



Aalto University
School of Business

DEMOS
HELSINKI



GOVERNING COLLABORATIVE INTERACTIONS

A multiple-case study on the platform
governance of peer-to-peer marketplaces

Master's Thesis
Anna Korpela
5 March 2017
Information and
Service Economy

Approved in the Department of Information and Service Economy

___ / ___ / 20___ and awarded the grade

Author Korpela Anna

Title of thesis Governing Collaborative Interactions - A multiple-case study on the platform governance of peer-to-peer marketplaces

Degree Master of Science in Economics and Business Administration

Degree program Information and Service Economy

Thesis advisors Tinnilä Markku, Tuunainen Virpi

Year of approval 2017**Number of pages** 106**Language** English

Abstract

Globally successful peer-to-peer services have inspired rapidly growing interest in platforms. Besides having become an established part of recent economics research, both collaborative consumption and platforms have found their way into our everyday lives through smart phones and news headlines, embodying the changes and opportunities brought about by digitalization. This study contributes to the ongoing discussion from an entrepreneurial viewpoint by aiming to answer the research question: how do platform entrepreneurs govern peer-to-peer marketplaces?

The question is answered through three overlapping phases of research. First, previous and recent literature is reviewed and critically examined to map different definitions, theories and approaches. Second, an entrepreneurial lens is applied by focusing on the more concrete level of decisions and actions done on platforms. A contextual framework for studying platform governance, i.e. the means and mechanisms of steering, controlling, and managing them, is identified by evaluating and comparing relevant theories found among the literature streams. Third, the governance mechanisms are explored in real life situations among six peer-to-peer platforms.

The empirical part of the research is conducted by utilizing the contextual framework in a comparative multiple-case study on six peer-to-peer platforms, which represent three different types of marketplaces. While a subjectivist view of multiple individual realities and subjective meanings is followed, methodologically the study represents interpretive qualitative research, where the focus is on understanding meaning in context. Primary data have been collected through one-on-one case interviews with platform entrepreneurs, and secondary data through a quantitative data set received from the marketplace platform provider Sharetribe.

The results of the study depict the current field of peer-to-peer online marketplaces as well as the topics and issues confronted by entrepreneurs. The theoretical framework identified in the literature review is utilized in within- and cross-case analysis between the six platforms as well as the three marketplace types. No significant differences or similarities either within or across the different types are identified – however, the results indicate specific areas of interest for further research. The empirical findings are used to develop the governance mechanism framework further in the context of collaborative consumption. The analysis reveals that all the marketplaces represent either reactive or proactive approach for platform development, and suggests this as a noteworthy starting point for following research. Even though a case study is not one to be used for making broad statistical generalizations, by combining theoretical views and an empirically developed framework this study is of value to anyone involved or interested in managing platform business.

Keywords collaborative consumption, collaborative economy, entrepreneurship, network effect, online marketplace, peer economy, peer-to-peer, platform, platform development, platform governance

Tekijä Korpela Anna

Työn nimi Yhteisöllinen kulutus ja alustojen hallinnointi - Monitapaustutkimus
vertaismarkkinapaikkojen ohjausmekanismeista

Tutkinto Kauppatieteiden maisteri

Koulutusohjelma Information and Service Management

Työn ohjaajat Tinnilä Markku, Tuunainen Virpi

Hyväksymisvuosi 2017**Sivumäärä** 106**Kieli** Englanti

Tiivistelmä

Digitaalisten yhteiskäyttöpalveluiden kansainvälinen menestys on synnyttänyt laajaa mielenkiintoa alustoja sekä niiden aiheuttamia liiketoiminnan muutoksia ja mahdollisuuksia kohtaan. Yhteisöllinen kulutus ja alustalous ovat paitsi juurtuneet osaksi akateemista taloustieteen tutkimusta, myös löytäneet paikkansa arjessamme muun muassa älypuhelinien yleistymisen ja medioissa tehtyjen keskustelunavausten myötä. Tämä maisterintutkinnon tutkielma osallistuu käytävään keskusteluun erityisesti yrittäjälähtöisestä näkökulmasta pyrkiessään vastaamaan asetettuun tutkimuskysymykseen: miten alustayrittäjät hallinnoivat verkossa toimivia vertaismarkkinapaikkoja?

Kolme päällekkäistä tutkimusvaihetta vastaavat osaltaan yllä esitettyyn kysymykseen. Ensiksi, niin aiempaa kuin uusinta akateemista kirjallisuutta tarkastellaan kattavasti sekä kriittisesti erilaisten määritelmien, teorioiden ja näkökulmien sekä niiden mahdollisten puutteiden kartoittamiseksi. Toiseksi, aihetta lähestytään yrittäjän näkökulmasta keskittyen erityisesti konkreettisen tason päätöksentekoon ja toimenpiteisiin alustoilla. Arvioimalla ja vertailemalla aiempaa tutkimustyötä valitaan yksi empiirisessä osassa hyödynnettävä teoreettinen viitekehys alustojen hallinnoinnin (ohjauksen, rajoitusten ja johtamisen) tutkimukseen. Kolmanneksi, valittua viitekehystä käytetään kuuden vertaismarkkinapaikan hallinnointikeinojen kartoittamiseen käytännössä.

Tutkielma on metodologialtaan tulkitseva kvalitatiivinen monitapaustutkimus. Se tarkastelee kuutta vertaismarkkinapaikkaa, jotka edustavat kolmea erilaista markkinapaikkatyyppiä. Erityistä huomiota on kiinnitetty tutkijasta riippumattomien nykytapahtumien yhteyteen ja vuorovaikutukseen kontekstinsa ja tapahtumaympäristönsä kanssa. Primäärilähteenä on käytetty kahdenvälisiä tapaustutkimushaastatteluja kuuden alustayrittäjän kanssa, ja sekundaarilähteenä toimii yrittäjien käyttämän markkinapaikka-alustan tuottajan Sharetriben koostama kvantitatiivinen tietokanta.

Tutkimuksen tulokset kuvaavat tämänhetkistä vertaismarkkinapaikkojen kenttää, sekä niitä hallinnoivien yrittäjien kohtaamia haasteita. Teoreettinen viitekehys toimii pohjana vertailevalle analyysille kolmen markkinapaikkatyyppin sisällä sekä välillä. Vaikka yksiselitteisiä eroja tai yhtäläisyyksiä eri tyyppien välille ei tämän tutkimuksen perusteella voida osoittaa, sen avulla voidaan nimittää joitakin yksityiskohtaisia, jatkotutkimusta kaipaavia alueita. Erityisesti yrittäjien suhtautuminen alustan kehitystyöhön joko reaktiivisesti tai proaktiivisesti vaikuttaa mielenkiintoiselta näkökulmalta hallinnointikeinojen tarkempaan tutkimukseen. Sitä hyödynnetään myös tässä tutkielmassa; kuvailevan analyysin lisäksi tulokset esittelevät vertaismarkkinapaikkojen toimintaympäristöön sovelletun version teoreettisesta viitekehuksesta alustojen hallinnointikeinojen tutkimiseen.

Avainsanat alusta, alustatalous, alustojen hallinnointi, jakamistalous, markkinapaikka, verkostovaikutus, vertaistalous, yhteiskäyttö, yhteisöllinen kulutus, yhteisötalous, yrittäjyys

Acknowledgements

This master's thesis is an end result of a project that would have been very different – in some cases impossible – without a number of helpful people. First, being able to study Sharetribe's customers and their businesses was an invaluable opportunity for getting a practical approach to the topic. Thank you Juho and Antti for all your time and effort; interviews, answering my questions, compiling and editing data, and helping out in all the other ways you did.

Second, the whole group of Demos Helsinki, Demos Effect and their friends: not only did this project start as an aftermath of an inspiring spring at Töölönkatu 11, but also during it you provided all the support a novice researcher can wish for. Special thanks for thought-provoking materials to Airi Lampinen, Aleksi Aaltonen, Johannes Koponen & Juha Leppänen; for peer-support and all the practicalities to Johannes Mikkonen & Risto Lätti.

The whole process of planning, researching, writing and repeating has sure been a significant one for me in many ways. As such, it did not take over only my daily life, but also made those around me go through the sometimes-endless rambling and speculation. Thanks for the support and for the much-needed breaks to family and friends – you know who you are. See you at the graduation.

Table of Contents

Acknowledgements	iii
1 Introduction.....	1
1.1 Research Question and Objectives	2
1.2 The Approach	3
1.3 Structure	5
2 Literature review	6
2.1 Collaborative Economy and Transactions in the 2010's	6
2.1.1 Collaborative Economy in the Digital Age.....	6
2.1.2 Collaborative Consumption	9
2.1.3 Towards Collaborative Disruption.....	12
2.2 Platforms as Mediators.....	17
2.2.1 The Evolution of Platform Research	17
2.2.2 Multisided Platforms.....	20
2.2.3 Network Effects and Platform Competition	23
2.2.4 Decisions of a Multisided Platform Entrepreneur	26
2.3 Platform Governance.....	31
2.3.1 Platform Governance Mechanisms.....	32
2.3.2 Theoretical Framework for Governing Collaborative Consumption.....	37
3 Methodology	40
3.1 Research Philosophy	40
3.2 Multiple-Case Study Research.....	41
3.3 Data Collection and Compilation Methods.....	43
3.3.1 Primary Data	44
3.3.2 Secondary Data	46
3.4 Data Analysis and Interpretation	47

4	Empirical Findings and Analysis.....	50
4.1	Sharetribe as the Platform Producer	50
4.2	Within-Case Analysis.....	51
4.2.1	Rental Marketplaces	54
4.2.2	Product Sales Marketplaces	57
4.2.3	Service Marketplaces.....	61
4.3	Cross-Case Analysis.....	64
4.3.1	Rental Marketplaces	64
4.3.2	Product Sales Marketplaces	68
4.3.3	Service Marketplaces.....	72
4.4	Observations from Empirical Analysis	75
4.4.1	Marketplaces with Reactive Development Approach	77
4.4.2	Marketplaces with Proactive Development Approach	78
4.4.3	Theoretical Framework for Governing Peer-to-peer Marketplaces.....	78
5	Conclusions.....	82
5.1	Main Findings and Theoretical Contribution	82
5.2	Managerial Implications.....	84
5.3	Limitations of the Study	85
5.4	Suggestions for Future Research	86
	References.....	88
	Appendix A: Interview Frame.....	97

List of Figures

Figure 1. Collaborative Economy Honeycomb 3.0 (Owyang, 2016)	9
Figure 2. The sharing economy niche and aligned regimes (Martin, 2016; adapted from Martin et al., 2015).....	14
Figure 3. The complete picture of collaborative economy (adapted from Botsman, 2013)	16
Figure 4. Interior platforms (Porch et al., 2015).....	18
Figure 5. Platform ecosystem (Porch et al., 2015).....	18
Figure 6. Platform network effects	24
Figure 7. Optimal growth of platform sides towards critical mass (Evans, 2009)	25
Figure 8. Multisided platform vs. alternative business models (Hagiu & Wright, 2015).....	28
Figure 9. Rental marketplaces by the number of members	54
Figure 10. Product sales marketplaces by the number of members.....	58
Figure 11. Service marketplaces by the number of members.....	61

List of Tables

Table 1: Critical principles behind collaborative consumption systems (Botsman & Rogers, 2010).....	10
Table 2: Collaborative economy sectors in Europe 2015 (PwC UK, 2016).....	13
Table 3: Platforms in economics and engineering design (Gawer, 2014)	19
Table 4: Typology of platforms (Gawer, 2009).....	22
Table 5: Summary of the definition of a multisided platform (adapted from Hagiu & Wright, 2011).....	27
Table 6: Multisided platform governance dimensions and mechanisms (Hein et al., 2016).....	33
Table 7: Multisided platform governance dimensions and mechanisms for collaborative consumption (adapted from Hein et al., 2016).....	39
Table 8: Sharetribe marketplace count by geographic location.....	52
Table 9: Summary of the secondary data analysis.....	53
Table 10: Summarized findings from the cross-case analysis of rental marketplaces	65
Table 11: Summarized findings from the cross-case analysis of product sales marketplace	69
Table 12: Summarized findings from the cross-case analysis of service marketplaces	73
Table 13: Summarized findings from multiple-case analysis.....	79
Table 14: Multisided platform governance dimensions and mechanisms for peer-to-peer online marketplaces (adapted from Hein et al., 2016)	81
Table 15: Systems of collaborative consumption (Botsman & Rogers, 2010).....	83

1 Introduction

The prominent success of companies like Uber and Airbnb has induced many entrepreneurs – established and wannabes alike – to discover the possibilities of platform business. In Europe alone this drive has been concretized in the 275 collaborative platform startups founded by 2016 (PwC, 2016). At the same time, roughly a fifth of EU-citizens say they have already used services provided by them (European Commission, 2016). While the abovementioned giants get to ride the hype around collaborative economy, their status as rebellious heroes has also sparked critique and concern from those prioritizing communal benefit over shareholder profits. On the regulative level, these concerns have been addressed mostly by attempting to retrofit 20th-century rules into the 21st-century business models – unsurprisingly leading to increased perplexity instead of clarity. It is not that the new economy would be the birthplace of problems or phenomena previously unheard. On the contrary, it merely shows old issues in new light, like the cases of Uber drivers not being able to accommodate the needs of disabled customers.

Corporate critics’ alternative solution has been to apply collaborative values and politics to organizational structures by creating democratic cooperatives i.e. platforms owned and ruled by their members. The rapid advances in the digitization of markets are likely to give rise to other multi-faceted platform settings as well (Hagiu, 2007b). This might all just be a prologue to their increasing importance in wide networks of systems – multisided platforms might even threaten internet as the ruling architecture for mediating communication (Mattila & Seppälä, 2016). However speedy and bumpy this development reveals to be, citizens, consumers and regulators are going to ponder questions similar to current and previous times (Gawer, 2009a; Scholz, 2016): how is the innovativeness of platforms supported without giving them excessive power? How are the tools of future work governed, and how do we ensure they function in the best possible way?

So, tomorrow’s labor market being a result of choices made today, research-based, informed design is needed to steer the ride and avoid the ugliest crashes. Since a pioneering paper by Jean-Charles Rochet and Jean Tirole in 2003, hundreds of academics have produced information by putting their minds into the distinctive characteristics of multisided platforms (Evans & Schmalensee, 2016). The enthusiasm for platforms has even lead economics researchers to find platforms almost everywhere from shopping malls to credit cards and the human genome database (Cusumano, 2012). At the moment, we know that the driving forces

behind the rise of platforms are the ones also spurring the megatrend of digitalization: decreasing computer processing and storage prices; cheaper, faster and widely spread communication connections; and software platform technologies (Evans & Schmalensee, 2007). Yet, despite all the efforts, platform research still today lacks common fundamental definitions and further empirical views. Martin (2016) notes that the same insufficiency is present in the field of collaborative consumption, calling especially for empirical research on the various forms of collaborative economy. Based on the combined insights derived from both literature streams, I aim to address these shortages by an empirical exploration on collaborative marketplaces.

