides findings of univariate, multivariate tests and results for all the formulated hypotheses. Chapter 8 presents a comprehensive discussion of findings, suggesting that the five research objectives set out in Chapter One have been adequately addressed.

Consequently, this study achieves five main objectives. Firstly, the results of this study confirm that the Egyptian financial sector applies intrafirm social capital within its institutions. Furthermore, these institutions adopt effective strategies of CRM. Secondly, this study identifies the main antecedents of social capital dimensions (structural, cognitive and relational). This study identifies three predictors for the structural capital dimension: network ties, network configuration and network stability. These three factors establish social interactions within an organisation. Regarding the cognitive capital (shared goals) dimension, this study establishes two main antecedents for developing cognitive capital within the organisation: shared values and shared norms. Thirdly, our study demonstrates that structural capital helps in establishing cognitive capital, and on the other hand cognitive capital supports development of structural capital within organisations. Moreover, our study proves that relational capital (trust relationships) within an organisation is derived from the integration between structural capital (social interactions) and cognitive capital (shared goals) among employees. Fourthly, this study shows that intrafirm social capital has a positively effect on customer satisfaction. In addition, this customer satisfaction directly and positively affects on customer commitment and CRM performance (customer loyalty and customer retention). Finally, this study introduces strong evidence, which confirms the positive link between intrafirm social capital and CRM performance through the mediating roles of customer satisfaction and customer commitment. Achieving the objectives of this study add many contributions and implications. Therefore, the next sub-sections present the contributions and implications of this study.

9.3 Contributions of the Study

This study makes several significant contributions towards research and theory of social capital as a new marketing field of knowledge. As theory in the marketing field of social capital is still comparatively undeveloped, fragmented and the environment is rapidly changing, this study can be considered as a step towards the building of a more robust theory.

It has brought together a large body of relevant marketing literature, and unified different schools of thought into one integrative perspective. The current study investigated the characteristics and significance placed on social capital in the financial service industry in Egypt and critically assessed the impact of social capital on CRM performance through the mediating roles of satisfaction and commitment. Table 9-1 summarises key findings, which show the relationship between constructs.

Table 9-1 Summary of key findings of research model

Hypotheses	Findings	Assertion
1.Network ties → Structural capital (+)	$\beta = .29^{***}$	Supported
2.Network configuration → Structural capital (+)	$\beta = .14^{***}$	Supported
3.Network stability → Structural capital (+)	$\beta = .13^{*}$	Supported
4. Shared values →Cognitive capital (+)	$\beta = .19^{***}$	Supported
5.Shared norms →Cognitive capital (+)	$\beta = .31^{***}$	Supported
6.Structural capital→ Cognitive capital (+)	$\beta = .45^{***}$	Supported
7.Cognitive capital→ Structural capital (+)	$\beta = .39^{***}$	Supported
8. Structural capital→ Relational capital (+)	$\beta = .26^{***}$	Supported
9. Cognitive capital→ Relational capital (+)	$\beta = .52^{***}$	Supported
10.Structural capital → Customer satisfaction (+)	$\beta = .24^{***}$	Supported
11. Relational capital → Customer satisfaction (+)	$\beta = .23^{***}$	Supported
12. Customer satisfaction → Customer loyalty (+)	$\beta = .64^{**}$	Supported
13. Customer satisfaction → Customer retention (+)	$\beta = .108^{ns}$	Rejected
14.Customer satisfaction → Customer commitment (+)	$\beta = .77^{***}$	Supported
15.Customer commitment→ Customer loyalty (+)	$\beta = .30^{***}$	Supported
16.Customer commitment→ Customer retention (+)	$\beta = .40^{***}$	Supported
17. Customer loyalty→ Customer retention (+)	$\beta = .34^{**}$	Supported
Goodness of Model fit		
Statistics	*Suggested*	*Obtained*
Chi-square/ df	≤ 5	2.8
Goodness-of-Fit Index (GFI)	≥ 0.9	0.92
Comparative Fit Index (CFI)	≥ 0.9	0.98
Normed Fit Index (NFI)	≥ 0.9	0.96
Parsimony Normed Fit Index (PNFI)	> 0.5	0.55
Parsimony Comparative Fit Index(PCFI)	> 0.5	0.56
Root Mean Square Residual (RMSEA)	≤ 0.10	0.096
Root Mean Residual (RMR)	≤ 0.05	0.03

*P< 0.05; **P< 0.01; *** P< 0.001, ns: not significant.

These findings highlight the potential contribution for this study towards social capital, customer behaviour and CRM literatures. They also contribute to practice within the Egyptian financial service institutions. Moreover, Table 9-1 exhibits the validation of the theoretical model for this study. Therefore, the current study has made theoretical and methodological contributions.

9.3.1 Theoretical Contributions

The current study has attempted to make several contributions to a body of knowledge in organisation-customer relationship literature. It has also provided a more testable model that integrates social capital with CRM in the financial service industry. Consequently, the research findings provide a rich basis for further theory development in this area. Various theories such as network, cognition, structural holes, social resource and social exchange process are used in this study to develop social capital theory. These conceptual concepts give valuable information that helps in better understanding to social capital dimensions and their antecedents. This contribution supports in establishing a robust theory of social capital. Our study contributed to the literature on a number of fronts.

Firstly, this study encourages researchers to move beyond a focus on the role of social capital in adding values within an organisation, and to recognise its role in enhancing customer behaviour and CRM performance. The results of this study show that the effect of intrafirm social capital is mediated by the more proximal determinants of customer satisfaction and customer commitment, that is, anticipated outcomes of adopting social capital within an organisation. Moreover, this study provides empirical support for both direct and indirect effects of intrafirm social capital on CRM performance (customer loyalty and customer retention) through the mediating roles of customer satisfaction and customer commitment

Secondly, overall, the findings of this study support the idea that social capital affects the creation of efficient interunit linkages within an organisation. The results respond to an unanswered question in the extant literature: Where do network linkages within an organisation come from? Previous studies explored the role of prior linkages in network formation without explaining how linkages are created (Tsai and Ghoshal, 1998; Lu and Yang, 2011). By empirically investigating how network linkages are created within an organisation, this study contributes to our understanding of the evolutionary dynamics of an organisation's internal linkages. These internal linkages provide new opportunities for productive resource exchange among organisational units. This study gives empirical evidence for the positive impact of intrafirm social capital in creating efficient internal linkages within an organisation.

Thirdly, there is no doubt that social capital is vital in the search and discovery of valuable information that is otherwise difficult to obtain. In addition, social capital is instrumental in

forming close cohesive bonds within an organisation that give employees a sense of belonging and create cooperative behaviour among them. However, as a value-creation mechanism, the impact of social capital has not been fully explored. The findings from our inquiry suggest that there are instances where social capital can facilitate value creation by providing access to otherwise unavailable knowledge, giving employees a sense of trust that is essential in mutually reinforcing relationships among employees. This trust relationship within the organisation establishes positive customer behaviour and improves CRM performance.

