Value Co-Creation in Firm Sponsored Online Communities of Interest: Enablers, Constraints, and Shaper

Student Name: Diah Priharsari

Date submitted: 6 December 2019

A dissertation submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

Principal Supervisor: Dr. Babak Abedin

Co-Supervisor: Industry Professor Emmanuel Mastio

School of Information, Systems and Modelling

Faculty of Engineering and Information Technology

2019

UNIVERSITY OF TECHNOLOGY SYDNEY
I, Diah Priharsari declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Information, Systems and Modelling/Faculty of Engineering and Information Technology at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise reference or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

Production Note:
Signature: Signature removed prior to publication.

Date: 6 December 2019
ACKNOWLEDGEMENT

I would like to thank my principal supervisor, Dr. Babak Abedin, for encouraging me to believe in myself. I could not have asked for a better mentor for my Ph.D study. I appreciate his selfless dedication in giving his time, ideas, countless e-mails to make my Ph.D journey an exciting quest. His patience and commitment to supervision is remarkable. His consistent support during the time I was expecting a baby while raising a toddler during my study, is noteworthy. I am thankful for the times he steered me back on track, when I was drowning under too much data.

A big thank you to my co-supervisor, Industry Prof. Emmanuel Mastio as well. I am very glad for an opportunity to work with him, as I enjoyed phenomenal support and encouragement from him. Both him and Dr. Babak Abedin made an excellent and inspirational supervisory team. A thank you to my previous co-supervisor as well, Dr. Rajeev Sharma, whom we worked with briefly before he left the institution.

I would like to acknowledge the funds that supported my research – the Indonesia Endowment Fund for Education, the Faculty Travel Funds and the HDR Maintenance Funds. My sincere thanks to the Graduate Research School and Faculty HDR teams for their administrative support and guidance during my study.

I am sincerely grateful for the friendships formed with academics and fellow PhD students, for the stimulating discussions, advice, the sharing of ideas, and the inspiration, for the lunches, morning and afternoon teas, dinners and sleepovers. Thanks to those who attended my countless practice sessions and presentations, for their feedbacks and enthusiasm.

Last but not least, I would like to thank my husband (Aris), my two daughters (Nindy and Ninda), my brother (Wisnu) and my parents (Supriyanto and Titin). They are my biggest supporters in life with whom I experienced the ups and downs of my PhD journey. The incredibly strong bonds we made became the wind beneath my wings.
List of Papers/publications


Papers in progress of submission


## Contents

### CHAPTER 1 INTRODUCTION

1.1 Significance of the Study ................................................................. 2
1.2 Research Scope and Assumptions .................................................. 4
1.3 Objectives and Research Questions ............................................... 5
1.4 Overview of Research Design ....................................................... 6
1.5 Overview of Case Studies .............................................................. 7
1.6 Key Findings, Implications, and Contributions .............................. 8
1.7 Organization of the Thesis ............................................................. 11
1.8 Definition of Key Terms ............................................................... 12

### CHAPTER 2 LITERATURE REVIEW

2.1 Firm-Sponsored Online Communities ........................................... 16

#### 2.1.1 Definition and their importance ........................................... 16
#### 2.1.2 A Firm-Sponsored Online Community as a Fluid Organization ........................................... 18
#### 2.1.3 Types of Firm-Sponsored Online Communities ....................... 19
#### 2.1.4 Interaction in Firm-Sponsored Online Communities .................. 21

2.2 Value Co-Creation in Firm Sponsored Online Communities ........... 23

2.3 Theoretical Background ............................................................... 26

#### 2.3.1 Service Ecosystem and Firm Roles in Service-Dominant Logic .......... 26
#### 2.3.2 Human and Technology Agency in Sociomateriality Perspective .......... 31

2.4 Summary, Research Gaps, and Research Questions ....................... 34

### CHAPTER 3 RESEARCH DESIGN ....................................................... 36

3.1 Philosophical Paradigm: Critical Realism ...................................... 38

#### 3.1.1 Retroduction Approach ....................................................... 39
#### 3.1.2 Critical Realism in this Study .............................................. 40