Besides academic discourse, this thesis also aims to contribute to entrepreneurial decision-making processes in a more mundane level. In fact, multisided business models have proven to be among the toughest ones to get right (Evans, 2009; Evans & Schmalensee, 2016). This is where my personal motivation stems from: by shedding light on the current practices of peer-to-peer platform entrepreneurs I hope to guide those looking for suitable and sustainable combinations of governance mechanisms. In addition, the research is part of a strategic research opening of Tekes called *The Naked Approach – Nordic perspective to gadget-free hyperconnected environments*, which aims to direct the paradigm shift to user-centric hyperconnected environments by utilizing Finnish excellence in design and ICT. My work has been done as a commission for think tank Demos Helsinki, where I interned during spring 2016. In addition to Demos Helsinki, The Naked Approach has participants from VTT, Tampere University of Technology, Aalto University, the University of Lapland, and the University of Oulu. As one of the opening’s subprojects, my aim is to deepen the research related to digital platforms and their role for value creation and interaction mediation. I search for platform governance mechanisms in the context of collaborative consumption, hence also contributing to the abovementioned themes of future labor and regulation.

1.1 Research Question and Objectives

The research question of this thesis is

How do platform entrepreneurs govern peer-to-peer marketplaces?

As mentioned, it brings together two different streams of theory. On one hand, the question is rooted in an area known as collaborative economy, which serves as a context for peer-to-peer transactions and marketplaces. On the other hand, existing knowledge on platform characteristics is needed in order to fully understand the nature of these strategic decisions.

The question is explored in practice through a comparative cross-case analysis on the governance decisions of six peer-to-peer marketplace entrepreneurs.

As the two research areas are not only quite young, but also swift to reflect the development of ICT, there are identifiable knowledge gaps in both of them. To start with, neither of them features widely accepted definitions of core terms and their borderlines. This is addressed by the first research objective, which is *to map different definitions and theories in the two research areas*. This is done by reviewing previous and recent literature, and critically examining the concepts and approaches encountered.

Second, previous research has focused on rather narrow areas and topics. Collaborative consumption and peer-to-peer markets have mostly been examined from the viewpoint of consumers, their motives and perceived trust. And while platforms have certainly received remarkable interest during the last decade, have researchers' efforts largely centered on modeling pricing and competition between them. Even though platform governance, i.e. the means and mechanisms of steering, controlling, and managing a platform, has been acknowledged as important, we have not yet seen that many attempts to explain them at a more concrete level of entrepreneurial decisions and actions. This lead to my second research objective: *to identify a theoretically justified approach for studying the governance mechanisms of collaborative peer-to-peer consumption*. This contextual framework is chosen by evaluating and comparing relevant theories found among the literature streams.

Besides contributing to the existing knowledge, the first two research objectives also lay the groundwork for the third one: *to explore the governance mechanisms of peer-to-peer platforms in real life situations*. This can be accomplished by applying the contextual framework in a multiple-case study. Overall, when achieved, all three objectives together help addressing the research question of the thesis, and so enrich the discussion on platform governance and collaborative consumption.

1.2 The Approach

The focus of the research is on development paths, trends, different forms, embodiments, and practical key characteristics of collaborative online platforms. The study is strongly connected to current digital technologies, infrastructures and discourses, and I acknowledge the risk of it becoming irrelevant as the pace of development in the field is able to leap forward almost unexpectedly. The troubling contradiction between these advances and the

structured and hierarchical evolution of regulation will also be addressed throughout different parts of the thesis.

Theoretically, the topic is approached from two directions. First, contextual insights are provided by studying collaborative consumption as the trending form of transactions in 2010's. Second, the distinctive characteristics of multisided platforms are examined from an entrepreneurial point of view, focusing on economics literature. Although the interaction between the context and the platforms plays a focal role for a case study research, the main emphasis of the work is on understanding the decision-making on multisided platforms. A governance mechanism framework formed in earlier research is utilized in the empirical work, yet due to the exploratory nature of the thesis, the cases are studied with the aim to explore new knowledge – not to test existing theory.

As defined by Yin (2009), a case study researcher needs to design their work around five essential components. These include the study's questions, its propositions or purpose, unit(s) of analysis, analytic techniques, and criteria for interpreting the findings. I address the first two in the preceding section 1.1 by presenting the research question and objectives and by reviewing the motivations for the study. Unit of analysis – the decisions of platform entrepreneurs – are discussed in detail in section 3.2 about multiple-case study research methods. Respectively, analytic techniques are presented in section 3.4. Finally, chapter 5 includes the interpretation of the findings alongside the evaluation of the study's success and limitations. While discussing the research design, it needs to be highlighted that its components have been revisited and refined multiple times during the process; this is characteristic to case studies with discoveries arising from data collection.

The research is of interest to anyone working within close proximity to or under the influence of multisided platforms. Due to its focus on practical governance decisions, the study is conducted and reported with especially two groups of audience in mind: platform entrepreneurs and their organizational stakeholders. However, I wish to offer new insights and viewpoints also to anyone interested in platform dynamics, peer-to-peer marketplaces, or other forms of collaborative consumption. The empirical part also serves as a glimpse of the current variety of peer-to-peer marketplaces on a global level.

I discuss the scope and the limitations of my research in depth in the concluding chapter of the thesis. Yet, a brief summary of the outlines is offered here to guide the reader and to help them follow my reasoning. First, the research is conducted among the customers

of marketplace platform provider Sharetribe. The selection of case organizations is based on their level of activity and viability in order to enhance the possibilities of gaining insights on various decision-making situations. The interviewees come from four different countries, reflecting the global nature of platform business. However, broad generalizations cannot be drawn, as the “sample” of a multiple-case study is not even aiming to be a statistically relevant one, but has been chosen on theoretical grounds. I consciously abandoned some research streams to avoid exceeding the limited scope of a master’s thesis. These include the behavioral view of consumers; engineering view of platform research; and dynamics of platform pricing and subsidizing. While all these would have undoubtedly offered chances for valuable comparisons and interesting side paths, it would have risked the quality of research by making the process too heavy and complicated.

1.3 Structure

The thesis includes five main chapters: introduction, literature review, methodology, empirical findings and analysis, and conclusions. The chapters comprise of a varying amount of sections and subsections, and their contents are introduced in the beginning of each chapter. This is to help the reader capture a coherent view of the topics covered, spot the most essential key points if only flicking through, and – most importantly – follow my reasoning.

The first chapter introduces the topic by describing both the academic and my personal motivation to exploring it. By listing and explaining the research question and objectives, it points out the theoretical knowledge gaps and how the multiple-case study is related to them. Also the approach – i.e. methodology, scope and viewpoint of the thesis are briefly reviewed here. Second chapter presents the relevant theories and results from two areas of economics literature: collaborative economy and platforms. The temporal and topical development of earlier research is viewed critically to justify and describe the choices for my own approach. The two streams are tied together in the concluding section of the chapter, which summarizes the overall theoretical context of the thesis. Chapter 3, methodology, describes the empirical data and material used for the research. In it, I present the data collection and compilation methods as well as the performed analyses in detail. Case descriptions and the empirical findings with relevant comparisons and summaries are reported in chapter 4. Finally, chapter 5 summarizes the research, and illustrates the theoretical and managerial implications as well as the limitations of it. Guidelines and concrete suggestions for future research conclude the final chapter.

2 Literature review

The literature review summarizes existing knowledge on collaborative consumption and multisided platforms. It presents relevant theories, identified research gaps and concludes with a contextual framework that is used in the empirical part of the thesis. Besides summarizing essential knowledge and the theoretical discussions behind it, the review has another fundamental purpose: to clarify focal definitions by pointing out connections, contradictions, and unmapped areas. The need for this will become clear through the following sections, yet it can be incisively summarized in the words of collaborative economy contributor Rachel Botsman: “Terms can become hard to define when they become too big. By too big, I do not mean in terms of impact or scale. -- The more inaccurately the term is applied the more its value is questioned, and eventually the flame of meaning behind an important concept burns out.” (2015, para. 1).

2.1 Collaborative Economy and Transactions in the 2010’s

Sharing economy, collaborative consumption and peer economy all represent the jumble of terms used for labelling various phenomena of 2010s’ from open data and consumer lifestyles to the business models of Uber and Airbnb. Despite academics and journalists having acknowledged the lack of clear definitions (e.g. Koopman, Mitchell, & Thierer, 2015; Roberts, 2015), and made efforts to address it (e.g. Bardhi & Eckhardt, 2012; Botsman, 2013), there is no consensus on how to categorize and characterize these concepts. The following subsections start with a brief review of the relevant research on the field, and continue by further defining the concept of collaborative consumption. The first part of the literature review is concluded with a summarized overview of collaborative economy as the context for peer-to-peer transactions in 2010s’.

2.1.1 Collaborative Economy in the Digital Age

Sharing privately owned goods with family or friends is in no way a new form of behavior, and notions of collaborative consumption in literature can be traced back to the article by Felson and Spaeth in 1978. However, as a phenomenon of the modern digital sphere, the topic has been approached by academics starting from the pioneering work by Belk (2007; 2010), which frames the obstacles and incentives of sharing from the viewpoint of consumer behavior. Belk’s definitions of sharing as “the act and process of distributing what is ours to others for their use” (2007, p. 127) and as communal and nonreciprocal acts of joint rather

than transferred ownership (2010) have been widely adopted – yet also criticized (e.g. by Arnould & Rose, 2016). The problematic nature of defining sharing is well highlighted in an expression by Albinsson and Perera (2012), who describe it to occur in multiple contexts, for multiple reasons, and with multiple outcomes (p. 306). As a result, sharing economy has been approached – besides the abovementioned behavioral view – for example through its benefits, business models as well as market structures (Botsman, 2015).

Regardless of the lens applied, researchers seem to agree that the recent development in ICT has been the one true enabler for sharing models (e.g. Bucher, Fieseler, & Lutz, 2016; John, 2013; Matzler, Veider, & Kathan, 2015). This has led for example Hamari, Sjöklint and Ukkonen (2015) to view collaborative consumption “mainly as a technological phenomenon, as opposed to e.g. the perspective of an emerging consumer culture” (p. 2049). The same approach is applied in this thesis, building towards the entrepreneur-centered theoretical context for online platform governance. More on consumer motives and customer adaption can be read for example in the works of Bucher et al. (2016), or Möhlmann (2015); and as for the object-centered view, for example in Wittel (2011).

Unsurprisingly, the mutual and seemingly tight relation of sharing and collaborative consumption is presented in numerous different ways in literature. Overall, the discussion seems to culminate on the concept of ownership and whether collaborative consumption involves it being transferred or merely accessed over. Botsman and Rogers (2010) define collaborative consumption as a socioeconomic model in which traditional market behaviors are redefined through technology: it includes internet-enabled renting, lending, swapping, sharing, bartering, and gifting. Belk (2014), on the other hand, sees this as a miss-specification resulting in too broad a concept. In his view, actions of marketplace exchange, sharing, gift giving, and collaborative consumption ought to be distinguished from each other. Belk’s definition requires that either non-monetary or monetary compensation must occur in order to label a transfer of ownership as collaborative consumption. The concept of access-based consumption by Bardhi and Eckhardt (2012) is even more restricted, only including actions that do not result in any kind of transfer of ownership – be it compensated or not.

For the exploratory purposes of this thesis, I have chosen to follow the less-restricted conceptualization by Botsman and Rogers (2010), reviewed in detail in the following subsection 2.1.2. The choice is supported by the study of Hamari et al. (2015), in which mapping of 254 peer-to-peer online platforms revealed significant (and also overlapping)

occurrences in both categories of exchange: access over ownership and transfer of ownership. Both of the categories are well represented also in the market map gathered by the collaborative economy expert Jeremiah Owyang (2016). The framework consists of 280 international sharing economy startups analyzed and handpicked from among the total of 460, and organized into a honeycomb (Figure 1). Despite being neither an exhaustive list of companies in the field nor a presentation of comparable categories of collaborative economy, the map presents in an informative manner the industries and categories into which collaborative economy has expanded. For closer familiarization, a list of and links to the included organizations can be found on Owyang's blog, alongside with the earlier versions of the honeycomb starting with mere six industries in May 2014.

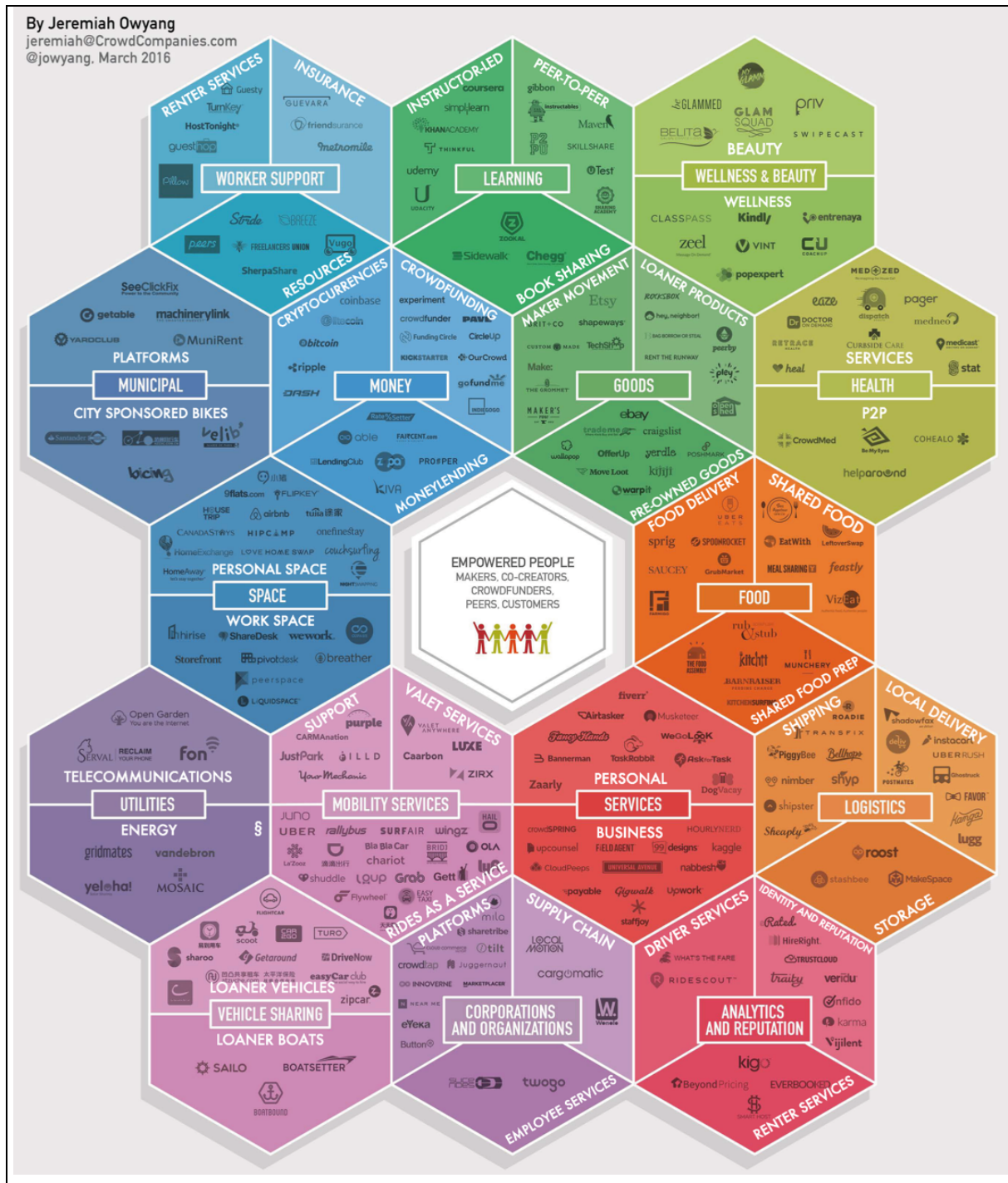


Figure 1. Collaborative Economy Honeycomb 3.0 (Owyang, 2016)

2.1.2 Collaborative Consumption

As mentioned in the previous subsection, this thesis follows the definition introduced in the accredited book by Botsman and Rogers (2010): collaborative consumption means technology-enabled actions of renting, lending, swapping, sharing, bartering, and gifting. The authors also present that all forms of collaborative consumption can be organized into three systems: product service systems, redistribution markets, and collaborative lifestyles. I

introduce the qualities of these systems below, and return to them again when formulating an environmental context for platform governance.