Fourthly, understanding the theoretical determinants of predictors of social capital dimensions (structural, cognitive and relational) is an important step. This study has extended social capital and customer relationship management literature to predict and explain the antecedents of social capital dimensions. In fact, understanding the key predictors of social capital dimensions is crucial to understand the mechanism of social capital within an organisation. Furthermore, as we mentioned earlier in Chapter Two, there is a shortage of social capital studies that investigate the interrelationships among the three dimensions of social capital. Besides this scarcity, there is also inconsistency in the results of these limited studies. Therefore, this study gives more empirical evidence for these interrelationships. Social capital studies that investigate the interrelationships among social capital dimensions identified three forms of relationships. These relationships include the impact of structural capital on both cognitive capital and relational capital. These studies also examine the impact of cognitive capital on relational capital. Besides these three interrelationships, this study is one of the first studies to contribute to literature by investigating the impact of cognitive capital on structural capital.

Fifthly, starting with the findings that are directly related to the original aim of the study, the findings would seem to suggest that intrafirm social capital and CRM are indeed two important notions that cause corporate clients to uphold a relationship with their organisations. Furthermore, intrafirm social capital precedes the development of CRM performance. This is important to bear in mind because the two notions, although closely related, are rarely integrated together. Drawing on theories such as social capital and RM we developed a model that explains the impact of intrafirm social capital on CRM performance. Our results encourage researchers to move beyond a focus on interfirm social capital, and to recognise

the role of intrafirm social capital in the organisation –customer relationship. Moreover, this relationship should be discussed extensively in future research.

Sixthly, Egypt as the geographical area of interest for this study is an under researched area in terms of customer-organisation relationship. Egypt is characterised as a developing region and the literature review presented in Chapter One shows that very little research has been conducted on social capital and CRM in Middle East culture (e.g. Egypt). Most studies on social capital or CRM have been conducted in Asian- western culture, whereas there is a scarcity in these studies in Middle East area. Therefore, this study contributes to the extant literature by providing empirical evidence on the role of social capital in enhancing CRM performance in one of the Middle East countries (e.g. Egypt).

Finally, in terms of the contribution to the extant literature, this study validates previous research, which highlighted that the intangible resources within organisations contributed to their performance, by testing this emerging theory in a new area. This study also contributes to the social capital literature by deconstructing the components of social capital to create taxonomy of terms that can be used to describe the attributes of social capital as it relates to the financial service industry. In addition, the study introduced the predictors of social capital to highlight the importance of relationships among employees to develop of social capital within the financial service industry in Egypt.

9.3.2 Methodological Contributions

From a methodological perspective, this thesis provided a rigorous study of issues in social capital aimed at enhancing the research methods in the field of social capital. According to Marr and Chatzkel (2004), the field needs to move forward by adopting more rigorous empirical research methods in theory testing. Adoption of an appropriate rigorous methodology would enable researchers in the field to understand and communicate better the theory and concepts behind the study of social capital. This study reinforced the use of quantitative method in testing hypotheses.

This study is one of the first studies that undertook an intensive study of the literature to identify existing measures of sub-factors of social capital dimensions. These measurement items were developed by adopting measures that had been validated in prior studies and modifying them to fit our context. These measurements items were discussed and refined

through 19 pilot interviews with relevant managers in Egyptian financial service institutions. These interviews make these measures more realistic and suitable for the Egyptian business environment. This thesis has verified and extended the use of exploratory factor analysis to identify the structure of each social capital dimension (structural, cognitive and relational). Regarding the structural capital in this study, it was been measured through social interactions among employees within an organisation. "Exchanging knowledge frequently and informally", "learning from each other", "feeling closer to each other", "cooperating when handling customer requests", "discussing the key issues in depth with supervisors" and "sharing knowledge with supervisors" represent the main indicators for measuring social interactions within organisations.

According to our results, network ties, network configuration and network stability represent the main antecedents for establishing social interactions within organisations. Firstly, "share practices and expertise", "initiate informal face-to-face conversations", "mutual encouragement and support", "seek advice from direct supervisors when necessary", "communicate directly with supervisors without prior appointments" and "low level of friction" are the most important items regarding network ties among employees". Secondly, "having authorised permission to access in organisation database"," linking through communication networks", "supporting by a customer data repository", "having direct contact with supervisors" and "using organisation system friendly" are the six most important items concerning "network configuration" within organisations. Finally, "easily‑ understood information", "prompt and timely information", "reliable information flow", "updating information and in-depth information about existing customers", "carrying out duties easily and "dealing with customer requests in efficient way" are the most important items regarding "network stability" within an organisation.

With respect to cognitive capital in this study, it was measured through shared goals among employees within organisations. "Common understandings of organisational goals, " commonality of purpose", " consistent ideas about achieving organisation goals", "enthusiastic about pursuing the collective goals of the whole organisation", "mutual support to achieve organisation goals" and "considering customer orientation as the main goal for company" were considered as the main items for measuring shared goals among employees within organisations. According to our findings, shared values and shared norms describe the main antecedents of cognitive capital (shared goals). "Belief in team work value", "faithful to

customer orientation philosophy", "degree of open- mindedness and accepting different viewpoints and opinions", "smooth communication with customers", "positive feelings toward organisation" and " similarity in work values that facilitate doing work" represent the main indicators for measuring shared values among employees within organisations. On the other hand, "acting within the organisation's regulations", "obligated with organisation's rules", "adhered with ethical principals", "complying with the law and professional standards", and "reducing opportunistic behaviour among colleagues" are the most important items regarding "shared norms" among employees .

Moreover, this study identified two main antecedents for developing relational capital within organisations. These antecedents are structural capital (social interactions) and cognitive capital (shared goals). The current study measures relational capital in terms of trust. Trust is measured through seven items. These items are "trustworthy", doing what is right for organisations", "responding promptly to colleagues", "encouraging explanation and questioning"., "helpful", "exchange valuable information among colleagues"., "confidence in colleagues' abilities and skills" and "faith that trust among them is the best and easiest way to get the work done". Moreover, this research represents an important step by proposing and empirically testing the antecedents of social capital dimensions in the field of service literature. However, although these dimensions (structural, cognitive and relational) are conceived as important issues in the social exchange processes within organisations, the antecedents of these dimensions will play an important role in understanding the mechanism of intrafirm social capital. The results reveal a number of areas for future research.