3.2 Systematic Literature Review ...................................................... 43
5.1.4 Demographics of Content Analysis ................................................................. 90
5.1.5 Demographics of Interview Participants ...................................................... 92
5.2 Demographics and Background: Berliano ..................................................... 92
5.2.1 Routine Events ............................................................................................. 92
5.2.2 Recruitment Process .................................................................................... 93
5.2.3 Data Collection ............................................................................................ 93
5.2.4 Demographics of Content Analysis ............................................................ 94
5.2.5 Demographics of Interview Participants .................................................... 95
5.3 Findings of Content Analysis ......................................................................... 97
5.3.1 Enablers in Sponsored Online Communities from Individual Participants’ Perspective 97
5.3.2 Constraints in Sponsored Online Communities from Individual Participant Perspective 104
5.3.3 How is Value Co-Created .......................................................................... 108
5.3.4 Summary of Content Analysis Findings and Contributions ...................... 114
5.4 Interview Findings ....................................................................................... 116
5.4.1 Enablers in Firm-Sponsored Online Communities .................................... 116
5.4.2 Constraints in Firm-Sponsored Online Communities ............................... 134
5.4.3 How is Value Co-Created .......................................................................... 141
5.5 Summary of Interview Findings ................................................................. 148

CHAPTER 6 DISCUSSION ....................................................................................... 150
6.1 Characteristics and Types of Sponsored Online Co-creation Communities .......... 150
6.2 Enablers and Constraints in Sponsored Online Communities from Individual Participant’s perspective ........................................................................................................ 153
6.2.1 The list of Enabler and Constraint ............................................................. 153
6.2.2 Dynamic Nature of Enablers and Constraints ......................................... 157
6.3 Value Co-Creation in Communities of Interest ........................................... 159
6.3.1 The Roles of the Firm in Value Co-Creation ........................................... 159
6.3.2 The Mechanisms in Sponsored Online Communities to Co-create Value .......... 161
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3.3 The Relationship between Enablers, Constraints and Mechanisms</td>
<td>168</td>
</tr>
<tr>
<td>6.4 Empirical Corroboration in Abekani and Berliano</td>
<td>169</td>
</tr>
<tr>
<td>CHAPTER 7 CONTRIBUTION AND CONCLUSION</td>
<td>176</td>
</tr>
<tr>
<td>7.1 Summary of Study</td>
<td>176</td>
</tr>
<tr>
<td>7.2 Findings and Contribution to Knowledge</td>
<td>176</td>
</tr>
<tr>
<td>7.3 Contribution to Theory</td>
<td>178</td>
</tr>
<tr>
<td>7.3.1 Service Dominant Logic</td>
<td>178</td>
</tr>
<tr>
<td>7.3.2 Sociomateriality</td>
<td>179</td>
</tr>
<tr>
<td>7.3.3 Research Methodology</td>
<td>180</td>
</tr>
<tr>
<td>7.4 Recommendations for Practitioners</td>
<td>181</td>
</tr>
<tr>
<td>7.5 Limitation</td>
<td>182</td>
</tr>
<tr>
<td>7.6 Recommendation for Future Research</td>
<td>182</td>
</tr>
<tr>
<td>CHAPTER 8 REFERENCES</td>
<td>186</td>
</tr>
<tr>
<td>APPENDIX I Interviews Protocol</td>
<td>195</td>
</tr>
<tr>
<td>APPENDIX II Excerpt Examples for Each Enabler Theme</td>
<td>197</td>
</tr>
<tr>
<td>APPENDIX III Threads About Member Acceptance Process in Abekani</td>
<td>211</td>
</tr>
<tr>
<td>APPENDIX IV Selected Papers for SLR</td>
<td>214</td>
</tr>
<tr>
<td>APPENDIX V SLR Coding</td>
<td>218</td>
</tr>
<tr>
<td>APPENDIX VI Updated List of Enablers and Constraints</td>
<td>227</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

