UNIVERSITY OF GHANA

VALUE CO-CREATION AND CUSTOMER LOYALTY IN HEALTHCARE SECTOR: AN ANTECEDENT OF PATIENT COGNITIVE ENGAGEMENT

BY

ALEXANDER ANNANE-McCARTHY
(10600493)

THIS THESIS IS SUBMITTED TO THE DEPARTMENT OF MARKETING AND ENTREPRENEURSHIP, UNIVERSITY OF GHANA BUSINESS SCHOOL, UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL MARKETING DEGREE

JULY, 2018
DECLARATION

I do hereby declare that this thesis is the result of my own research and has not been presented by anyone for any academic award in this university or any other university. All references used in the work have been fully acknowledged.

I bear sole responsibility for any shortcomings.

.................................................... ..............................................

ALEXANDER ANNANE McCARTHY                     DATE

(10600493)
CERTIFICATION

We do hereby certify that this thesis was supervised in accordance with procedures laid down by the University of Ghana.

.............................................  .............................................
DR. ERNEST YAW TWENEBOAH-KODUAH  DATE
(LEAD SUPERVISOR)

.............................................  .............................................
DR. RAPHAEL ODOOM  DATE
(CO-SUPERVISOR)
DEDICATION

I dedicate this work first and foremost to God Almighty whose unfailing love and protection have seen me through my studies successfully.

Second dedication goes to my lovely and supportive wife, Mrs, Dora Asiwome McCarthy, and to my lovely children.
ACKNOWLEDGEMENT

I am indebted to the Almighty God for this immense blessing. Words cannot express how you did it. Glory unto Thy Name.

My profound gratitude goes to my lead supervisor, Dr. Ernest Yaw Tweneboah-Koduah. I am grateful for your guidance, time, appreciative suggestions and the words of encouragement that I could do it. I am also thankful to my co-supervisor, Dr. Raphael Odoom. I am grateful for your time and suggestions throughout the project.

Moreover, in no particular order I wish to acknowledge the following persons; Mrs. Matilda Adams, John Paul Kosiba, Michael Amoako, and Patrick Anim for the love, encouragement and support I received from them. Finally, to all Marketing MPhil students, you are the best class ever; I’m grateful for everything.

To all of you, a heartfelt thank you.
ABSTRACT

Many studies in value co-creation and its outcomes predominantly conducted in developed economies and their findings may not necessarily be applicable in developing economies due to disparities in culture and economic situations. There is therefore the need to probe further in developing economy such as Ghana in order to attain better understanding empirically, the influence of value co-creation behaviour on the relationship between cognitive engagement and customer loyalty. The purpose of this study is to investigate the influence of customer’s value co-creation behaviour on the relationship between cognitive engagement and customer loyalty in the healthcare sector in Ghana. The study was underpinned by the co-creation and role theory. Data was collected from customers of healthcare service providers in Accra. Non-probability sampling technique was used to collect data from 395 respondents. Smart PLS 3 was used for partial least squares (PLS) structural equation modelling (SEM) to examine the effect on the relationship between value co-creation and customer loyalty in the healthcare services in Ghana. The study found that patients cognitive engagement (process enjoyment and patient self-efficacy) positively and significantly relate to value co-creation. In patient-physician context, the findings show that customers’ cognitive engagement in terms of process enjoyment (PE) positively leads to co-creation of value. Moreover, unlike previous studies that debated that personalities who have confidence in performing a task due to high level of SE gain success in those encounters and do express positive behavioural intentions, the findings of this study rather emphases that this could be achieved through co-creation of value. This study therefore conclude that a more seamless customer cognitive engagement in terms of process enjoyment and self-efficacy positively and significantly influences value co-creation.
# LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVE</td>
<td>Average Variance Extracted</td>
</tr>
<tr>
<td>CCB</td>
<td>Customer Citizenship Behaviour</td>
</tr>
<tr>
<td>CPB</td>
<td>Customer Participation Behaviour</td>
</tr>
<tr>
<td>CE</td>
<td>Cognitive Engagement</td>
</tr>
<tr>
<td>CB-SEM</td>
<td>Covariance Based Structural Equation Model</td>
</tr>
<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
</tr>
<tr>
<td>EFA</td>
<td>Exploratory Factor Analysis</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>MSI</td>
<td>Marketing Science Institute</td>
</tr>
<tr>
<td>NHIS</td>
<td>National Health Insurance Scheme</td>
</tr>
<tr>
<td>OPD</td>
<td>Out-Patient Department</td>
</tr>
<tr>
<td>PE</td>
<td>Process Enjoyment</td>
</tr>
<tr>
<td>PLS</td>
<td>Partial Least Squares</td>
</tr>
<tr>
<td>SEM</td>
<td>Structural Equation Model</td>
</tr>
<tr>
<td>SI</td>
<td>Symbolic Interaction</td>
</tr>
<tr>
<td>SDL</td>
<td>Service Dominant Logic</td>
</tr>
<tr>
<td>SE</td>
<td>Self-Efficacy</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>SSA</td>
<td>Service Science Approach</td>
</tr>
<tr>
<td>RT</td>
<td>Role Theory</td>
</tr>
<tr>
<td>UNISIC</td>
<td>United Nations International Standard Industrial Classification</td>
</tr>
<tr>
<td>VCC</td>
<td>Value Co-Creation</td>
</tr>
<tr>
<td>VCCB</td>
<td>Value Co-Creation Behaviour</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

DECLARATION...................................................................................................................i
CERTIFICATION....................................................................................................................ii
DEDICATION.......................................................................................................................iii
ACKNOWLEDGEMENT.........................................................................................................iv
ABSTRACT.............................................................................................................................v
LIST OF ABBREVIATIONS ....................................................................................................vi
TABLE OF CONTENTS ...........................................................................................................vii
LIST OF TABLES ...................................................................................................................x
LIST OF FIGURES .................................................................................................................xi
CHAPTER ONE ......................................................................................................................1
  1.1 Background of the Study ..............................................................................................1
  1.2 Problem Statement .....................................................................................................4
  1.3 Research Purpose .......................................................................................................8
  1.4 Objectives of the Study ..............................................................................................8
  1.6 Significance of the Study ..........................................................................................8
  1.7 Chapter Outline .........................................................................................................9
CHAPTER TWO ....................................................................................................................11
THE HEALTH SERVICE SECTOR IN GHANA ................................................................11
  2.1 Introduction ..............................................................................................................11
  2.2 The Ghana Health Service .......................................................................................11
  2.2.1 Mandate of the Ghana Health Services ................................................................12
  2.3 Overview of Health Care Services ...........................................................................12
  2.3.1 Providers and Professionals ................................................................................14
  2.3.2 Delivery of Services .............................................................................................15
  2.4 Overview of Health Institutions ..............................................................................15
  2.4.1 Korlebu Teaching Hospital ..................................................................................16
  2.4.2 Tema General Hospital .......................................................................................17
  2.4.3 University of Ghana Hospital ..............................................................................18
  2.4.4 Korlebu Polyclinic ..............................................................................................19
  2.4.5 Research and Clinical Activities .........................................................................19
  2.4.6 Patient Education ...............................................................................................19
  2.5 Customers of Hospitals ............................................................................................20
  2.6 Innovation in Hospitals ............................................................................................20
  2.6.1 Six Forces that can Drive Innovation or Kill It ......................................................21
  2.6.2 Health Care System Innovation Catalogue ..........................................................21
  2.7 Categorisation of Health Service .............................................................................22
  2.8 Summary ..................................................................................................................22
CHAPTER THREE ..............................................................................................................23
LITERATURE REVIEW .....................................................................................................23
  3.1 Introduction ................................................................................................................23
  3.2 Customer Value .........................................................................................................23
  3.3 Value as Fundamental Concept in Co-Creation .......................................................24
  3.4 Background Information on Value Co-Creation .....................................................26
  3.5 The Concept of Value Co-Creation ..........................................................................27
  3.6 Importance of Customers in Value Co-Creation ......................................................28
  3.7 Customer Motivations and Contributions towards Value Co-Creation ..................29
CHAPTER FIVE ................................................................................................................... 67
RESEARCH DESIGN AND METHODOLOGY ............................................................... 51
CHAPTER FOUR .................................................................................................................. 51
4.10. Ethical considerations ................................................................................................. 65
4.9. Data Processing and Mode of Analysis ........................................................................ 64
4.8.1 Factor analysis ............................................................................................................ 63
4.8 Analysis Technique ........................................................................................................ 63
4.7.1 Data Collection ........................................................................................................... 62
4.7. Data Sources and Collection Method ........................................................................... 61
4.6.1 Study Population and Sample Size ............................................................................. 59
4.6 Sample Design and Sample Size Selection Technique .................................................. 59
4.4 Research Strategy........................................................................................................... 56
4.3.3 Descriptive research .................................................................................................... 55
4.3.2 Explanatory research ................................................................................................... 55
4.3.1 Exploratory research ................................................................................................... 55
4.3 Research Purpose
4.2.1 Positivism as a Research Paradigm............................................................................. 54
4.2 Research Paradigms ....................................................................................................... 51
4.1 Introduction .................................................................................................................... 51
3.22 Value Co-Creation Behaviour and Customer Loyalty ................................................. 47
3.21 Conceptualisation of Customer Loyalty ...................................................................... 45
3.20 Process Enjoyment (PE) .............................................................................................. 44
3.17 Value Co-Creation Behaviour...................................................................................... 40
3.18 Value Co-Creation through Cognitive Engagement .................................................... 42
3.19 Customer Self-Efficacy (SE) ......................................................................................... 43
3.16 Customer Citizen Behaviour......................................................................................... 39
3.15.1 Information Seeking..................................................................................................... 37
3.15.2 Information Sharing ................................................................................................... 38
3.15.3 Responsible behaviour .............................................................................................. 38
3.15.4 Personal Interaction .................................................................................................. 39
3.15 CPB .............................................................................................................................. 37
3.14 Value Co-Creation Behaviour Dimensions ................................................................. 37
3.13 Co-Creation and Role Theory ...................................................................................... 36
3.12.2 Role Characteristics .................................................................................................. 35
3.12 Co-Creation and Role Theory ...................................................................................... 36
3.11 Postmodern Approach to Value Co-Creation .............................................................. 33
3.10 Service Science Approach (SSA) ................................................................................ 32
3.9.1 SDL approach to value co-creation............................................................................. 31
3.9 Service Science Approach (SSA) ................................................................................ 32
3.8.1 Flexibility dimension ................................................................................................. 30
3.8.2 Interaction Dimension as an Antecedent of Co-Creation ........................................... 30
3.8 Approaches to value co-creation................................................................................... 31
3.7.1 Data Collection ........................................................................................................... 29
3.7. Data Sources and Collection Method ........................................................................... 29
3.6.1 Study Population and Sample Size ............................................................................. 27
3.6 Sample Design and Sample Size Selection Technique .................................................. 27
3.5 Research Strategy........................................................................................................... 25
3.4.3 Descriptive research .................................................................................................... 25
3.4.2 Explanatory research ................................................................................................... 25
3.4.1 Exploratory research ................................................................................................... 25
3.4 Research Purpose
3.3.1 Positivism as a Research Paradigm........................................................................... 22
3.3 Research Paradigms ....................................................................................................... 21
3.2 Conceptualisation of Customer Loyalty......................................................................... 18
3.1.2 Value Co-Creation Behaviour Dimensions ................................................................. 14
3.1.1 Value Co-Creation Behaviour Dimensions ................................................................. 14
3.1 CPB .............................................................................................................................. 12
3.10 Service Science Approach (SSA) ................................................................................ 12
3.9 Approaches to value co-creation................................................................................... 11
3.8 Service Science Approach (SSA) ................................................................................ 11
3.7 Approaches to value co-creation................................................................................... 10
3.6 Service Science Approach (SSA) ................................................................................ 10
3.5 Approaches to value co-creation................................................................................... 9
3.4 Service Science Approach (SSA) ................................................................................ 9
3.3 Approaches to value co-creation................................................................................... 8
3.2 Conceptualisation of Customer Loyalty......................................................................... 7
3.1 Postmodern Approach to Value Co-Creation ............................................................... 5
3.10 Service Science Approach (SSA) ................................................................................ 5
3.9 Approaches to value co-creation................................................................................... 4
3.8 Service Science Approach (SSA) ................................................................................ 4
3.7 Approaches to value co-creation................................................................................... 3
3.6 Service Science Approach (SSA) ................................................................................ 3
3.5 Approaches to value co-creation................................................................................... 2
3.4 Service Science Approach (SSA) ................................................................................ 2
3.3 Approaches to value co-creation................................................................................... 1
3.2 Postmodern Approach to Value Co-Creation ............................................................... 1
3.1 Service Science Approach (SSA) ................................................................................ 1
CHAPTER FOUR .................................................................................................................. 51
4.1 Introduction .................................................................................................................... 51
4.2 Research Paradigms ....................................................................................................... 51
4.2.1 Positivism as a Research Paradigm............................................................................. 54
4.3 Research Purpose .......................................................................................................... 54
4.3.1 Exploratory research ................................................................................................... 55
4.3.2 Explanatory research ................................................................................................... 55
4.3.3 Descriptive research ................................................................................................... 55
4.4 Research Strategy .......................................................................................................... 56
4.5 Research Approach ........................................................................................................ 56
4.6 Sample Design and Sample Size Selection Technique .................................................. 59
4.6.1 Study Population and Sample Size ............................................................................. 59
4.6.2 Sampling Techniques .................................................................................................. 60
4.7. Data Sources and Collection Method .......................................................................... 61
4.7.1 Data Collection ........................................................................................................... 62
4.8 Analysis Technique ......................................................................................................... 63
4.8.1 Factor analysis ............................................................................................................. 63
4.10. Ethical considerations ................................................................................................. 65
4.9. Data Processing and Mode of Analysis ........................................................................ 64
DATA ANALYSES AND DISCUSSION OF FINDINGS ................................................. 67
5.1 Data Analysis and Presentation ................................................................. 67
5.2 Demographic Statistics .......................................................................... 67
5.3 Descriptive Statistics of Measurement Items ........................................... 69
5.4 Relationships between Value Co-Creation, Customer Loyalty and Cognitive Engagement ................................................................. 69
5.4.1 Assessment of measurement models / outer model evaluation .......... 70
5.4.2 Testing of structural model (Inner model evaluation) ................. 75
5.5 Discussion of Findings ........................................................................ 79
5.5.1 Value co-creation behaviour as a third-order construct ............... 79
5.5.2 Influence of cognitive engagement on customer value co-creation .. 80
5.5.3 Influence of value co-creation on customer loyalty ....................... 81
5.6 Role of VCCB on CE and customer loyalty ............................................ 82
CHAPTER SIX ......................................................................................... 84
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS ..................... 84
6.1 Introduction ....................................................................................... 84
6.2 Summary of Major Findings ............................................................... 85
6.3 Theoretical and Practical Implications ................................................ 87
6.4 Conclusion of the Study ................................................................. 88
6.5 Recommendations ................................................................. 90
6.6 Limitations and Future Research ...................................................... 91
REFERENCES ....................................................................................... 51
APPENDIX A .......................................................... 117
APPENDIX B .......................................................... 120
### LIST OF TABLES

Table 4.1: Research Paradigms ................................................................................................ 53
Table 5.1: Demographic Characteristics of Respondents ........................................................ 68
Table 5.2: Outer Loading Measurements Model ................................................................. 71
Table 5.3: Discriminate Validity ......................................................................................... 74
Table 5.4: Structural Parameter Estimates .......................................................................... 78
LIST OF FIGURES

Figure 3.1: Conceptual Framework ......................................................................................... 48
Figure 5.1: Third-order factor of Value Co-creation Behaviour.............................................. 76
Figure 5.2: Structural model .................................................................................................... 77
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

In this contemporary world, majority of companies are prone to risk. This is due to the
dynamic nature of the environment that is evolutionary very fast than previous years (Filieri,
2013; Zhang, & Chan, 2008). Improvements in digitalisation, emergence of globalisation,
deregulation of industry and technology convergence has forced managers to look beyond
process quality, products and costs (Prahalad & Ramaswamy, 2004, p.2). Furthermore, firms
are forced to constantly differentiate to obtain loyal customers in order to gain competitive
dge. This aids their ability to meet customer needs (Jaakola & Hakanen, 2013; Business
Innovation Observatory, 2014). Firms are much informed about how competitive edge and
superior performance are inextricably linked (Hunt & Morgan, 1995; Barney, 1991).
Therefore, businesses must endeavour for unique causes of unceasing, open innovations
couple with creativeness to gain such special performance in order to remain relevant in the
competition (Prahalad & Ramaswamy, 2004; Krapez, Skerlavaj & Groznik, 2012).

One form of open innovation ideology is firm’s collaborating to create value together with
customers. Co-creation of value refers to the internal usage of external interest, knowledge,
skills as well as the external usage of internal resources to speed market expansion and firms’
innovation (Nambisan & Baron, 2009; Fuchs & Schreier, 2011; Chesbrough, Vanhaverbeke,
& West, 2006). The contention of the value co-creation concept is that value exchange is no
longer explained in terms of the provider, but rather value is viewed as the collaboration
between the service provider, customers and other stakeholders through effective interaction
(Lusch & Vargo, 2014). This implies that service providers generate value with customers,
rather than generating value for customers. It also involves acknowledging customer’s
progressive engagement within the process of innovation (Auh, Bell, McLeod & Shih, 2007; Prahalad & Ramaswamy, 2004). The co-creation of value is a term “that commonly describes a shift in considering organisation as a definer of value to a more participative process in which people and organisations together generate and develop meaning” (Ind & Coates, 2013, p.2). This concept over some period of time has not gained interest in the service marketing literature only, but also in the business management discourse (Saarijärvi, Kannan, & Kuusela, 2013). Personalisation is seen to have become the ultimate goal of the value co-creation concept as compared to a primary focus on customisation. The value co-creation methods provide multiple chances, thus paving new ways for the systematised involvement of lead users in the service production process. Prior to the emergence of the value co-creation concept, the orthodox means of creating and delivering value made the customer a mere end user of a firm’s good or services (Franke & Schreier, 2010).

Differentiation has been useful in setting some boundaries for value co-creation (Gronroos & Voima, 2013). For instance, some researchers equate co-creation to co-innovation (Chen, Lin, & Chang, 2009), co-creation and co-design and co-creation and co-production (Vargo & Lusch, 2008). Alexander (2012) therefore argued that, value co-creation has increasingly become a term that is used to delineate a wide range of interactions and activities such as prosumption, co-pricing, co-disposal, co-conception, co-promotion, co-design, shared inventiveness and co-innovation. The result of this has therefore made it difficult to comprehend what industry players and researchers define as value co-creation, as many researchers provide different paradigmatic assumptions in terms of value creation, nature of service and value (Tronvol, Brown, Gremler, Edvarsson, 2011). Hence, the attainment of in-depth insight regarding the key elements to be considered in value co-creation is the direction of this study.
An extensive search through literature indicates that value co-creation has attracted plethora of academic research. Key knowledge in this area has come from Vargo and Lusch (2008) on co-creation through S-D logic, Yi and Gong’s (2013) customer value co-creation behaviour and Vega-Vazquez, Revilla-Camacho, and Cossio-Silva’s (2013) benefits of customer participation in co-creation. Most of these investigations focused on finding out the antecedents of co-creation and its outcome such as customer satisfaction and perceived value. However, further search into literature shows scanty work on customer loyalty as an outcome of value co-creation (Cossio-Silva, Revilla-Camacho, Vega-Vázquez, Palacios-Florencio, 2016; Yim, Chan, Lam, 2012; Chan, Yim, & Lam, 2010). Additionally, the past investigations about the effect of customer’s involvement in co-creation of value and its outcome have provided some inconsistent results (Chan et al., 2010; Yim et al., 2012). It seems questionable whether adequate customer involvement in co-creation activities always result in promoting customer – company relationship with increase customer loyalty or otherwise (Eisingerich, Auh, & Merlo, 2014). This study follows the above discussion, nonetheless this current work suggest value co-creation as the mediator between cognitive engagement and customer loyalty.