Underlying the three collaborative consumption systems Botsman and Rogers recognize four critical and equally important principles (Table 1). The first, critical mass, is in their words “the existence of enough momentum in a system to make it become self-sustaining” (p. 75). Critical mass secures enough choice for users and provides social proof for late adopters. The second principle, idling capacity, is about redistributing un- and underused belongings (e.g. a ladder or a car), intangibles (e.g. space or skills), and commodities (like electricity) for those in need. The third principle of believing in the commons refers to expanding individual value by contributing to communal interests: to “give to get” (p. 90)¹. It can be widely applied to many things that are public or shared: roads, wildlife, creative content online – even the internet itself. Lastly, the fourth principle is trust between strangers. It is created and sustained through decentralized and transparent communities, resulting in reasonable and self-governed use of those shared resources.

Table 1: Critical principles behind collaborative consumption systems (Botsman & Rogers, 2010)

Critical mass	Idling capacity	Belief in the commons	Trust between strangers
the large enough number of users that keeps the system running	Redistribution of idle resources for those in need of them	Individual value can be increased by communal contributions	Self-governance in decentralized and transparent communities

Product Service Systems

According to Botsman and Rogers, consumers face the benefits of dematerialization now that status, group affiliation, and belonging can be shown without actually owning CDs to listen to music; DVDs to watch a movie; or a car to get from a place to another. The value of an

¹ Increasing individual value through communal contributions is closely related to the concept of network effects explained in subsection 2.2.3.

item can be now delivered without ownership. The authors have distinguished two categories among product service systems: usage and extended life. The first comprises of models where a product that either has limited use or involves high investment is owned by a company or an individual, and its benefits are being shared to many others through a service. In the extended-life model extra value is created not through sharing but servicing highly specialized or costly products to lengthen their life cycle and reduce additional consumption.

Technology-enabled product service systems help produce very detailed knowledge of users, as exemplified by the personalized recommendations in Netflix. Besides personalized user experience, a successfully built product service system differs from non-collaborative models of consumption by offering improved access, convenience, cost-efficiency, and trust. The prerequisites for these benefits to be realized are covered from the platform entrepreneurs' view in sections 2.2 and 2.3. Empirical results on product service systems can be found in the works of Bardhi and Eckhardt (2012; about the car sharing service Zipcar), and Piscicelli, Cooper and Fisher (2015; about a UK-based product-service system Ecomodo).

Redistribution Markets

Before the recent developments in ICT, getting unwanted goods in reuse was seldom worthwhile because of the high transaction costs it involved. Now, various social media channels and other online communities connect people who do not necessarily share the same circle of friends but instead the mutual goal of extending the life span of goods. Botsman and Rogers explain these systems to be fueled by a “motivational currency” (p. 133) that does not always presume any immediate reward (e.g. in the free gifting site Freecycle), or a combination of various motivational factors combined with the use of made-up or real currencies (e.g. eBay and craigslist). Non-monetary motivation for circulating goods may also arise from the environmental benefits of less used resources, emission and waste, or the trust in the kind of reciprocity where helping someone else results in receiving help yourself some later day. Redistribution markets have been studied empirically for example by Albinsson and Perera (2012), who explored non-monetary-based sharing events as a form of alternative consumption.

Collaborative Lifestyles

Whereas redistributing physical items through collaborative marketplaces requires local transactions, exchange of less tangible assets like time, skills, money, and space can happen

between any internet-connected locations worldwide. Communities of likeminded people coordinating human-to-human interactions are the heart of collaborative lifestyles (Albinsson & Perera, 2012), of which some have developed to global success stories like CouchSurfing and Airbnb. Like highlighted by Botsman and Rogers, the social aspect of collaborative lifestyles presumes higher degree of trust than product service systems or redistribution markets for any interactions to happen.

The consequence of utilizing technology and improved communications for collaborative lifestyles is the abovementioned expansion from local to global. As noted already by Belk (2007), the acts of sharing and collaborative behavior that used to occur mostly within families and circles of close friends are now conducted between strangers. This is supported by various trust-enhancing mechanisms built in the collaborative marketplaces and platforms and covered in more detail in subsection 2.2.5 about platform governance mechanisms. Besides built-up mechanisms, trust and togetherness is strengthened through a mutual context or – as named by Botsman and Rogers – “an anchor of commonality” (p. 174). The feeling of fitting in and sharing a purpose encourages people to collaborate and to bond, and can be compared to the strength of an admired brand with appealing values. Empirical research on collaborative lifestyles has been done for example in the comparative frame analysis of time banking by Laamanen, Wahlen, & Campana (2015).

2.1.3 Towards Collaborative Disruption

Besides the collaborative consumption categorization by Botsman and Rogers, collaborative economy has also been approached sector-by-sector in recent studies. In addition to the detailed startup landscape created by Owyang (presented in subsection 2.1.1), a more general-level report by PwC UK (2016) contributes by presenting the revenues and transactions in the European market. Their work includes five key sectors: peer-to-peer accommodation, peer-to-peer transportation, on-demand household services, on-demand professional services, and collaborative finance. Table 2 below summarizes the key features and example organizations of the sectors, alongside the monetary values analyzed by the authors.

Table 2: Collaborative economy sectors in Europe 2015 (PwC UK, 2016)

Sector	Features	Examples	Revenue m€ (% of total)	Value of transactions m€ (% of total)
<i>Peer-to-peer accommodation</i>	Sharing access to space from sofas to entire houses	Airbnb HomeAway	1 150 (32)	15 100 (54)
<i>Peer-to-peer transportation</i>	Sharing a ride or a car (incl. parking space)	Uber Blablacar Zipcar	1 650 (47)	5 100 (18)
<i>On-demand household services</i>	Freelancers sharing access to supportive household tasks	Instacart TaskRabbit	450 (12)	1 950 (7)
<i>On-demand professional services</i>	Freelancers sharing access to supportive business skills	Upwork HolterWatkin	100 (2)	750 (3)
<i>Collaborative finance</i>	Individuals and businesses investing, lending and borrowing	Kickstarter LendingClub FundingCircle	250 (7)	5 200 (18)
Total			3 600 (100)	28 100 (100)

As the reported numbers show, revenues generated by collaborative economy sectors neared 4 billion euros in 2015, while transactions exceeded 28 billion. Both values have followed a strong growing trend since 2013 (more on this in PwC UK, 2016, p. 7). Despite past growth, there seems to be significant potential yet to be unleashed, as confirmed by Eurobarometer “The use of collaborative platforms” (European Commission, 2016), which mapped the awareness, use and views of collaborative platforms among EU citizens. It revealed that less than a fifth of respondents have used collaborative platforms, with the number being higher among the group of younger and more educated ones. From the respondents having visited collaborative platforms, a relatively good percentage of 32 have also provided services themselves: 9% once, 18% occasionally, and 5% regularly.

Consistent with the results of the reports mentioned, an analysis by Martin (2016) confirms the thought discussed also by Botsman and Rogers (2010): while collaborative consumption is often seen rooted in a critique of hyper-consumption, it does not indicate a shift towards anticonsumption or antibusiness but disrupts the established structures of consumption and peer-to-peer business. Based on his work on the online sharing economy discourse, Martin conceptualizes the field level of the sharing economy into four groups: resource circulation, accommodation, car and ride, and peer-to-peer employment. The groups

have diverse relationships with corresponding regimes; yet they share alignment with the ICT regime due to their nature as social and digital platforms (see Figure 2). The sharing economy niche actors and the regimes seem to share a single expectation: multiple regimes will be disrupted by the decentralization sparked by the niche.

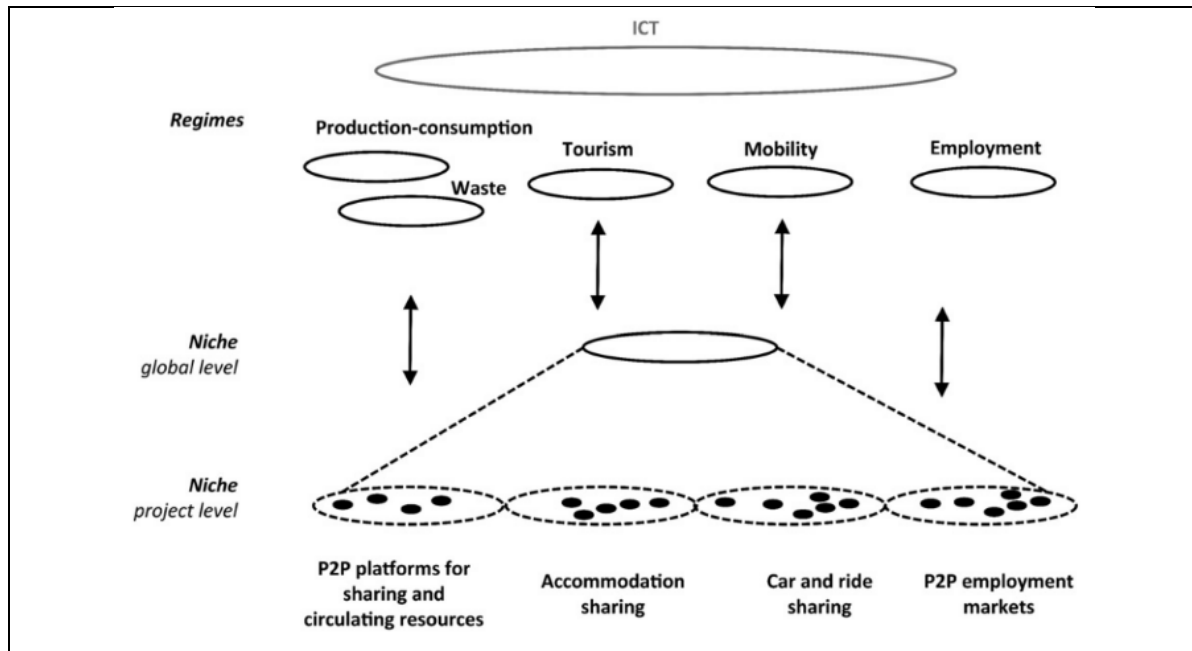


Figure 2. The sharing economy niche and aligned regimes (Martin, 2016; adapted from Martin et al., 2015)

Apart from the upcoming disruption, Martin notes that ICT industries, entrepreneurs, and activists seem to take advantage of very different framings of the sharing economy. Depending on whether the actors' interests lay in empowering or resisting the sharing economy niche, it is discussed as a more sustainable form of consumption or a reinforcement of the neoliberal paradigm. These contradictions have received publicity through the accusations against global corporate giants like Uber, Google, and Airbnb, resulting in intense conflicts and yet more criticism (see e.g. Pasquale & Vaidhyanathan, 2015).

Regardless of the result of these controversies, concerns about the policies and employee rights of corporates have become a persistent characteristic of the twenty-first century work discourse. Among the active discussants is scholar-activist Trebor Scholz, who identifies four approaches to the mentioned concerns (2016). The first two of them require dialogue with corporate managers and government, including the adoption of discretionary policies and obligatory regulation. The third approach is non-commercial peer production, and the fourth a democratic movement called platform cooperativism. The following paragraphs introduce shortly the three approaches applicable for compensated markets,

starting with platform cooperativism, and moving on to the regulatory issues of collaborative economy.

According to Scholz, the movement of platform cooperativism has two goals: communal ownership of platforms and their democratic governance (2016). Sutton, Johnson, and Gorenflo emphasize that without standards and transparency neither these goals nor fair and equal conditions for labor and digital production will be achieved (2016). Besides increasing how-to material online, numerous advocacy organizations have been established to support the cooperative movement in practice. The organizations provide chances for entrepreneurs to network worldwide, including the likes of OuiShare (originating in France), Shareable (USA), and Collaborative Consumption (Australia). Regardless of whether the currently dominant ownership model will be overtaken by cooperatives, the movement undoubtedly diversifies the discussion about collaborative economy, and can be of support for emerging platform entrepreneurs.

Facing both the criticized corporate giants and cooperative platforms, there are possible downsides to disrupting consumption too. An extensive list of these challenges by Owyang (2013) shows that while they vary greatly in depth and scope, the issues of legality and taxation get mentioned repeatedly. As individuals are staffing the roles that used to be fulfilled by businesses and their employees (Isaac, 2014), the inaptitude of current regulation is neither a total surprise nor an easy change to implement. Besides rapid legal updates (Feeney, 2015), suggested solutions include also deregulation (Bond, 2015; Koopman et al., 2015) and self-regulation (Sundararajan, 2012). Whether regulation will be able to catch the speed of development among collaborative consumption remains an uncertain yet not indifferent a step: it might even have a crucial role in changing the economical and institutional unattractiveness of ethical consumption, as proposed by Hamari et al. (2015). Regardless of being outside the scope of this thesis, the long-run effects on social justice, commoditization and global food security (as suggested by Belk, 2010) are and sure will be present in the discussions about collaborative economy.

