

# The attributes of value co-creation in service and its impact on customers' willingness to pay. Observations from three service industries.

Submitted by **Kwok Thye Yip (Student Number 560022869)** to the University of Exeter as a thesis for the degree of Doctor of Philosophy, March 2011.

This thesis is available for Library use on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

(Signature) .....

## **Abstract**

Marketing literature has propagated “customer-participation” and “co-production” in the seller-buyer framework since the 1970s (Lovelock and Young 1979), yet marketing knowledge gaps exist in this area. Recent management research emphasise the need to re-evaluate how value is created for consumers and to consider the close nature of the interactions between buyers and sellers (Payne et al 2008). Vargo and Lusch’s (2004) proposed service-dominant logic reiterates this need, arguing that the “customer is always the co-creator of value”, as they are part of the system that delivers value.

Understanding value co-creation is then important to management research, as it uncovers new opportunities to create “value” for customers. This also enables firms to formulate better pricing strategies. This thesis examines value co-creation attributes and how they may impact on the customer’s willingness to pay.

Three studies utilising qualitative and quantitative methods have been conducted to address the research question. The first two studies employed qualitative methods to derive insights into value co-creation attributes from a comparative case study perspective under two different service contexts; the defence and healthcare industries. The third study, conducted under the higher education context, employed quantitative methods to gauge the impact of value co-creation attributes on the customers’ willingness to pay.

The qualitative studies found six generic value co-creation attributes, while the quantitative study empirically verified the importance of value co-creation attributes and the fact that they may impact on the customer’s willingness to pay for a service.

This thesis validates that value co-creation is important in service provision. As customers become increasingly informed and empowered, a deeper understanding of how customers co-create value with the firm is then central to marketing activities, specifically in how firms design and price their services. Therefore, this thesis contributes to marketing knowledge by proposing value co-creation attributes that have both theoretical and managerial implications.

## **LIST OF CONTENTS**

Chapter 1: Introduction.....	7
1.1 Introduction to the Research.....	7
1.2 Aims and the Structure of the Research .....	9
Chapter 2: Service and Pricing Literature Review .....	14
2.1 Introduction .....	14
2.2 Service Literature .....	16
2.2.1 What is service?.....	17
2.2.2 The different areas of service research.....	29
2.2.3 Service-dominant logic.....	32
2.2.4 The concept of “value” .....	36
2.2.5 Co-production and value co-creation .....	42
2.2.5.1 Co-production.....	42
2.2.5.1 Value co-creation.....	45
2.3 Pricing Literature .....	52
2.3.1 Definition of “price” .....	53
2.3.2 Importance of pricing research and its multidisciplinary nature .....	56
2.3.3 Study of Pricing in Marketing .....	63
2.3.3.1 Service pricing in marketing.....	66
2.3.3.2 Value-based pricing.....	70
2.3.3.3 Willingness to pay .....	72
2.4 Conceptual Development .....	76
2.4.1 Knowledge gaps in service literature.....	79
2.4.2 Knowledge gaps in service pricing literature .....	82
2.4.3 Research question .....	86
2.4.4 Justification and importance of the research .....	90
Chapter 3: Research Methodology .....	93
3.1 Research Philosophy .....	95
3.2 Methodology and Data Collection.....	99
3.3 Methodology and Data Collection for Case Study 1.....	101
3.3.1 Background to case study 1 .....	102
3.3.2 Research Methodology for case study 1 .....	103
3.3.3 Data collection for case study 1.....	105
3.4 Methodology and Data Collection for Case Study 2.....	106
3.4.1 Background to case study 2.....	107
3.4.2 Research methodology for case study 2 .....	109
3.4.3 Data collection for case study 2.....	110
3.5 Methodology and Data Collection for Study 3.....	113
3.5.1 Background to Study 3: Value co-creation in higher education.....	113
3.5.2 Research Methodology for Study 3 .....	116
3.5.2.1 Developing scale and hypotheses for value co-creation in HE .....	121
3.5.2.2 Questionnaire design for study 3 .....	126
3.5.3 Data Collection for Study 3 .....	129
Chapter 4: Analysis and Findings.....	130
4.1 Analysis and Findings for Case Study 1.....	130
4.1.1 Contextual dynamics in the defence industry.....	131
4.1.1.1 Complexity and Unpredictability in Costs .....	134
4.1.1.2 Cultural change and traditional contracting.....	135
4.1.1.3 Distrust, hostility and communication challenges.....	136
4.1.1.4 Loss of perceived control by the customer and by the firm .....	137
4.1.1.5 Lack of boundaries (rigidities and fluidities) .....	138