The study undertakes an empirical research within the health care sector of Ghana. Within the field of health services, the consumer is referred here as the patient. Three key arguments validate the choice sector under study. First, several studies in the area of marketing center on this type of services (Osei-Frimpong, Wilson, & Lemke, 2015; Zhang, Chen, & Wang, 2011); second is the intense nature of the health care sector which has greater and active participation of the customer (Hamby & Bringberg, 2016; Lusch & Vargo, 2014) and finally, the heavy competition that exists within this sector in Ghana.
In view of this, many researchers have called for a need for further empirical investigation to appreciate in deepness, the role clarity of patients in value co-creation process and how their experiences are incorporated in the service encounters leading to value outcomes (Hardyman, Daunt, & Kitchener, 2015). In light of this, this study engaged in a highly-focused investigation of patients (customers) encounter processes to understand how the customer’s cognitive engagement affects the expected value outcomes in a health care context. According to McLaughlin and McGrath (2005), an individual is cognitively engaged in an activity when that individual forms part in building procedures through interaction in deep and thoughtful manner. Hence this study seeks to measure the relationship between cognitive engagement and value co-creation, and its outcome effect on customer loyalty.

1.2 Problem Statement

Health care unswervingly affects day-to-day activities of individual’s life and economies across the world (Danaher & Gallan, 2016), for this reason, investigations on individual’s quality life through healthcare and patient comfort is recommended by practitioners and academic respectively (Ostrom et al. 2010; Osei-Frimpong & Owusu-Frimpong, 2017). Conventionally, health care service providers viewed customers as passive recipients of an organisation created value (Frow, Nenonen, Payne & Storbacka 2015). Scholars such as Porter and Lee (2013) argue that this perspective is prevalent in healthcare services. Nonetheless, a paralleling shift to concepts such as brand communities, new service development, customer centric and service dominant logic (SDL), indicates an emergent of new model (Ind & Coates, 2013), that is, “customers have the opportunity to co-create value with service providers” (Vargo & Lusch, 2016, p.18). This new perspective provides an
understanding that the roles of customers are now extending beyond being passive healthcare recipient’s to an active participant. It is recognised within healthcare services that, managing chronic diseases successfully is dependent on collaborative interactions between the healthcare service provider(s) and the engagement of patients (Vargo & Akaka, 2012). Following this, Porter and Lee (2013) also posit that patients can play a major role in enhancing their well-being by becoming actively involved during healthcare service encounter. Again, a rising acknowledgement in healthcare services has shown that doctor-patient encounter and its interrelated undertakings exceeds dyadic exchanges, to a larger characteristic of patient’s lifestyle and beliefs (Osei-Frimpong, Wilson, & Owusu-Frimpong, 2015).

Although, value co-creation is a widely discussed topic in literature through the SDL approach (Vargo et al. 2011; Ramaswamy et al., 2010; Batalden et al., 2015), few studies have thoroughly investigate various dimensions that constitute value co-creation behaviour from customer’s point of view (Vega-Vazquez et al., 2013). Amongst the reason for this research gap is the lack of customer-oriented measurement scales. Until now, the utmost effort from researchers such as Dellande, Gilly, and Graham (2004), and Fang, Palmatier, and Evans (2008) conceptualised value co-creation behaviour as a first order construct, however, in contrast, Yi and Gong (2013) employed a higher order construct approach. This study therefore addresses this gap by examining literature to establish and test the exact nature of value co-creation behaviour and its relationship outcomes in the health care sector of a developing economy.

Customer loyalty is a concept which has gained tremendous marketing attention both in academia and practice (Wu & Ai, 2016). Despite the difficulty in the conceptualisation of the concept, many scholars agree that, customer loyalty is a long-term company’s asset
(Kandampully, Zhang, & Bilgihan, 2015) and a key business outcome (Moerkerken, Petrick, Dullweber, & Hamilton, 2012; Kim, Wong, Chan, & Park, 2016). Scholars such as Ndubisi (2006) have postulated that, it is less expensive to maintain a customer than to attract new ones. Loyal Customers are considered essential for various service providers in competitive market environment, this is because customers who are loyal might pay premium prices and engage in positive word-of-mouth comments for a firm (Gee, Coates & Nicholson, 2008; Kim et al., 2016).

Value co-creation is regarded as a potent tool that can increase customer loyalty levels and reduce customer defects (Cossío-Silva, Revilla-Camacho, Vega-Vázquez & Palacios-Florencio, 2016). Some scholars have asserted that, obtaining loyal customers is a daunting task for firms (Moerkerken et al., 2012). Heilman, Bowman and Wrigth (2000) for instance contend that well equipped and knowledgeable customers hardly stay loyal to an organisation since they tend to seek competitive offers. The authors argued further that, these customers perceive less risk in terms of switching to other competitors because they have more confident in assessing other alternatives. This assertion was confirmed by Stokburger-Sauer, Scholl-Grissemann, Teichman and Wetzel (2016) who concluded that a non-linear relationship exist between value co-creation and customer loyalty.

Additionally, this study contends that, value co-creation behaviour must have significant effects on customers’ loyalty in order for firms to gain returns on investment. In spite of this, earlier investigations on the influence of value co-creation on customer loyalty has been inconsistent during the last decade (Yim et al., 2012; Chan et al., 2010). It is debatable as to whether the involvement of customers during service production can be linked with threat of time wasting (McColl-Kennedy, Vargo, Dagger, Sweeney & Kasteren, 2012) or fear of service

In addition, the patient input or involvement in information improvement, and analysis of healthcare is also commonly referred to patient engagement (Hardyman, Daunt & Kitchener, 2015), and recent studies have conceptualised that relationship between engagement and value co-creation behaviour (Jaakkola & Alexander, 2014; Hardyman, Daunt & Kitchener, 2015; Ranjan & Read, 2016; Storbacka, Brodie, Böhmann, Maglio & Nenonen, 2016), however, these studies did not test the conceptualised relationship. As a result, this thesis empirically examines this relationship within the health care service.

Another argument is whether sufficient customer engagement in co-creation leads to improving customer loyalty (Eisingerich, Auh, & Merlo, 2014). Hence, the need to explore empirically the influence of value co-creation on the relationship between customer cognitive engagement (i.e. customer’s self-efficacy, and process enjoyment) and customer loyalty in healthcare services.

Finally, many investigations on value co-creation and its outcomes are more in developed economies and their findings may not necessarily apply in developing economies due to disparities in culture and economic situations such as differences in perceptions, buying behaviour and purchasing power. There is therefore the need to probe further in developing economy such as Ghana to attain empirically better understanding the influence of value co-creation behaviour on the relationship between cognitive engagement and customer loyalty. This assertion is supported by Cossío-Silva, Revilla-Camacho, Vega-Vázquez and
Palacios-Florencio (2016) and Thiruvattal (2017) who made a call for further studies in different contextual variations.

**1.3 Research Purpose**

This study purports to investigate customer value co-creation behaviour influence on the relationship between cognitive engagement and customer loyalty within the healthcare sector in Ghana.

**1.4 Objectives of the Study**

i. To examine the relationship between cognitive engagement and customer value co-creation behaviour.

ii. To find out the relationship that exist between value co-creation and customer loyalty

iii. To determine the mediating role value co-creation plays on the nexus between cognitive engagement and customer loyalty

**1.5 Research Questions**

i. What is the relationship between cognitive engagement and customer value co-creation behaviour?

ii. What is the relationship between value co-creation and customer loyalty?

iii. What is the mediating role of value co-creation in the relationship between cognitive engagement and customer loyalty?

**1.6 Significance of the Study**

This thesis adds to the increasing stream of literature on customer value co-creation dimensions and its effects on customer behaviour. It investigates customers’ cognitive
engagement and its role on attitudinal and behavioral loyalty which have been scantly employed in literature. Additionally, it brings a new viewpoint on customers’ value co-creation dimensions and impacts on loyalty from developing economy such as Ghana, as prior research has focused more on developed economy. As a result, this study will help in the accomplishment of a more holistic understanding of value co-creation by customers and how such initiatives influence their attitudes towards a firm such as healthcare services sector.

1.7 Chapter Outline

The first chapter of the research provides an introduction to the study, specifying details such as the background of the study, identifying the research problem, objectives and questions as well as highlighting the significance of the study in terms of its contribution to research, policy and practice. This chapter ends with the organisation of the study. Chapter two presents the context in which the study is situated. Chapter three presents a thorough review of relevant extant literature, outlining the concept of cognitive engagement, co-creation and loyalty. At the end of the chapter, a theoretical and conceptual framework which serves as a guide for the study is presented and explained. The fourth chapter focuses on the presentation of a comprehensive description of the methodology of the researcher, detailing the processes of how the sample size and respondents were selected in order to answer the questions posed by the study. The tools and techniques for data analysis are also submitted along with valid justifications for their selection. Chapter five presents the data analysis and discussion of findings. The results elicited from the study were then compared to the literature and helpful links were drawn on points of contention or agreement evident from this particular context. The final chapter, Chapter six, examines the major conclusions of the study, expounding on how the research objectives and questions have been settled by the study. The contributions
of the study to academic knowledge as well as some managerial implications and recommendations for further research then round up the study.
CHAPTER TWO

THE HEALTH SERVICE SECTOR IN GHANA

2.1 Introduction

This chapter gives an overview of the Ghanaian healthcare sector. It provides vivid information concerning the healthcare environment and other affecting sectors such as Ghana Health Service, health services’ legal frameworks, delivery of healthcare services, health services’ personnel and profiles selected healthcare institutions in the country.

2.2 The Ghana Health Service

Health services administration in Ghana is a function of the Ghanaian public service which had its inception in 1996 (Act 525) in the constitution of the republic. The Ghana Health Service is managed and run independently with the mandate of implementing national policies on health. Healthcare administration in Ghana is provided by the government through the Ghana Health Services for the Ministry of Health. The number of hospitals in Ghana according to the Ghana Health Service report in 2010 are 200 excluding some clinics which serve below 2% of healthcare issues. According to the WHO (2014), Ghana spent 3.6% of GDP on healthcare in 2014 while expenditure in relation to health per capita was $145.
2.2.1 Mandate of the Ghana Health Services

The primary mandate of the institution assigned by law is to diligently regulate and manage medical services in the country as well as ensuring an effective participation and excellent outputs by all healthcare stakeholders at all levels as stipulated by the policies of Ghana.

The Ghana Health Service’s mandates in the constitution include:

1. Implement approved national policies for health delivery in the country
2. Increase access to good quality health services and
3. Manage prudently resources available for the provision of the health service.

Aside the above mentioned objectives, the GHS also perform the following functions to achieve those objectives:

- Develop appropriate ways and set of technical guidelines to achieve national policy goals.
- Undertake management and administration of the overall health resources within the service.
- Promote healthy mode of living and good health habits by people.
- Establish effective mechanisms for disease surveillance, prevention and control.
- Determine charges for health services with the approval of the Minister of Health.
- Provide in-service training and continuing education.
- Implement any other functions to the promotion, safeguard and restoration of health.

2.3 Overview of Health Care Services

The healthcare environment in Ghana is categorised into two distinct areas, the alternative and the orthodox medicines. Alternative medicine comprises solely or sometimes, a combination of herbal and psychosomatic treatments and traditional medicine. Orthodox
medicine adopts scientific methods in administering healthcare. Recent trends have showed increases in the patronage of alternative medicine, but inherently, the Ghanaian healthcare market is dominated by orthodox medicine. This accounts for the strain on medical institutions in Ghana as there are more and more people seeking medical care or treatments. Ghana’s medical care environment is made up of a blend of various industries that present services to cater for patients with medicinal, preventive, therapeutic and analgesic care. The health care market in this era has been commercialised and as such has goods and services that are sort after by clients for preservation and regeneration of health.

The health care sector is regarded as very promising such that it is ever expanding and as such scholars estimate the sectors expenditure as over 10% of GDP of several developed countries. Thus, healthcare plays a major role in contributing to countries’ economy. The healthcare industry has several classifications in terms of finance and management. The United Nations International Standard Industrial Classification (ISIC), segments the healthcare sector as comprising:

1. Activities at the hospital;
2. Medicinal and Oral health practices;
3. Other human health activities.

The last classification comprises actions of midwives, nurses, domestic medical facilities and other health careers for example chiropody, massage, chiropractic and others.

There are two main groups under the healthcare industry as a benchmark differentiated by the Global Industry Classification Standard. They are:

1. Healthcare equipment and services; and
2. Pharmaceuticals, biotechnology and related life sciences.
The first group involves the units in the healthcare sector that provide healthcare equipment, medical supplies and supplementary medical service. The healthcare equipment and services group provide medical care like; hospital services, personal medical care provision and include nursing homes. Pharmaceuticals and biotechnology are other grouping and they are considered to offer diverse and complementary services in healthcare. Additional criteria for distinguishing aspects of the healthcare industry are most often broadly described as vital activities concerning health such as management of the delivery of healthcare, administration of health insurance and sometimes educational and regulatory issues.

2.3.1 Providers and Professionals

Healthcare providers are described as institutions or people that administer or provide cures, prevention, rehabilitation and promotions to clients such as individuals, homes and communities. The healthcare providers as in the definition can be seen as either institutions or persons. Examples of institutional healthcare providers are hospital and clinics whereas some personnel healthcare providers are physicians, community health workers and more. According to the World Health Organisation, there are about 9.2 million physicians, 19.4 million nurses and midwives, 1.9 million dentists and 2.6 million pharmacists and other pharmaceutical personnel, other dentistry personnel, and over 1.3 million community health workers worldwide, and this represents one of the biggest ratio of industry workforce globally. There are other career paths that are not necessarily found in the healthcare system but are also found in the sector to support the activities of the industry. For example, administrators, shareholders, attorneys and marketers help promote healthcare services and hence contribute to sector costs but these professions are not strictly healthcare related.
2.3.2 Delivery of Services

Healthcare delivery in these modern ages take various forms. The most common ways of healthcare delivery are the primary care, secondary and advanced levels of care to clients and to the public. The most effective way of delivering healthcare is when it is done person to person or in a healthcare facility. In this case the medical practitioner and the client meet face to face. This notwithstanding, modern day trends have changed the healthcare landscape which has resulted in accessing medical care through technologies such as the internet, mobile telephony and other various forms of modern communication.

Structures present in a country’s healthcare industry determines developments such as improvement in access, quality and coverage of health services. There are various funding systems in healthcare across the world. For instance, in the United States of America, patients pay for healthcare through a health insurance provider of that client. This is not so different in Ghana, where apart from some patients paying directly to access healthcare, others depend on government financed National Health Insurance which patients pay renewable premiums to use. Other poor countries depend on donors and charities to access healthcare. This includes services from volunteers who seek to help finance parts of societies who do not have access to healthcare. The following sections discuss the overview of health institutions and selected hospitals in Ghana for the study.

2.4 Overview of Health Institutions

The history of Ghana’s healthcare system is influenced by the British. Prior to the independence of Ghana in 1957, Ghana was colonised by the British government, therefore, the system of healthcare delivery was modeled by the British, conceivably after their own system back home (Abeka-Nkrumah, 2005). The healthcare delivery system at that time
centered on the delivery of basic healthcare services by the demands of the missionaries and the civil servants. Hence, many healthcare centers were situated in the district capitals with a centralised form of administration. In 1972, the government at the time tried to spread out healthcare services to the districts while policy formulation remained at the center. Since then, a number of changes have followed this effort in 1977, 1997 and 2002 which has risen to a complete decentralised system of healthcare delivery, from national right down to the communities (Abekah-Nkrumah, 2005). The discussions below are the details of healthcare institutions in Accra, the capital city of Ghana.

2.4.1 Korlebu Teaching Hospital

The Korlebu teaching hospital was built to serve the purpose of addressing the health concerns of local people under the care and administration of Sir Gordon Guggisberg who was the governor at the time. The hospital was commissioned on the 9th October, 1923. Over the years, the hospital have transformed from a little over 200 bed capacity medical center into over 22,000 bed capacity. Korlebu Teaching Hospital is the third largest in Africa and a primary medical center in the whole Ghana which receives referrals from almost all the other hospitals in the country.

Nevertheless, the performance of the teaching hospital accorded the government of Ghana to accept and implement the recommendations to construct new structures by the taskforce, namely; the medical, maternity and other units that increase the capacity of the teaching hospital to over 2200 beds. The Korlebu Teaching Hospital is currently made up of 17 diagnostic departments and clinical units with over 22,000 bed capacity. The hospital gets an average visitation of 1500 patients daily and about a half of that number of admissions. The departments in the hospitals are Pathology, Laboratories, Radiology, Anaesthesia, Medicine, Child Health, Obstetrics and Gynaecology, Surgery amongst several others.
2.4.2 Tema General Hospital

In Ghana, other metropolis like Tema happens to be the industrial place of the country is faced with several service quality challenges despite efforts by successive governments to improve upon the sector. Accounts from the Tema health directory indicates that it has seven medical health facilities and more than 58 medical health facilities which were established in the year 1954 to take care of the construction workers of the Tema Harbour which was subsequently handed to the government for the use by the public. The location of the hospital geographically is surrounded by road networks and the nature of the metropolis has made the medical centre a busiest of its kind in the country which serves everyone including those in the nearby villages and towns. It has been accorded as one of the referral hospital and the point to call on at any time especially those accidents that occur on the motor way due to the fact that it is so close to the hospital. Nearby areas of the hospital include towns and villages such as Sakumono, Dangme West and Dangme East districts, Lashibi and Nungua. The medical centre consummates its mission of protecting, promoting, and ensuring the health and well-being of their clients and the community via the delivery of ample, inexpensive and quality medical care services.

The Tema General Hospital is made up of divisions such as surgery, pediatrics, theatre internal medicine, general, obstetrics and gynecological care not as well as the accident and emergency services just to mention a few. It is focused on diabetic, sickle cell clinics. It has eye, dental and dermatology clinics as well as others been hypertensive and ENT clinics and anesthetic, chest, and fevers Unit. It also has other supporting services such as are laboratory, pharmacy physiotherapy blood bank, radiology, and ultrasound scan. Previously, when the National Health insurance scheme (NHIS) was introduced, patients attending the hospital
increased with a total of 207,329 at the Out-Patient Department (OPD) in 2008 in comparison with 180,914 in 2007. With a bed capacity of 280 for 10 wards, a total of 19,685 patients got admitted by the hospital in 2014 out of which 13,800 and 5,885 were females and males respectively.

2.4.3 University of Ghana Hospital

The Legon Hospital, as it is predominantly referred as, The University of Ghana Hospital was established as a University of Ghana property in 1957. The hospital at its initial stages was sharing logistics, personnel and equipment together with the Achimota Hospital. Gradually as the years went by, some personnel were moved from the Achimota Hospital to become full time staff at the University of Ghana Hospital. The hospital now has 130 bed capacity and boasts of several departments.