This thesis confirmed and extended the use of confirmatory factor analysis and structural equation modelling as appropriate methods to develop and validate constructs of the components of intrafirm social capital, perceived value (satisfaction and commitment) and CRM performance in social capital research. Statistical techniques and methods that are widely used in other social sciences data analysis were incorporated into this study. A full structural equation modelling methodology was used to empirically test the CRM performance linkage mediated by customer satisfaction and customer commitment and intrafirm social capital. The use of structural equation modelling in social capital studies in marketing field is still relatively new and most of the prior studies in intrafirm social capital that used the technique were limited to one of path analysis, partial least squares or confirmatory factor analysis. However, the complex nature of the intrafirm social capital in

marketing field supports using a structural equation modelling as a suitable multivariate technique for this study.

9.4   Research implications

The full picture of the research findings within the context of the body of knowledge is provided in this section, in which the theoretical and managerial implications of the research are elaborated. This section, therefore, is divided into two categories: academic and managerial implications.

9.4.1   Academic implications

In terms of academic implications, this study has not only made a significant contribution to knowledge in its immediate discipline/field, but it also has implications for the wider body of knowledge, including the parent disciplines/fields and other related fields. The findings discussed above have a number of implications for management theorists.

1. Organisational research would benefit if we overcame the tendency to bifurcate our social capital research into a strand focused on interfirm social capital and a strand focused on intrafirm social capital. The results of this study indicate that the extended model of intrafirm social capital can be applied to understand the mechanism underlying the relationship between employees within an organisation, which sheds light on inconsistent empirical results regarding this relationship in the literature.

2. The current results provide support for the model of intrafirm social capital used in this study and help to resolve a growing controversy in the literature regarding the conceptualisation of intrafirm social capital. Our investigation of the intrafirm social capital gives more insights into how is social capital created and accumulated inside an organisation. Our results demonstrate that each dimension of social capital has many antecedents and each dimension reinforced the creation of the other dimensions. Our results also introduce some valid and reliable predictors for each of the social capital dimensions. Those predictors for social capital dimensions yielded some interesting findings that give further elaboration of underlying social capital theory in the organisational setting.

3. Social network theory is one of the theories that help in understanding how social capital can be developed within an organisation. In this study, we provided clear performance implications for the role of intrafirm social capital by showing how social capital contributed to improve customer – organisation relationships in the financial sector in Egypt. Such an emphasis on the role of intrafirm social capital is consistent with a recent development in the social network literature, which argues that organisational advantages can be achieved through resource sharing among different organisational units (Tasi and Ghoshal, 1998; Liao and Welsch, 2005, Lu and Yang, 2011).

4. The results of this study indicate that intrafirm social capital can be applied to understand the mechanism underlying the relationship between customer and the organisation, which fills the gaps in the scarce of empirical results of this relationship in the literature. The intrafirm social capital offers a holistic view for future customer – organisation relationship strategy studies. It aims to fill the void in previous studies and in the launch strategy for efficient CRM by proposing a model comprising variables of intrafirm social capital and customer behaviour. Moreover, this thesis focuses on the processes which are responsible for accumulating social capital within an organisation. It also aims to explain how intrafirm social capital can affect on customer satisfaction and CRM performance. This study developed and tested a model linking intrafirm social capital and CRM performance. It has integrated social capital theory with mainstream customer-organisation research to explain how intrafirm social capital is developed within strategic organisation– customer relationships. The findings of this study show that the effect of intrafirm social capital on CRM performance is mediated by customer satisfaction and customer commitment.

5. While prior studies have indicated that social capital facilitates the creation of new intellectual capital (Coleman, 1988; Granovetter, 1973; Nahapiet and Ghoshal, 1998), this research highlights a wholly different, but essential, impact of social capital on the strategic formulation of CRM strategy within organisations. Therefore, this thesis calls for more research on what they call the "coevolution" of social capital and CRM. If social capital has the manifold effects we have ascribed to it, then it seems important that researchers study not only its effects on CRM performance but also its effects on customer behaviour. Thus a future research avenue might be inspired.

6. The validation of the proposed model of this study was conducted using data collected from the financial industry in Egypt. By applying this model and presenting the empirical relationship of the variables with realistic industrial data, this study sheds some light on the concepts that may help in improving CRM strategy.

9.4.2 Managerial implications

Given the goals of this study, we have positioned ourselves at a considerable distance from practice. Nevertheless, the current study suggests a number of managerial implications. These implications are as follows:

1. In both academic and practitioner marketing, emphasis on building and maintaining customer relationships continues to grow with a central focus on customer loyalty and retention. Ironically, progress made in the management of customer relationships to date generally has not substantially increased loyalty and retention rates. What is more, continuing enthusiasm for CRM initiatives still has not brought about commonly accepted successful factors of CRM. In the present study, however, a conceptual framework is provided for empirical investigation of the role of intrafirm social capital in enhancing CRM performance (in terms of loyalty and retention).

2. To foster social capital in organisations, our framework suggests that managers need to do more than merely encourage social interactions among employees. Organisations should also focus on establishing common goals among employees within organisations through developing shared values and norms among employees. Moreover, managers in these organisations should know that building structural capital requires not only establishing more social ties but also nurturing consistency in information flow and providing efficient organisations for interfirm networks within organisations (Lesser, 2000).

3. Our discussion of the results of this study suggests that management should pay heed to the role of intrafirm social capital in building the internal, bonding social capital within units, within the firm, and within interfirm networks. A group of theories such as social capital, social network, cognition and social exchange are the main theories that help in understanding how social capital can be developed within an organisation. In this study, we provided clear performance implications for the role of intrafirm social capital in remedying the poor results of CRM performance in financial service.

4. Our results highlight the role of the individual representative (service providers) in business services. The results suggest that representatives who build strong, long-term personal bonds with their colleagues within an organisation will also be supporting the creation of more relational types of exchange with their customers. Therefore, our results may help researchers to refine their understanding of service relationships by introducing a new level of analysis and new explanatory variables. It may also help managers to develop effective and trusting relationships among employees by helping them to coordinate their efforts at both the organisational and personal levels.

5. I have seen that a series of important changes is taking place in the financial services business and that, in this situation, it is necessary to develop strategies that prevent loss of customers. One of these strategies is to adopt intrafirm social capital as one of the strategies to improve customer behaviour (satisfaction and commitment) and CRM performance (loyalty and retention). Financial entities must maintain long term relationships with their customers in order to obtain the advantages of a customer base loyal and retainable to the organisation (Jacoby and Chestnut, 1978), and for this purpose it is necessary to orientate management around the value perceived by the customer.

6. This thesis informs practice by the recognition of how the benefits of intangible resources accrue to financial service institutions. This study validated the direct effect of intrafirm social capital on customer satisfaction and highlighted that customer satisfaction contributes significantly to the development of CRM performance (loyalty and retention) within the financial service industry in Egypt. The implication of this is that managers should have an understanding that appropriate intrafirm social capital strategies can develop effective CRM performance. As suggested by the social capital theory, an organisation's unique social capital resources and capabilities provide the basis for competitive advantage. Therefore, managers should recognise the importance of social capital dimensions and their sub-factors in the development of social capital within the organisation.