The more concrete implications on peer-to-peer markets of 2010's can be derived from the contextual frame presented by Rachel Botsman (2013). Building on her initial work with Rogers, she has formed “the complete picture” of collaborative economy (see Figure 3). It illustrates an environment where, instead of centralized organizations and their employees, individuals and communities occupy the key roles for transactions. The environment is divided into four sectors of collaborative consumption, production, education, and finance, of

which the two first are shown as bases for the overlapping areas of sharing and peer economy. However, it needs to be highlighted, that this does not mean peer-to-peer transactions would not occur in the other sectors – indeed, personal or peer-to-peer banking and learning are core activities for several platforms (see e.g. Zopa, LendingClub, P2P University, and Skillshare).

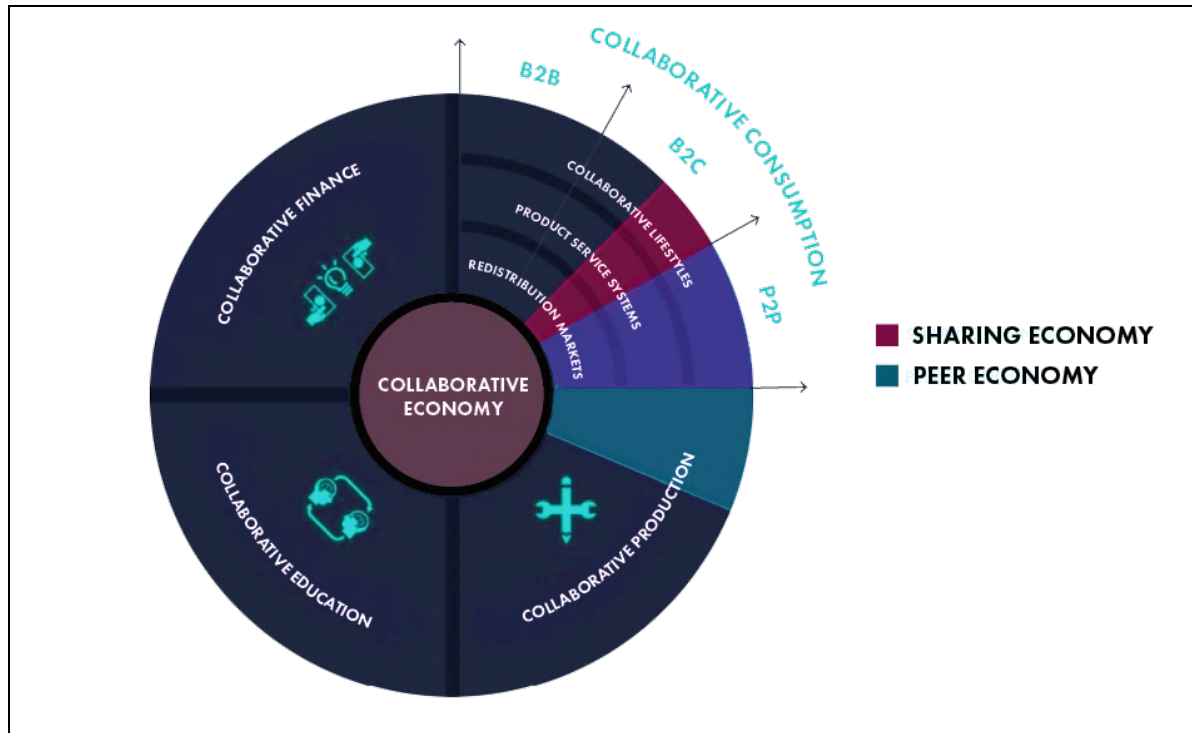


Figure 3. The complete picture of collaborative economy (simplified from Botsman, 2013)

The purple-colored slice of the collaborative consumption sector hosts peer-to-peer marketplaces for sharing underutilized assets. They can be further divided into the three subcategories of redistribution markets, product service systems, and collaborative lifestyles, as introduced in subsection 2.1.2. Together they form a contextual frame for collaborative peer-to-peer transactions in the 2010’s. As is apparent through the examples presented, these transactions are often performed on online marketplaces also known as multisided platforms. In the empirical part of this thesis I study how entrepreneurs govern these types of marketplaces in practice. First, in order to fully understand the dynamics of platform governance mechanisms and to identify a suitable theoretical framework for researching them, relevant literature on platforms is reviewed in the second part of chapter 2.

2.2 Platforms as Mediators

The development of platforms can be described through the history of modern business, reflecting changes in organizations and their boundaries (Porch, Timbrell, & Rosemann, 2015). The industrial firm, as Gawer (2009a) presents, gave birth to a significant and highly persistent division in expertise and knowledge: while engineers focused on creating products, business managers dealt with clients, transactions and markets - and both took the other's performance for granted. However, this separation expired as modern platform businesses emerged and reformed the rules of industries, markets, and products. This new setting, its emergence and characteristics are introduced in the next subsection, followed by discussions on multisided platforms, their qualities and decision-making. After building this basis for understanding platform dynamics, the literature review is concluded in section 2.3. It introduces the theoretical framework of platform governance chosen to be used in the empirical research, hence addressing the second research objective.

2.2.1 The Evolution of Platform Research

The evolution of platform research can be depicted through three overlapping theoretical paths. They have all in their own terms contributed to the evolving concept of a platform, hence resulting in varying - even inconsistent - uses and definitions of the term (Hagiu & Wright, 2015). Constantiou, Eaton and Tuunainen (2016), as well as Baldwin and Woodard (2009) depict these paths from the perspectives of product development, technology strategy and industrial economics.

First, within product development field platforms refer to a single firm's structure of assets (Figure 4), which it can efficiently use to develop a generation or family of products (often utilized e.g. in car manufacturing). These in-house product platforms are widely referred to as interior platforms, and they long represented the primary meaning for the term platform in literature (Porch et al., 2015).

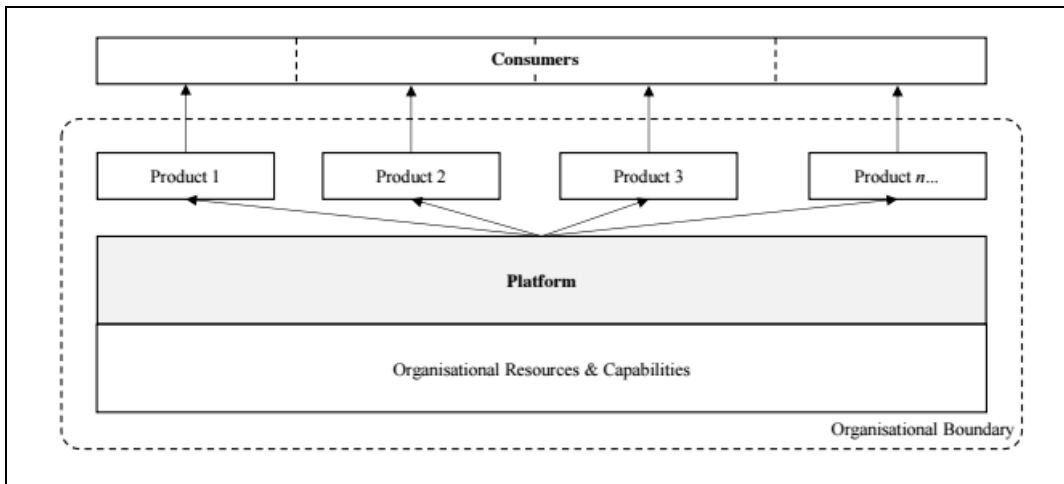


Figure 4. Interior platforms (Porch et al., 2015)

Second, among technology strategists platforms are understood to be ecosystemic foundations for complementary innovation. Industry level collaborations of firms share them (as in Figure 5), tying their chances of succeeding to depend on the success of the platform itself (e.g. Microsoft Windows operating system). Third, in industrial economics this ecosystemic view has been expanded through concepts like network externalities, subsidiaries and pricing, leading into a wide definition of platforms referring to products, services, and organizations as mediators of transactions between multiple agents (e.g. Airbnb, Facebook).

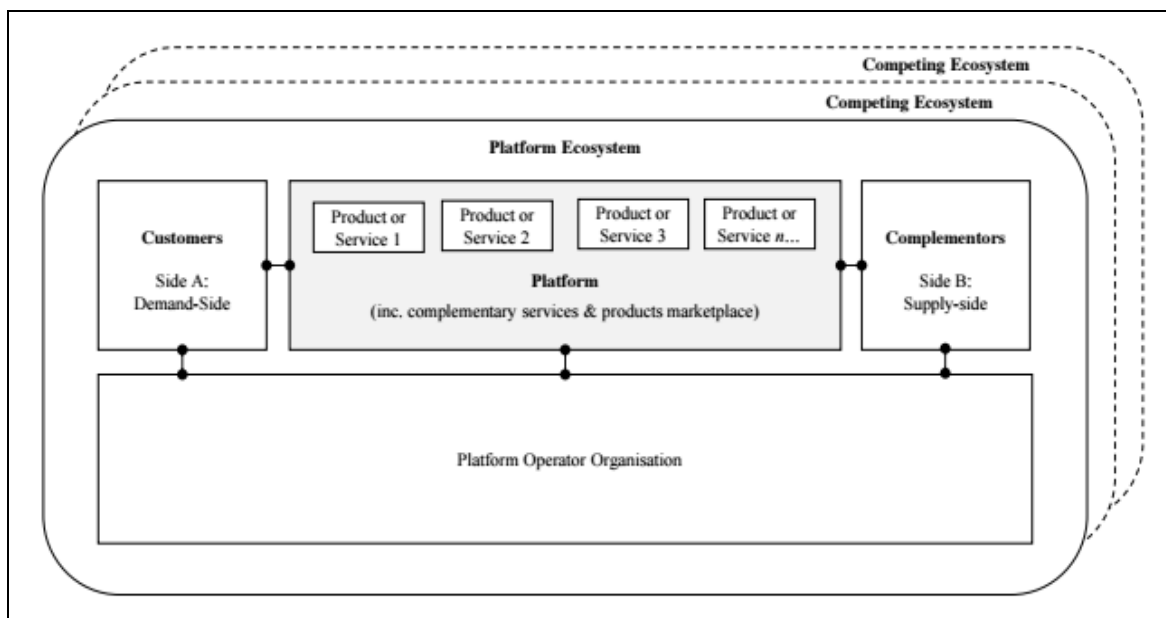


Figure 5. Platform ecosystem (Porch et al., 2015)

Even though these paths have been defined to comprise a somewhat miscellaneous set of things ranging from dating services to shopping malls and video game consoles, Baldwin and Woodard (2009) describe them sharing a common heritage in engineering design. From

this mutual background they conclude that from an architectural point of view all platforms are the same: modular systems made up of a reusable platform and its complements, interaction-mediating interfaces, and access rights. This description unquestionably helps to parallel the concepts of within and cross-firm platforms. However, drawing parallels between product platforms and mediator platforms appears slightly constrained and oversimplified – regardless of the two sharing some defining features.

Gawer’s (2014) view on the platform literature is slightly less generalized. Her study summarizes the evolutionary paths by dividing platform research into two separate perspectives: the economics view and the engineering design view (Table 3). Both of the views include concepts that are rarely separable in real business environments. This is taken into account in the author’s proposal for an integrative framework, which aims to bridge platform competition and platform innovation (a rather recent issue remarked also by Boudreau, 2010 and Eisenmann, Parker, & Van Alstyne, 2011).

Table 3: *Platforms in economics and engineering design (Gawer, 2014)*

Literature	Economics	Engineering design
<i>Conceptualization</i>	Platforms as markets	Platforms as technological architectures
<i>Perspective</i>	Demand	Supply
<i>Focus</i>	Competition	Innovation
<i>Value created through</i>	Economies of scope in demand	Economies of scope in supply and innovation
<i>Role</i>	Coordinating device among buyers	Coordinating device among innovators
<i>Empirical settings</i>	ICT	Manufacturing and ICT

Although building connections between the two views is unquestionably not just a fascinating but also a necessary step to be taken among further platform research, it is left for others to do. As the limited scope of a master’s thesis does not support the extensive and detailed groundwork needed for comparisons across the two views, it could, at worst, lead to defective settings and erroneous conclusions. Hence, acknowledging the focus set by my research topic – the governance of peer-to-peer online platforms – this study follows the boundaries of the economics literature and its assumptions, mostly excluding the intellectual traditions behind the engineering view.

The innovation-focused technological approach is however touched upon, as it is the starting point for the temporal and topical evolution of platform research: the term platform first became popular among studies about internal product development of a single company. It has often been discussed related to themes like product architecture, product modularity and mass customization; referring to a set of related yet differentiated products (more on these themes in e.g. Alsawalqah, Kang, & Lee, 2014; Krishnan & Gupta, 2001; Qu, Bin, Huang, & Yang, 2011; and Shibata & Kodama, 2015).

Later on, the concept of an industry level platform was developed alongside the aforementioned, describing product platforms expanded to serve the collaboration of multiple firms across a supply chain (e.g. in Brusoni & Prencipe, 2009; Huang, Zhang, & Liang, 2005; and Zirpoli & Caputo, 2002) as well as in ecosystems larger and looser than the mere supply chain (Boudreau, 2010; Boudreau & Lakhani, 2009; Ceccagnoli, Forman, Huang, & Wu, 2012; and Gawer, 2009a). In Gawer and Cusumano’s (2002) work, industry level platforms are described to differ from the single-firm in-house platforms in two particular ways. First, the value of an industry platform is often created through the complementary innovations of other firms and user communities. For this essential ecosystem to get formed, the platform must have open and accessible interfaces, which make adopting the platform technology easy for external innovators. Second, positive feedback loops – network effects – can exponentially increase the value of an industrial platform.

Both complementarities and network effects have had a fundamental role since the early research literature as they explain many of the qualities characteristic to platforms and platform markets (e.g. Chou & Shy, 1990; Jullien, 2001; Katz & Shapiro, 1985; Katz & Shapiro, 1994; Rohlfs, 1974). The constituent role of network effects for multisided businesses will be discussed in detail in the following subsections. First, however, the basic qualities of multisided platforms are introduced through relevant examples from the economics literature.