4.1.1.6 Coordination with suppliers .....	140
4.1.2: Value co-creation in the defence industry .....	140
4.1.2.1: Understanding “value-in-use” and “benefits” .....	140
4.1.2.2: Service behaviours and service skills .....	144
4.1.2.3: Capacity in service value proposition.....	146
4.1.2.4: Value co-creation and co-production .....	147
4.2 Analysis and Findings for Case Study 2.....	152
4.2.1 Contextual dynamics in the healthcare industry .....	152
4.2.3: Value co-creation in the healthcare industry .....	155
4.2.3.1 Taking the lead in the provision of the AMD service .....	156
4.2.3.2 Ability to innovate and treat increased number of patients .....	159
4.2.3.3 Capability as a dedicated team working together.....	162
4.2.3.4 Negotiating conflicts through tacit knowledge.....	166
4.3 The attributes of value co-creation .....	170
4.3.1 Congruence of Expectations .....	172
4.3.2 Complementary Competencies.....	174
4.3.3 Process Alignment.....	175
4.3.4 Behaviour Transformation.....	176
4.3.5 Perceived Control .....	178
4.3.6 Empowerment.....	180
4.4 Summary of case study 1 and case study 2 .....	181
4.5 Analysis and Findings for study 3 .....	182
4.5.1 The student’s value co-creation university experience.....	182
4.5.2 Part-worth utilities for the attributes of value co-creation.....	188
4.5.3 Value co-creation attributes’ impact on willingness to pay .....	196
Chapter 5: Discussion.....	203
5.1 Theoretical Implications .....	203
5.2 Managerial Implications .....	207
5.2.1 The customer’s perspective .....	207
5.2.2 Operant and operand resources .....	208
5.2.3 Roles within the service system.....	209
5.2.4 Pricing.....	209
5.3 Limitations of the research .....	210
5.4 Future research .....	211
Chapter 6: Conclusion .....	213
References .....	216

## **LIST OF TABLES**

Table 1: Comparison of production and services categories in the UK and US .....	20
Table 2: Illustrative list of services.....	21
Table 3: Different occupations within the service industries .....	22
Table 4: Academic disciplines involved in the service science concept by IBM.....	31
Table 5: Foundational Premises for the Service-Dominant Logic .....	33
Table 6: Four major types of customer value .....	39
Table 7: Different value literature .....	40
Table 8: Five types of customer participation in co-production.....	44
Table 9: “DART” framework for understanding value co-creation .....	48
Table 10: The many different terms for price in services.....	55
Table 11: Cross-section of pricing research .....	59
Table 12: Broad classification of pricing topics.....	62
Table 13: Related topics under the study of pricing in marketing.....	64
Table 14: Cross section of pricing frameworks over the years in the study of pricing..	65
Table 15: A selection of published articles on service pricing in different industries ...	66
Table 16: Sources of value .....	72
Table 17: Selected studies on “customer participation” research in marketing .....	77
Table 18: Analysis on service pricing articles.....	82
Table 19: Elements of research .....	94
Table 20: Comparison of three research philosophies in management research.....	97
Table 21: Cross section of personnel interviewed.....	105
Table 22: Examples of interview questions.....	106
Table 23: Interview Groups for Study 2.....	112
Table 24: Sample questions for the participants.....	112
Table 25: Proposed measures for value co-creation in education .....	122
Table 26: Attributes of Value Co-creation for Study 3 .....	125
Table 27: Levels for the Attributes of Co-creation.....	126
Table 28: The firm’s value proposition to the customer .....	132
Table 29: Summary of Qualitative Evidence for Case Study 1 and 2.....	171
Table 30: Summary of the Independent Variables .....	183
Table 31 : Mean Scores for the University Experience Measures .....	184
Table 32: Importance ranking of university stakeholders .....	185
Table 33: KMO and Bartlett’s Test.....	185
Table 34: Rotated component matrix for university experience measures .....	186
Table 35: Reliability Test (Cronbach Alpha) .....	186
Table 36: Summary of utility scores for the attributes of value co-creation .....	189
Table 37: Relative importance ratio for value co-creation attributes .....	191
Table 38: Relative utilities ratio for groups of respondents .....	194
Table 39: Comparison of PLS and self reported scores .....	196
Table 40: Descriptive statistics on scenarios for value co-creation attributes.....	198
Table 41: Kolmorov-Smirnov test of normality .....	198
Table 42: Mean scores for independent variables in different scenarios .....	200

## **LIST OF FIGURES**

Figure 1: Conceptual Development of Thesis .....	10
Figure 2: Research Process of Thesis .....	12
Figure 3: UK Service sector as a percentage of GDP (1971 - 2010).....	18
Figure 4: Value Added by Tangible and Intangible Elements .....	24
Figure 5: Multidisciplinary to Interdisciplinary Service Research.....	30
Figure 6: Value as the difference between sacrifices and benefits.....	38
Figure 7: Framework on the concept of co-production or co-creation.....	44
Figure 8: Value co-creation according to the service-dominant logic.....	45
Figure 9: Conceptual framework for value co-creation.....	48
Figure 10: Methods for Measuring WTP .....	74
Figure 11: Dimensions of co-production in early management literature.....	76
Figure 12: Evolving studies of co-production and value co-creation in Marketing.....	78
Figure 13: Four paradigms for the analysis of social theory .....	98
Figure 14: Cross section of the eye where the macular degeneration occurs.....	107
Figure 15: Two-step process of Study 2.....	109
Figure 16: Process summary for Study 3 .....	117
Figure 17: Sample preference question .....	128
Figure 18: Sample “willingness to pay” question .....	129
Figure 19: The firm and customer’s interactions in the delivery of the service.....	133
Figure 20: Possible AMD stakeholder interactions.....	154
Figure 21: Service Model of Generic Attributes of Value Co-creation .....	172
Figure 22: Box plots respondent’s “paying extent” in different scenarios.....	199