Figure 2.1 Online Community (OC) as a fluid object (taken from Faraj, JArvenpaa, & Majchrzak 2011) ................................................................. 18
Figure 2.2 Interactions in Service-Dominant Logic (adapted from Gronroos & Voima, 2013)................. 28
Figure 2.3 Narrative and process of value co-creation in sponsored online communities adopted from Vargo & Lusch 2016 ................................................................................................. 29
Figure 2.4 Value Co-Creation in Sponsored Online Communities as a Service Ecosystem (Adapted from Vargo & Lusch 2016 and Gronroos & Voima 2013) .............................................................................. 30
Figure 2.5 Possible theoretical foundations for the conceptualization of sociomateriality (adapted from Leonardi 2013). ........................................................................................................................................... 32
Figure 2.6 Value Co-Creation in Sponsored Online Communities as a Service Ecosystem with 4 actors (Adapted from Vargo & Lusch 2016, Gronroos & Voima 2013, and Leonardi 2013) ................. 34
Figure 3.1 Overview of Research Design .............................................................................................. 37
Figure 3.2 The Retroductive Research Process (Kovacs & Spens 2005) ............................................... 40
Figure 3.3 Level of Explanation in Critical Realism Studies (adopted from Dobson 2001)............... 43
Figure 3.4 Methodological phases ........................................................................................................ 44
Figure 3.5 Systematic review process .................................................................................................. 46
Figure 3.6 Abekani Website .................................................................................................................. 49
Figure 3.7 Berliano Website .................................................................................................................. 51
Figure 3.8 The Invitation and the Screenshot of the Online Form to Register Potential Interviewees 53
Figure 3.9 Example of a Thread on the Facebook Platform ................................................................ 55
Figure 3.10 Coding Steps Adopted from Saldana (2016) ...................................................................... 61
Figure 4.1 Publications per Year ........................................................................................................... 65
Figure 4.2 Data Analysis and Disciplines .............................................................................................. 65
Figure 4.3 Theories Used in the Literature ............................................................................................... 66
Figure 4.4 Typology of Firm-Sponsored Online Co-creation Community ........................................... 72
Figure 4.5 Breakdown of Citation to Enabler and Constraint themes .................................................. 77
Figure 4.6 Value Co-Creation Ecosystem in Sponsored Online Communities ....................................... 81
Figure 5.1 Graphics of Abekani downloaded threads ........................................................................... 91
Figure 5.2 Graphics of Berliano downloaded threads ........................................................................... 95
Figure 5.3 Distribution of content analysis evidence for enablers in Abekani and Berliano ............... 97
Figure 5.4 Abekani and Berliano word clouds .................................................................................... 100
Figure 5.5 Distribution of content analysis evidence for constraints in Abekani and Berliano .......... 104
Figure 5.6 Distribution of firm roles in Abekani and Berliano ............................................................. 108
Figure 5.7 Graphics of Abekani and Berliano downloaded co-creator threads..........................109
Figure 5.8 Graphics of Abekani and Berliano downloaded facilitator threads..........................111
Figure 5.9 Word clouds of two online communities..................................................................116
Figure 6.1 Value co-creation model in sponsored firm online communities.............................162
Figure 6.2 A Series of Markup Reseller Events in Abekani .......................................................174
Figure 6.3 A Series of Markup Reseller Events in Berliano .......................................................174
LIST OF TABLES