2.2.2 Multisided Platforms

As reiterated by Gawer (2014), the recent economics literature has conceptualized platforms as markets that facilitate exchange between two or more separate customer groups, for whom transacting in other means would be costlier. An equivalent definition has been used throughout the highly cited platform literature keystones by Armstrong (2006); Eisenmann, Parker and Van Alstyne (2006); and Rochet and Tirole (2003). Evans and Schmalensee

(2007) made an attempt to develop the somewhat passive concept of a facilitator further, and substitute it by defining platforms more dynamically as catalysts. Although their definition has not been adopted to common use, the authors summarize well the three activities that account for the lowered transaction costs of multisided platforms. First, customer communities are formed as they become attracted by a platform’s value proposition to mediate transactions. Second, to stimulate interactions between these communities, platforms provide information and search methods. Third, rules are applied to coordinate and govern these interactions.

Also Hagiu and Wright (2011, 2015) have made a substantial effort to end the absence of an agreed yet accurate definition of a multisided platform. They define outlines for the concept by taking a stand on some fundamental characteristics of platforms including network effects, value creation and customer interactions. The result is a comprehensive approach that adjusts not only to the current operational environment, but also to the continuous changes in it. Preferring the longevity and adaptability of their definition, I have chosen to build this thesis on their concept. However, before breaking down the definition detail by detail, it is reasonable to review briefly what is said about multisided platforms in the economics literature.

Besides conceptualizations, research on multisided platforms has focused quite narrowly on issues related to pricing and network effects (Boudreau & Hagiu, 2009). It is only the most recent academics – roughly during the current decade – that have started discussions on other fundamental platform characteristics. Gawer (2009b) presents this unbalance illustratively in her typology of platforms (Table 4). Platform design rules, an area of shallow interest in the past, has a focal role for this research and is covered while introducing the decisions confronted by platform entrepreneurs in subsection 2.2.4.

Table 4: Typology of platforms (Gawer, 2009)

Type of platform	Internal platforms	Supply chain platforms	Industry platforms	Multi-sided markets or platforms
<i>Context</i>	Within the firm	Within a supply chain	Industry ecosystems	Industries
<i>Number of participants</i>	One firm	Several firms within a supply chain	Several firms who don't necessarily buy or sell from each other, but whose products/services must function together as part of a technological system	Several firms (or groups of firms) who transact with each other, through the intermediary of a double-sided (or multi-sided) market
<i>Platform objectives</i>	<p>To increase the productive efficiency of the firm</p> <p>To produce variety at lower costs</p> <p>To achieve mass customization</p> <p>To enhance flexibility in the design of new products</p>	<p>To increase productive efficiency along the supply chain</p> <p>To produce variety at lower costs</p> <p>To achieve mass customization</p> <p>To enhance flexibility in the design of new products</p>	<p>For the platform owner: to stimulate and capture value from external, complementary innovation</p> <p>For complementors: to benefit from the installed base of the platform, and from direct and indirect network effects complementary innovation</p>	To facilitate the transactions between different sides of the platform or market
<i>Design rules</i>	<p>Reuse of modular components</p> <p>Stability of system architecture</p>	<p>Reuse of modular components</p> <p>Stability of system architecture</p>	Interfaces around the platform allow plugging-in of, and innovation on, complements	Not usually addressed in economics literature
<i>End-use of the final product, service or technology</i>	Is known in advance and defined by the firm	<p>End-use is defined by the assembler/integrator of the supply chain</p> <p>End-use is known in advance</p>	<p>Variety of end-uses</p> <p>End-uses may not be known in advance</p>	Not usually a variable of interest in the economics literature
<i>Key questions asked in the literature</i>	How to reconcile low cost and variety within a firm?	How to reconcile low cost and variety within a supply chain?	<p>How can a platform owner stimulate complementary innovation while taking advantage of it?</p> <p>How can incentives to create complementary innovation be embedded in the design of the platform?</p>	How to price the access to the double-sided (or multi-sided) market to the distinct group of users, to ensure their adoption of the market as an intermediary?

The following subsections introduce relevant parts of earlier research on multisided platform characteristics and qualities affecting their business models and the strategic decisions made by platform entrepreneurs. The review is not exhaustive, yet it briefly covers the essence of network effects, platform competition and multisided platform design, building a basis for the platform governance mechanisms introduced in section 2.3.

2.2.3 Network Effects and Platform Competition

As mentioned in the previous subsection, the objective of a multisided platform is to lessen difficulties of transactions between two or more distinct customer groups. Not only are information and transaction costs lower, but also free-riding is less of an issue under the governance of a multisided platform (Evans, 2003). These lower costs of various types are examples of network externalities. Network externalities denote the overall effects which result from actions done in a network, but which are not internalized i.e. acknowledged or noticed as part of the overall value for the network (Katz & Shapiro, 1985; Liebowitz & Margolis, 1998). Externalities may arise from the mere passive membership in a network, or from actions – like consumption – in situations where membership is not restricted in any way (Rochet & Tirole, 2006). A widely used example of externalities is the situation where a single consumer does not take into account how they affect the overall benefit of all telephone owners by joining the network by purchasing a telephone themselves.

A definition first used by Liebowitz and Margolis (1994) and adopted by Katz and Shapiro (1994) distinguishes network externalities from network effects. According to them, network externalities represent market failures, and it is only after they have been internalized that they can be called network effects. However, in platform studies the two terms have often been used interchangeably (e.g. in Shapiro & Varian, 1999). Recognizing the difference, and for clarity and consistency, I use the term network effect in the thesis unless some specific need to emphasize a non-internalized nature of an effect occurs. In previous research, network effects have been in the focus of many economists (e.g. Armstrong, 2006; Chou & Shy, 1990; Katz & Shapiro, 1994; Parker & Van Alstyne, 2005). While the majority of these theoretical discussions are beyond the depth of this thesis, do two-sided network effects have such fundamental impacts on multisided platform operations that they cannot be left totally untouched.

A two-sided network effect is created when a change in the number of platform members on either side of a platform affects members on the same or the other side of the

platform. In the case of an online service platform, for example Airbnb, this means that an increase or a decrease in the number of apartment owners would have either similar or opposing effect on the number of other owners or people looking for accommodation. These can be described respectively as same-side or cross-side effects, which can be either positive or negative of nature. (Eisenmann et al., 2006.) The effects are visualized in Figure 6. A situation where cross-side effects occur in both directions while one side's decision to join depends on the number of members joined on the other side is called indirect network effect (Hagiu & Wright, 2011).

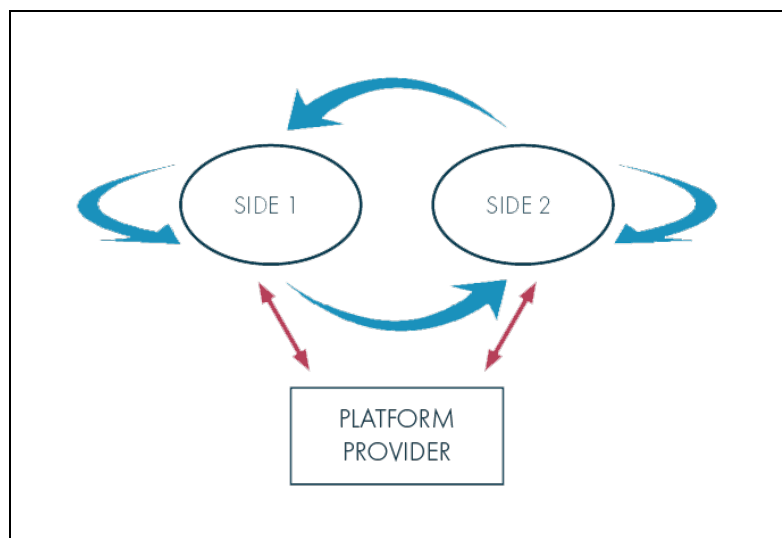


Figure 6. Platform network effects

As framed by Gawer (2014), the two-sided network effects that feature multisided platforms reveal the interdependency of different platform sides, and ignite a feedback loop of member adoption. This means that the more members a multisided platform can attract on one side, the more new members will follow on the same or the opposite sides - depending on the nature of network effects. This depicted growth has been described to lead to demand-side economies of scale (Katz & Shapiro, 1985; Parker & Van Alstyne, 2005; Shapiro & Varian, 1999) and even scope (Gawer, 2014), which at best strengthen the platform's position in the market by raising the barrier to entry (Hagiu, 2014). However, at worst they set a serious challenge for the platform: how to find those first participants if they are only willing to follow others.

The phenomenon, later called a chicken-and-egg problem by many (e.g. Caillaud & Jullien, 2003; Gawer & Cusumano, 2002), was already acknowledged by Rohlfs (1974): a low number of service users makes it unattractive to other potential members of the network. Evans (2003) lists some solutions for this: offering the service for lowered costs, for free or

even paying the first side for taking it. The strategy of extracting profits from some side(s) while lowering the costs of another has been called divide-and-conquer by Caillaud and Jullien (2003). Besides figuring out how to attract all relevant sides, a multisided platform needs to ensure a large enough number of side members for the market to sustain. According to Evans (2009), the problems of attracting critical mass and getting both sides on board – sometimes simultaneously – are crucial for the platform’s success, as imbalance between side adoption will lead to failure. Evans visualizes the optimal growth path towards critical mass by the triangle O-C’-C’’ in Figure 7.

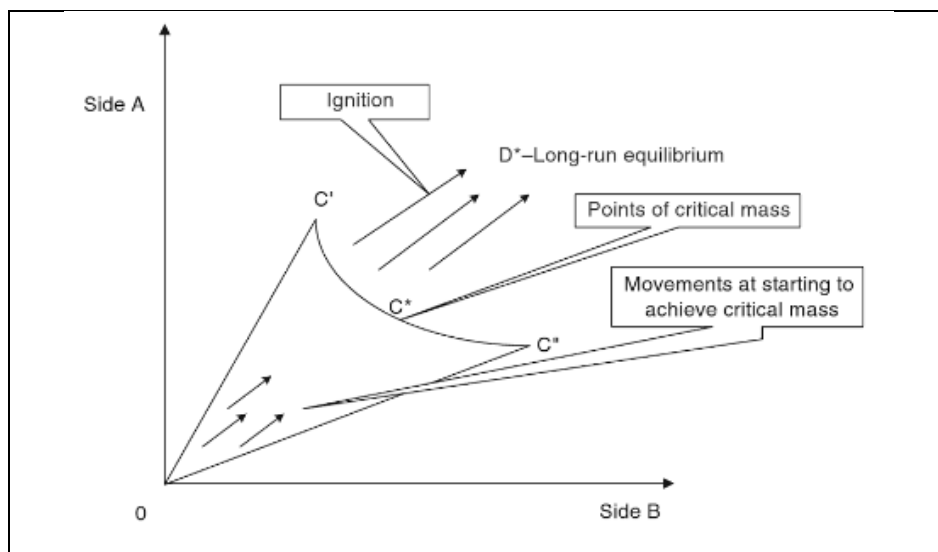


Figure 7. Optimal growth of platform sides towards critical mass (Evans, 2009)

The challenge of a platform to be adopted by multiple sides is what drives competition between multisided platforms (Gawer, 2014). This typical characteristic of platform competition is affected by a phenomenon called homing: it describes the number of platforms the majority of members on one side affiliate with. Dedication to just one platform is called mono- or single-homing (Armstrong, 2006), and it may be due, for example, to efficiency reasons (Evans, 2003). Correspondingly, when platform members on one side are attracted to commit to more than one separate platform, they are multi-homing.

Shapiro and Varian (1999) claim the positive feedback loops to produce self-fulfilling consumer expectations, eventually resulting in the dominance of a single platform. Evans (2003) argues against this conclusion, stating that multi-homing enables the survival of overlapping competing platforms. Both of these claims exemplify for their part the point made by Armstrong (2006): homing is a phenomenon, whose impact on multisided platform should not be overlooked. An extreme yet not totally uncommon example of this significance

is a winner-take-all situation, where a single platform prevails among one side similarly to the case of natural monopoly.

In addition to the research cited above, more detailed material on the dynamics of multisided platform competition can be found in the keystone article by Rochet and Tirole (2003), as well as in the recent works by Hagiu and Spulber (2013), and Zhu and Iansiti (2012). In the following subsection, I will cover the set of strategic decisions a multisided platform entrepreneur needs to make in order to clear the challenges imposed by network effects and distinctive competition dynamics.

2.2.4 Decisions of a Multisided Platform Entrepreneur

The differences between single-sided and multi-sided markets that fundamentally shape platform competition also affect the internal dynamics and the decision making of a multisided platform. Yet entrepreneurs seem to ignore these differences by making inappropriate strategic moves (Eisenmann et al., 2006) often resulting in business failure (Evans & Schmalensee, 2007). In this subsection I explore the complex choices a platform decision maker needs to address. However, to provide clarity and framing for the review and the later parts alike, I will start by introducing the exact definition of a multisided platform used in this thesis.

Multisided Platforms as Interaction Enablers

To sharpen the commonly used yet somewhat blurred variations of the multisided platform definition, Hagiu and Wright (2011, p. 2) have proposed the following formatting:

“Specifically, we define a MSP [multisided platform] to be an organization that creates value primarily by enabling direct interactions between two (or more) distinct types of affiliated customers.”

In their definition, Hagiu and Wright (2011, 2015) abandon earlier researchers’ (including themselves, e.g. Hagiu, 2007b) requirements for cross group and indirect network effects as over- and under-inclusive, respectively. The verdict of over-inclusiveness is also cast on the theory by Rochet and Tirole (2006), according to which multisidedness depends on pricing structures across platform sides. Instead, they emphasize the role of direct interactions, highlighting that either of the participating sides must retain control rights over the key terms of mutual communication, exchange or consumption. These building blocks of a multisided

platform are summarized in Table 5, followed by a term-by-term analysis and a closer look on what they require from platform decision-makers.

Table 5: Summary of the definition of a multisided platform (adapted from Hagiu & Wright, 2011)

Term	Prerequisites
<i>An organization</i>	Understood loosely; does not have to follow organizational boundaries
<i>Primary source of value</i>	Direct interactions must be not only present, but also significant for value creation
<i>Direct interactions</i>	The platform does not take over the contractual or commercial relationship between different sides
<i>Enabling</i>	Communication, exchange and/or consumption happens on or through the platform
<i>Affiliation</i>	Conscious, platform-specific and necessary decisions from all sides, often involving a fixed investment
<i>Customer types</i>	Distinct at the point of interaction

First, the reference to “an organization” is understood rather widely: Hagiu and Wright list not only firms, but also parts of organizations, groups of companies, not-for-profit organizations and cities as applicable for being a multisided platform. Second, the action of enabling direct interactions between customers must have a primary role in the organization’s value creation. This role also defines whether the platform decides to position itself as a vertically integrated firm, a reseller, or a multisided platform (see Figure 8). By describing this decision to be made on a spectrum, Hagiu and Wright highlight its nature: besides being a subject to change, is the position anything but black-and-white.