7. The importance of the relationships among employees was highlighted as a major factor in the development of intrafirm social capital within the financial service industry. The implication of this to management is that practices are needed to grow the intrafirm social capital by managing those internal trusting relationships among employees in the community. This highlights that it is not only relationships with customers that are critical in the

development of social capital but also the relationship among employees in the financial service. In addition, the study provides insights on leveraging value from customer relationship management systems through the integration of social capital dimensions (structural, cognitive and relational). The implication of leveraging value from customer relationship to practice is that managers should understand the potential economic benefits of having effective customer relationship management systems in place. Moreover, this study suggests that investment in the social capital provides an organisation with a competitive advantage. Although this study has produced some interesting results, it may still have some limitations, which will be discussed in the next section.

9.5   Study Limitations and Future Research

As with any study, there are certain limitations that should be recognised. This study focuses only on the manager's perspective. In future studies, it will be very useful to explore the employees' perspective in measuring the constructs of this study such as intrafirm social capital, customer satisfaction, customer commitment and CRM performance (loyalty and retention. However, acquiring information from employees about the dimensions of social capital and their antecedents would allow future studies to gain a better understanding to the dimensions of social capital. Furthermore, this study operationalised relational capital in terms of trust and there is an absence for the other dimensions such as friendship and reciprocity as recommended by Dyer and Singh (1998), Kale *et al.* (2000), Lawson *et al.* (2008) and Yang *et al.* (2008). Thus, there is a need to pay attention to these dimensions of relational capital, which may add additional contributions to this study and assist in developing social capital theory.

This study also used a quantitative method to collect data through using a questionnaire survey to collect data, which suffered from a certain degree of measurement error (Gay and Diehl 1992). The collection of data based entirely on a cross-sectional, self-report survey methodology is a limitation of the present study, since problems associated with common method variance – "the conflation of response-response correlations when all data is derived from the same source" (Brewerton and Millward, 2001) – may arise. For, example an overstatement of relationships among the variables studied may be attributed to use of a single source of data, such as self-report questionnaires. Rousseau (1990) advocated the use

of multiple methods as a means of addressing the problem of common method variance. Future research might consider use of mixed methods to collect data.

This study is limited by its cross sectional nature. The use of cross-sectional design for survey research in the quantitative methodology means that data were collected through a survey, which captured the perception of the respondents at a point of time. Because the study was not longitudinal, the researcher cannot make causal inferences among the dimensions of the study. Although survey research may be beneficial in predicting relationship between variables, causal relationships between the constructs cannot be determined on a temporal dimension. In other words, it is impossible to prove causal relationship among the constructs of interest on a longitudinal basis. Thus the cross-sectional design of this study limited inferences about the true nature of the causal relationships among the constructs of the intrafirm social capital, perceived value (satisfaction and commitment) and CRM performance (loyalty and retention). These constructs are dynamic in nature and require incorporation of the time element in order to study them precisely. For example, it may happen that accumulation of social capital within organisations is increasing or decreasing, and CRM performance could be increasing due to the nature of relationships among employees and customers. However, the limitation in terms of cost, and particularly in terms of time, did not warrant a longitudinal research for this purpose.

As the current study was a cross-sectional in nature, it cannot purport to provide a causal test of relationships. Causal inferences are stronger with experiential studies where the following conditions apply: (a) association, (b) temporal precedence, and (c) isolation (Gefen *et al*, 2000). Correlation implies association but is not enough. Research has to show that no other event has happened between the cause and effect events (Gefen *et al.,* 2000). SEM as used in this study can establish association with path analysis but it is difficult to establish isolation. There is always the possibility of omitting factors or specifying weak measurements. Therefore, causality inferences in SEM should be supported with strong relevant theory behind the data results. Gay and Diehl (1992) suggest that a correlation study supported by sound theory can lead to a causal–comparative study. In addition, over time, the importance of the various factors of social capital is likely to change, calling for new strategies and redirection of resources. Longitudinal research could gauge such changes and their effects on overall organisational well-being. Therefore, additional work is needed to test the

significance of hypothesised linkages among variables. In particular, future research should clarify the theorised relationships using longitudinal study designs.

The cultural aspect is one of major limitations of this study. This study was conducted in one of the Middle East countries (Egypt); thus its results may not be appropriate to generalise in the Western and Asian cultures. The effects of constructs such as network ties, shared values and shared norms in developing intrafirm social capital may differ in Middle East culture compared to Western culture because shared values and norms represent the main elements of cultural aspect as suggested by Nahavandi and Malekzadeh (1999) and Inken and Tsang (2005). Therefore, there is a need for more studies that use the proposed model of this study to be applied in different regions in Western and Asian cultures. Conduct a comparative study through applying the research model on different cultures may be useful in understanding the different aspects of shared values and norms in different cultures. It also contributes in understanding how can intrafirm social capital accumulate in different culture.

This study initially intended to survey the general phenomenon of the use of intrafirm social capital to enhance CRM performance. Sample organisations from the banks, insurance and brokerage sectors were selected for this study. Our samples provide business to customer (B-C) services in the financial sector in Egypt. Thus the results of the proposed model in this study cannot be generalised to other sectors such as other service sectors or industrial sectors. Applying the proposed model of this study on different sectors in Egypt will enrich the CRM literature and contribute in developing social capital theory. Moreover, a comparison of the results presented here with those from other marketing contexts would be worthwhile. The limitations of the study are discussed here in order to establish the boundaries for the interpretation of the results and their application to theory and practice as discussed above. In addition, study limitations help to specify areas for future research.

This study proposed and tested a model that integrates intrafirm social capital with CRM performance. The research results may help in developing the bonding view of social capital, while there is a need for suggesting and testing a model that examine the impact of interfirm social capital, bridging perspective of social capital on CRM performance. However, a comparison of the results presented for both models would be valuable to increase understanding of the mechanism of customer- organisation relationship and help in developing new strategies to enhance CRM performance.

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Appendixes

Appendix (A): English version of the questionnaire

Dear Sir/Madam,

The purpose of this questionnaire is to get your opinions about the impact of intrafirm social capital on customer relationship management performance. This is in order to provide Egyptian financial managers an insight into the role of social capital in enhancing the performance of CRM.

Your cooperation will contribute greatly to the success of this research. The questionnaire should take only few minutes to complete. Any personal data provided will be used only for statistical analysis and will be strictly confidential.

Thank you for your cooperation

The researcher: Elsayed Sobhy Mohamed

The University of Hull, UK

Business School

The impact of Social Capital on Customer Relationship Management Performance

Who should complete this questionnaire? How?