The main aim of the hospital was to serve the medical need of students and staff of the university. In the late 1970’s, as the surrounding communities started developing, the hospital began extending healthcare to the people in the community as well. The ministry of health, recognising the situation at the time, started a support system that supplied drugs, equipment and instruments to the hospital. The University of Ghana Hospital is now regarded as the District Hospital and now serves a wider area than previously. The drive of the hospital to provide quality healthcare to its stakeholders made them establish an outreach for Primary health care which helps to advice the general public mostly students, pregnant and nursing mother about basic healthcare needs. The Legon Hospital serves is therefore one of the focal health service institutions in the Greater Accra region as it serve a cross section of people.
The hospital also in its drive to reduce referrals to the Korlebu Teaching Hospital and 37 Hospital has set up a specialist consultancy service to tackle special health cases.

2.4.4 Korlebu Polyclinic

The Korlebu Polyclinic is a supplement health facility that caters for patients with relatively less severe healthcare problems in and around the Korle vicinity in Accra. This comes in handy as it eases the numbers on the Korlebu Teaching Hospital. The polyclinic has a 42 bed capacity and provides healthcare for the people of the locality. It has been used as a training capacity for Family Physicians in both West Africa and Ghana Colleges of Physicians since 2003. Some services that the Korlebu Polyclinic offers are a 24-hour in-outpatient services, eye care services, radiological Services (X-ray and Ultrasound), laboratory services, 24-hours pharmaceutical services, child immunisation/ welfare clinic and health education (Public Health Unit) amongst others. Other special services are Asthma treatments on Fridays, Chronic Care on Saturdays and Palliative Care and Women clinic on Thursdays.

2.4.5 Research and Clinical Activities

This aspect of medical care delves into clinical checks and is critical on specific disease conditions and their presentations for scholarly purposes. Some significant areas that have over the years proved topical to most clinical researchers are Diabetes, HIV and most chronic disease conditions to improve literature.

2.4.6 Patient Education

Patient education is done mostly through healthcare professionals and patients face to face at health institutions. This interactions are more effective and efficient when they are done frequently and often at the OPD by the public health administrators or equivalent in the various healthcare institutions.
2.5 Customers of Hospitals

It is paramount that companies identify that any individual that consumes or uses its produced good or service is a customer, as stipulated under the consumer value chain. The mandate of operations teams is to ensure maximum value created for the customer and for producer of the goods and services at all times. These teams are always working to increase the experience of the customer at the same time providing value for providers. In healthcare, the roles of the customers are not clearly structured. The medical care industry nowadays have embraced the modern trends and as such do not perceive patients as just patients but also as customers that patronise their services. This is as a result of an increasingly competitive healthcare industry emerging in the country hence these measures are to attract new customers and retain old ones.

Characteristics of customers in other industries differ from that of those in the healthcare industry. Making of choices by customers of a service provider may be dependent on the amount of money that customers have. Unlike other industries where if the customer does not like services provided, they do not go back or if they had a bad instance with a provider, they switch to another, the healthcare industry in Ghana may not permit that luxury and does not follow that norm.

2.6 Innovation in Hospitals

Innovation can be described as the transformation of knowledge into workable outcomes that creates value for the customer. Medical treatment has paved for amazing improvements some years back. However, the delivery and packaging of treating health problems are not enough, not effective and not friendly to consumers. Medical inconsistencies are popular concerns
raised in the healthcare industry as causing death and increasing healthcare costs. As a result, one may ask, what is the reason for the unsuccessfulness of innovation in the healthcare sector? An answer to this issue requires a solution to the problem, taking into consideration the forms of innovation, considering the factors that have effects on them for better or worse.

2.6.1 Six Forces that can Drive Innovation or Kill It

**Actors:** Foes and friends who hang about in the healthcare industry whose efforts terminate or reinforce the chance of innovation success

**Funding:** The procedures for making capital and getting revenue for which they both are different from other countries

**Policy:** The code of practice that permeate the sector, because of incompetency or deceitful sellers may bring about permanent damages in the healthcare system.

**Technology:** Innovative mechanical advancements that ensure more effective and efficient delivery of healthcare and wellbeing.

**Customers:** The progressively involved consumers in of medical treatments, which consequentialy have moved passed just patients to families, homes and more.

**Accountability:** There are always those vigilant customers that think innovative healthcare products secure and as effective but also hold the separate view about their cost effectiveness as compared to related competing healthcare services.

2.6.2 Health Care System Innovation Catalogue

The healthcare industry can adopt three kinds of change which will transform healthcare services to be efficient and affordable. Firstly, there can be changes in the processes involved in accessing and purchasing healthcare by customers. Healthcare systems can also implement technologies into the systems and operations which will improve medical care. The third change is to introduce an entirely new business models that encompasses a cross-section of
vertical and horizontal structures to aid smooth flow of activities in the healthcare system. The innovative delivery of healthcare is less stressful, more effective and most time provides very affordable healthcare to customers.

2.7 Categorisation of Health Service

Healthcare in Ghana is recognised as one of the most advanced in Africa. The health insurance system of accessing healthcare in Ghana allows easy and affordable access to medical care in the country. The healthcare sector in Ghana still faces several challenges, which includes low quality of healthcare services and lack of facilities especially out of the capital. The majority of Ghanaians depend on self-medication that has become sometimes inevitable because of the poor state of public healthcare facilities in Ghana. This is because the country as a whole is below par served from the medical care perspective. This situation is even worse in the rural parts of the country. Public healthcare centers in Ghana are about 1,818 countrywide which and that of private healthcare institutions number about 1,294. These private institutions normally provide better healthcare at a much relatively higher price which deters many people from patronage hence adapt to self-medication.

2.8 Summary

The current chapter provided a summary on health sector environment and hospitals in Ghana. Studies conducted on public and private hospitals has seen significant increase within the last decade in the developed economies. The literature revealed that the mission of the GHS is to provide healthcare in a caring, effective and efficient way by friendly, well trained, client oriented personnel and highly motivated staff. An overview of all the hospitals sampled for the study has been reviewed. The study further indicated that, developing access, health quality lies on the means the services are structured and managed and other incentives affecting the users and the providers. A study on healthcare regarding the open innovation of
co-creating value with customers which leads to patients’ loyalty both in its behavioral and attitudinal perspective is very imperative because it plays a significant role in ensuring means, coverage and service quality. Having highlighted on the healthcare environment and hospitals in Ghana, the next chapter examines the relevant literature together with the theoretical framework that direct the present study.

CHAPTER THREE
LITERATURE REVIEW

3.1 Introduction
With regards to objectives of the study, relevant and contemporary literature are reviewed on the concept and approaches to value co-creation. Again, the chapter discusses the existing nexus between the value co-creation behaviour and customer loyalty linkage. This chapter further focuses on the theoretical foundation of the study and also the conceptual framework and the elements that constitute the model.

3.2 Customer Value
The concept of value in recent years has generated a lot of argument in both academics and practitioners. The significance of value has led to its being named among the most researched topics in 2010-2012 and 2012-2014 respectively (MSI, 2010, 2012). Salem-khalifa (2004) asserted that, due to the significance of customer value, the concept has been overused and misused in the social sciences and management literature. This view seems to be in line with Huber et al. (2001) position that industrial-organisation (IO) economists and several
marketing methods stress that a key to a company’s success is through the creation of superior customer value (see Laitamaki, & Kordupleski, 1997).

There are issues involved in defining customer value. In an effort to merge the varied explanations, Woodruff (1997, p. 142) suggests however that, “Customer value is a customer’s perceived preference for and evaluation of those consequences use, attribute performances and product attributes arising from achieving the customer’s goals and purposes in use situations”. Though, the multiple criteria, tasks and contexts in the definition above mirror the complexity and richness of the context, the definition is not in relation to the customer alone, but also other side for the businesses. Customer value is explained as the difference between the value the customer obtains from owning and consuming a product and the actual cost of acquiring the product. On the other side, it is understood that the overall customer value is the total sum of the value, image value, personnel value and services value. Hence, these monetary, energy costs, time and physic are the overall cost of the customer and the consumer (Christopher, 1996). Existing literature has shown a positive link between offering superior customer value and increased financial returns and customer loyalty behaviors (Heskett, Sasser, & Schlesinger, 1997; Reichheld, Markey, & Hopton, 2000; Reichheld, 1994). For example, a study by Reichheld and Sasser (1990) proved a strong correlation between firm’s profitability, customer loyalty, and perceived value customers obtain from firms. This suggests that customers are satisfied and loyal to a firm so far as the firm provides them with superior value services other than what competitors offer.

3.3 Value as Fundamental Concept in Co-Creation

With value as fundamental concept in co-creation, the user’s value perception portrays user’s expectation and beliefs, which is interconnected to the potential value and derived from their involvement. This presupposes that, customer’s perceived value advantage improves their
participation behaviour and increase their level of interactiveness (Damkuviene, Tijunaitiene, Petukiene, & Bersenaite 2012). Customer’s engagement during the co-creation process, value is observed as giving utilitarian or hedonic benefits (Hassan & Toland 2013; Tuunanen, Myers, & Cassab 2010) and this could be either extrinsic or intrinsic, in financial or non-financial terms (Hassan & Toland, 2013). Nevertheless, Spiteri and Dion (2004) explain value as the real integration or fusion of cost, quality and service. Undeniably, during co-creation, value can be delineate as any actual or perceived benefits from the customer (Shamim & Ghazali 2014; Durugbo & Pawar 2014; Lorenzo-Romero, Constantinides, & Brunink, 2014). Also, Sanchez, Callarisa, Rodriguez and Moliner (2006) refer to perceived value as the value that contains the comparisons customers make between the sacrifices and benefits of one or several service providers. It was further debated that if customers evaluate the service and realises it to be positive and outweighs that of other competitors, that particular supplier will be chosen. Following Uses and Gratifications theory, value is grouped into hedonic, social and personal integrative beliefs as well as cognitive that mirror what customers anticipate to acquire from their involvement in working together with the service provider (Nambisan & Baron, 2007; Nambisan & Baron 2009).

Cognitive value is delineated as the expectations to acquire certain level of knowledge about the usage of a service or product and the underlying technologies (Nambisan & Baron 2009; Hoyer, Chandy, Dorotic, Kraft, & Sing, 2010), as well as the discernment of the information gaining procedures (Kohler, Fueller, Matzler, & Stieger 2011b). The higher participation of customers, the greater the value of such service or product related learning (Nambisan & Baron, 2007). Social integrative benefits are associated to intensifying relations with others whilst personal integrative benefits are associated to the self-efficacy, credibility and status of customer (Kohler et al. 2011b; Katz et al., 1999). The social benefits of co-creation ends in
the increment of social esteem, status, “good citizenship’’ and strengthen the relationship with others whilst improving their social identity and sense of belonging (Nambisan & Baron 2009; Hoyer et al., 2010; Kollock, 1999). Again, another motivation in co-creation by customers is the desire to improve one sense of self-expression, pride and the intrinsic value which is more connected to their personal uprightness (Etgar, 2008). Also, hedonic benefits are benefits that are associated with the pleasurable or aesthetic experiences (Kohler et al. 2011b; Katz et al. 1999). Extant literature reviewed has shown that the hedonic value predict future participation, whereas customer cognitive value, and social and personal integrative value leads to a continual involvement as well as higher actual involvement (Nambisan & Baron, 2007; Nambisan & Baron 2009). Kohler et al. (2011b) stressed on the significant role of these four (4) forms of value on design element to trigger co-creation.

3.4 Background Information on Value Co-Creation

Value co-creation has emerged as a new paradigm in industry and academic world. It provides chances to firms and customers to create value through high level of interaction. Co-creation has become widespread expeditiously in the early 2000s through empirical analysis and theoretical essays, putting a challenge to some of the pillars of capitalist economies. The capitalist economies mostly define value before the actual market exchange with buyers. In other words, they determined value to customers (Vargo & Lusch, 2004; Prahalad & Ramaswamy, 2000, 2004a). However, from the value co-creation standpoint, customers and suppliers are not conversely on opposite sides, but rather in sync with each other for value to be created together. According to Saarijarvi et al. (2013), the way by which value is paid for, created and distributed in co-creation perspective contrast deeply from the conventional demand and supply framework. To better comprehend the past and the present states of value
creation, this study provides an empirical review of literature and recognises its core subject matter, boundaries and content.

3.5 The Concept of Value Co-Creation

The on-going active engagement of customers in the process of value production modify radically, conversional marketing concept, which defines a firm as arbiter of value. The evolution from a company to a customer focus was first captured in literature as consumer participation by Lovelock and Young (1979) and as prosumption by Kotler (1986). The term value co-creation originated from Kambil, Friesen and Sundram (1999), the authors made a reference to firms collaborating with customers to produce their own value. In this context, they asserted that co-creation activities increase the relationship between a company and the customer. However, to highlight a better understanding of the term value co-creation, Prahalad and Ramaswamy (2000) delineated the concept as the process that allows the customer to become active subject in the service encounter process rather than a passive subject who merely accepts the produce of a firm. An extant literature review has shown diverse definitions for co-creation, the concept most times has been used erroneously and synonymously with other concepts such as co-production, co-innovation, co-ideation, customisation (Auh, Bell, McLeod, & Shih, 2007, Lengnick-Hall, Claycomb, & Inks, 2000, Soltanzadeh, 2014) or consumer participation (Fang, Palmatier, & Evans, 2008). Since the aforementioned terms do not certainly equate with co-creation, a lack of clarity about the specific meaning of the term co-creation remains (Rajah, Marshall, & Nam, 2008). However, researchers like Piller, Vossen and Ihi (2011) define value co-creation as an active, creative, social partnership process between producers (providers) and customers (users) facilitated by a company. O’Hern and Rindfleisch (2010) also view the concept as an activity that stems from co-operating with a firm to develop new products and customers playing an active role
to contribute and select elements of the new product being offered. Rajah et al. (2008) in their contention posit that co-creation occurs only when the customer and the company work together during the service production encounter to create an experience that adds value to the buying process. Zwass (2010) position value co-creation as the active participation of customers with service producers to create value in the market. The discussions above highlights that value co-creation requires active collaboration between firms and its customers to create the needed value through effective interaction. Considering the aforementioned definitions, this study proposes that co-creation is an activity that grants customers free rein to work with company-provided resources in the production of their own value offerings. The importance of the concept also led to it being acknowledge by MSI (2014-2016) as a priority area for investigation. This interest is as result of its potential strategic use for both theoretical study and practice. Therefore this emerging trend offers an excellent opportunity for research.

3.6 Importance of Customers in Value Co-Creation

Consumers are identified as a major aspect of the service production and provision (Lovelock & Young, 1979; Bitner, Faranda, Hubbert, & Zeithaml, 1997). Usually services that have are perceived to have a high level of quality tend to be more involved with their customers as opposed to those that are on the search and experience dimension. According to Hilton Hughes and Chalcraft (2012), customer involvement with regards to value creation can range from being an option to being a requirement. The latest service dominant logic propounded by Vargo and Lusch (2004) captures goods under the wing of services by regarding them to be tools for distributing services. In the past, the customers role has been examined from numerous perspectives which include human resource (Bowen, 1986), personal resource
(Mills and Morris, 1986), productivity enhancer (Fitzsimmons, 1985; Goodwin, 1988; Dabholkar, 2015; Kelly, Donnelly & Skinner, 1990; Dong, Evans & Zou, 2008). Until recently the spotlight was not on the consumer as source of competence (Prahalad and Ramasawamy, 2000; Sawhney & Prandelli, 2000; Vargo & Lusch 2004) and as equity (Ranjan and Reed, 2014).

Lengnick-Hall (1996) pointed roles that consumers play; worker (co-producer), resource, buyer and user. In the same vein, Bitner et al (1997) grouped the roles of consumers into three different categories (1) competitor (2) productive resource (3) contributor to service quality and satisfaction. Customers can often be described as banks of various forms of resources that can be sort from time to time with the process of creating value. These resources according to Arnold et al., (2006) and Baron and Harris (2010) can be categorised into cultural, social and personal resource. Even at times when consumers lack some resources, they consciously inquire from their colleagues and other firms (Hibbert, Winklhofer and Temerak, 2012). Being an authority in service dominant logic, Bolhuis (2003) proposed an engaging of consumer learning based on cognitive, emotional and volitional elements.

3.7 Customer Motivations and Contributions towards Value Co-Creation

The complexity of consumers and the changes in their duties are vital issues for today’s businesses. The maintenance of inflow demands that firms allow their customers to partake in the value creation that is a shift from their rather passive approach to customer participation (Agrawal & Rahman, 2015). There should always be the urge to keep customers excited about contributing to value creation because it is important to understand customer needs regarding value creation (Roberts, Hughes & Kertbo, 2014). Organisations are increasingly
finding new ways of engaging customers. Today’s marketplace has seen many rewards offered customers both monetary and non-monetary to get them engaged (Roberts, Hughes & Kertbo, 2014). Extant literature documents several factors that motivate customers to participate in value creation especially from the cost-benefit viewpoint. Several other factors are also accountable for customer value co-creation: social, cultural and environmental (Agrawal & Rahman, 2015).

### 3.8 Antecedents of Value Co-Creation

#### 3.8.1 Flexibility Dimension

The integration of customers into value co-creation processes requires frequent co-ordination due to uncertainties and heavily reliance on new information from customers. In this context, emerges the need for flexibility (Zhang & Chen, 2008). Wang and Masini (2009) delineate flexibility as one of the critical contributing factor to the proper and successful factors in enhancing business relationships in today's competitive business environment. The flexibility concept is seen to be one of the controversial issues with multiple coverage areas (Sushil, 2001). The theoretical and practical applications of the service-dominant marketing paradigm directly imply an increase in the flexibility of marketing structures and processes.

#### 3.8.2 Interaction Dimension as an Antecedent of Co-Creation

In disciplines such as sociology, communication, psychology and discourse analysis, interaction plays a significant role. For instance in the field of sociology, one of the most important theory is the interaction theory (symbolic interaction theory). The central principle of the interaction perspective is hinged on one basic premise which states that people act toward the things that they encounter on the basis of what those things means to them (Cole, 2017). The construct of interaction is a core element in SI (symbolic Interaction). One of the
founding fathers of SI, Goffman (1959) defines interaction as the reciprocal influence of individuals upon one another’s actions. He posits that an interaction consists of all the activities carried out by a given participant in order to influence other participants. In this context, Fyrberg and Juriado (2009; p. 422), stipulated that the quality of the interaction between the customer and the service provider is fundamental for value co-creation.

3.9 Approaches to value co-creation

Currently, there is a new shift in argument over the concept of value exchange. This concept allows customers and service providers to work together in value production (Saarijarvi, Kannan & Kuusela, 2013). In depth literature review reveals that several approaches have been employed in debating the concept of value co-creation (VC). Although some of these approaches share similar view in discussing the VC concept, there are also divergent views to the discussion. The divergent view in discussing the approaches to VC has led to multifaceted context of explanations and understandings customer collaboratively value creation with service providers and other actors (Hienerth, Keinz, & Lettl, 2011; Miller & Lammas, 2010). For a better understanding and discussion of the conceptual model surrounding value co-creation, this work reviewed three central approaches related to value co-creation, i.e. S-D logic approach, Service Science approach, and postmodern approach.