Third, while allowing direct actions of communication, exchange or consumption, multisided platforms need to let their customers control that activity or the goods and services in question. As an example of interaction not fitting in the definition the authors use cable TV: a cable company designs and prices the bundled content of channels sold to customers, and therefore controls the commercial relationship. By ruling out these type of indirect interactions, the definition excludes a great number of intermediaries operating as resellers. Fourth, the allowed i.e. direct interactions must happen either on or through the platform in order for it to be labelled as an enabler. For this, the cross-sides interaction needs to be treated as three consecutive components: communication, exchange and consumption. The components are seldom enabled by a single platform, but the act of consumption is often

separate from the two preceding ones. Hence, it is adequate for the definition that only one type of these interactions is enabled by the platform.

The fifth requirement considers affiliation, meaning that all relevant members on different sides of the platform must have made a conscious decision to participate, often including a fixed investment to be made. This decision must be not only specific to the platform, but also necessary for the interaction to happen. Affiliation of members from all sides means ruling out also input suppliers from fitting in the definition: an overview of the differences in interactions between these four models is pictured in Figure 8. Lastly, sixth, the side members must be separable as of distinct types at the moment of interaction, not the moment when they decide to affiliate. This is an important factor of the interaction-oriented perspective of the definition, supporting a more flexible approach than the rather rigid ones built on network effects and pricing structures.

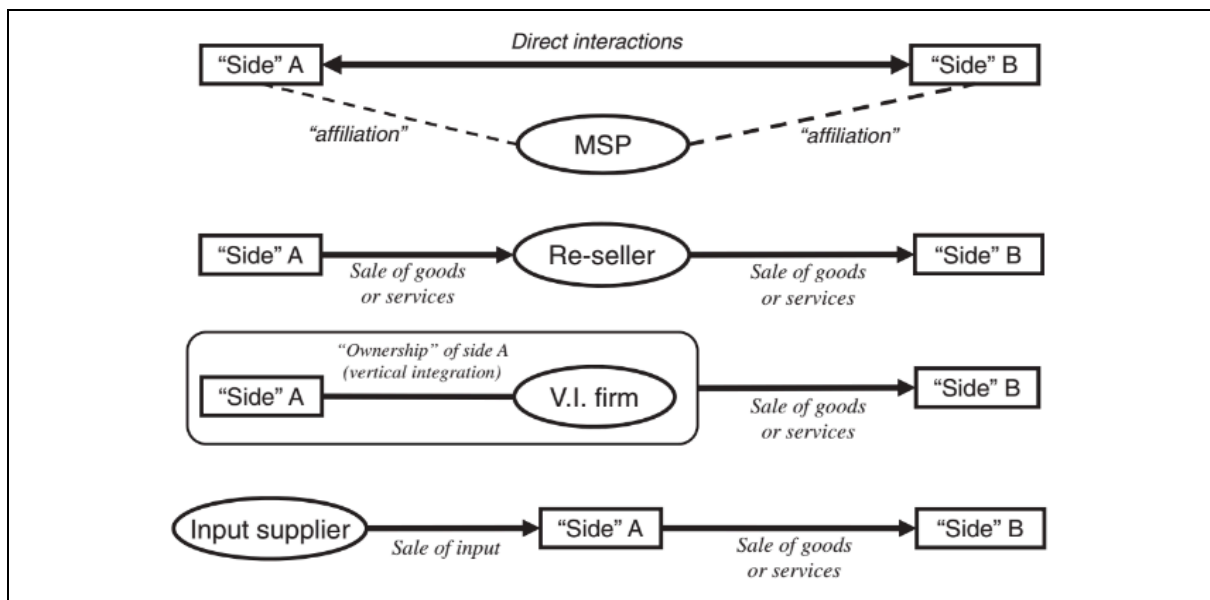


Figure 8. Multisided platform vs. alternative business models (Hagiu & Wright, 2015)

More detailed terms on how and why an intermediary decides to function as a multisided platform instead of an integrated firm, a reseller, or an input supplier can be read in the referred work by Hagiu and Wright (2011), as well as in their later pieces dedicated to modelling the choice and its key trade-offs (2013, 2015). The introduced definition sets borders for this research and the following parts of the thesis, starting with an overview of additional strategic decisions of platform entrepreneurs.

Strategic Platform Decisions

There are multiple mentions of essential strategic decisions in the platform literature, Hagiu (2014) presenting the most inclusive list of four types of decisions: number of platform sides, platform design, pricing structures, and governance rules. Rysman (2009) emphasizes the meaning of pricing and openness – i.e. the number of pursued sides and the compatibility with competitors – as essential for a potential platform to start off. Gawer (2014), on the other hand, states that from the economic perspective pricing is the sole most important decision there is to be made. Both these mentions represent parts of the abovementioned four-folded frame by Hagiu, and will be introduced respectively below.

When considering the number and the type of sides a platform wants to interact with, there are considerable differences between industries. Besides the traditional members of ‘buyers’ and ‘sellers’, for example local communities and developers of complementary services may come into question. Like in the cases of Microsoft Windows and Google Android, more sides can lead to greater benefits in cross-side network effects, scale and sources of revenue. However, growing the number of sides also increases the risk of economically unfeasible sides, complexity and conflicts of interest. (Hagiu, 2014.) Boudreau and Lakhani (2009) discuss advanced approaches, in which mixed or nested relationships may be built among a same side, for example by taking some innovators as part of the community, while treating others as independent and external rivals. The level of risks and costs often rises as the approaches get more advanced, drawing more caution and resources from operational activities. Sriram et al. (2015) point out that as the availability of data about individual side members increases, so do also the possibilities of sophisticated member selection and quality control. These issues of controlling multisided platform output are further covered in section 2.3 on the theoretical framework for governance mechanisms.

Platform design decisions are about technological add-in features and qualities, like search or payment functions, which have an impact on the fluency of platform usage. The variety of choices consists of characteristics that reduce search, transaction, or product development costs – and is often chosen straightforwardly on the grounds of cost-benefit analysis (Hagiu, 2014). Design decisions become more complicated when their consequences are positive for some platform sides and negative for other(s) (Bakos & Katsamakas, 2008). This, according to Hagiu (2014), should be solved by focusing on the long-term interest of the most important participant group. Yet, as Cusumano (2012) points out, success is not

guaranteed to follow even a good platform design: instead of any standalone value, it ultimately depends on the value created to side members through interaction mediation.

Platform pricing has received considerable attention in economics, having been a subject of extensive research (Sriram et al., 2015). Rysman (2009) summarizes the main result of this attention: pricing decisions are now known to be affected not only by the demand and costs on one side of the platform, but also by the elasticity of the other side's response and the profits charged. This makes pricing on multisided platforms much more complex than it is on one-sided markets. The complexity applies to both new and mature platforms alike. As the former may have to solve the aforementioned chicken-and-egg problem of attracting separate sides at the same time, the latter needs to outline and maintain an optimal pricing structure to sustain. This often results in one side of a platform covering a significantly higher proportion of common costs, while other(s) get to pay a price even below the marginal costs (Evans, 2003). More on platform side subsidizing may be read for example in the work of Parker and Van Alstyne (2005).

Despite the researchers' extensive interest in pricing decisions of multisided platforms, for example Boudreau and Hagiu (2009), Hagiu (2014), and Lorenzoni and Lipparini (1999) agree on the importance of looking beyond mere price mechanisms. As argued for example by Katz and Shapiro (1994), even when multisided platform prices are controlled, many different levels of participation may result in stable equilibria. Hence, in order to reach an optimal balance between its multiple sides, a platform must somehow govern the relationships between them and their different side members and also those in between their side member groups. Hagiu (2014), too, argues that imbalances in a market require platforms to react with active means regardless of their price setting decisions. The referred imbalances i.e. market failures result for example from an insufficient amount of information in the market, leading to buyers' inability to distinguish poor- and high-quality suppliers. Another justification for tighter rules would be the risk of overheated competition on one side of the platform, resulting in decreased profits that hinder the introduction of innovations.

The work by Boudreau and Hagiu (2009) shares this argument: due to the privileged nature as “bottlenecks” in relation to their multiple customer groups, owners of multisided platforms are able to address the market coordination problems by deploying regulation. Platform owners' “‘high-powered incentives’ to regulate” (Boudreau & Hagiu, 2009, p. 170) are suggested to stem from the profound will to maximize profits captured from platform transactions. Whether this self-interest in regulation is actually accompanied by goals of

increasing the overall ecosystem value, is left unanswered. Platform governance is reviewed in detail in the concluding section, which introduces rules, restrictions, incentives and other regulation instruments used for controlling the access and interaction on the platform.

2.3 Platform Governance

As noted already in the preceding parts of the literature review, research on platforms has been done through the lenses of many different disciplines. This causes fragmentation that is also reflected in the knowledge about platform governance mechanisms, their design and efficiency (Manner, Nienaber, Schermann, & Krcmar, 2012). In this thesis I concentrate on multisided peer-to-peer platforms, i.e. marketplaces that enable interactions between individual consumers. This does not rule out the possibility that one or more of the platform sides were some type of an organization, as long as peer-to-peer interactions still play a fundamental role in the platform's operations. The elaborate definition of the nature of these interactions is given in the previous subsection 2.2.4. In addition, to clarify, governance here refers broadly to the actions and choices a platform decision maker takes in order to control the members of that platform or the interactions between them. This is separated from the concept of governance structure, which refers to how decision rights and ownership of the platform are organized, and which will be discussed as one part of the governance mechanism framework.

As pointed out by Bakos and Katsamakos (2008), defining rules, rights, and obligations for members should be seen as investment for a multisided platform – one that can either reinforce or hinder the network effects across its sides. Besides network effects, governance is of strategic importance to a multisided platform for other reasons as well. Because independent third parties play a critical role for platform end customer value creation, it would be inconsiderate not to regulate their actions at least at some level (Hagiu, 2014). The autonomy of platform side members is a point also made by Gawer (2014), who presents that governance is critical for a platform in order to be seen as anything more than a mere technological architecture or an agentless structure. She concludes that governance allows for the evolution of side members' roles over time, affecting their legitimacy as well as identities. Next subsection will take a closer look on how network effects and platform side dynamics can be influenced in real life through multiple mechanisms of platform governance.

2.3.1 Platform Governance Mechanisms

Concrete governance mechanisms have been categorized by a few authors in the platform research and literature. First, the primary case studies by Boudreau and Hagiu (2009) support the abovementioned objectives of regulation mechanisms, presenting that digital multisided platforms aim to control the terms of access and monitor the interactions between participating groups. Their findings show that this has been done by implementing contractual, technological and informational instruments like user agreements and online identification. Without expanding their work to presenting comprehensive lists of regulation mechanisms, Boudreau and Hagiu suggest that these mechanisms are both various and nuanced, and that even very sophisticated regulation objectives can be achieved by composing them appropriately. Questions about a platform owner's motivations beyond profits are left unanswered.

The same two-folded approach to governance is repeated by Hagiu (2014). He summarizes that by defining who gets to join the platform and how restricted are the interactions on it, a decision maker aims at ensuring the quality of both the participants and interactions on the platform. In line with Bakos and Katsamakas (2008), Hagiu states that the implementation of platform governance rules is always an investment that should be justified on the grounds of cost-efficiency analysis.

The most concrete research results concerning governance mechanisms are currently found in the multiple case analysis by Hein, Schreieck, Wiesche, and Krcmar (2016). They develop a summary of the different dimensions of governance mechanisms found in earlier literature, and analyze whether and how the dimensions have been implemented in six successful case companies. The cases represent four different business models: social network (Facebook), merchant (Alibaba), service platform (Airbnb and Uber), and application platform (Play Store and App Store). The summary by Hein et al. is presented below in Table 6, followed by a more detailed description of the six dimensions and the mechanisms they comprise.

Table 6: Multisided platform governance dimensions and mechanisms (Hein et al., 2016)

Dimension	Mechanisms	Description
<i>Governance structure</i>	<ul style="list-style-type: none"> • governance structure • decision rights • ownership status 	Centralized or diffused governance. Platform governance then entails how the authority and responsibility for each class of decisions is divided between the platform owner and module developers. Ownership declares whether a platform itself is proprietary to a single firm or is shared by multiple owners.
<i>Resources & documentation</i>	<ul style="list-style-type: none"> • platform transparency • platform boundary resources 	Documentation ensures easy understanding and usability of the platform. Transparency of the platform. Governance decisions concerning the platform's marketplace are easy to follow and understand. Application programming interfaces (APIs) for cultivating platform ecosystems through third-party development.
<i>Accessibility & control</i>	<ul style="list-style-type: none"> • output control & monitoring 	The platform governance pre-specifies the principles by which outputs are evaluated, penalized, or rewarded.
	<ul style="list-style-type: none"> • input control • securing 	Controlling which products or services are allowed. Assess quality of services or products as a gatekeeping mechanism.
	<ul style="list-style-type: none"> • platform accessibility • process control • platform openness 	Who has access to the platform and are there any restrictions on participation? Who controls the process and is in charge for setting up regulations? Is the platform open or closed? Constraints: Technical performance cost of required equipment, and cost of selling.
<i>Trust & perceived risk</i>	<ul style="list-style-type: none"> • strengthen trust • reduce perceived risk 	Platform enhances trust. Perceived risk of platform participants is minimized.
<i>Pricing</i>	<ul style="list-style-type: none"> • pricing 	Pricing is depended on who is setting the price, who decides on participation, who is paying and who values.
<i>External relationships</i>	<ul style="list-style-type: none"> • external relationship management 	Management of inter-firm dependencies. Architecture of participation. Firm's ability to manage the relationships between its IT function and external stakeholders. The platform allows technical interoperability between other systems.

Governance structure

The first dimension of the summary by Hein et al. includes three interrelated mechanisms. Governance structure refers to how the governance of a platform itself is organized; whether it is centralized in the hands of a single actor or diffused among multiple. It is reflected in the mechanisms of decision rights and ownership status, which describe further who carries the

authority and responsibility of decisions made on the platform. In their case study, Hein et al. identified some tradeoffs for retaining high platform control and commercialization with the loss of transparency and user involvement and less administrative work.

The analysis by Hein et al. can be complemented with a few additional remarks relevant to the topic of this thesis. First, a recent Eurobarometer survey about the use of collaborative platforms confirmed the importance of clearly sharing responsibilities in platforms (European Commission, 2016). 41% of the EU citizens having heard of or visited collaborative platforms named unclear responsibilities as a main disadvantage of platforms. Iansiti and Levien (2004), on the other hand, note that even though publicly traded platform companies and not-for-profit cooperative ones seem both to be able to succeed, intermediate models between the two are less likely to work. These unusual governance structures are threatened by conflicts that arise from their mixed incentives and eventually confuse the already complicated process of strategic decision-making. The platform ownership regimes and their impacts on design strategies are further examined in business-to-business context in the paper by Bakos and Katsamakas (2008).