The questionnaire should be filled in by the **Area Supervisor/Customer Service Head (or by the manager who is in charge of customer service activities)** of the corporation. This will be done through asking respondents:

1. To choose an answer in an appropriate box.
2. To indicate their extent of agreement about different issues. A five-point scale (1-5) has been designed as follows:

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

1- BACKGROUND INFORMATION

Please tick in the appropriate box

A. About You

1- Age Category

☐ Under 30 yrs	☐ 30-40 yrs	☐ 41-50 yrs	☐ 51-60 yrs

2- Gender Category

Male ☐	☐ Female

3- What is your role in the organisation　?

☐ Area supervisor	☐ Customer service Head	☐ Other (specify,........)

4- How long have you been working in your organisation?

☐ Less 5 yrs ago	☐ 5-7yrs ago	☐ 7-10yrs ago	☐ More than 10 yrs ago

5. Please specify your educational background?

☐ University graduate	☐ Diploma	☐ Master	☐ Doctorate

B. About your Company

6- What is the size of your organisation (number of employees)?

☐ under 100	☐ 100-200	☐ 201-300	☐ More than 300

7- In what industry sector is your organisation?

☐ Insurance	☐ Banks	☐ Brokerage firms

8- Which investment sector owns your organisation?

☐ Public sector investment	☐ Private sector investment	☐ Foreign investment

(Please check all that apply)

2-THE DIMENSIONS OF SOCIAL CAPITAL

Questions in the next part concern your reactions to the factors that constitute Social Capital in financial institutions in Egypt. Questions also measure the replies of the respondents to the sub dimensions for each social capital dimension. Please tick the number that reflects your level of agreement.

9-These items are related to Structural Capital (social interactions):

Items	1	2	3	4	5
A. Our employees express their problems freely with their direct supervisors					
B. Open communication makes our employees feel closer to each other.					
C. Collaboration enables our employees to learn from each other.					
D. Our supervisors share their knowledge with their subordinates.					
E. Our employees cooperate when handling customer requests.					
F. Our supervisors encourage employees' elaboration and questioning about the work's key issues.					
G. Our employees discuss the key issues in depth with their supervisors.					
H. Exchanging knowledge takes place frequently and informally among employees.					
I. Our employees collaborate when solving customer' problems.					

9.1. These items are related to Network Ties:

Items	1	2	3	4	5
A. The strength of relationships between employees allows them to discuss their new ideas freely.					

Items	1	2	3	4	5
B. The relationships between our employees are characterised by high degree of emotional closeness.					
C. The strength of relationships between employees enables them to share their best practices and expertise with their colleagues.					
D. The strength of relationships between employees enables them to seek advice from their colleagues and direct supervisors when necessary.					
E. The strength of relationships between employees enables them to initiate informal face-to-face conversations with each other.					
F. The strength of relationships between employees encourages them to support each other.					
G. The strength of relationships between employees reduces the level of friction among them.					
H. The strength of relationships between employees and their supervisors enable them to communicate directly with their supervisors without prior appointments.					

Items	1	2	3	4	5
A. The front offices and back offices are linked by communication networks.					
B. Our employees can easily access to company's database.					
C. Our employees have interactive communications with their colleagues via (face to face, phone, internet, etc.).					
D. Our information system is user-friendly					
E. Our organisation system needs ID and password to access in.					
F. Our departments are linked by communication networks.					
G. Our company support employees by a customer data repository.					
H. Our front offices have direct contact with their supervisors.					
I. Use advanced information system helps employees to reach and access to each touch point in organisation.					

Items	1	2	3	4	5
A. Our IT staff regularly updates our information system to support the reliability of information flow among employees.					
B. Our company has efficient information system.					
C. Our information system provides employees with in-depth information.					
D. Our company regularly monitors and reviews information flow within its entire networks.					
E. Our information system provides employees with easily- understood information to carry out their duties.					
F. Our information system maintains information flow among employees.					
G. Our information system provides all departments with prompt and timely information.					
H. Our information system is very useful when dealing with customer requests.					
I. Information system architecture in our company can be modified without disrupting information flow within the firm.					

Items	1	2	3	4	5

Items	1	2	3	4	5
A. Our employees have common understanding for how to achieve organisation goals.					
B. Our employees share the same business language.					
C. Our departments have a commonality of purpose.					
D. Our employees are enthusiastic about pursuing the collective goals of the whole organisation.					
E. Our employees work towards attaining common goals.					
F. Customer orientation is the main goal for our company.					
G. Our departments support each other to achieve organisation goals.					
H. Our employees share the same interpretation for organisation goals.					
I. Our departments have consistent ideas about what the organisation should be trying to achieve.					

10.1. These items are related to Shared Values:

Items	1	2	3	4	5
A. Our employees have common beliefs.					
B. Our employees have positive attitudes toward organisation.					
C. The similarity in work values among employees facilitates doing work.					
D. Our employees share the work value of organisation achievements.					
E. Our employees share the value of maintaining long- term relationship with customers.					
F. Our employees encourage collectivism work value.					
G. Our employees use common terms or jargons which our customers understand.					
H. A 'team spirit' exists among employees.					
I. Our employees are open- minded and accept different viewpoints and opinions.					
J. Our employees share the same business values.					

10.2. These items are related to Shared Norms:

Items	1	2	3	4	5
A. Our employees believe that they have a responsibility for the future development of the firm.					
B. Our employees are expected to comply with the law and professional standards.					
C. Our employees are adhered to follow ethical principals in serving customers.					
D. Our employees never act opportunistically with their colleagues.					
E. Our employees believe that adopting corporate social responsibility helps achieve organisation's goals.					
F. Our employees act within the standards defined by the organisation's regulations.					
G. Our employees believe that respecting organisation's rules helps achieve organisation's goals.					
H. Our employees believe that following ethical standards help in achieving organisation goals.					
I. Our employees are obligated with the organisation's rules.					
J. The adherence to organisational rules is the most efficient way to do work.					

11- These items are related to Relational Capital (trust):

Items	1	2	3	4	5
A. Our back offices respond promptly to front offices' explanation and questioning.					
B. Our employees always depend on their colleagues' suggestions and recommendations when service encounter.					
C. Our employees have confidence in their colleagues' abilities and skills to do the work.					

	1	2	3	4	5
D. Our employees never act opportunistically.					
E. Our employees frequently exchange valuable information with their colleagues.					
F. Our employees are helpful when responding to their colleagues' requests.					
G. Our employees are faithful to their colleagues.					
H. Our employees can be counted on to do what is right for their colleagues.					
I. Our employees trust each other because that is the best and easiest way to get the work done.					
J. Our employees are trustworthy.					