3.9.1 SDL approach to value co-creation

The evolving S-D Logic approach in the spheres of marketing maintains that customers are always co-created with service providers (Vargo, Maglio & Akaka 2008; Vargo & Lusch, 2004). This presupposes that customers should be seen as a central tenet to the value co-creation process instead of being seen as targets of producer-created value (Merz, He & Vargo, 2009). Gummesson (2008) in his introduction to many-to-many marketing approach
endorses the role of customer networks and highlights the importance of a multitude of actors such as employees, intermediaries, neighbours and society in general in the value co-creation process. The author contended further that, it is inadequate to conclude that co-creation has taken place by considering interaction between customer and service providers only, rather he argued that the concept of value co-creation can take place when other social actors in the value chain are considered as part of the value co-created. In support of Gummeson’s argument, Edvarsson et al. (2011) in their social constructionist approach to value co-creation, the authors suggested value-in-social context instead of value-in-use concept propagated by Vargo and Lusch (2004). The authors argued further that describing the concept of value co-creation in value-in-social context capture holistically other actors in the co-creation process. However, literature has proven that SD logic also recognises customers and other partners in value creation process (Lusch & Vargo 2006), hence the SDL approach is well fit in discussing value co-creation concept.

3.10 Service Science Approach (SSA)

Service science value co-creation approach considers the interactions that exist between customers, processes and resources in creating value in service system (Vargo & Lusch, 2008). The approach was originally IBM orientation which fundamentally corresponds with SDL approach. It was proposed to be theoretically grounded on S-D logic (Maglio & Spohrer, 2008). However, this position by Maglio and Spohrer (2008) has been debated by some researchers as a misleading argument since SDL is not yet accepted as a theory by scholars (Vargo, 2007). Service science approach focuses on how participants, processes and resources are collaborated mutually through interaction to create value (Baron & Harris, 2008; Vargo et al., 2008, p150). Anytime value co-creation is appreciated from service
science perspective, the distinction between service-producer and customer disappear and all participants contribute to the value creation for themselves and for others. This uniformity of participants and their roles is captured in FP9 of S-D logic; all economic and social actors resource integrators (Vargo & Lusch, 2008a).

In contrast to SDL, the SSA seeks to better understand value co-creation process that occurs within and between diverse services system, and view value co-creation from macro perspective. It stresses on greater configurations of resources and interaction as well as recognising the central role of technology in enabling value co-creation.

### 3.11 Postmodern Approach to Value Co-Creation

In the postmodern approach to value co-creation is based on the work of Bendapudi and Leone (2003). The approach recognises that there has been a shift to more customised experience being presented to the consumer who takes elements of market offerings and crafts a customised consumption experience out of these (Firat & Venkatesh, 1993). Consumers plays an important role in terms of service production. In order to meet the growing need and allow consumer’s active involvement, marketers have no choice than to re-engineer their processes (Bendapudi et al., 2003; Firat et al., 1993) which is mostly called presuming (Ritzer & Jurgenson, 2010). The customer has reached an important point which was previously the producer’s (Bendapudi et al., 2003). Nonetheless, as consumption is deemed as a process manufacturing, “it can no longer be performed instinctively, naturally, without development of special skills” (Firat et al., 1993). This may be likened to the proposition of Gronoos (2008b) that customers’ value creation is also made up of some added resources, such as providing information and not only the service or good alone (Vargo &
Lusch, 2004; Humphreys & Grayson, 2008). The recent methods being employed in co-creation recognises that the product is not a complete object. Instead, the concept is likened as a process into which a customer can immerse oneself and provide inputs (Auh et al., 2007).

In a nutshell, the varying methods of S-D logic, service science or post modernism can be put together even though they all give different views on the concept. Literature shows that some homogeneity brings to light consumers capabilities in their quest to being the central creators of the consumption experience (Holt, 1995) and also that they are involved adequately with the environment they find themselves in (Sherry, 2007).

3.12 Theoretical Framework

In view of array of theories that abound in business literature, Role Theory (RT) will serve as the theoretical underpinning of this study. The process of value co-creation is an experience that comprises two parties co-operatively, and actively partaking in an activity that creates mutual benefit (Vargo & Lusch, 2004). Co-creation of value is fundamental in role theory, as all parties involved in the experience assume certain roles that are influenced by their mutual expectations. Role theory is deemed a social theory that considers a person’s behaviour to be a bunch of signals that needs to be given attention in every situation. They are usually predicted by a person’s status in a society and some perceptions that other people have and how roles should be carried out (Ruddock, 1969). Role is described as a social theory that is derived from the discipline of behavioural science. It proposes that individuals take up particular duties when they find themselves in circumstances that demand them to do so. Mostly, the duties or roles taken up are shaped by expectations of other people in addition to the individual’s role in society (Ruddock, 1969).
Co-creation demands that suppliers and consumers take up a number of roles that will be in line with their involvement in the buying experience (Akaka & Chandler, 2011). The co-creation engagement will only be fruitful if the customer and the supplier both comprehend fully the expectations surrounding how they ought to carry out their roles (Prahalad & Ramaswamy, 2004)

3.12.1 Role Definition

Role definition is a word plagiarised from the drama theatre and employed as a metaphor in this case. However, this simple metaphor has been used in various means to develop numerous theoretical traditions of role theory (Thies, 2009). There exist structural, organisational and even functional forms of role theory that describe the role as a conduct that follows some exact parts (or positions) instead of the actors who recite them (Sarbin & Allen, 1968:489). Role theory is usually referred to by symbolic interactionists as repertoires of attitudes inferred from other people’s expectations and the individual’s conceptions, considered as least partly as reaction to signals and requirements (Walker, 1992:23) The concept has become employable in real life as people take up roles to enable their positions be carried out in every circumstance (Ruddock, 1969).

3.12.2 Role Characteristics

A lot of roles have similar features. A person may take up a lot of roles simultaneously, one role at a given time or a lot of roles. The role being played by a person greatly determines the way and manner they will behave. The role that is taken up may be forcefully given to a person due to their circumstance or they may choose it themselves. Various groups, individuals and firms vary as to their expectations of each other and this may lead them to perform their roles differently. Role conflict will be the order of the day if people have
different role expectations (Ruddock, 1969). The way and manner an individual carries out their role is dependent on the requirements and limitations the community put on them. The act of carrying out each role also matches up personal needs. Individuals carry out roles to be able to belong fully in the community and also to satisfy a need for self-actualisation (Ruddock, 1996). Individuals take up roles when it is obvious that the role will aid them reach their set out objectives (Banton, 1965). People also want others to reassure them so they can defend their actions and this shapes the way they perform their roles.

3.13 Co-Creation and Role Theory

The concept of co-creation is properly explained by role theory that verifies the reason why suppliers and consumers take up certain responsibilities to reach their goals in a given buying circumstance. Much focus is placed on the parts played by the supplier and the consumer due to the fact that co-creation emphasises on the involvement of the two parties (Ballantyne & Varey, 2008). The entire co-creation operation is deemed a theoretical drama. All parties involved play roles of actors whiles the place where the actual transaction occurs assumes the role of the stage. The location (stage) has an influence on the consumer’s perception and what they expect which goes further to affect the success (or failure) of the actual operation (Palmer, 1995). Every party (actors) operates by a script which is directed by the role they are expected to play. The script clearly spells out the roles of all parties involved, how the parties present themselves, the time the transaction takes place and also what kind of information is exchanged.

Script theory is of the view that the interaction will be fruitful if every party involved can tell the behaviour of the other party while simultaneously understanding their own behaviour (Solomon et al., 1985). As soon as relationship to operate together in creating is established between a customer and a supplier, they both take up a number of roles (Vargo & Lusch,
Together they act the role of value creation. They may both take up the role of commencing and the supplier may employ marketing strategies in scouting and targeting the consumer. The consumer can also take up the duty of the initiator by finding the supplier and going to them to establish a relationship. As time goes on, both parties will take up other roles. The part they play may vary in terms of the degree of difficulty associated to the co-creation experience. One of the roles that is of significance to this research is the consumer’s. The consumer and the supplier tend to be co-creators of value when a customer takes up the role of the supplier.

3.14 Value Co-Creation Behaviour Dimensions

As introduced by Yi and Gong (2013), there are two types of Customer VCC behaviour. These are Customer Participation Behaviour (CPB) and Customer Citizenship Behaviour (CCB). The first is more of the engagement of customer in the VC and service delivery process, while the latter prides itself more in a voluntary behaviour of providing extra value to a firm by giving feedback and helping others. The authors (Yi & Gong, 2013), consider the first four constructs under CPB. Thus information seeking, information shearing, responsive behaviour and personal interaction as indispensable for successful value co-creation and constructs under CCB.

3.15 CPB

3.15.1 Information Seeking

To be able to participate in the value co-creation process, consumers must be presented with the details regarding the primary features of the service they will be receiving. They specifically seek information related to the best way of developing their role of value co-creators and what is expected of them during the service provision (Yi & Gong, 2013). This
information can be obtained from various sources. These range from consulting to observing the behaviour of other customers while they use the service. This knowledge is going to reduce the customers' uncertainty while facilitating their assimilation into the value co-creation process. This has an important influence on user participation in the service delivery. Indeed, if the customer does not know or does not understand how a service works or is provided, it will be quite complicated for them to take part in its creation and they will probably become passive subjects in the provision (Yi & Gong, 2013).

3.15.2 Information Sharing

For the value creation process to be developed appropriately, it is vital for consumers to be heavily involved as well. They must provide information to the employees about their needs and the details of the service which they want to experience (Yi & Gong, 2013). Without this information transmission, the service provision process will be made more complex because a worker will not have the necessary knowledge about the problem to be solved and the best way of doing so is from the customer's point of view. For example patients should provide the physician with proper information about their condition so that the physician can make an accurate diagnosis (Yi & Gong, 2013). This co-creation dimension is of vital importance for the success of the service because the employees' ability to provide a service adapted to the customer's specific needs depends on it (Yi & Gong, 2013).

3.15.3 Responsible behaviour

In the value co-creation process, the customers must co-operate with the employees, following their guidelines and orientations. This involves the users knowing their rights and responsibilities in the development of the provision and being willing to collaborate in this process. Without this type of behaviour, the service encounter will have a low level of value co-creation.
3.15.4 Personal Interaction

Interpersonal relations between customers and employees, based on courtesy, friendliness and respect are fundamental for the success of value co-creation. Therefore, for this process to develop satisfactorily, it is necessary to create a climate of trust and a pleasant environment for the customers that favour their involvement in the value co-creation process (Yi & Gong, 2013).

3.16 Customer Citizen Behaviour

3.16.1 Feedback

This refers to the information, which consumers give to staff and the firm (which includes proposals and orientations) which enables the continuous enhancement of the service being provided (Yi & Gong, 2013). It is not a behaviour that is necessary for the success of the service encounter, but it greatly contributes to its improvement, as it involves exploiting the customer's experience and knowledge for the perfection of the service (Yi & Gong, 2013).

3.16.2 Advocacy

This involves recommending a company and or its staff to friends and family. This dimension is not necessary for the success of co-creation, but it contributes to the renown and reputation of a firm, as well as attracting and retaining customers. It is also an indicator of customer loyalty (Yi & Gong, 2013).

3.16.3 Helping

In the value co-creation process, the customers can help other customers. This spontaneous willingness to advise or assess other service users help better the service with no need of inputs coming in from the employees (Yi & Gong, 2013).
3.16.4 Tolerance

This refers to the consumers' willingness to be patient when the service provision does not fulfill their expectations. Taking into account that service failures are one of the main reasons which explain switching behaviour, this dimension is vital to retain customers and improve an organisation's profitability indicators (Yi & Gong, 2013).

3.17 Value Co-Creation Behaviour

Contrary to traditional marketing practices, value co-creation predominantly considers customer as an active player and part of a firm during the interaction process to equally co-produce and co-create value (Vargo et al., 2008). It is imperative for both practitioners and academics to focus on customer value co-creation behaviour during the service delivery process. (Akaka & Chandler, 2011; Lusch & Vargo 2006).

Within the Service-dominant logic framework (Vargo & Lusch, 2004; Vargo & Lusch, 2008), several studies in relation to value co-creation behaviour have been put in considered (Neghina et al. 2015; Yi et al., 2013; McColl-Kennedy et al., 2012; Randall et al., 2011), from which the customer value co-creation measurement debate has emerged. Some studies consider value co-creation behaviour as a multidimensional construct that consists of many distinctive components (e.g. Bove, Pervan, Beatty, & Shiu, 2008; Groth, 2005) while other researchers employ a unidimensional approach and use single or multiple item in measuring the value co-creation behaviour (Fang, Palmatier, & Evans, 2008; Dellande, & Graham, 2004). Regarding empirical research, Randall et al. (2011), and Mc- Coll Kennedy et al. (2012), Yi and Gong (2013) are particularly relevant. Randell et al. (2011) suggest the construction of a measurement scale composed of three dimensions, connection, trust and commitment, The most significant problem is that the aforementioned investigation by Randell et al. (2012) failed to address the locus of value co-creation (service interactions) or
its conceptual boundaries, therefore, adding to the ambiguity surrounding the activity of value co-creation and its dimensions. Secondly, the work of Mc-Coll Kennedy et al. (2012) put out eight components that constitute value co-creation behaviour. However, the eight components and activities of customer value co-creation behaviour in healthcare were merely listed without any critical analysis to facilitate their eventual generalisation or any examination of their internal composition or any semantic investigation of the concept in terms of sub-dimensions or the simple activities being performed. Finally, Yi et al. (2013), considered value co-creation behaviour to be a third-order factor that is viewed through the lens of customer participation behaviour (CPB) linked to customer citizenship behaviour (CCB). The former denotes the behaviour customers adopt during the service provision and is needed to achieve an appropriate act of value co-creation. The latter denotes a type of behaviour that can creates a higher value for an organisation but is not necessary for value co-creation (Yi & Gong, 2013). Each of these dimensions has four factors in the original scale: information seeking, information sharing, responsible behaviour and personal interaction in the participative behavior framework; feedback, advocacy, helping and tolerance for citizen behaviour. The authors considered the first four as indispensable for the normal performance of a service, whereas the rest are complementary to this process and provide an organisation with a superior value.

Based on the idea of Yi and Gong (2013), this study considers VCCB as a multidimensional model made up of two higher-order factors, with four dimensions each. These two factors are customer participation behaviour and customer citizenship behaviour. CPB comprises of information seeking, information sharing, responsible behaviour and personal interaction dimensions whereas CCB comprises of feedback, advocacy, helping, and tolerance dimensions. This distinction is in congruent with traditional management literature on the
distinction between employee in-role and extra-role behaviour. According to Borman and Motowidlo's (1993) theoretical framework on partitioning of the individual performance domain, performance can be divided into task performance and contextual performance. Task performance involves behaviours that are expected and necessary for the successful completion of service delivery so that without these behaviours, service delivery will be incomplete. Similar to employees, customers who participate in service delivery should engage in some behaviours such as information seeking, information sharing, responsible behaviour and personal interaction which are classified as customer participation behaviour in this study. For example, customers seek information to perform their expected behaviours without which value co-creation could not be completed successfully. Meanwhile, contextual performance involves voluntary and discretionary behaviours that are not required for a successful value co-creation. In this regard, customers do not have to exhibit behaviours such as feedback, advocacy, help, and tolerance for the successful completion of service co-creation. In view of these, the study hypothesise that:

\[ H1: \text{Value co-creation behaviour is a third-order construct manifested in the second-order dimensions of customer citizenship behaviour and customer participation behaviour.} \]

3.18 Value Co-Creation through Cognitive Engagement

According to Hollebeek (2011a), engagement is potentially strongly oriented to context and it can be influenced by consumer’s decision related to particular engagement objects, e.g. brands, products or organisations. Macey and Schneider (2008, p. 4) identify three categories or levels of engagement, (1) cognitive engagement, when the actor cognitively acknowledges and provides his/her resources to the lead actor and/or its offering; (2) emotional engagement, when the actor is committed and willing to invest and expend discretionary effort in engaging with the lead actor and/or its offering; and, (3) behavioural engagement, when, given a
specific frame of reference, the actor changes his/her behaviour, because of the lead actor and/or its offering. Conceptualising cognitive engagement, prior studies propose several consumer variables such as customer perception to the co-creation process, process enjoyment and process effort (Franke & Schreier, 2010), absorption and attention (Rothbard, 2001), customer insight (Franke, Keinz, & Steger, 2009), innovations (Fuller, Matzler, Hutter, & Hautz, 2012) and self-efficacy (Beuningen et al., 2009). Amidst this variety of variables, this study adopts customer Self-Efficacy (SE) and Process Enjoyment (PE) in order to ascertain its role on the relationship between customer value co-creation and loyalty in the healthcare services. This seems to gain support from Yim et al. (2012) who opined that both customer SE and PE play an imperative role in participation behaviour.

3.19 Customer Self-Efficacy (SE)

SE was selected as one of the variables to explain cognitive engagement because it is central in discussing the value co-creation (Yim et al., 2012), this is because customers’ perceived capabilities to be part of the value production plays a vital role for the perceived value and, ultimately, the overall success of the service (Van Beuningen, Ruyter, & Wetzels, 2011). This investigation defines SE in a co-creation setting as a person’s belief in his/her ability to perform a task as required by the value creation process (Van Beuningen et al. al 2009). With regards to service management and marketing literature in general, SE is usually considered a precursor for customer involvement, which means SE serves as a motivator for customer to engage effectively in service production (Van Beuningen et al., 2009; Mckee et al., 2006; Xie et al., 2007-2008).

In most literature, SE has been considered as an antecedent of customer’s ability towards using self-service technologies (Dabholkar and Bagozzi, 2002; Van Beuningen et al., 2009)
or service participation (e.g. McKee et al., 2006; Xie et al., 2007-2008). In sectors like organisational behaviour or education, SE has been considered as influencer in determining an individual’s capability in performing a given task (Pinquart et al., 2004; Dierdorff et al. 2010). In a services marketing context, Yim et al., (2012) posited that SE plays a moderating role in the relationship between customer participation and outcome variables, such as customer satisfaction and repurchase intentions. Considering the aforementioned, it is therefore essential to empirically examine the role of SE in value co-creation behaviour.

3.20 Process Enjoyment (PE)

Extant literature reviewed shows that an individual’s mostly involve themselves with creative jobs when they are essentially interesting and challenging (Fuller et al., 2011; Dahl, & Moreau, 2007; Amabile et al., 1996). Similarly, Mochon et al. (2012) contended that, even though there has been an increase preference fit, customers are willing to partake in co-creating value due to the fact that the process can mostly be an interesting experience. A consumer’s level of enjoyment while in the process of co-creating which is known as perceived enjoyment is a considered a psychological response that adds up greatly to the benefits consumers gain from co-creation (Franke, & Schrier, 2010; Yim et al., 2012). Value co-creation happens via the collaboration between a company and a customer (Akaka & Chandler, 2011). It is vital for value co-creation to only occur when customers find some form of interest in these interactions.

Based on the above, Ramaswamy and Gouillart (2010) put forward a discussion that the co-creation of value typically requires an engagement platform (that enables actors to share their resources and adapt their processes to each other). In some instances, the argument is made
that the co-creation platforms are part of a lead firm’s overall offering itself. Based on these arguments, the study hypothesizes that:

**H2: Patient cognitive engagement, thus (a) customer’ process enjoyment and (b) customer self-efficacy has a positive influence of value co-creation behaviour.**

### 3.21 Conceptualisation of Customer Loyalty

In the early stages, loyalty was investigated in terms of brand loyalty with respect to tangible goods (Tucker, 1964; Cunningham, 1956). Cunningham (1956) defined brand loyalty as the number of purchases a household allocated to a brand over a period of time. The conceptualisation and measurement of loyalty concept has become more complex (Jones & Taylor, 2007). Many market researchers view loyalty as a multi-dimensional concept, however there is debate as to the exact number of dimension(s) to measure loyalty with. Chitty, Ward, and Chua (2007) have severally argued that loyalty can be conceptualised by two dimensions that is behavioural loyalty, indicated by repeat purchase behaviour and attitudinal behaviour referring to the inherent affective and cognitive facets of loyalty.