Resources and documentation

The dimension of resources and documentation comprises of two governance mechanisms affecting mainly the possibilities of third-party application developers: platform transparency and boundary resources. The objective of transparency is to increase the understandability and usability of the platform for example by providing access to platform data. Boundary resources, for instance application programming interfaces (APIs) and software development kits (SDKs), support the growth of platform ecosystem through providing concrete development tools. The two mechanisms do not directly affect the peer-to-peer interactions on online marketplaces, and are left to be explored in detail by other researches. Recent articles related to this dimension include for example the case study of tuning of boundary resources by Eaton, Elaluf-Calderwood, Sorensen, and Yoo (2015); the boundary resources model and its application by Ghazawneh and Henfridsson (2013); and the conceptualization of perceived platform openness by Benlian, Hilbert, and Hess (2015).

Accessibility and control

The dimension of accessibility and control is further divided into three subgroups with the six mechanisms. The first subgroup includes the control and monitoring mechanisms of platform interaction output. These refer to the specifications according to which the transactions are

evaluated and then rewarded or suspended, like for example one- or two-way rankings, reviews, and comments. The second subgroup of platform input respectively deals with quality issues of products, services of other offering before they are allowed on the platform, highlighting its role as a gatekeeper.

Cabral and Hortaçsu (2010) have examined the meaning of the online marketplace eBay's reputation system, concluding that feedback has a remarkable impact on the growth rate of sales. Similar results have been received in the study of user-generated ratings in the collaborative rental platform Airbnb (Zervas, Proserpio, & Byers, 2015). A large-scale study by Jolivet, Jullien, and Postel-Vinay (2016) provides credible support for the earlier with their empirical evidence of a significant and positive relation between seller reputation and transaction prices. In addition, Hein et al. note that output control and monitoring is often used to shift quality checks to side members, resulting in decrease in both the workload and control of platform decision maker. As for input control, interesting angles are provided by Gillespie (2017), who approaches it from the viewpoint of public speech; and Grimmelmann (2015), who develops taxonomy of moderation in online communities.

The third subgroup in this dimension includes the mechanisms of platform accessibility, process control, and platform openness. Accessibility and openness refer to any possible restrictions and requirements on participation i.e. who is able to access the platform and who is has the ownership of these regulations. In practice these can mean for example checking the backgrounds of users or restricting the platform for the use by registered members only. Process control covers the issue of who gets to make decisions concerning the interaction between side members. In the example case of Airbnb, the process control can be seen to belong to the hosts who get to choose their accepted guests and the amount charged from them.

Eurobarometer survey results show that a notable amount (41%) of respondents who have heard of or visited collaborative platforms appreciate a convenient access to services on platforms and name it among the main benefits for users (European Commission, 2016). Caillaud and Jullien (2003) remark a related point of multi-homing: when platforms are nonexclusive i.e. when they do not restrict access on them in any way, they will most likely be used by side members who affiliate with other intermediaries too. The authors note that exclusivity may be justified when a platform wants to ensure that any high-cost efforts with users end up in transactions, or when registrations involve for example building of proprietary profiles.

Trust and perceived risk

The fourth dimension by Hein et al. represents trust and perceived risk on the platform, including mechanisms of maximizing the previous and minimizing the latter. Concrete actions affecting trust and perceived risk partly overlap with those in the previous dimension of accessibility and control, as mechanisms like reviews, rankings, and background checks may increase trust or reduce perceived risk among side members.

Alongside pricing, online trust and perceived risk are among the mechanisms that have relatively often received attention from researchers (Sriram et al., 2015). Jones and Leonard (2008) modelled and tested consumer-to-consumer trust on electronic commerce, and found that especially the quality of websites and recognition gained from third parties influence trust. A study by Pavlou and Gefen (2004) suggests that for marketplaces operating in less-developed legal environments – like often is the case for collaborative consumption intermediaries (see subsection 2.1.3) – institution-based trust may be a powerful prerequisite for succeeding. The recent Eurobarometer survey results give some support for the importance of trust, as a little over 25% of the respondents highlight not trusting Internet transactions in general; and not trusting the provider or seller to be among the main disadvantages of using online collaborative platforms (European Commission, 2016). Iansiti and Levien (2004) underline trust as essential for organizations to build successful operations or even to scale up, as it decreases operating costs and risk exposure.

Pricing

The pricing dimension covers the decision rights concerning pricing, as well as the division of costs and profits among the members of interaction and the platform. As already brought out multiple times in the literature review, pricing decisions represent the most covered area of platform governance research, extending their roots back into the theories and models of organizational economics. Even though some academics emphasize pricing as the primary way to coordinate platforms (e.g. Gawer, 2014), I will follow the motivation behind also Bakos and Katsamakas (2008), focusing on other strategic issues a multisided platform decision maker encounters. Overall, it seems that platforms deploy a wide range of revenue models regardless of the sector they are in, with the average choice of commission-based approach where provider, not the platform, receives over 85% of the value of transactions (PwC UK, 2016).

External relationships

The last dimension represents the management of platform external relationships. It may involve various forms of strategic partnerships and architecture of inter-organizational participation, often aiming at enabling interoperability between different technical systems. The organizational focus of the dimension indicates that it affects peer-to-peer interactions of a platform merely indirectly. This is in line with Perrons (2009), who studies the meaning of inter-organizational relationship management in the case of Intel as a leading platform, and suggests that all stakeholders of a platform might ultimately be affected by the balanced use of power and trust. Platform ecosystem governance is approached from the more uncommon viewpoint of a non-focal i.e. peripheral organization in the research by Selander, Henfridsson, and Svahn (2013).

The introduction of multisided platform governance dimensions and mechanisms is the last subsection presenting previous literature and research. The review began with the environmental context of collaborative peer-to-peer consumption built in section 2.1, moving on to multisided platforms and their characteristics in section 2.2 and platform governance in section 2.3. After presenting the most relevant picks of both literature streams, I next conclude the review by summarizing its key points into a comprehensive theoretical framework used for empirical research on the governance of peer-to-peer marketplaces.

2.3.2 Theoretical Framework for Governing Collaborative Consumption

This last subsection of the literature review sums up the key points of presented theories, piecing together a framework for the empirical part of the research. The basis for my comparative cross-case study and its analysis has been created throughout chapter 2, and now I revisit my choices of approaches and definitions regarding collaborative consumption and platform governance. Detailed explanations of these choices are not repeated here, but presented in respective sections above.

By collaborative peer-to-peer consumption I refer to the technological phenomenon that enables redistribution of idle assets by selling, renting, lending, swapping, sharing, bartering, and gifting between individual people online. These actions presume interaction between the peers, and are often enabled by social and digital platforms that can be further divided into three. First, there are redistribution markets i.e. marketplaces where people can transfer ownership of goods through selling, swapping, bartering, and gifting. Second, product service systems are marketplaces where goods are accessed over ownership by renting, lending, and

sharing. Third, collaborative lifestyles comprise actions involving access to less tangible assets like for example skills, money, and space.

Multisided platforms are separated from the similar groups of resellers, vertically integrated firms, and input suppliers by a distinctive combination of characteristics. First, they are organizations in a loose sense: they do not necessarily follow organizational boundaries, and they range from the hobby-like set-ups of individual entrepreneurs to global corporations and cooperatives. Next, their key activity is to host direct interactions of distinct, affiliated customers, thus enabling communication, exchange, or consumption between them. Overall, multisided platforms create an environment where individuals and communities gain more ground in the space previously occupied by firms and employees. Progressive and disruptive – yet trouble-free in no way, as reflected by immature state of legislation and even somewhat obscure research results.

Success factors of an online peer-to-peer marketplace can be derived from the principles behind collaborative consumption and the strategic choices of platform decision maker. To start with, a marketplace needs to solve two issues: building trust with transparent and decentralized design, and tackling complex pricing decisions. The latter is in fact only one aspect of the underlying challenge to attract a critical mass of people from each customer group. A feedback loop between these groups can either boost or bar a marketplace business, depending mostly on the entrepreneur’s ability to acknowledge the distinctive internal and external dynamics of multisided platform competition.

Besides the most often covered research topics of marketplace trust and pricing, marketplace governance is critical to the success of a platform. Hein et al. (2016) are among the first – if not the first – to map the practical dimensions and mechanisms of platform governance and form a framework for it. They notice the dimensions and mechanisms being implemented variously between different business models, and recommend others to do further comparisons among various business models and offerings. I aim to continue their work by implementing the framework into the context of peer-to-peer online marketplaces. Table 7 introduces the dimensions and mechanisms in a form that takes into account the exploratory nature of the study, as well as the environmental characteristics of collaborative online consumption. As such, it describes the focus of my empirical research introduced in full detail in the following chapters 3 and 4. As one of the results of my study, the framework will be completed into an adapted version for peer-to-peer marketplaces in section 4.4.

Table 7: Multisided platform governance dimensions and mechanisms for collaborative consumption (adapted from Hein et al., 2016)

Dimension	Mechanisms	Focus
<i>Governance structure</i>	<ul style="list-style-type: none"> • governance structure • decision rights • ownership status 	Structure of the organization. How is authority and responsibility divided on the platform; do employees get to participate in decision-making? Are side members involved? Are there some influential roles outside the platform or its members (e.g. advisories)? How are disagreements/difficulties sorted?
<i>Resources & documentation</i>	<ul style="list-style-type: none"> • platform transparency • platform boundary resources 	Technical transparency and usability of the platform & the data on it. Role and accessibility of application programming interfaces (APIs) and software development kits (SDKs).
<i>Accessibility & control</i>	<ul style="list-style-type: none"> • output control & monitoring 	How are outputs evaluated, penalized, or rewarded; is evaluation mandatory? Is evaluation pre-specified by platform only or also its members; is the workload split or shifted to the members? Is the role of output control made visible e.g. through communication?
	<ul style="list-style-type: none"> • input control • securing 	Are products or services screened before allowed on the platform? Is input control utilized as a gatekeeping mechanism or merged into output control and only monitored through evaluation and reviews after interaction?
	<ul style="list-style-type: none"> • platform accessibility • process control • platform openness 	Who gets to join as a member; who is able to participate in interaction? Who is in charge for setting up regulations? Is openness seen as related to single/multi-homing? Is there a fixed investment; is the affiliation strongly specific to the platform?
<i>Trust & perceived risk</i>	<ul style="list-style-type: none"> • strengthen trust • reduce perceived risk 	What are the features enhancing trust or increasing perceived risk? Are these controlled by the platform or its members? Are they more related to online interactions or to the specific platform?
<i>Pricing</i>	<ul style="list-style-type: none"> • pricing 	Presence of non-paid transactions; is control in the hands of the platform or its members? Who sets the price; who decides on participation? Payment methods; factors affecting the price; existence/division of commission.
<i>External relationships</i>	<ul style="list-style-type: none"> • external relationship management 	External stakeholders and partnerships; interoperability with other systems. Reasons and characteristics for cooperation/the lack of it.

3 Methodology

Before moving on to the empirical findings and analysis in chapter 4, I describe how the topic was researched. I will start with my general approach and choices regarding the research itself i.e. the research philosophy. This is followed by introducing the multiple-case research design and the unit of analysis. Next, the selected case organizations are presented alongside the collection and compilation methods of primary and secondary data. Chapter 3 is concluded with the review of data analysis and interpretation methods. Overall, the methodology chapter aims to go briefly yet precisely through the justifications and explanations of why the research was done as it was, and how and when different parts of it were executed.

3.1 Research Philosophy

As noted for example by Myers (2009), regardless of being qualitative or quantitative, all research is based on some fundamental, underlying assumptions about how to construct valid and meaningful research. Acknowledging and outlining these assumptions is critical for a master's thesis for two reasons. First, as a researcher it is important for me to be conscious of these assumptions, as they lay the groundwork for further research decisions concerning methods, data collection, and analysis. Second, the assumptions need to be made visible to provide the readers of my thesis the necessary tools for understanding my choices and reasoning.

The philosophies underlying management research are classified in various ways by different researchers (Myers, 2009). I have adopted the classification introduced by Saunders, Lewis and Thornhill (2009) which suggests a four-fold list of possible philosophies: positivism, realism, interpretivism, and pragmatism. According to the authors, qualitative researcher may well choose either of these. While this is in line with what also Myers (2009) notes about qualitative research methods being independent of the adopted philosophical assumptions, the view is not without opponents. For example, Yin (2009) states that case study researchers should follow the assumptions of positivism i.e. assume that reality is external of themselves and their values, and can be simplified to measurable variables. Being a dominant choice of most business researchers (Myers, 2009), positivism aims at the construction of causalities and law-like generalizations. However, the strict view of invariably adopting positivist assumptions to conduct case study research feels unnatural when studying the decisions made by platform entrepreneurs. I cannot say that as a researcher

I would be able to explore my topic from the viewpoint of an objective outsider: rather, I need to look the phenomenon empathetically from “inside” in order to actually understand the social and organizational features of it. These things indicate my research to lean more on the assumptions of interpretive research, where the focus is on understanding meaning in context (Myers, 2009).

Ontologically, interpretive philosophy allows me to take a subjectivist view of reality: it is socially constructed and continuously changing. Epistemologically, the subjectivist view acknowledges that – instead of mere credible facts from observable data – multiple individual realities and subjective meanings are accepted as knowledge. (Saunders et al., 2009.) This unavoidably leads to interpretation: good theories are built on understanding meanings and intentions, not deductive explanations (Eriksson & Kovalainen, 2008; Myers, 2009). Besides subjective interpretation, inductive approach also allows for recognizing the possibility of alternative explanations. This is something I want to leave room for in my research, as the topic of platform governance is new with little existing literature and a lot of emerging discussions. This is supported also by Saunders et al. (2009), who suggest that new topics are to be studied inductively by compiling data, and analyzing and reflecting the themes arising from it.

Throughout the development of my research question and the iterative steps of doing empirical research, I have acknowledged my ultimate objective being to understand a new phenomenon in its context. Instead of aiming to change the current order of things, my research question of peer-to-peer marketplace governance has indeed directed me towards exploratory study: to understand and explain through discovering and exploring. The exploratory nature of my multiple-case study is further introduced in the following section, which reviews the principles of multiple-case study research, as well as the organizations selected as the cases of my study.