Table 2.1 Categorization of firm sponsored online communities ......................................................... 19
Table 2.2 Focus of study ........................................................................................................................ 21
Table 2.3 Goods-dominant logic vs. service-dominant logic ............................................................... 23
Table 2.4 Research questions, gaps, and theoretical frameworks ...................................................... 34
Table 3.1 Implementation of CR in this study ...................................................................................... 41
Table 3.2 Case studies (Abekani and Berliano) .................................................................................. 49
Table 3.3 Keywords to select threads .................................................................................................. 56
Table 3.4 Map from Research Questions to Interview Questions ...................................................... 58
Table 4.1 Mapping Online Co-Creation Communities ....................................................................... 68
Table 4.2 Types and Characteristics of Online Co-Creation Communities ...................................... 70
Table 4.3 Sample quotes ...................................................................................................................... 73
Table 4.4 Categories, Subcategories of Enablers, and Studies ............................................................ 75
Table 4.5 Details of enablers (combined with constraints) ................................................................. 82
Table 5.1 Total Data Collected .......................................................................................................... 88
Table 5.2 Number of Abekani interviews ........................................................................................... 92
Table 5.3 Number of Berliano interviews .......................................................................................... 96
Table 5.4 Theme of Enablers in Each Online Community ................................................................. 98
Table 5.5 Example of evidence for enablers found in Abekani and Berliano online texts ............... 100
Table 5.6 Constraints in Berliano and Abekani ................................................................................... 106
Table 5.7 Example of evidence for constraints found in Abekani and Berliano online texts ............ 106
Table 5.8 Example of co-creator events found in Abekani and Berliano online texts ....................... 106
Table 5.9 Example of facilitator events found in Abekani and Berliano online texts ....................... 110
Table 5.10 Summary of enablers in Abekani and Berliano based on interviews ............................... 117
Table 5.11 Constraints Abekani vs Berliano (findings from interview) ............................................... 134
Table 5.12 Themes of Value Co-Creation from Interviews and Example of Excerpt from Abekani and Berliano ........................................................................................................... 142
Table 5.13 Abekani Changing Boundaries ......................................................................................... 145
Table 5.14 Changing boundaries in Berliano (findings from interview) .......................................... 147
Table 6.1 Summary of Enabler and Constraint Themes (V=yes and X=no) ........................................ 153
Table 6.2 Events representing Consensus Making and the outcomes related to enablers and constraints ....................................................................................................................................... 163
Table 6.3 Events representing Consensus Settlement and the outcomes related to enablers and constraints .................................................................................................................................... 166
Table 6.4 Series of Events related to markup resellers in Abekani .................................................... 170
Table 6.5 Series of Events related to markup resellers in Berliano .................................................... 172
Table 6.6 Empirical corroboration in Abekani and Berliano ............................................................... 175
ABSTRACT

Recent studies in information systems and organization science have shown that online communities are devoid of a traditional structure mechanism. The lack of authority of the sponsoring firm in online communities raises questions about how to orchestrate all members of an online community. The firm is assumed to have the responsibility to coordinate value co-creation which is then called orchestration. Considering the importance of value co-creation in online communities in the information systems field, and considering that our understanding of the orchestration of value co-creation in online communities is underdeveloped, this study aims to examine firm sponsored online communities to understand what shapes, enables, and constrains value co-creation. Among different types of online communities, this study focuses on communities of interest.

From a theoretical point of view, this thesis uses service dominant logic (SDL), particularly the service ecosystem and sociomateriality as well as a critical realist approach, to investigate two case studies in Indonesia. First, a Systematic Literature Review (SLR) is conducted to provide a comprehensive understanding of the existing literature. Next, this study uses a multiple case study approach to collect and examine empirical evidence from two similar online communities.

The key findings are: i) the study has revealed four types of firm sponsored online communities which differ in the level of the members’ self-organization and the output of the community for the sponsoring firm: Open Source Communities, Commercial Communities, Communities of Interest, and Crowdsourcing; ii) a set of enablers and constraints in online communities is uncovered and outlined; iii) value co-creation is shaped through the firm roles as a facilitator and co-creator and through the fluidity of the online community which are represented by three responses (Consensus Making, Consensus Settlement, and Changing Boundaries).

The research makes several significant contributions to theoretical knowledge, methodology and practice. First, it proposes a new way to view types of firm sponsored online communities and offers a novel model that elaborates the dynamic nature of the co-creation ecosystem in firm sponsored online communities. Second, it contributes to SDL theory by bridging the abstract level explanation of SDL into empirical and observable levels. Third, it develops a further understanding of sociomateriality in fluid organizations. Fourth, it demonstrates how to conduct multiple critical realist case studies. Last, this study offers important practical implications for designing co-creation strategies and for
improving co-creation practices, by delineating the resources that can influence value co-creation in online communities.