The behavioural approach involves an individual behaviour exhibiting strong intentions to repurchase from one service provider over alternative service providers. An extant literature review reveals that behavioural loyalty is measured by repurchasing intentions, switching intentions and exclusively purchasing intentions (Jones & Taylor, 2007). However, several authors have criticised behavioural loyalty definition for being vague and limited (Dick & Basu, 1994; Riechheld, 1994). Furthermore, TePeci (1999) argues that repeat purchase is not always the result of deep psychological commitment. He further asserted that, a customer may patronise from a particular service provider due to its convenient location, but will switch when another firm who provides similar service but offers better value opens nearby.
Attitudinal loyalty approach considers both the emotional and psychological aspects inherent in loyalty. The attitudinal perspective reflects a sense of engagement and allegiance. According to Evanschitzky et al., (2007), affective commitment has a significant role to play in attitudinal loyalty since commitment reflects the customer’s self-evaluation of the consumption context and the active decision to engage in a long-term relationship. Similarly, Morgan and Hunt (1994) posited that affective commitment involves a customer’s desire to maintain a relationship that he/she perceives as value. Lee and Cunningham (2001) further, suggested an alternative measure for attitudinal loyalty, known as cognitive loyalty. They argued that, cognitive approach is based on conscious evaluation of attributes or the conscious evaluation of the rewards and benefits associated with re-patronage of a service/product.

In summary, the psychology literature that is focused on pro-relational maintenance suggests that loyalty is two-dimensional which includes behavioural and combined cognitive/attitudinal concept (Rusbult et al., 1999). However, an extant review of marketing literature reveals tri-dimensional construct of customer loyalty. These are behavioural, attitudinal, and cognitive (Jones & Taylor, 2007). A recent study investigating value co-creation and customer loyalty by Cossio-Silva et al. (2016) found the two-dimensional representation consistent in healthcare delivery services. However, they posit that cognitive approach to loyalty is embedded in attitudinal loyalty. In this context, this study adopts the two-dimensional (behavioural and attitudinal) concept of customer loyalty.
3.22 Value Co-Creation Behaviour and Customer Loyalty

The main outcome construct of this study is customer loyalty. This is because aside repeat purchase, loyal customers share their experiences with friends and family through positive word of mouth. This to a larger extent, increases profit and eventually grow business (Reichheld, 2003; Moerkerken, Petrick, Dullweber & Hamilton, 2012).

Oliver defines loyalty as a deeply held commitment to re-buy or re-patronise a preferred product or service in the future despite situational influences and marketing efforts having the potential to cause switching behaviour (cited by Kotler, 2000). Value co-creation is fundamentally a relational perspective that emphasises contextual frames within which the enmeshed consumers participate in core behaviours to use resources for mutual benefits (Vargo & Lusch, 2011; Yi & Gong, 2013). In agreement with the definition of Vargo and Lusch (2011) and Yi and Gong (2013), this study defines value co-creation as active customer engagement in the production and delivery of service process. This study further clarify that, the concept of value co-creation involves significant and co-operative contributions to the service process. In the healthcare services delivery, such contributions might involve patient preparation prior to meetings with a doctor, delivery of input to decision-making processes and apt and accurate responses to healthcare provider requests for information. Co-creation likely yields several benefits for customers, including lower prices, more opportunities to make choice and greater discretion about the configuration of the final product. In addition, clients are likely experience shorter waiting times and enjoy a greater likelihood of customisation. The relationship between co-creation and perceived value, however, may not be unequivocally positive (Lengnick-Hall, 1996). Firms have less control over the training of customers to participate effectively in the production process than they do with service employees. In turn, customer involvement may raise the overall level of
uncertainty in the transaction and thereby affect outputs. Dellande et al. (2004) recently demonstrated that customer compliance—one facet of co-creation—relates significantly to customer satisfaction, and efforts by organisations to involve clients in co-creating of value leads to increased mutual understanding (Mohr & Bitner, 1991). Such mutual understanding results in positive emotional responses to the service (Price et al. 1995). Moreover, according to the view that satisfaction results from both cognitive and affective assessments of service experiences (Westbrook, 1991), repeated positive emotional experiences ultimately contribute to the sort of customer satisfaction that underpins customers’ decisions to be loyal to an organisation (Lam, Shankar, Erramilli & Murthy, 2004). Therefore, the researcher incorporated measures of attitudinal and behavioral loyalty (Dick & Basu, 1994; Wallace et al., 2004). Attitudinal loyalty refers to a measure of clients’ intentions to stay with an organisation and level of commitment to that organisation, whereas behavioural loyalty, in the healthcare services context, can be delineated as a patient continuing to believe that a particular healthcare service offer is the best option and it best fulfills their value proposition whatever that may be. Following the discussions above this study hypothesise that:

**H3**: Value co-creation behaviour has a positive influence on (a) customer attitudinal loyalty and (b) customer behavioral loyalty

**H4**: Value co-creation behaviour mediates the relationship between patient cognitive engagement and customer loyalty

![Figure 3.1: Conceptual Framework](http://ugspace.ug.edu.gh)
Researcher’s Own Construct (2018)
CHAPTER FOUR
RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter focuses on the methodology, which underpins the research and design used in guiding the empirical part of the work. It further provides the methodological outline adopted to tackle the research hypothesis in the study. The root of every study hinges primarily on the various methods employed in the collection and analysis of statistical data. It is necessary to take into consideration that, the method and technique used eventually determine the outcome. Thus, the method must be portrayed rigorous to enable one draw reliable and objective conclusions. The chapter begins by discussing research paradigms or philosophical assumptions. It also elaborates on the processes of data collection, data management and analysis as well as ethics applicable to research of this nature.

4.2 Research Paradigms

Sarantakos (2012) delineates methodology to involve the theoretical principles as well as framework that provide guidelines about how research is done in the context of a particular paradigm. Mostly, all academic research has been noted to be established on a paradigm or philosophical perspective (Holden & Lynch, 2004; Proctor, 2005; Blaikie, 2019). From an earlier viewpoint, a paradigm, has been delineated as “a set of beliefs, values and techniques which is shared by members of a scientific community, and which acts as a guide or map, dictating the kinds of problems scientists should address and the types of explanations that are acceptable to them” (Kuhn, 2012, p. 1). Basically, several paradigms exist and have clear distinctions among them, however, in the light of the several prevailing philosophical
outlooks, the most commonly mentioned in research are positivism, interpretivist, realism, relativism and critical realism (Chan, 2015; Beverland & Lindgreen, 2010; Kim, 2003; Orlikowski & Baroudi, 1991). According to Creswell (2014), each of the paradigms has its own arrangement of epistemological, ontological and methodological philosophies that serve as a structure to clarify and separate them from each other. The summary of differences between these paradigms provided by Boateng (2016) (illustrated in the table 4.1.1 below) to help understand their contrasts.
# Table 4.1: Research Paradigms

<table>
<thead>
<tr>
<th>ONTOLOGY (What is the nature of reality?)</th>
<th>EPISTEMOLOGY (What is the nature of knowledge generated?)</th>
<th>METHODOLOGY (How is knowledge created?)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POSITIVISM</strong></td>
<td>Value-Free. Knowledge created is objective, free of time impacts, and is context-free.</td>
<td>Researchers formulate research questions and hypotheses and then test them empirically under carefully controlled circumstances. Deductive reasoning</td>
</tr>
<tr>
<td>Multiple realities exist, subject to human experiences and interpretation. Reality is socially constructed.</td>
<td>Knowledge generated is subjective, time-bound and context dependent.</td>
<td>Knowledge is made through researchers recognising the different interpretations and constructions of reality that exist, and endeavouring to establish patterns. Inductive logic and emergent design.</td>
</tr>
<tr>
<td><strong>REALISM</strong></td>
<td>Value-Cognizant/Value-aware. Findings are probably true........researcher needs to triangulate any perceptions collected.</td>
<td>Social phenomenon is understood through hypotheses which are tested to establish patterns of associations and hence, the most possible explanation. Hypothetico-Deduction</td>
</tr>
<tr>
<td>Reality is “real” yet just incompletely and probabilistically understandable, so triangulation from numerous sources is required to attempt to know it. Reality as truth is not &quot;absolute&quot;, it is relative, it is dependent upon 'something' and it does exist.</td>
<td>The interpretation of the world requires some form of human processing</td>
<td>The construction of knowledge is influenced by the worldview and research paradigm of a researcher. Researchers should focus more on creating and developing new 'useful' theories - useful solutions to specific problems.</td>
</tr>
<tr>
<td><strong>CRITICAL REALISM</strong></td>
<td>Transitive world is value-laden and changing continually. Intransitive world has underlying structures and mechanisms that are 'relatively enduring' - that is what we want to study.</td>
<td>Researchers seek to deconstruct and understand that structures and mechanisms underlying the subjective realities that exist. Triangulation from many sources is required to try to know it. Retroductive reasoning.</td>
</tr>
</tbody>
</table>

Source: Boateng (2014)
4.2.1 Positivism as a Research Paradigm

For this study, the researcher adopted a positivist approach. Till now, several social science studies draw their methods of insight either in agreement or disagreement with a phenomenon to positivism (Johnson & Duberley, 2003). As a result, most philosophers believe that the positivist approach is the foundation and justification for management research these days (Johnson et al., 2003). There are principles and assumptions of science within which the positivist framework must be understood. As Cohen, Manion, and Morrison (2011) noted, these are determinism, empiricism, parsimony, and generality.

According to Dash (2005), ‘determinism’ suggests that events are caused by various circumstances and therefore, understanding such links are principal for desire and control. ‘Empiricism’ infers the gathering of verifiable empirical evidence in backing of hypotheses or speculations. ‘Parsimony’ implies the explanation of the phenomenon in the most moderate way comprehensible and ‘generality’ is the method of summing up the view of the particular phenomenon to the world at large. The premise for a positivist research design in conducting this kind of study is in two folds, (1) researchers should base assumptions on fact and seek causality from variables to generalise fundamental laws; and (2) positivist research should be specific and hypothetically tested using quantitative methods on large samples in order to increase objectivity (Easterby-Smith, Thorpe & Jackson, 2012).

4.3 Research Purpose

There are three forms of research purpose: explanatory, exploratory, and descriptive (Saunders, 2011); these differ in several facets including the way research questions or hypotheses are formulated and the way data is collected (Green, 2008).
4.3.1 Exploratory research

Exploratory research is depicted by seeking new outlooks, observation and the questioning of events or by fitting research phenomenon into proper perspective. According to Blaikie (2010) exploratory research is vital when very little is known about a phenomenon being investigated, or about the context within which the research is to be conducted. Exploratory research majorly emphasises the discovery of new notions and insights, which could possibly be used as a basis for further research (Saunders et al., 2009). The assumptions of the research may be fairly complex to the researcher because the phenomenon of interest to a large extent could be unfamiliar. Thus, there is a need for more information to enable the researcher understand better the concept and scope of the study.

4.3.2 Explanatory research

Explanatory research focuses on studying a situation or a problem in order to explain the relationships among variables (Saunders, 2011). According to Bulmer (1986), explanatory research often seeks to account for patterns in observed social phenomena, attitudes, behaviours, social relationships, social processes or social structures. Explanatory research focuses on determining cause-and-effect relationships and aims to develop comprehensive theory that can be used to definitively explain the phenomena, which leads to the generalisation from the research (Green, 2008; Marshall and Rossman, 2006).

4.3.3 Descriptive research

According to Babbie (2007), descriptive research is adopted to deliver an exact depiction of a facet of observed persons, events, situations and environments. Descriptive research typically aspires to present an accurate account of some phenomenon, the characteristics in some demographic category, group or population, the patterns of relationships in some social contexts, at a particular time or the changes in those characteristics over time (Bulmer, 1986).
This research is typically descriptive due to the use of quantifiable information that uses statistical inference after data had been analysed. This method is by far the most commonly used method of research to determine the effect of a variable on another (Bulmer, 1986), hence the researcher's decision to select this method.

**4.4 Research Strategy**

Inductive and deductive approaches are the most essential approaches in research (Amaratunga et al, 2002; McGiven, 2006). The deductive approach begins with the analysis of a theory and the subsequent testing of that theory by collecting empirical data; the order is to particularise a general piece of information. By using a sufficient size of sample in the empirical study, it would be possible to generalise the answers to the specific study (Hakim, 2000). Using the inductive approach compels an impressive comprehension of the research context. The researcher analyses a specific statement first, and then moves to a generalisation; the researcher finds a theory, and then finds a pattern to prove it. This is the opposite of the deductive approach, in which researchers find patterns first, and then create a new theory (Hakim 2000). Thus, primarily, induction has its starting point in the empirical data whereas deduction begins in theory.

**4.5 Research Approach**

An extant literature reviewed has proven that no single approach of research is better than the other (Benbasat, Goldstein & Mead, 1987). Academics of research methodology (Denzin & Lincoln, 2000) discuss two general research approaches: quantitative and qualitative research (Engstrom & Salehi-Sangari, 2007), granting that some researchers have adopted a
combination of both approaches, the best methodology for any study is dependent on the research problem that is under consideration and the stated objectives for the study. Hence, authors like Benbasat et al. (1987) and Pervan (1994) posit that the best methodology suitable for any study should be dependent on the research problem under consideration, the richness and complexity of the real world and the stated objective of the researcher. For example, Cavaye (1996) mentions that the choice or the kind of methodology a researcher adopts is usually based on the goal of the researcher and not the paradigm. Despite the existence of many research method classifications, the most dominant group of classification are the quantitative and the qualitative (Johnson & Onwuegbuzie, 2004; Myers, 1997). Below is a detailed explanations of the aforementioned most dominant research methods.

Qualitative (inductive) research focuses on proximity to the subject(s) of study. It also adopts a participant role, thus, describing a phenomenon in a social reality from the perspective of the subject rather than the observer (Creswell, 2013). Creswell (2013) defined qualitative research as an approach for exploring and understanding the meaning individuals or groups ascribe to a social problem. Myer (1997) delineates qualitative research method as an approach or method designed with the goal of empowering writers to gain understanding of the socio-cultural surrounding of people. Thus, this method was developed by the social sciences to enable the study of social and cultural phenomenon. According to Myer (1997), observation (fieldwork), interviews, documentation and the researcher’s impressions and reactions are the main data sources used in qualitative research. The qualitative approach process involves data collected usually in the researcher's own setting, data analysis and the researcher making interpretations from the data.

The quantitative research (deductive) on the other hand is recognised as an exciting of empiricism in which theories are not only justified by the extent to which they can be
verified, but also by an application of facts acquired (Amaratunga et al., 2002). According to Hair et al (2008), a quantitative research method is an approach for testing objective theories by examining the relationship among variables. It involves numbered data that can be analysed using statistical methods for measurement. Authors like Straub et al. (2004) have stated that essential tools used for quantitative researchers involve statistical tools and software packages due to the presence of numbers in such research. This explanation is supported by Saunders et al (2009), who posit that to carry out a successful quantitative study, the most important characteristic the researcher must exhibit is an ability to develop hypotheses and test them with proper statistical techniques and interpret the statistical information into descriptive information. Despite the prospects of the quantitative method adopted, Yin (2013) cautions of the shortcomings associated with this method. This is because, this research approach is characterised by generalisation and the analysis does not apply to specific or peculiar situations. It is also criticised as being too vague in nature.

In this context, this research employs a quantitative approach (deductive). Quantitative data involved the use of questionnaires with closed ended questions which were statistically analyzed to meet the objectives of the study. The quantitative approach was adopted because it allowed freedom in the collection of data while avoiding researcher bias. Value co-creation and customer loyalty is embedded with descriptive elements due to the fact that, it describes data about the phenomenon and population being studied.

Another reason for the adoption of the quantitative approach is to ensure relevance and reliability of data collected by using quantitative metrics in its analysis.
4.6 Sample Design and Sample Size Selection Technique

The sample design is a framework used to select the right sample from a given population. It includes the method the researcher uses to choose and which units to include in the research since not all units can be considered (Miles & Huberman, 1994). For many research questions and purposes, it becomes difficult to either collect or analyse all the data available in a population due to limited resources and often, access. Saunders (2011) notes that a census investigation does not necessarily provide more useful results than a well-planned sample survey. If the study sample is representative, generalisations about the underlying population can still be drawn (Zikmund, 2002).

4.6.1 Study Population and Sample Size

Babbie (2007:198) delineates study population as that accumulation of elements from which the sample is selected. The target population for this study were customers of healthcare service providers in Ghana. This is in agreement with Taherdoost (2016), who posit that a precondition to sample selection is to define the target population as narrowly as possible and that sample selection depends only on the population size, its homogeneity, the sample media, and the extent of precision required. A sum of five hundred (500) structured questionnaires were initially administered to respondents who were customers of healthcare service providers in Accra, Ghana. This number was in sync with what is suggested by Hair, Anderson, Babin and Black (2010); that, a sample size of 100 respondents and above is adequate for a quantitative study. However, only four hundred and seventy (470) questionnaires representing 94.0% rate of the initially administered returned. During the data processing stage, a total of seventy-seven representing 16.4% were found unusable for reasons such as incomplete records, poor handwriting, and soiled papers that prevented the researcher from being able to read the respondents’ comments. This resulted in only three
hundred and ninety-three (393) questionnaires being usable for the data analysis. In consequence, the researcher was able to gather a sample size of three hundred and ninety-three (393) from the research population for the current study.

A sample size is the total number of elements to be measured by the researcher. It is complex to determine the sample size and it involves many deliberations both qualitatively and quantitatively (Malhotra, 2012). The sample size of 393 respondents was appropriate because it conforms to the recommendation of Hair et al (2010) that the researcher should consider a large sample size for the following reasons. First, it increases the possibility that the mean, percentages and other statistics reflect the actual state of the population. Thus, nearly factual results are derived from the study. Again, large sample sizes give the effects of randomness the chance to work (Malhotra, 2007). In addition, the likelihood of errors reduce as the sample size increases. This research considers the relevance of a large sample size to precision in a survey study. Depending on the population size, one may be able to analyse and collect data on each case or representative. Most research such as the current study need to employ sampling procedures because the group of interest is obviously large, as it entails too many cases which may not facilitate individual data collection.

4.6.2 Sampling Techniques

There are two categories of sampling techniques: probability and non-probability sampling. In probability sampling, each element within the sample frame has an equal and fair chance of being included within the sample size, which enables statistical inferences (Malhotra, 2007). This allows researchers to answer research questions and to achieve purposes that require them to estimate statistically the characteristics of the population inferred from the sample (Sanders et al., 1988). In contrast, it is impossible to make valid inferences about a population using a non-probability sampling. All non-probability samples rely on personal
judgments somewhere in the process, which implies that samples derived from non-probability sampling are not necessarily representative of the entire population. In some research studies, it is impossible to give every member of the population a fair and equal chance of inclusion in the sample size. These techniques include convenience, purposive, snowball and quota sampling. This study however adopts the non-probability sampling technique (convenience), which is advantageous because it gives the researcher easy access to respondents (Malhotra, 2007).