3-THE ORGANISATIONAL PERECIVED VALUES

The following questions emphasize the organisational perceived values. These values are represented in customer satisfaction and commitment. Please tick the appropriate number that reflects your opinion in the following items.

12- These items are related to Customer Commitment:

Items	1	2	3	4	5
A. Our employees exert maximum effort to introduce the best financial products to our current customers.					
B. Our company is always committing to fulfil its agreements with customers.					
C. Our company deserves stable relationships with our customers.					
D. Our customers can make sacrifices to help our company (e.g. raises in prices, effort, time... etc).					
E. Our customers maintain personal relationships with our employees.					
F. Our customers always behave in a way that maintains a close relationship with our company.					
G. Our company introduces better offers and prices than competitors do.					
H. The good reputation of our company encourages our customers to be committed.					
I. It is easier to persuade our existing customers with new services rather than new potential customers.					

13. These items are related to Customer Satisfaction:

Items	1	2	3	4	5
A. Our employees deal promptly with customers' complaints.					
B. Our employees are approachable and easy to contact.					
C. Our employees put a lot of effort into their jobs to satisfy customers' needs.					
D. Our employees respond quickly to our customers' needs.					
E. Our service delivery process is easy to understand.					
F. Our employees respond politely to our customers' requests.					
G. Our employees do their best to perform the service close to customers' specifications					
H. There are frankness and clarity of our organisation' services that offers to customers.					
I. Our employees give customers the appropriate personnel attention.					

4-CUSTOMER RELATIONSHIP MANAGEMENT PERFORMANCE (CRMP)

The following questions concern with customer loyalty and retention as the key measurements for CRMP. Please tick the appropriate number that reflects your opinion in the following items.

14- These items are related to Customer Retention:

Items	1	2	3	4	5
A. Our company systematically attempt to customise products/services based on the value of the customer.					
B. Our customers have long lifetime cycle with our company.					
C. Our company segments market according to the economic value of customers.					
D. Our existing customers set their future financial plans with our company for next three years.					
E. Our company maintains an interactive two-way communication with our customers.					
F. Our existing customers increase their investments in the new financial products of our company this year.					
G. Our company achieves better customer attraction and retention of target customers than competitors.					
H. Our company provides customers with "one-to-one" experience.					
I. Our company systematically attempts to manage the expectations of high value customers.					
J. Our existing customers plan to invest more in the next year.					
K. Our company consolidates critical information about each customer.					

15. These items are related to Customer Loyalty:

Items	1	2	3	4	5
A. Our existing customers defend our company when others criticise us.					
B. Our company acquires new customers thanks to its current customer.					
C. Our customers feel loyal to the service provider in our company.					
D. Our existing customers are active in recommending products and services of this firm.					
E. Our existing customers prefer our company above other competitors.					
F. Our existing customers assist our service providers in delivering services.					
G. Our existing customers encourage their relatives and friends to deal with our company.					
H. Our customers consider our company as the first alternative for most of their financial investments.					
I. Our existing customers give good references to potential customers because of word of mouth.					

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Any additional comments: :……………………………………………………………………………………..
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Thank you for your co-operation

If you would like a copy of the study results report, please complete the following details

Name: …………………………………………………………………………………………

Organisation: …………………………………………………………………………………

Address: …………………………………………………………………………………

THE UNIVERSITY OF HULL

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عنوان الدراسة: تاثير رأس المال الأجتماعى على ادارة العلاقة مع العميل

من الذي يجب عليه ملء هذه الأستماره؟ كيف؟

يرغب الباحث أن يقوم مدير التسويق/ أو مدير خدمة العملاء بالشركات بملء هذه الاستمارة. سوف يتم ذلك من خلال سؤالهم :

1-اختيار الإجابة المناسبة داخل كل صندوق.

2-تحديد درجه الاتفاق مع القضايا المطروحة.من خلال استخدام مؤشر ليكارت الخماسي بالشكل التالي:

5	4	3	2	1
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة

1- معلومات عامة

من فضلك ضع العلامة المناسبة أمام كل صندوق:

*أسئلة عن عينة البحث:

1- السن

4	3	2	1
☐ 51-60	☐41-50	☐ 30- 40	☐ أقل من 30

2- النوع

2	1
☐أنثى	☐ذكر

3- الوظيفة بالشركة

2	1
مدير خدمة العملاء ☐	مدير تسويق ☐

4- سنوات الخبرة

4	3	2	1
☐أكبر من 10	☐7-10	☐5-7	☐ أقل من 5 سنوات

5 - المستوى التعليمي

4	3	2	1

</div>

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☐دكتوراه	☐ماجستير	☐دبلومة	☐بكالوريوس

6- حجم الشركة (عدد الموظفين)

4	3	2	1
☐أكبر من 300	☐201-300	☐200-100	☐أقل من 100

7- مجال عمل الشركة

3	2	1
☐شركات وساطه مالية	☐بنوك	☐تأمين

8- هيكل ملكيه الشركة

2	1
☐قطاع خاص	☐قطاع عام

2 - مكونات رأس المال الأجتماعى

أسئلة هذا الجزء تنصرف الى رأيك فى ماهية العوامل التى تشكل رأس المال الأجتماعى فى المؤسسات المالية فى جمهورية مصر العربية.حيث يتكون رأس المال الأجتماعى من ثلاثة عوامل: هيكل العلاقة بين العاملين بالشركة ، التقارب الأدراكى. من فضلك أختار الأجابه التى تعكس رأيك فى العبارات التالية.

ـ هذه العبارات تقيس هيكل العلاقات الشخصية داخل المؤسسات المالية

5	4	3	2	1	العناصر
					1- يمكن للعاملين بالمنظمة أن يعبروا عن أفكارهم ومشكلاتهم بحرية مع رئيسهم المباشر
					2- الاتصالات المتبادلة بين العاملين بالمنظمة تخلق الإحساس بالتقارب بين بعضهم البعض
					3- التعاون بين العاملين يقدم فرصاجيده للتعلم من بعضهم البعض
					4- هناك تبادل للمعرفة والمعلومات بين الرؤساء والمرؤوسين داخل الشركة
					5- دائما ما يشارك الرؤساء معلوماتهم مع المرؤسين
					6- هناك تعاون كبير بين موظفي الشركه عند التعامل مع طلبات العملاء
					7- يناقش الموظفين المشاكل الرئيسه فى العمل باستفاضه مع رؤساؤهم

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5	4	3	2	1	العناصر
					8- كثيرا ما يحدث تبادل للمعلومات بشكل مستمر وغير رسمى بين الموظفين داخل الشركة
					9- دائما ما يتعاون الموظفين لحل مشاكل العملاء