**4.7. Data Sources and Collection Method**

There are two basic types of data collection methods. These are primary and secondary data collection methods. The critical distinction between the types of data is that the researcher collects primary data specifically for the purpose for which the data is required. Secondary data is data that has been collected for another primary purpose (i.e. all secondary data have been primary data themselves for other earlier studies). It must be noted that both primary and secondary data sources can yield either qualitative or quantitative data (Babbie et al., 2007). While primary data may be collected using observation, interviews or questionnaires, secondary data may include both raw and published summaries such as data collected by other researchers, organisations, governments and other statistical institutions. Routine data collected by institutions involved in an activity could be extraordinarily good sources of secondary data which could be duplicated by primary data collection without unreasonable expense. The use of secondary data could result in cost and time savings (Saunders et al, 2009).

In this study, it was necessary to get relevant information from respondents on their opinions concerning the moderating effect on the relationship between value co-creation and customer
loyalty in the healthcare services in Ghana. Secondary data thus was limited, hence the decision of the researcher to resort to primary data specifically generated from the administered questionnaires to customers of healthcare services in Accra, Ghana.

4.7.1 Data Collection

Grounded on the purpose of this study, a non-contrived research setting was adopted. Data was collected from customers of healthcare services in Accra, Ghana. This therefore made it possible to gather information from the natural setting with minimal influence from the researcher. It was imperative to obtain information directly from the respondents on their views concerning the moderating effect of cognitive engagement on the relationship between value co-creation and customer loyalty in healthcare services. Questionnaires were therefore deemed appropriate. The researcher was however conscious of the demerits of written questionnaires. Written questionnaires are subject to misunderstandings and different interpretations. To curb this issue, the researcher carried out an incipient pre-testing of questionnaires to assess respondents’ knowledge of the research area. To further lessen the errors linked to written questionnaires, respondents were given the option of requesting further explanation regarding the questionnaire. This was beneficial in achieving content credibility, a self-evident measure that relies on the assurance that the researcher demonstrates an adequate coverage of the known field after critically reviewing the literature and constructing questions or instruments to cover the known content represented in the literature (Malhotra & Birks, 2007). The prime step of specifying which information needed is rooted in the thorough review of components of research questions, hypotheses and other characteristics that influence the research design (Malhotra et al., 2007). The researcher employed a structured questionnaire for the study and took the form of self-administered personal interviews because as stated by Churchill and Lacobucci (2006), this mode allows
respondents seek clarification on points of confusion in the presence of the interviewers. For healthcare customers, this method allowed the respondents to seek clarification from the researcher. Additionally, it is worth mentioning that the questionnaires were undisguised and structured; the purpose of the project was disclosed to respondents. In addition, the questions were presented in the same wording across board and ordered with fixed alternatives respectively.

4.8 Analysis Technique

This segment describes the techniques that were used in the analysis of data for this study. Regarding data analysis, there are two major techniques – quantitative data analysis and qualitative data analysis. Quantitative analysis is the numerical representation and manipulation of observations/data for the purpose of describing and explaining the phenomena which those observations/data reflect. Qualitative analysis on the other hand, refers to the non-numerical examination and interpretation of observations for the purpose of discovering underlying meanings and patterns of relationships (Babbie et al., 2007). In this study, quantitative techniques was adopted. An extant literature review has shown that a substantial number of studies on value co-creation and loyalty have mostly examined the phenomenon from B2B perspective or in most instances through case studies. Hence, studying value co-creation and loyalty from a quantitative approach particularly from customer perspective is of significant contribution to literature.

4.8.1 Factor analysis

Factor analytic techniques are mostly used by researchers involved in the development and evaluation of tests and scales. Literature presents two main approaches to factor analysis which are exploratory and confirmatory. Exploratory factor analysis (EFA) is often used in
the early stages of research to gather information about (explore) the interrelationships among a set of variables. Confirmatory factor analysis (CFA) on the other hand, is a more complex and sophisticated set of techniques used later in the research process to test (confirm) specific hypotheses or theories concerning the structure underlying a set of variables (Tabachnick & Fidell, 2007; Pallant, 2011). Data for the current study is assessed using EFA at the initial stage. According to Hair et al. (2010), EFA can be used for examining the underlying patterns or relationships among a large number of variables and to determine whether the information can be condensed or summarised in a smaller set of factors or components.

4.9. Data Processing and Mode of Analysis

Data was organised and processed using Smart PLS version 3.2.3 and IBM Statistical Package for Social Sciences (SPSS) 21. The IBM SPSS was used for descriptive statistics including frequency tables, measures of central tendency and regression. Smart PLS 3 was used for partial least squares (PLS) structural equation modelling (SEM) to examine the structural component of the measurement and the structural model (Hair, Ringle & Sarstedt, 2013). From a more applied angle, PLS could be considered a family of regression-type data analysis methods (Sanchez, 2015). According to Jöreskog and Wold (1982), PLS is well suited to handle highly complex predictive models and is helpful, compared to covariance based structural equation modelling (CB-SEM), when analysing predictive research models that are in the stages of theory development (Gimbert, Bisbe, & Mendoza, 2010). Another advantage of the PLS SEM approach is that it has no assumptions about data distribution (Hair, Ringle & Sarstedt, 2013; Vinzi, Trinchera, & Amato, 2010). PLS is also a good alternative when the sample size is small (see in Hwang, Malhotra, Kim, Tomiuk, & Hong, 2010; Wong, 2013; Hair, Sarstedt, et al., 2013), thus, PLS-SEM can be utilised with much
smaller sample sizes, even when the models are highly complex. However, Hair et al. (2013) indicated that sample size can be determined by the following factors in a structural equation model design:

i. The significance level

ii. The statistical power

iii. The minimum coefficient of determination (R2 values) used in the model

iv. The maximum number of arrows pointing at a latent variable

A “typical marketing research study would have a significance level of 5%, a statistical power of 80%, and R2 values of at least 0.25” (Wong, 2013, p. 5). Using these suggestions, Marcoulides and Saunders (2006) establish the minimum sample size for a research study, depending on the maximum number of arrows pointing at a latent variable. However, Wong (2013) cautioned that, despite the ability of PLS to handle sample small size, “it does not mean that your goal should be to merely fulfil the minimum sample size requirement” (p. 5). Hence, a sample size of a hundred (100) to two hundred (200) participants is a good starting point in carrying out PLS (Hoyle, 1995).

4.10. Ethical considerations

Respondents usually show reluctance in sharing information, particularly health-related ones. Malhotra and Birks (2007), therefore, mention the adverse importance of the critical consideration of ethics when conducting any kind of social research. In accordance with this, the researcher took steps to make sure that no participant in this research work was harmed in any way. Potential ethical issues were therefore considered in the collection of data, analysis, and presentation of findings. This study process was guided by three ethical principles adopted from Denscombe (2014). These principles suggested that participants’ interest were
protected, the researcher avoided deception or misrepresentation, and participants provided their informed consent.
CHAPTER FIVE
DATA ANALYSES AND DISCUSSION OF FINDINGS

5.1 Data Analysis and Presentation

This chapter explains the procedure followed in the analysis of the data, present the main results that emerged from the data analysis and provides an interpretation of the findings. This thesis chapter adopts a deductive approach to research and uses quantitative data in an attempt to provide an objective view of the relationship between value co-creation, customer loyalty and cognitive engagement. Specifically, this chapter begins by briefly describing the respondents, followed by descriptive statistics of the measurement items. The next section assesses the measurement scale items adopted from past studies as indicated in chapter four by examining reliability and validity. After which the relationship between the constructs (value co-creation, customer loyalty and cognitive engagement) are established using PLS-SEM approach. The discussion of key findings follows the results reported and lastly a chapter summary in section.

5.2 Demographic Statistics

An overview of the respondents’ demographic (i.e., age, gender, level of education) profiles, used in providing the findings of the thesis, is shown in Table 5.1. As indicated in the table 5.1 of the 550 individuals contacted 393 respondents willingly participated in this study. Resulting in a response rate of 71.45%. Majority of the respondent who participated in the study were male (51.1%). Most of the respondent were within the ages of 18-25 (39.7%).
Table 5.1: Demographic Characteristics of Respondents

<table>
<thead>
<tr>
<th>Details</th>
<th>Frequency (n = 393)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>201</td>
<td>51.1</td>
</tr>
<tr>
<td>Female</td>
<td>192</td>
<td>48.8</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>156</td>
<td>39.7</td>
</tr>
<tr>
<td>26-30</td>
<td>124</td>
<td>31.6</td>
</tr>
<tr>
<td>31-40</td>
<td>67</td>
<td>17.0</td>
</tr>
<tr>
<td>41-50</td>
<td>20</td>
<td>5.1</td>
</tr>
<tr>
<td>51-60</td>
<td>10</td>
<td>2.5</td>
</tr>
<tr>
<td>61-70</td>
<td>14</td>
<td>3.6</td>
</tr>
<tr>
<td>71</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>66</td>
<td>16.8</td>
</tr>
<tr>
<td>Degree</td>
<td>199</td>
<td>50.6</td>
</tr>
<tr>
<td>MBA/MPhil.</td>
<td>98</td>
<td>24.9</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>13</td>
<td>3.3</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>Visit - How often do you visit the clinic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than once a year</td>
<td>170</td>
<td>43.3</td>
</tr>
<tr>
<td>1-2 times a year</td>
<td>111</td>
<td>28.2</td>
</tr>
<tr>
<td>3-6 times a year</td>
<td>83</td>
<td>21.1</td>
</tr>
<tr>
<td>7-12 times a year</td>
<td>23</td>
<td>5.9</td>
</tr>
<tr>
<td>More than 12 times a year</td>
<td>6</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Clinic - Type of clinic you visit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>203</td>
<td>51.7</td>
</tr>
<tr>
<td>Public</td>
<td>119</td>
<td>30.3</td>
</tr>
<tr>
<td>Both public and private</td>
<td>71</td>
<td>18.1</td>
</tr>
<tr>
<td><strong>Source - Source of knowledge about healthcare issues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio, TV, Newspaper</td>
<td>160</td>
<td>40.7</td>
</tr>
<tr>
<td>Social media</td>
<td>94</td>
<td>23.9</td>
</tr>
<tr>
<td>Family/Friends</td>
<td>89</td>
<td>22.6</td>
</tr>
<tr>
<td>Frequent interaction with service provider</td>
<td>50</td>
<td>12.7</td>
</tr>
</tbody>
</table>
5.3 Descriptive Statistics of Measurement Items

The descriptive statistics gave an impression of the respondents’ perception of value co-creation, cognitive engagement and customer loyalty with a single value that represents the centre of data on a scale of 1 to 5. Hence, table 5.2 displays the mean scores with a standard deviation for the variables used for the study. The results indicated that all the measurement items had means greater than 3. This means that on the average majority of the respondents agreed with the measures stated. Normality of data distribution was examined base on skewness, even though PLS-SEM is not stringent when working with non-normal data (Beebe, Pell, & Seasholtz, 1998; Cassel, Hackl, & Westlund, 1999). Nonetheless, the findings from table 5.2 showed that the skewness was within the acceptable limits of ±2 as recommended by scholars (George & Mallery, 2003; Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006), therefore normality was not an issue with this study.

5.4 Relationships between Value Co-Creation, Customer Loyalty and Cognitive Engagement

As stated in the earlier chapter, this thesis employed PLS-SEM approach, thus, a second-generation multivariate data analysis technique frequently used in marketing research to establish the relationship between value co-creation, customer loyalty and cognitive engagement, since it can test theoretically supported linear and additive causal models (Haenlein & Kaplan, 2004) – such as moderation as seen it this study. According to Chin (2010) SEM results reporting involves two steps: (1) is to assess measures item and (2) structural model to establish the relationship. According to Hair et al. (2013), the achievement of this centers around the three most salient steps: (1) model specification, (2) outer model evaluation, and (3) inner model evaluation.
5.4.1 Assessment of measurement models / outer model evaluation

Previous literature (see Bagozzi & Yi, 2012; Jöreskog & Sörbom, 1996) have indicated the importance of the assessment of measurement items to establish validity and reliability of the measurement because the structural model will be meaningless if the measurement model does not hold. However, before evaluating our outer model measures, there is a need to specify the model that is to be tested. For this thesis, the measurement models /outer models of the exogenous and endogenous latent variables to be tested have been presented in table 5.2, while the structural model/inner model represent value co-creation, customer loyalty and cognitive engagement constructs.

Assessment of measurement models /outer model evaluation was based on validity via convergent validity and discriminant validity and reliability as suggested by Hair et al. (2013). Construct validity is the degree to which a test measures what it claims, or purports, to be measuring (Cronbach & Meehl, 1955; Brown, 1996). Convergent validity and discriminant validity are subgroups of construct validity. Convergent validity is a parameter often used in sociology, psychology, and other behavioural sciences, refers to the degree to which two measures of constructs that theoretically should be related, are in fact related (Trochim, 2006). To establish convergent validity, outer loadings and average variance extracted (AVE) were used in showing that measures related are in reality related. Therefore, measures which were not related were dropped. A sum total of two (2) items (AL1 and PE1) that had loadings less than 0.5 were deleted (see Table 5.3). Also, the AVE for all items were greater than 0.50 as recommended by Hair et al. (2013) with the exception of attitudinal loyalty, this might be because it shared some variance with behavioural loyalty. Malhotra and Dash (2011) have also argued that AVE is often too strict, and reliability can be established through composite reliability (CR) alone. Therefore, reliability of the items were assessed
using Cronbach’s alphas (α) and CR to see if the construct attitudinal loyalty could be retained. Table 5.3 shows that the reliability measures in this study were all above the acceptable levels (Cronbach’s alphas > .70 and composite reliability > .70). Thus, reliability (composite reliability and the Cronbach’s alphas) for each construct were larger than the minimum required level of 0.70 as recommended by Hair et al. (2013) and Nunnally (1978). Hence, all the constructs were retained.

Table 5.2: Outer Loading Measurements Model

<table>
<thead>
<tr>
<th>Details</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitudinal Loyalty (α= .730, CR = .742, AVE = .439)</strong></td>
<td></td>
</tr>
<tr>
<td>AL1- I continue to see my current health service provider for my medical needs in the future</td>
<td>Deleted</td>
</tr>
<tr>
<td>AL2- The chances of me staying with my current health service provider are very good</td>
<td>0.774</td>
</tr>
<tr>
<td>AL3- The likelihood of me trying other services from my health service provider is very good</td>
<td>0.576</td>
</tr>
<tr>
<td>AL4- I try to use my current health service provider for most of my medical needs</td>
<td>0.741</td>
</tr>
<tr>
<td><strong>Behavioural Loyalty (α= .862, CR = .862, AVE=.610)</strong></td>
<td></td>
</tr>
<tr>
<td>BL1- I will transact with this health service provider again for future need</td>
<td>0.828</td>
</tr>
<tr>
<td>BL2- I will try new services that are provided by this health service provider</td>
<td>0.788</td>
</tr>
<tr>
<td>BL3- I will recommend other people to patronize this health service provider</td>
<td>0.762</td>
</tr>
<tr>
<td>BL4- I will say positive things to other people about the services provided by this health service provider</td>
<td>0.743</td>
</tr>
</tbody>
</table>
Information seeking behaviour (α= .842, CR = .834, AVE = .561)

IS1- I have asked others for information on what this service offers 0.653
IS2- I have searched for information on where this service is provider is located 0.749
IS3- I have paid attention to how others behave to use this service well 0.677
IS4- I asked the employee relevant questions during the service encounter 0.894

Information sharing behaviour (α= .821, CR = .825, AVE = .542)

IH1- I clearly explained what I wanted the employee to do 0.647
IH2- I gave the employee proper information 0.792
IH3- I answered all the employee's service related questions 0.768
IH4- I provided necessary information so that the employee could perform his or her duties 0.729

Responsible Behaviour (α= .869, CR = .869, AVE = .625)

RB1- I answered all the employee's service related questions required 0.800
RB2- I performed all the tasks that are required 0.730
RB3- I adequately completed all the behaviors expected 0.846
RB4- I followed the employee's directives or orders 0.782

Personal Interaction (α= .921, CR = .922, AVE = .665)

PI1- I fulfilled responsibilities to the business 0.756
PI2- I was friendly to the employee 0.837
PI3- I was kind to the employee 0.838
PI4 I was polite to the employee 0.842
PI5- I was courteous to the employee 0.827
PI6- I listen attentively to the employee during the service encounter 0.787

Feedback (α= .868, CR = .869, AVE = .688)
FB1- If I have a useful idea on how to improve the service, I let the employee know 0.797
FB2- When I receive good service from the employee, I comment about it 0.829
FB3- When I experience a problem, I let the employee know about it 0.861

Advocacy (α= .871, CR = .870, AVE = .691)
AD1- I said positive things about my health provider and the employee 0.841
AD2- I recommended my health provider and the employee to others 0.821
AD3- I encouraged friends and relatives to use my health provider 0.831

Helping (α= .903, CR = .904, AVE = .703)
HP1- I assist other customers if they need my help 0.839
HP2- I help other customers if they seem to have problems 0.852
HP3- I teach other customers to use the service correctly 0.871
HP4- I give advice to other customers 0.790

Tolerance (α= .841, CR = .843, AVE = .643)
TL1- If service is not delivered as expected, I would be willing to put up with it 0.894
TL2- If the employee makes a mistake during the service delivery, I would be willing to be patient 0.810
TL3- If had to wait longer than I normally expected to receive the service, I would be willing to adapt 0.688

Customer Self Efficacy ($\alpha = .870$, $CR = .871$, $AVE = .577$)

CE1- If I try enough, I am always able to resolve difficult problems 0.793
CE2- It is easy for me to put my intentions into practice and attain my objectives 0.732
CE3-I am confident that I can deal efficiently with unexpected events 0.876
CE4- When am confronted by a problem, I am generally able to find diverse and different solutions 0.727
CE5- I remain calm even when facing difficulties because I can trust in my capacity to deal with situations 0.653

Process Enjoyment ($\alpha = .880$, $CR = .868$, $AVE = .579$)

PE1- During the encounter process with my health provider I was deeply engrossed Deleted
PE2- During the encounter process with my health provider I concentrated fully 0.802
PE3- During the encounter process with my health provider I felt happy 0.544
PE4- During the encounter process with my health provider I felt content 0.557
PE5- The encounter process with my health provider was worthwhile 0.896
PE6- The activity was fulfilling 0.918

Discriminant validity tests whether concepts or measurements that are not supposed to be related are actually unrelated (Trochim, & Donnelly, 2006). This thesis examined discriminant validity using Fornell-Lacker criterion. Fornell and Larcker (1981) states that the square root of AVE should be greater than the correlation shared between the construct
and the other constructs. Table 5.4 shows that the correlations among the constructs are less than the square root of the AVE, an indication of discriminant validity with the exception of attitudinal loyalty and behavioural loyalty which have been establish to be related therefore is was not considered an issue.
<table>
<thead>
<tr>
<th>Details</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Advocacy</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Attitudinal loyalty</td>
<td>0.45</td>
<td>0.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Behavioural loyalty</td>
<td>0.54</td>
<td>0.71</td>
<td>0.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Customer self- efficacy</td>
<td>0.21</td>
<td>0.21</td>
<td>0.20</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Feedback</td>
<td>0.64</td>
<td>0.30</td>
<td>0.39</td>
<td>0.27</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Helping</td>
<td>0.52</td>
<td>0.33</td>
<td>0.33</td>
<td>0.35</td>
<td>0.53</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Information seeking</td>
<td>0.29</td>
<td>0.47</td>
<td>0.46</td>
<td>0.27</td>
<td>0.32</td>
<td>0.29</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Information sharing</td>
<td>0.46</td>
<td>0.56</td>
<td>0.60</td>
<td>0.31</td>
<td>0.45</td>
<td>0.36</td>
<td>0.57</td>
<td>0.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Personal interactions</td>
<td>0.48</td>
<td>0.44</td>
<td>0.51</td>
<td>0.39</td>
<td>0.50</td>
<td>0.45</td>
<td>0.41</td>
<td>0.67</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Process enjoyment</td>
<td>0.18</td>
<td>0.24</td>
<td>0.31</td>
<td>0.53</td>
<td>0.20</td>
<td>0.32</td>
<td>0.27</td>
<td>0.35</td>
<td>0.34</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Responsible behaviour</td>
<td>0.53</td>
<td>0.50</td>
<td>0.53</td>
<td>0.34</td>
<td>0.44</td>
<td>0.37</td>
<td>0.44</td>
<td>0.77</td>
<td>0.67</td>
<td>0.30</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>12 Tolerance</td>
<td>0.36</td>
<td>0.16</td>
<td>0.19</td>
<td>0.17</td>
<td>0.28</td>
<td>0.33</td>
<td>0.21</td>
<td>0.16</td>
<td>0.13</td>
<td>0.04</td>
<td>0.15</td>
<td>0.80</td>
</tr>
</tbody>
</table>
5.4.2 Testing of structural model (Inner model evaluation)

After the measures had been assessed and affirmed as dependable and substantial, the hypotheses development from the literature review section of this thesis were tested via an evaluation of the inner model. That is the model’s predictive capabilities and the relationships between the constructs were examined (Hair et al., 2013). Hence, a bootstrapping (5000 re-sample) was performed to assess the path coefficients’ significance and $R^2$, by applying the PLS–SEM algorithm (see in Rezaei & Ghodsi, 2014). The results of the bootstrapping re-sample provides two main criteria for assessing the structural model which include the use of the $R^2$ of endogenous latent values and the path coefficients (Hair et al., 2013). For this thesis, the $R^2$ value for value co-creation behaviour, attitudinal loyalty, behavioural loyalty were 0.19, 0.24 and 0.34 respectively. The $R^2$ values indicates the predictive capacity on customer co-creating behaviour in determining attitudinal loyalty, behavioural loyalty, and customer self-efficacy and process enjoyment (see Chin, 1998). Hypotheses testing based on significance was determined using signs and magnitude of the path coefficients. The p-value and t-value for significant (alpha) level of 0.05 is 1.96. The results are displayed in Table 5.5 below.

In order to access our structural model a step-by-step analysis was applied, as conceptualised the thesis initiate analysis shows that value co-creation behaviour is a combination of customer citizenship behaviour ($\beta=0.82$, $t=27.56$), and customer participation behaviour ($\beta=0.92$, $t=103.04$). Also, the findings of the study revealed that two dimensions that make up value co-creation behaviour are also made up of a combination of four dimensions each. These eight dimensions are seen as the first-order construct of value co-creation, thus for customer participation behaviour – information seeking ($\beta=0.61$, $t=11.61$), information sharing
(β=.83, t=36.16), responsible behaviour (β=.82, t=40.74) and personal interaction (β=.86, t=42.92) and for customer citizenship behaviour – feedback (β=.78, t=33.28), advocacy (β=.80, t=32.14), helping (β=.81, t=28.49), and tolerance (β=.52, t=9.54). As a result, the two dimensions that make up value co-creation behaviour are viewed as two-order factors making value co-creation behaviour a third-order factor. This conceptualisation of value co-creation behaviour as a third-order factor has been support by Yi and Gong (2013).

Figure 5.1: Third-order factor of Value Co-creation Behaviour
The next stage of this thesis was to evaluate the direct and mediation analysis. According to Baron and Kenny (1986) to test the mediating variable first of all, the independent variable must be significantly related to the dependent and mediating variable. Also, the mediating variable must be significantly related to the indirect variable. However, Hayes (2009) indicated that for indirect effect (mediation analysis), the relationship between the independent variables and dependent variable should not necessary be significant. This argument is in line with the hypotheses of this study as a result, the step-by-step approach recommended by Baron and Kenny (1986) approach was not applied. Therefore, Hayes (2009) method was applied using the SmartPLS bootstrapping nonparametric procedure was used in evaluate the direct and mediation analysis together.

**Figure 5.2: Structural model**
### Table 5.4: Structural Parameter Estimates

<table>
<thead>
<tr>
<th>Path Analysis</th>
<th>Beta</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct relationship</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Self Efficacy -&gt; Co-creation value behaviour</td>
<td>0.286</td>
<td>4.995</td>
<td>0.000</td>
</tr>
<tr>
<td>Process Enjoyment -&gt; Co-creation value behaviour</td>
<td>0.222</td>
<td>4.102</td>
<td>0.000</td>
</tr>
<tr>
<td>Co-creation value behaviour -&gt; Attitudinal loyalty</td>
<td>0.493</td>
<td>8.003</td>
<td>0.000</td>
</tr>
<tr>
<td>Co-creation value behaviour -&gt; Behavioural loyalty</td>
<td>0.583</td>
<td>11.575</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>Mediation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Self Efficacy -&gt; Co-creation value behaviour -&gt; Attitudinal loyalty</td>
<td>0.141</td>
<td>4.367</td>
<td>0.000</td>
</tr>
<tr>
<td>Customer Self Efficacy -&gt; Co-creation value behaviour -&gt; Behavioural loyalty</td>
<td>0.167</td>
<td>4.866</td>
<td>0.000</td>
</tr>
<tr>
<td>Process Enjoyment -&gt; Co-creation value behaviour -&gt; Attitudinal loyalty</td>
<td>0.109</td>
<td>3.704</td>
<td>0.000</td>
</tr>
<tr>
<td>Process Enjoyment -&gt; Co-creation value behaviour -&gt; Behavioural loyalty</td>
<td>0.129</td>
<td>3.816</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The results from the direct relationship showed that all the direct effects were significant, thus customer self-efficacy ($\beta=0.286$, $t=4.995$) and process enjoyment ($\beta=0.222$, $t=4.102$) are significantly related to co-creation value behaviour and also value co-creation behaviour has a positive and significant effect on attitudinal loyalty ($\beta=0.49$, $t=8.003$) and behavioural loyalty ($\beta=0.58$, $t=11.575$). Furthermore, the indirect effect revealed that indirect effect were also significant, thus, co-creation value behaviour mediated the relationship between customer self-efficacy and attitudinal loyalty ($\beta=0.141$, $t=4.367$), customer self-efficacy and
behavioural loyalty ($\beta=0.167$, $t=4.866$), process enjoyment and attitudinal loyalty ($\beta=0.109$, $t=3.704$) and process enjoyment and behavioural loyalty ($\beta=0.129$, $t=3.816$). Thus a full mediation occurred.

5.5 Discussion of Findings

5.5.1 Value co-creation behaviour as a third-order construct

The results support the assertion that value co-creation is a third construct manifested in the second-order dimensions of customer citizenship behaviour and customer participation behaviour. Value co-creation behaviour was conceptualised as a combination of customer citizenship behaviour ($\beta=.82$, $t=27.56$), and customer participation behaviour ($\beta=.92$, $t=103.04$). Also, the findings of the study revealed that two dimensions that make up value co-creation behaviour are also made up of a combination of four dimensions each. These eight dimensions are seen as the first-order construct of value co-creation, thus for customer participation behaviour – information seeking ($\beta=.61$, $t=11.61$), information sharing ($\beta=.83$, $t=36.16$), responsible behaviour ($\beta=.82$, $t=40.74$) and personal interaction ($\beta=.86$, $t=42.92$); and for customer citizenship behaviour – feedback ($\beta=.78$, $t=33.28$), advocacy ($\beta=.80$, $t=32.14$), helping ($\beta=.81$, $t=28.49$), and tolerance ($\beta=.52$, $t=9.54$). The study results is therefore consistent with Bove, Pervan, Beatty and Shiu (2008) and Groth (2005) Yi and Gong (2013) who argued that value co-creation is a multidimensional construct contrary to the studies of Fang, Palmatier and Evans (2008) and Dellande and Graham (2004) who argued that, value co-creation is a unidimensional construct. The finding of this study therefore implies that, value co-creation is a broader construct which has two higher-order factors and consists of four dimensions each. This finding is consistent with Yi and Gong (2013).
5.5.2 Influence of cognitive engagement on customer value co-creation

This study sought to examine the relationship between cognitive engagement, thus customer process enjoyment and self-efficacy on customer value co-creation. The findings of the study suggested that patients’ cognitive engagement (process enjoyment and patient self-efficacy) is positively and significantly related to value co-creation. In patient-physician context, the findings show that customers’ cognitive engagement in terms of process enjoyment (PE) positively leads to co-creation of value (p < 0.001). This is consistent with extant literature (Fuller et al., 2011; Dahl et al., 2007) which confirm that people engage in creative tasks when the task itself is intrinsically interesting, challenging and exciting. Secondly, this work is in congruent with Hoyer et al (2012) description of co-creation concept. The authors stipulated that the psychological reasons which enhance customers’ participation in the co-creation process include self-expression and the pure enjoyment of contributing in terms of creativity.

Also, with regards to the cognitive engagement of customer or patient self-efficacy (SE), the result shows positive and significant relationship with value co-creation (p < 0.01). Previous studies have shown that customers with high self-efficacy have a tendency to engage more, apply more effort and persevere more to overcome duty obstacles (van Buttgen et al., 2012; Lent & Lopez, 2002). Furthermore, the results of this study is similar to the suggestion made by van Beuningen et al. (2011) that, customer’s confidence to perform a given task can eventually lead to unique contribution of value creation in services. Lastly, the results of this thesis also provide some empirical support to Yim et al. (2012) findings which suggest that customer self-efficacy (SE) helps create positive relationship between participation enjoyment and co-creation. This thesis therefore, conclude that a more seamless customer
cognitive engagement in terms of process enjoyment (p < 0.01) and self-efficacy (p < 0.01) positively and significantly influences value co-creation.

5.5.3 Influence of value co-creation on customer loyalty

This thesis also aimed at assessing the relationship between value co-creation and customer loyalty (both attitudinal and behavioural form). The findings show that value co-creation is significantly associated with both attitudinal and behavioral loyalty respectively. These findings confirm earlier research that suggest that better engagement of customers in value co-creation process can lead to customer loyalty (Lee & Feick, 2001; Lam, Shankar, Erramilli & Murthy, 2004; Yang & Peterson, 2004; Amin, Zaidi, & Fontaine, 2013). The importance of this is that it addresses an important question in management and other fields concerned about managing customer value effectively to yield an optimum level of customer retention and delight. Given the centrality of the nexus between customer value co-creation and customer loyalty both to theory and practice, for instance, the findings of this study offer insightful implications for management theory, future research, and practice. First, the idea that value co-creation positively influences customer loyalty provides us a deeper thought on how to effectively engage with customers while profiting from them at both sides of the firm-customer continuum. An effective involvement of customers in the determination of value does not only lead to the creation of goods and services that customers are satisfied with, but also to one that makes customers stay with firms over the long time and unforeseeable future. Specifically, in the healthcare sector, the results prove that organisations who are able to encourage patients to be more involved in patient-physician encounter process in creation of value through interaction tend to have loyal customers. Furthermore, the co-creation of value in the health service environment will lead to repeat visit to that health provider, the referral of other patients, and positive word of mouth from the customers that fell best served. As
found in the findings, value co-creation and attitudinal loyalty (p < 0.01), as well as value co-creation and behavioural loyalty (p < 0.01) were statistically significant. In addendum to the findings of the current study, it is important to note that this research holds a contrary view to Stokburger-Sauer et al. (2016). Unlike what is found here, the authors’ findings suggest a negative, curvilinear (inverted u-shaped) effect on the relationship between co-creation/co-production on customer loyalty. They further assert that customer’s willingness to be involved in co-creation process is only to a certain extent, beyond which the feeling of exploitation may arise. Yet, results from this work prove otherwise, helping us to empirically understand the concepts and the relationships that exist among them from different contexts and from diverse perspectives. Consequently, this study concludes that value co-creation would have significant and positive association with attitudinal and behavioural loyalty.

5.6 Role of VCCB on CE and customer loyalty

Lastly, this thesis examines the role of VCCB on the relationship between cognitive engagement (process enjoyment and customer self-efficacy) and customer loyalty. This current study found VCCB to have a mediating effect on the relationship between PE and customer SE on both attitudinal and behavioural loyalty. Van Buttegen et al. (2012), and Pavlou and Fygenson (2006) contended that, customers with high level of SE believe in their capabilities to produce a service and thus, express positive behavioural intentions. In addition, Bauer, Falk and Hammerschmidt (2006) found service process enjoyment to be a dominant factor in influencing both relationship duration and repurchase intention as major drivers of customer lifetime value.

Nonetheless, the findings of this study suggest that this is achieved with the co-creation of value. Thus, if engagement does not result in the creation of value, customers will not remain
loyal. In detail, the results of the study showed that value co-creation behaviour significantly mediates the relationship between service process enjoyment and attitudinal and behavioural loyalty ($P < 0.001$). Also, the relationship between customer self-efficacy and customer loyalty is significantly mediated by value co-creation behaviour ($P < 0.001$). The findings of this thesis therefore, show that in the healthcare service, customers will engage in interaction with the expectation of creating value with the service provider in order to remain loyal. However, when this interaction does not result in the creation of value, customer loyalty is not assured. This is in agreement with Heidenreich et al. (2014) argument that, the concept of co-creation assist to reinforce the relationship between customer and company which can lead to loyalty.

**Chapter Conclusion**

This chapter empirically examined the influence of cognitive engagement on value co-creation behaviour and explored the effect of value co-creation behaviour on the relationship between cognitive engagement and customer loyalty. The analysis revealed that cognitive engagement (process enjoyment and customer self-efficacy) influences value co-creation behaviour, and that value co-creation behaviour mediates the relationship between cognitive engagement and customer loyalty.
6.1 Introduction

This chapter concludes the study. It begins by restating the objectives of the research and the methodology that was employed in the data collection process. The chapter continues with the key findings of the research as well as the theoretical and practical implications and recommendations to healthcare service providers. The chapter ends by giving its conclusions and suggestions for further studies. The purpose of this study was to examine the relationship between cognitive engagement and value co-creation behaviour. It further explore the effect of co-creation on the relationship between cognitive engagement and customer loyalty. In order to answer the research questions posed in chapter one, the study adopts value co-creation behaviour dimensions proposed by Yi and Gong (2013). According to Yi et al. (2013), there are two types of customer value co-creation behaviour which are customer participation behaviour and customer citizenship. Customer participation behaviour is made up of information seeking, information sharing, responsible behaviour, and personal interaction. Customer citizenship behaviour on the other hand is made up of feedback, advocacy, helping and tolerance.

The target population for this study were customers of healthcare service providers in Accra, Ghana. After three months period of data collection, three hundred and ninety three (393) questionnaires were valid for statistical analyses. The Partial Least Square (PLS) method was used to test the hypothesis.
6.2 Summary of Major Findings

This section provides details of the major findings from the empirical data analysed in line with the study objectives.

The relationship between cognitive engagement and customer value co-creation behaviour

The first and foremost objective of this study is to examine the relationship between customer’s cognitive engagement and value co-creation behaviour. This thesis identified dimensions of cognitive engagement in the healthcare sector as Process Enjoyment and Self Efficacy. The next was to examine dimensions of value co-creation behaviour. VCCB was conceptualised as a third order construct, having two dimensions namely CPB and CCB. This is in line with Yi et al. (2013). Smart PLS 3- SEM was employed to determine the existence of association between cognitive engagement and value co-creation behaviour in the healthcare services in Ghana. After the hypothesis was tested to determine the relationship, the result of the analysis clearly revealed that there is positive and significant relationship between cognitive engagement in terms of process enjoyment (PE) and value co-creation behaviour, as seen in previous studies (Fuller et al., 2011; Hoyer et al., 2012). This implies that in the Ghanaian context, patients engage deeply in value co-creation, when the process is fundamentally motivating, thought provoking, self-expressing and exciting. Furthermore, the result of the analysis revealed that there is positive significant relationship between cognitive engagement it terms of self-efficacy and value co-creation. These findings provide evidence for the justification of engaging customers deeply through interaction during the service encounter. This is because value co-creation almost always involve interaction between customers and service provider. For instance, patients must tell doctor what is wrong for
healing to take place. Previous studies have shown that customers with high self-efficacy have a tendency to engage more, apply more effort, and persevere more, to overcome duty obstacles which contribute immensely to customer participation behaviour to enhance value co-creation (van Buttgen et al., 2012; Lent & Lopez, 2002).

**The correlation between value co-creation and customer loyalty**

The second objective of this study sought to investigate the correlation between value co-creation and customer loyalty. The findings show that value co-creation is significantly associated with both attitudinal and behavioral loyalty. The results of this research gives justification that positive emotional experiences aroused through continuous interaction with service providers, eventually leads to the type of customer satisfaction and results in loyalty. Ultimately, that increased customer loyalty through value co-creation behaviour can lead to higher switching cost. This confirms earlier research which suggested that, better engagement of customers in value co-creation process can lead to both faster adoption of new products and services and to more satisfactory perceptions of the healthcare provider’s service quality which in the turn leads to customer loyalty (Lee & Feick, 2001; Yang & Peterson, 2004; Amin, Zaidi, & Fontaine, 2013).

**Mediating effect of value co-creation on cognitive engagement and customer loyalty**

The third objective was to determine the mediating role value co-creation behaviour plays on the nexus between cognitive engagement and customer loyalty. The study revealed after analysis that value co-creation behaviour positively and significantly influences the relationship between cognitive engagement and customer loyalty. The findings suggest a
fully mediated relationship because to achieve loyalty, customer self-efficacy and process enjoyment were dependent on the value co-creation behaviour which is a second order construct. The findings of this thesis therefore, show that in the healthcare service, customers will engage in interaction with the expectation of creating value with the service provider in order to remain loyal. However, when this interaction does not result in the creation of value, customer loyalty is not assured. The result is consistent with Osei-Frimpong et al. (2017) proposition, that an effectual and responsive engagement with patient is likely to engender positive experiences, which could affect their healing process.