- هذه العبارات تقيس نوعية العلاقات بين الموظفين داخل الشركة

5	4	3	2	1	العناصر
					1- تشجع قوة العلاقة بين الموظفين على مناقشة الأفكار الجديدة بكل حرية
					2- تتصف العلاقة بين الموظفين بدرجة عالية من التقارب العاطفي
					3- قوة العلاقة بين الموظفين تسمح لهم بمشاركة خبراتهم وممارستهم المتميزة مع بعضهم البعض
					4- قوة العلاقة بين الموظفين تسمح لهم بطلب المشورة والنصح من زملاؤهم و من رئيسهم المباشر عند الحاجة
					5- قوة العلاقة بين الموظفين تسمح لهم بالحديث المباشر وغير الرسمي مع بعضهم البعض
					6- قوة العلاقة بين الموظفين تشجع وتسهل تقديم الدعم لبعضهم البعض
					7- قوة العلاقة بين الموظفين تقلل من حده الخلاف فيما بينهم
					8- قوة العلاقة بين الموظفين ورؤساؤهم تشجع على الاتصال المباشر فيما بينهم دون ميعاد مسبق

- هذه العبارات تقيس كيفية تركيبة شبكة العلاقات بين الموظفين داخل الشركة

5	4	3	2	1	العناصر
					1- مقدمي الخدمة وموظفي المكاتب الخلفية متصلين بشبكات اتصال إلكترونيه
					2- موظفي ألشركه لديهم السلطة للدخول بسهوله لقاعدة البيانات بالشركة
					3- موظفي ألشركه لديهم وسائل اتصالات فعاله مع زملائهم من خلال مثلا (ألمقابله الشخصية, التليفون, الانترنت, الخ)
					4- نظام المعلومات بالشركة يسهل التعامل معه من قبل العاملين
					5- يحتاج نظام المعلومات بالشركة يحتاج إلى كلمة سر للدخول إليه
					6- كل أقسام الشركة ترتبط سويا بشبكات اتصال إلكترونيه
					7- تدعم الشركة موظفيها ببنك بيانات مركزي يخزن فيه كل بيانات العملاء
					8- مقدمي الخدمة لديهم قنوات اتصاله مباشره مع رؤساؤهم المباشرين
					9- نظام المعلومات بالشركة يسمح للموظفين الوصول لأى معلومه بالشركه

- هذه العبارات تقيس مدى أستقرار شبكة العلاقات بين الموظفين داخل الشركة

5	4	3	2	1	العناصر
					1- يقوم المسئولين عن نظام المعلومات بالشركة بشكل دوري بتحديث نظام المعلومات بالشركة للحفاظ على ضمان استمرار تدفق المعلومات للعاملين بالشركة
					2- تمتلك الشركة نظام معلومات يتصف بالكفاءة
					3- نظام المعلومات بالشركة يمد العاملين بمعلومات تفصيلية
					4- تقوم الشركة بصفه دوريه بمراقبه و مراجعه تدفق المعلومات داخل الشركة

5	4	3	2	1	
					5- نظام المعلومات بالشركة يمد العاملين بمعلومات سهله ومفهومه تمكن العاملين من القيام بواجباتهم
					6- يحافظ نظام المعلومات بالشركة على تدفق المعلومات بين الموظفين
					7- نظام المعلومات في الشركة مفيد جدا عند القيام بتلبية احتياجات العملاء
					8- يقوم نظام المعلومات بالشركة بتوفير المعلومات لجميع الأقسام بسرعة وفى الوقت المناسب
					9- يمكن تعديل وتطوير نظام المعلومات بالشركة دون التأثير على تدفق المعلومات بالشركة

- هذه العبارات تقيس مدى الأنسجام (توافق الاهداف) بين موظفى الشركة

5	4	3	2	1	العناصر
					1- موظفي الشركة لديهم توافق وتفاهم حول كيفيه تحقيق أهداف الشركة
					2- كل العاملين بالشركة يتحدثون لغة عمل واحدة
					3- كل أقسام الشركة لديها هدف مشترك
					4- العاملين بالشركة لديهم الحماس لدعم وتحقيق الأهداف العامة للمنظمة
					5- العاملين بالشركة يعملون من اجل تحقيق الأهداف المشتركة
					6- الاهتمام والتركيز على خدمة العميل هو الهدف الرئيسي الشركة
					7- جميع الأقسام تقوم بمساعده بعضها البعض من اجل تحقيق أهداف المنظمة
					8- كل العاملين لديه نفس التفسير لأهداف المنظمة
					9- أقسام الشركة لديها تناسق في التصورات حول ما يجب على المنظمة تحقيقه

-هذه العبارات تقيس القيم المشتركه للموظفين

5	4	3	2	1	العناصر
					1- العاملين الشركة لديهم معتقدات مشتركه
					2- العاملين بالشركة لديهم اتجاهات ايجابيه تجاه الشركة
					3- التشابه في القيم بين موظفي الشركة يسهل من إنجاز الأعمال
					4- يشترك عاملي الشركة في قيم العمل (تحقيق أهداف الشركة)
					5- يدرك العاملين بالشركة قيمة الاحتفاظ بعلاقات طويلة الأجل مع العملاء
					6- يؤمن العاملين بالشركة بقيم العمل الجماعي
					7- يستخدم العاملين بالمنظمة مصطلحات مفهومة وبسيطة يفهمها العملاء
					8- روح الفريق موجودة بين العاملين بالمنظمة
					9- يتصف العاملين بالمنظمة بسعة الأفق وتقبلهم لوجهات النظر والآراء المختلفة
					10- العاملين الشركة لديهم قيم عمل مشتركه

- هذه العبارات تقيس الطباع المشتركه للموظفين

5	4	3	2	1	العناصر

5	4	3	2	1	العناصر
					1- العاملين بالمنظمة يدركون أن عليهم جانب من المسئولية في النمو والتطوير المستقبلي للشركة
					2- من المتوقع أن يتبع العاملين القوانين والقواعد المهنية
					3- هناك التزام من جانب العاملين بالمبادئ الأخلاقية حيال خدمة العملاء
					4- لا يوجد أي نوع من الخداع بين العاملين
					5- يعتقد العاملين بأن الالتزام بالمسئولية الاجتماعية للمنظمة سيساعد على تحقيق أهداف المنظمة
					6- العاملين بالشركة يتصرفون وفقا لمعايير وقواعد الشركة
					7- يعتقد العاملين بأن احترام قواعد العمل بالشركة سوف يساعد على تحقيق أهداف الشركة
					8- يعتقد العاملين بأن احترام المبادئ الأخلاقية يساعد في تحقيق أهداف الشركة
					9- العاملين بالشركة ملتزمون بقواعد الشركة
					10- الالتزام بقواعد العمل بالشركة هو الطريقة الأكثر كفاءة في إنجاز الأعمال

-هذه العبارات تقيس طبيعة العلاقة بين موظفي الشركة (الثقة)