6.3 Theoretical and Practical Implications

Co-creating value with customers has been touted as one of the most essential business concept in recent times (Osei-Frimpong & Owusu-Frimpong, 2017; Vargo & Lusch, 2014; Gronroos & Voima, 2013). The concept of VCC hinged on the notion that organisations are no longer sole producers of value, but rather value is created through a collaborative effort between customers and service providers. Although, studies have examined the relationship between VCC and outcome such as loyalty (Auh et al., 2007; Cossio-Silva et al., 2016), there seems to be an absence of studies that have empirically tested the influence of cognitive engagement (process enjoyment and customer self-efficacy) on value co-creation behaviour and loyalty, particularly in the healthcare sector within the Ghanaian context. Therefore, from the theoretical point of view, the outcome of this study provides an empirical evidence that positive and significant relationship exist between customer cognitive engagement and value co-creation which in turn influences the customer’s decision of remaining loyal. This study thus adds value to literature by empirically linking customer process enjoyment and self-efficacy as an antecedent to value co-creation behaviour.
The research has some implications and discoveries that can be translated into strategic activities. This study adopts Yi et al. (2013) co-creation behaviour dimensions. The authors identified two behaviours. Thus customer participation behaviour (in-role), which they suggested is very necessary for successful value co-creation, and customer citizenship behaviour (extra-role) which they suggested is not essentially required for value co-creation. However, the findings of this study revealed that in healthcare sector both behaviours are necessary in value co-creation. This finding suggest that just as customer’s information seeking, information sharing, responsible behaviour, and personal interaction (CPB) is necessary in successful value co-creation behaviour, customer’s feedback, advocacy, helping, and tolerance (CCB) constitute value co-creation behaviour. This means that in the healthcare sector, patients must be encouraged to engage more in the CCB activities as well. In addition, contact employees must be encouraged by managers to create a receptive service environment in order to motivate customers to give out their best during value creation encounter. Managers must therefore design training programs and provide reward packages that can encourage contact employees to provide the requisite service environment required for value co-creation.

6.4 Conclusion of the Study

Involving customers in co-creating value is a crucial marketing strategy for any firm striving to meet customers’ needs and gain competitive advantage, irrespective of the kind of industry firms operate in. Changes in technology, increased competitiveness among firms and increased market demands have transformed the way firms operate. Businesses are presently considering open innovations as an aggressive approach to remain relevant in today’s dynamic world which is characterised by changing customer expectations and needs. This approach has gradually drawn firms to their customers for a more consented effort towards
the creation and delivery of value that benefits both firms and customers. As investigated in this study, we have found how co-creating value with customers interacts with cognitive engagement to generate loyal behaviours among customers, and how that consequentially keeps firms in business. From the foregoing discussion, customer cognitive engagement appears to be an antecedent of value co-creation which in-turn leads to loyalty. Specifically, we note that positive customer citizenship behaviour as well as positive customer participation behaviour would increase customer loyalty. The idea is that, firms can profit from their value co-creation efforts when customers feel part of the overall value creation process and are even be willing to voluntarily participate in this strategic effort. What’s more, the existence of a relationship between firms and customers that promotes information sharing, information seeking, responsible behaviour and personal interaction is well positioned to enhance the value that the interaction of value co-creation and cognitive engagement has on customer loyalty. Managers can heavily profit from their efforts at gaining and maintaining customer loyalty as long as they can capitalise on the insight that this study offers. Further, appropriate feedback form both customers and firms, advocacy, the offering of help, and tolerance are essential ingredients that contribute essentially to achieving customer loyalty through value co-creation and cognitive engagement. Practically, this study has been successful in showing in empirical terms how firms can profit from such a strategic orientation while delighting and maintaining customer loyalty. Since this study was conducted with the health service environment in mind, it is therefore critical for healthcare organisations to consider value co-creation from this strategic perspective while accounting for other essential marketing and customer management techniques such as right touching and proper market analysis. This study has successfully examined the role of value co-creation behaviour on the relationship between cognitive engagement (process enjoyment and customer self-efficacy) and customer loyalty.
6.5 Recommendations

Co-creating value with customers has been proven to be a catalyst that efficiently fulfils customers’ needs, increases productivity and satisfaction, and in-turn leads to loyalty. Hence, managers of healthcare providers may need to institute the culture of consistent and conscious engagement with customers through interaction during the service production encounter. Furthermore, since the notion of involving customers in co-creating value in the healthcare sector may possibly over-turn the orthodox mode of healthcare service delivery, there is the need for health service managers and service providers to develop competitive skills of profiting from such orientations. For example, managers of health care can embolden value co-creation by incorporating clients into social networks in order to exchange experiences which, in turn, shape their involvement.

Practitioners could benefit enormously from this study as findings here could help them in hiring the right service providers for the right position. The right hiring of service persons who are good at engaging and involving customers in the provision of service would be beneficial to both firms and customers since an increase in value co-creation initiatives and the benefits it has on customer loyalty requires more flexible, committed, trustworthy, capable and responsive employees to deal with the uncertainty inherent in additional customer involvement. Increased customer contact likely will give rise to role stress emotional exhaustion (Grayson 1998). It is therefore essential to engage the services of highly trained employees who are compensated commensurate to the benefits they bring to the table (Beatty et al. 1996). It is therefore imperative that hospital and clinic managers undertake rigorous recruitment and selection processes that will ultimately aid in identifying the right personnel for the job.
6.6 Limitations and Future Research

There are several limitations associated with this study. First, it is my contention that the aforementioned results may not be same in order countries. This may be possible based on sample size, and the type of respondents used in this study. This study focused on customer’s perspective of value co-creation and how that transcends into loyalty formulation. This is to say that since the respondent mainly were customers, the study recommends that future research should investigate employees or service providers.

Finally, this study investigates the influence of value co-creation behaviour on cognitive engagement (process enjoyment and customer self-efficacy). Future research may also like to examine the influence of other variables, such as resources, technical competence, firm size or other contextual variables.

REFERENCES


Fuller, J., Muller, J., Hutter, K., Matzler, K., & Hautz, J. (2012, January). Virtual worlds as collaborative innovation and knowledge platform. In *System Science (HICSS), 2012 45th Hawaii International Conference on* (pp. 1003-1012). IEEE.


Macey, W. H., & Schneider, B. (2008). Engaged in engagement: We are delighted we did it. *Industrial and Organizational Psychology, 1*(1), 76-83.


Ramaswamy, V., & Gouillart, F. J. (2010). *The power of co-creation: Build it with them to boost growth, productivity, and profits*. Simon and Schuster.


Salant, P., Dillman, I., & Don, A. (1994). *How to conduct your own survey* (No. 300.723 S3.).


Sanchez, G., & Trinchera, L. Russolillo G. plspm: Tools for Partial Least Squares Path Modeling (PLS-PM). R package version 0.4. 7. 2015.


Taherdoost, H. (2016). Sampling methods in research methodology; How to choose a sampling technique for research.


### APPENDIX A

**DESCRIPTIVE STATISTICS OF MEASURES**

<table>
<thead>
<tr>
<th>Codes</th>
<th>Statements</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL1</td>
<td>I continue to see my current health service provider for my medical needs in the future</td>
<td>3.97</td>
<td>.930</td>
<td>-1.515</td>
</tr>
<tr>
<td>AL2</td>
<td>The chances of me staying with my current health service provider are very good</td>
<td>4.01</td>
<td>.879</td>
<td>-1.600</td>
</tr>
<tr>
<td>AL3</td>
<td>The likelihood of me trying other services from my health service provider is very good</td>
<td>3.81</td>
<td>1.068</td>
<td>-1.327</td>
</tr>
<tr>
<td>AL4</td>
<td>I try to use my current health service provider for most of my medical needs</td>
<td>4.05</td>
<td>.872</td>
<td>-1.497</td>
</tr>
<tr>
<td>BL1</td>
<td>I will transact with this health service provider again for future need</td>
<td>3.94</td>
<td>.951</td>
<td>-1.407</td>
</tr>
<tr>
<td>BL2</td>
<td>I will try new services that are provided by this health service provider</td>
<td>4.01</td>
<td>.917</td>
<td>-1.514</td>
</tr>
<tr>
<td>BL3</td>
<td>I will recommend other people to patronize this health service provider</td>
<td>4.08</td>
<td>.860</td>
<td>-1.673</td>
</tr>
<tr>
<td>BL4</td>
<td>I will say positive things to other people about the services provided by this health service provider</td>
<td>4.16</td>
<td>.783</td>
<td>-1.599</td>
</tr>
<tr>
<td>IS1</td>
<td>I have asked others for information on what this service offers</td>
<td>3.78</td>
<td>1.049</td>
<td>-1.198</td>
</tr>
<tr>
<td>IS2</td>
<td>I have searched for information on where this service provider is located</td>
<td>3.81</td>
<td>1.017</td>
<td>-1.259</td>
</tr>
<tr>
<td>IS3</td>
<td>I have paid attention to how others behave to use this service well</td>
<td>3.94</td>
<td>1.021</td>
<td>-1.361</td>
</tr>
<tr>
<td>IS4</td>
<td>I asked the employee relevant questions during the service encounter</td>
<td>4.04</td>
<td>.956</td>
<td>-1.654</td>
</tr>
<tr>
<td>IH1</td>
<td>I clearly explained what I wanted the employee to do</td>
<td>3.92</td>
<td>.950</td>
<td>-1.498</td>
</tr>
<tr>
<td>IH2</td>
<td>I gave the employee proper information</td>
<td>4.07</td>
<td>.808</td>
<td>-1.617</td>
</tr>
</tbody>
</table>
IH3- I answered all the employee's service related questions 4.13 .839 -1.705
IH4- I provided necessary information so that the employee could perform his or her duties 4.19 .838 -1.798
RB1- I answered all the employee's service related questions required 3.93 1.039 -1.316
RB2- I performed all the tasks that are required 4.01 .920 -1.323
RB3- I adequately completed all the behaviors expected 3.98 .854 -1.551
RB4- I followed the employee's directives or orders 4.11 .856 -1.554
PI1- I fulfilled responsibilities to the business 4.02 .816 -1.857
PI2- I was friendly to the employee 4.24 .671 -1.350
PI3- I was kind to the employee 4.23 .695 -1.579
PI4- I was polite to the employee 4.30 .692 -1.488
PI5- I was courteous to the employee 4.30 .698 -1.534
PI6- I listen attentively to the employee during the service encounter 4.31 .691 -1.651
FB1- If I have a useful idea on how to improve the service, I let the employee know 3.84 1.022 -1.212
FB2- When I receive good service from the employee, I comment about it 3.94 .970 -1.388
FB3- When I experience a problem, I let the employee know about it 4.01 .942 -1.574
AD1- I said positive things about my health provider and the employee 3.83 .927 -1.456
AD2- I recommended my health provider and the employee to others 3.91 .899 -1.331
AD3- I encouraged friends and relatives to use my health provider 3.97 .863 -1.380
HP1- I assist other customers if they need my help 3.94 .911 -1.611
HP2- I help other customers if they seem to have problems 3.95 .867 -1.410
HP3- I teach other customers to use the service correctly 3.99 .882 -1.375
HP4- I give advice to other customers 4.00 .807 -1.617
TL1- If service is not delivered as expected, I would be 3.02 1.335 -.091
willing to put up with it

TL2- If the employee makes a mistake during the service delivery, I would be willing to be patient 3.31 1.211 -.411

TL3- If had to wait longer than I normally expected to receive the service, I would be willing to adapt 3.34 1.223 -.478

CE1- If I try enough, I am always able to resolve difficult problems 4.12 .748 -1.705

CE2- It is easy for me to put my intentions into practice and attain my objectives 4.24 .651 -1.572

CE3-I am confident that I can deal efficiently with unexpected events 4.24 .656 -1.448

CE4- When am confronted by a problem, I am generally able to find diverse and different solutions 4.32 .661 -1.466

CE5- I remain calm even when facing difficulties because I can trust in my capacity to deal with situations 4.31 .707 -1.611

PE1- During the encounter process with my health provider I was deeply engrossed 4.15 .845 -1.640

PE2- During the encounter process with my health provider I concentrated fully 4.30 .676 -1.301

PE3- During the encounter process with my health provider I felt happy 4.29 .724 -1.563

PE4- During the encounter process with my health provider I felt content 4.29 .705 -1.530

PE5- The encounter process with my health provider was worthwhile 4.40 .623 -1.298

PE6- The activity was fulfilling 4.41 .657 -1.767
APPENDIX B

QUESTIONNAIRE

VALUE CO-CREATION AND CUSTOMER LOYALTY IN HEALTHCARE SECTOR; THE ANTECEDENT OF PATIENT COGNITIVE ENGAGEMENT.

Dear Sir/Madam,

I am an MPhil. Student at the Marketing and Entrepreneurship Department of University of Ghana Business School. I am embarking on a research project titled; “Value Co-creation and Customer Loyalty in Healthcare Sector: The Antecedent of Patient Cognitive Engagement”. I would very much appreciate, if you would spare me few minutes of your time in filling out this questionnaire. All responses will remain confidential and no portion of the research will identify you. Your input is of great value to me. Thank You.

1. Gender       Male [ ]       Female [ ]

2. Age         18–25 years old [ ] 26–30 years old [ ] 31–40 years old [ ] 41–50 years old [ ]

                      51–60 years old [ ] 61–70 years old [ ] 71 or older [ ]

3. Highest level of education

       High School [ ]       B.S. Degree or equivalent [ ] Master’s Degree or equivalent [ ]
       Doctoral Degree or equivalent [ ]       Other [ ]

4. Religion: Christian [ ] Muslim [ ] Traditionalist [ ] Other [ ]
5. How often do you visit the clinic? Less than once a year [ ] 1–2 times a year [ ] 3–6 times a year [ ] 7–12 times a year [ ] More than 12 times a year [ ]

6. Type of clinic you visit Private [ ] Public [ ] Both Public and Private [ ]

7. Sources of knowledge about healthcare issues Radio [ ] TV [ ] Social media [ ] Newspaper [ ] Family/friends [ ] Frequent Interaction with service provider [ ]

Please indicate your opinion on the following statements by writing your assessment in the space provided after each statement on the scale of 1 to 5 (1 – Strongly disagree, 2 – Disagree, 3 – Neither agree/disagree, 4 – Agree, 5 – Strongly agree).

<table>
<thead>
<tr>
<th>No.</th>
<th>ATTITUDINAL LOYALTY</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL1</td>
<td>I will continue to see my current health service provider for my medical needs in the future</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AL2</td>
<td>The chances of me staying with my current health service provider are very good</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AL3</td>
<td>The likelihood of me trying other services from my health service provider is very good</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AL4</td>
<td>I try to use my current health service provider for most of my medical needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>BEHAVIOURAL LOYALTY</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL1</td>
<td>I will transact with this health service provider again for future need</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL2</td>
<td>I will try new services that are provided by this health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Provider</td>
<td>INFORMATION SEEKING</td>
<td>INFORMATION SHARING</td>
<td>RESPONSIBLE BEHAVIOUR</td>
<td>PERSONAL INTERACTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL3</td>
<td>I will recommend other people to patronize this health service provider</td>
<td>IS1 I have asked others for information on what this service offers</td>
<td>IH1 I clearly explained what I wanted the employee to do</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL4</td>
<td>I will say positive things to other people about the services provided by this health service provider</td>
<td>IS2 I have searched for information on where this service is located</td>
<td>IH2 I gave the employee proper information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS1</td>
<td>I have asked others for information on what this service offers</td>
<td>IS3 I have paid attention to how others behave to use this service well</td>
<td>IH3 I answered all the employee's service-related questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS2</td>
<td>I have searched for information on where this service is located</td>
<td>IS4 I asked the employee relevant questions during the service encounter</td>
<td>IH4 I provided necessary information so that the employee could perform his or her duties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS3</td>
<td>I have paid attention to how others behave to use this service well</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS4</td>
<td>I asked the employee relevant questions during the service encounter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INFORMATION SHARING</td>
<td>SD 1 D 2 N 3 A 4 SA 5</td>
<td>INFORMATION SHARING</td>
<td>RESPONSIBLE BEHAVIOUR</td>
<td>PERSONAL INTERACTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS1</td>
<td>I have asked others for information on what this service offers</td>
<td>IH1 I clearly explained what I wanted the employee to do</td>
<td>RB1 I answered all the employee's service-related questions required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS2</td>
<td>I have searched for information on where this service is located</td>
<td>IH2 I gave the employee proper information</td>
<td>RB2 I performed all the tasks that are required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS3</td>
<td>I have paid attention to how others behave to use this service well</td>
<td>IH3 I answered all the employee's service-related questions</td>
<td>RB3 I adequately completed all the behaviors expected</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS4</td>
<td>I asked the employee relevant questions during the service encounter</td>
<td>IH4 I provided necessary information so that the employee could perform his or her duties</td>
<td>RB4 I followed the employee's directives or orders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESPONSIBLE BEHAVIOUR</td>
<td>SD 1 D 2 N 3 A 4 SA 5</td>
<td>RESPONSIBLE BEHAVIOUR</td>
<td>RESPONSIBLE BEHAVIOUR</td>
<td>PERSONAL INTERACTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RB1</td>
<td>I answered all the employee's service-related questions required</td>
<td>RB2 I performed all the tasks that are required</td>
<td>RB3 I adequately completed all the behaviors expected</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RB2</td>
<td>I performed all the tasks that are required</td>
<td>RB4 I followed the employee's directives or orders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RB3</td>
<td>I adequately completed all the behaviors expected</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RB4</td>
<td>I followed the employee's directives or orders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERSONAL INTERACTION</td>
<td>SD 1 D 2 N 3 A 4 SA 5</td>
<td>PERSONAL INTERACTION</td>
<td>PERSONAL INTERACTION</td>
<td>PERSONAL INTERACTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI1</td>
<td>I fulfilled responsibilities to the business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI2</td>
<td>I was friendly to the employee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI3</td>
<td>I was kind to the employee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI4</td>
<td>I was polite to the employee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI5</td>
<td>I was courteous to the employee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI6</td>
<td>I listen attentively to the employee during the service encounter.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FEEDBACK**

<table>
<thead>
<tr>
<th>FB1</th>
<th>If I have a useful idea on how to improve the service, I let the employee know</th>
</tr>
</thead>
<tbody>
<tr>
<td>FB2</td>
<td>When I receive good service from the employee, I comment about it</td>
</tr>
<tr>
<td>FB3</td>
<td>When I experience a problem, I let the employee know about it</td>
</tr>
</tbody>
</table>

**ADVOCACY**

<table>
<thead>
<tr>
<th>AD1</th>
<th>I said positive things about my health provider and the employee to others</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD2</td>
<td>I recommended my health provider and the employee to others</td>
</tr>
<tr>
<td>AD3</td>
<td>I encouraged friends and relatives to use my health provider</td>
</tr>
</tbody>
</table>

**HELPING**

<table>
<thead>
<tr>
<th>HP1</th>
<th>I assist other customers if they need my help</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP2</td>
<td>I help other customers if they seem to have problems</td>
</tr>
<tr>
<td>HP3</td>
<td>I teach other customers to use the service correctly</td>
</tr>
<tr>
<td>HP4</td>
<td>I give advice to other customers</td>
</tr>
</tbody>
</table>

**TOLERANCE**

| TL1  | If service is not delivered as expected, I would be                           |
willing to put up with it

| TL2 | If the employee makes a mistake during service delivery, I would be willing to be patient |
| TL3 | If I had to wait longer than I normally expected to receive the service, I would be willing to adapt |

**CUSTOMER SELF EFFICACY**

| CE1 | If I try enough, I am always able to resolve difficult problems |
| CE2 | It is easy for me to put my intentions into practice and attain my objectives |
| CE3 | I am confident that I can deal efficiently with unexpected events |
| CE4 | When I am confronted by a problem, I am generally able to find diverse and different solutions |
| CE5 | I remain calm even when facing difficulties because I can trust in my capacities to deal with situations |

**SERVICE PROCESS ENJOYMENT**

| PE1 | During the encounter process with my health provider I was deeply engrossed |
| PE2 | During the encounter process with my health provider I concentrated fully |
| PE3 | During the encounter process with my health provider I felt happy |
| PE4 | During the encounter process with my health provider I felt content |
| PE5 | The encounter process with my health provider was worthwhile |
| PE6 | The activity was fulfilling |