5	4	3	2	1	العناصر
					1- المكاتب الخلفية تستجيب بشكل مناسب وبسرعة إلى اسئله واستفسارات زملائهم مقدمي الخدمة
					2- العاملين بالشركة دائما يعتمدون على اقتراحات وتوصيات زملائهم إثناء تقديم الخدمة
					3- يثق موظفي الشركة في قدرات ومهارات زملائهم لأداء العمل
					4- العاملين بالشركة لا يتصرفون أبدا بشكل انتهازي لمصلحتهم الشخصية
					5- يتبادل العاملين بالشركة المعلومات ألقيمه مع بعضهم البعض
					6- العاملين الشركة يتعاونون بشكل جيد عند الاستجابة لطلبات زملاؤهم
					7- العاملين بالشركة لديهم الموثوقيه في زملائهم
					8- العاملين بالشركة دائما ما يقومون بالأشياء الصحيحة لزملائهم
					9- العاملين بالشركة يثقون في بعضهم البعض لان الثقة هي الطريقة الأفضل والأسهل لأداء العمل
					10- العاملين بالشركة يتمتعون بدرجه عالية من الثقة والمصداقية

2 -اداء ادارة العلاقة مع العميل

لأى مدى يساهم تطبيق مفهوم رأس المال الأجتمعى فى زيادة ولاء العميل وبقاؤه مع الشركة لمدة طويلة. الأسئلة فى هذا الجزء تقيس مدى ولاء العميل ولأى مدى أستطاعت الشركة الأحتفاظ به.

-هذه العبارات تقيس مدى وفاء وولاء العميل للشركة

5	4	3	2	1	العناصر
					1- يدافع العملاء الحاليين عن الشركة حال انتقادها من البعض
					2- عدد من العملاء الجدد انضموا بناءا على توصيات من عملائنا الحاليين
					3- يشعر العملاء بالولاء تجاه مقدمي الخدمة بالشركة

5	4	3	2	1	
					4- يقوم العملاء الحاليين بترشيح منتجات وخدمات شركتنا للاخرين
					5- يفضل العملاء الحاليين شركتنا على الشركات المنافسة
					6- يقوم العملاء الحاليين بمساعد مقدم الخدمة في تقديمها
					7- يشجع العملاء الحاليين أقاربهم وأصدقائهم للتعامل مع الشركة
					8- العملاء الحاليين يعتبرون شركتنا هي البديل الأول لمعظم استثماراتهم المالية
					9- يعتبر العملاء الحاليين مرجعية جيدة للعملاء المرتقبين

5	4	3	2	1	العناصر
					1- تحاول الشركة وبشكل منظم تقديم منتجات وخدمات بناءا على قيمه العملاء
					2- العملاء الحاليين دوره حياه طويلة مع الشركة
					3- تقوم الشركة بتقسيم السوق إلى قطاعات وفقا للوزن النسبي للعملاء من الناحية الاقتصادية
					4- يقوم العملاء الحاليين بوضع خططهم المالية مع شركتنا للثلاث سنوات القادمة
					5- تحافظ الشركة على أن يكون الاتصال مع العملاء في اتجاهين
					6- العملاء الحاليين زادوا من استثماراتهم في المنتجات المالية الجديدة للشركة هذا العام
					7- تحقق الشركة مستوى أعلى من المنافسين في جذب والاحتفاظ بالعملاء
					8- تتعامل الشركة مع كل عميل وكأنه العميل الوحيد بالشركة
					9- تحاول الشركة وبشكل منظم أن تتعامل مع توقعات العملاء ذو ألقيمه ألاقتصاديه العالية
					10- خطه العملاء الحالية هي أن يستثمروا أكثر مع شركتنا في العام القادم
					11- تمتلك الشركة معلومات هامة عن كل عميل

3 ـ المنافع أو القيمه التى تجنيها المنظمة نتيجة تطبيق مفهوم رأس المال الأجتماعى

هذا الجزء من الأسئلة مرتبط بالمنافع التى يمكن للشركة جنيها نتيجة تطبيق مفهوم رأس المال الأجتماعى . يتوقع نتيجة تطبيق مفهوم رأس المال الأجتماعى أن يتحسن أداء العاملين بالشركة مما يؤثر بالتالى على مستوى الخدمة التى تقدمها الشركة. هذا التحسن فى مستوى أداء الخدمة قد يؤدى الى رضا العميل والتزامه.

5	4	3	2	1	العناصر
					1- يستجيب العاملين بسرعة لشكاوى العملاء
					2- العاملين بالشركة متاحين باستمرار ويسهل الوصول إليهم
					3- يبذل العاملين ما في وسعهم في العمل لتلبيه احتياجات العملاء
					4- يستجيب موظفي الشركة بسرعة لتلبيه احتياجات العملاء
					5- إجراءات تقديم الخدمة يسهل للعملاء استيعابها و فهمها

	5	4	3	2	1	
						6- يستجيب العاملين بالشركة بشكل مؤدب لطلبات العملاء
						7- يبذل العاملين بالشركة أقصى جهد لديهم لتقديم الخدمة بالشكل الذي يرغبه العميل
						8- تتصف الشركة بالوضوح والصدق في الخدمات التي تقدمها للعملاء
						9- يقوم العاملين بالشركه باعطاء العميل الاهتمام الشخصى المرضى
						10- يمنح موظفي الشركة عملاؤهم الاهتمام الشخصي المطلوب

ـ هذه العبارات تقيس مدى ألتزام العميل

5	4	3	2	1	العناصر
					1- يبذل العاملين بالشركة أقصى جهد لتقديم أفضل الخدمات المالية للعملاء الحاليين
					2- دائما ما تكون الشركة ملتزمة بتنفيذ تعاقداتها مع العملاء
					3- تستحق الشركة علاقات قويه ومستقرة مع العملاء
					4- يمكن أن يقدم العملاء بعض التضحيات لمساعده شركتنا(تحمل الارتفاع في الأسعار, بذل بعض المجهود أو الوقت)
					5- يحتفظ العملاء بعلاقات شخصيه طيبة مع موظفي الشركة
					6- دائما ما يتصرف العملاء بطريقة تحافظ على استمرار علاقتهم بالشركة
					7- تقدم شركتنا عروض وأسعار أفضل من المنافسين
					8- السمعة الحسنة للشركة تشجع العملاء على الالتزام والارتباط بالشركة
					9- إقناع العملاء الحاليين بالخدمات الجديدة أسهل من أقناع العملاء الجدد المحتملين

اى تعليقات اضافيه

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شكرا على تعاونكم معنا

إذا كنتم ترغبون في نسخه من نتائج هذه الدراسة فمن فضلك املأ البيانات التالية

الاسم:

المنظمة:

العنوان