3.2 Multiple-Case Study Research

Case research explores contemporary situations not controlled by the researcher in any way. They happen in real life, meaning that they might be complicated or happen unpredictably (Myers, 2009). In fact, as stated by Yin (2009), case studies are especially useful when the studied phenomenon and its context are hard to separate from each other. Case researcher approaches these situations by asking ‘how’ and ‘why’ questions to understand and describe

them. Consequently, cases are most often used in explanatory and exploratory research (Saunders et al., 2009).

In a definition by Myers (2009), case study research relies on empirical evidence from real organization(s), studied by using multiple sources of evidence; mostly interviews and documents. The author also emphasizes the importance of finding a case study that is able to help reveal something previously unknown. Being an exploratory research, my work aims exactly there: providing new knowledge and insights into platform governance. However, this cannot happen in a vacuum but needs to be built on existing knowledge (Yin, 2009). This is why also my thesis includes comprehensive reviews on collaborative consumption and platform literature in chapter 2. Additionally, to justify the choice of using case study method, I also need to specify spatial, temporal, and other boundaries for my “case” i.e. the unit of analysis used in the research (Eriksson & Kovalainen, 2008; Yin, 2009). These borderlines are reviewed next, with the intention to provide concreteness around the somewhat abstract topic of entrepreneurial governance decisions.

Herriott and Firestone argue that a study including more than a single case is considered robust, as it may lead to more compelling evidence (in Yin, 2009, p. 53). My final research design includes six cases, which represent three different contextual types of collaborative platforms. In the selection process of these six I acknowledged that a multiple-case design needs to follow theoretical aspects, not statistical sampling (Eisenhardt, 1989; Eriksson & Kovalainen, 2008). Accordingly, I have chosen the cases because they are likely to extend emergent theory, not because they make a random selection of the entire customer universe. Having two cases representing all three platform types enabled comparisons both across and inside the groups (Yin, 2009) without making the workload unbearable for a novice researcher.

On the general level, the unit of analysis is the set of governance decisions made by a platform entrepreneur. The studied entrepreneurs are marketplace owners who have built their peer-to-peer platform on Sharetribe’s “meta-platform”. After undergoing some significant alterations in their service, Sharetribe has provided its platform in the current manner since November 2014. To ensure comparability between case data, I decided on a temporal selection that only includes customers who have started their business after this point in time. Consequently, the maximal lifetime of the studied marketplaces being only two years, I decided to include all relevant governance decisions during the period of their existence. Geographically the customers of Sharetribe are located around the world, which is

reflected in the study also: no limiting selection among different locations was made to allow for possible cultural comparisons between countries.

Besides the strong exploratory and analytical benefits of a multiple-case study, the method has also been criticized for lacking rigor and basis for scientific generalization (Yin, 2009). I have aimed to address these concerns throughout my study. Besides the ultimate objective of providing scientific and intrinsic knowledge and therefore being interesting, Myers (2009) lists four attributes for an exemplary case study. First, it displays sufficient evidence that support created arguments and prove them plausible. Second, it is complete as in all relevant evidence has been collected. Third, the case study needs to consider alternative perspectives i.e. theories, cultural views, or possible disagreements, which are typical for complicated real-life situations. Fourth, the study should be recorded in an engaging manner. All parts of my work have been conducted with these attributes in mind – whether I have eventually managed to materialize them is left for the readers of the thesis to evaluate.

3.3 Data Collection and Compilation Methods

After reviewing the underlying research approach and methods of the thesis, this section introduces the methods of data collection and compilation. In case study research data collection techniques can vary and are often used as combinations (Eisenhardt, 1989; Saunders et al. 2009). All data for this research were collected among entrepreneurs who have built their online marketplaces on Sharetribe’s white label platform (for more detailed description of both the Sharetribe’s service and the case organizations, see sections 4.1 and 4.2, respectively). Primary data on the six case organizations were collected through interviews, while the secondary data consist of the database collected by Sharetribe. To devote to the construct validity and reliability of this evidence, I have followed the three principles of data collection proposed by Yin (2009).

First, triangulation of data from multiple sources is especially important for case study, as it can provide synergies through convergent paths of inquiry. I have aimed to fulfill this requirement by using both quantitative statistics of Sharetribe customer base and the qualitative interviews with the decision-makers of these organizations. Second, the collected data need to be organized and documented in a presentable database accessible outside the written report. To follow this principle and increase the reliability of my work, I have stored all my thesis-related data in a structured cloud database, with only the essential parts presented as appendices of the thesis. The database includes written and audiotaped

recordings of interviews, tabular materials of statistical information, and a wide range of personal notes made during data collection. Third, a chain of evidence from research questions to conclusions needs to be traceable without the loss of original information through either carelessness or bias. The following subsections about primary and secondary data collection contribute to this for their part, although in the end, traceability is an essential feature throughout the empirical part of my work.

Before moving on to the detailed descriptions of primary and secondary data, I want to highlight two valuable advantages of focusing data collection on this particular group of entrepreneurs (introduced in the respective subsections of chapter 4 on empirical findings and analysis). First, the decision guaranteed that the case organizations share a similar technological platform structure, enabling me to focus on the variety of decisions the entrepreneurs make after establishing their marketplace. This does not mean that technological or developmental choices would not affect the across-sides interactions on a platform – quite the contrary. However, including every possible governmental dimension a platform decision-maker needs to address would have taken the research way beyond the scope of a master’s thesis, requiring insights into engineering view through programming design and user experience. Second, through the connection I had established with Sharetribe, I was able to get in direct contact with a good number of possible research participants – a task often so difficult it is seen as one of the main disadvantages of doing case study research (Myers, 2009).

3.3.1 Primary Data

Primary data of six platform entrepreneurs was collected by interviews, as is often typical of case study research that aims to understand a subject in its context (Myers, 2009). The process started by categorizing the customers of Sharetribe according to the type of their marketplace into three groups of sales, rental, and service platforms. Next, to schedule interviews with two representatives of each group, five to eight potential interviewees were chosen among all of them to be contacted by email. This selection was done in close contact with Sharetribe for two significant reasons, and is explained in detail next.

First, as there is no public information on Sharetribe user base, creating even a mediocre picture of them on my own would have been practically impossible within the set timeframe of a master’s thesis. Besides the immense workload, finding Sharetribe platform users through Google searches would have most probably also led to a distorted selection, as

some of the service subscription types do not include any forms of visible Sharetribe branding. Second reason is related to the principle of following theoretical sample selection in case study research (Eisenhardt, 1989; Eriksson & Kovalainen, 2008). To ensure the interviewed entrepreneurs have experience from a diverse set of decision-making situations, the study focuses on marketplaces with at least some traction i.e. those with a viable business idea and proved user interest. As this cannot be easily measured by any single formula or number, the choices were rather based on the in-depth knowledge and insights the company has gained about their customers.

Total number of 19 entrepreneurs were contacted in the process by emails sent to the address they had reported as primary for Sharetribe records. The email introduced shortly the research project and the practicalities of interviewee participation. If no reply was received in five days, a follow-up email was sent. Seven entrepreneurs did not answer regardless of follow-ups, four declined due to their challenging schedules, and one interview had to be cancelled because of an illness. In addition, one interview was cancelled because of the interviewee's insufficient language skills as I felt the comparability of the findings would have suffered too much. Two of the marketplaces are based in Finland, two in the United Kingdom, one in the United States and one in Canada. Interviews were conducted during a three-week period between Nov 22nd and Dec 12th 2016, five of them being done through the online call service Skype and one face-to-face in the interviewee's office Helsinki. The recorded duration of them varied between 37 and 102 minutes.

As the objective of the interviews was to gain insights into the entrepreneurs' decisions while being able to compare them with each other, interview design required careful planning. On one hand, I had to take the entrepreneurs' various backgrounds and level of experience into consideration by using straightforward terms that decrease the risk of mixed interpretations and enable comparisons. On the other hand, I wanted to leave room for flexibility and not force the marketplaces into identical molds as they had been formed in very different social and cultural environments. My choice of interview type was semi-structured – although, to address the mentioned needs, I would describe it as leaning more towards a structured than unstructured design. I used a set of more than 40 pre-formulated questions under six themes, but also encouraged the interviewees to add in anything they felt relevant or connected to the themes even if not directly asked for (the interview frame can be familiarized in Appendix A). The interviews were started with an informal discussion about the study, the interviewer, and the interviewee in order to create a relaxed and trusting

atmosphere where the interviewee feels that they are listened to; that their perceptions are valued; and that they feel safe to ask questions themselves (Myers, 2009). The very first interview was planned to act as a test round: in case it would have indicated a need for changing or reformulating the questions, I was prepared to replace it with another one of the same marketplace type. However, as the interview did not show meaningful flaws in the original design, the first interview was also included among the primary data.

I requested and received permissions to tape all interviews, which allowed me to concentrate fully in listening and being present in the session instead of making notes of everything. In addition to enabling direct quoting, recording increases the reliability of the study as the data can be easily revisited (Myers, 2009). The recordings were transcribed into tabular form, listed according to the themes and respective numbered questions. In total, only two minor details revealed in interviews were asked to be removed from the official transcriptions by the interviewees. Overall, the interviewees were all very open towards the study, and no one declined to answer any of the questions – although of course as an outsider interviewer I cannot know if they have kept even significant details from me. Five out of the six interviewees gave their permission to being presented in the thesis with their marketplace’s real name, website information and identified set of secondary data. One wished to remain anonymous, hence being also excluded from the identified secondary data analysis. I contacted two interviewees by email during the analysis phase to specify certain details of their answers.

3.3.2 Secondary Data

Secondary data used in the research was collected by Sharetribe, and it consist of a quantitative set of their customer data. The data columns do not represent all information the company has of its customers, but was designed for this study to support addressing the research question and the objectives, and to achieve the synergies of triangulation (Yin, 2009). While the primary data depict the six case organizations in detail, the secondary data represents the customers of Sharetribe as a group and its subgroups, thus helping describe the context of the studied phenomena and evaluate the case marketplaces’ typicality as group representatives (not statistically but theoretically, as explained earlier). The original dataset included all active marketplaces that have been created since the company started in October 2011. As Sharetribe made some significant changes on its service in late 2014, the research data is limited to include marketplaces only created after this, leaving a total of 550 marketplaces.

Sharetribe staff compiled the set of secondary data into an Excel sheet before I received it. The columns include information on the following details:

- Marketplace type (goods sales/rentals/service)
- Creation time and date, geographical location
- Number of signed up members
- Locality i.e. the percentage of users in one country and the top countries of customer origin
- Number of marketplace admins
- Number of listing categories on the marketplace
- Whether the marketplace is public i.e. whether anyone can browse the listings on it
- Whether members need an invite to sign up
- Whether the marketplace charges commission of transactions; if, the commission percentage is shown
- Whether marketplace charges transaction fee; if, the minimum fee is shown
- Whether PayPal is connected
- Number of started transactions

The information on the sheet is anonymous, meaning the individual rows on it are in no way identifiable for me or any other observer outside Sharetribe’s organization. All the interviewed entrepreneurs were asked for their permission to get their rows identified by Sharetribe for the purposes of my research. Five out of six agreed to the identification, and one rental marketplace was left unidentified from the secondary data. Beyond the anonymous and identified statistical data, the discussions with Sharetribe CEO and COO helped me form a coherent overview of the platform and its users. Details on any notable exclusion of data are provided during the relevant parts of chapter 4 on empirical findings.

3.4 Data Analysis and Interpretation

As already referred to, for interpretive research the objective of focusing on meaning in context is a fundamental one (Myers, 2009). Besides this, my work follows another important principle. It is derived from the nature of inductive case study research that does not test previously formulated frameworks but explores themes, categories, activities and patterns found among the empirical data (Eriksson & Kovalainen, 2008): the discoveries from data collection justify revisiting and modifying the original research design – or “maintaining an

adaptive posture” as described by Yin (2009). The two principles of contextualization and exploration guide my choices regarding data analysis and interpretation.

As Yin (2009) points out, no exploration should be without a purpose or the criteria for judging its success. For me, the purpose and criteria combine the introduced principles into an objective to map and examine collaborative consumption governance mechanisms from the interviewees’ point of view. The above-reviewed data triangulation aims to ensure a steadier basis for this examination (Saunders et al., 2009), supported by the choice to use multiple cases instead of one (Yin, 2009). This data and the purpose and objectives of the study are linked by analysis, which in my thesis is done through within-case analysis and cross-case comparisons.

As Eriksson and Kovalainen (2008) state, following an inductive strategy of analysis does not mean that – even though I do not replicate any pre-given framework – I would refrain from using prior theory at all. Instead, theoretical concepts are utilized for describing and analyzing the organizing features of empirical data and its meanings. For this study, the main theoretical concepts used in data analysis include the three-fold categorization of collaborative consumption (introduced in detail in subsection 2.1.2), as well as the dimensions and mechanisms of platform governance (subsection 2.2.5). These two guide the empirical steps of the study already from selecting the cases and designing the data collection methods to analyzing and discussing it in the following chapters 4 and 5.

Yin (2009) points out the lack of unified codification of case analysis methods, supporting Eisenhardt’s statement of the approaches being as many as there are researchers (1989). However, previous research indicates that there are some common procedures for case analyses, which I have also applied where applicable. Eriksson and Kovalainen (2008) describe both single- and multiple-case studies to most often start with an analysis of each separate case, i.e. within-case analysis. Eisenhardt (1989), too, names it as a key step that helps a case study researcher to deal with large amount of data from multiple sources. In both sources (Eriksson and Kovalainen, 2008; Eisenhardt, 1989) the authors note that even though the individual case write-ups are often pure descriptions, they are central for generating insight into the uniqueness of them as well as holistic configuration. The within-case analysis in my research consists of creating general, thematically organized descriptions of all the case marketplaces, presented in section 4.2.

One of the five analytic techniques listed as suitable for a multiple-case study by Yin (2008) is to search for cross-case patterns. Using a designated searching tactic for this pushes a researcher beyond information-processing biases and premature conclusions (Eisenhardt, 1989). I have followed a tactic of categorization (Eisenhardt, 1989; Saunders et al., 2009), which involves searching for similarities and differences from within and across groups based on selected categories or dimensions. As mentioned, my group selection and the analysis dimensions are derived from existing theory. First, the data are divided into the three categories of collaborative consumption by Botsman and Rogers (2010): rental marketplaces representing product service systems, product sales marketplaces representing redistribution markets, and service marketplaces representing collaborative lifestyles. The three groups are further analyzed and compared according to the governance dimensions by Hein et al. (2016). After presenting the detailed analyses of marketplace types and case organizations, I discuss the theoretical contribution, implications as well as limitations of the study in the concluding chapter 5.

4 Empirical Findings and Analysis

Chapter 4 presents the findings and the analysis of the empirical research. The first section introduces Sharetribe in order to help the reader form a complete and realistic picture of the layered relationship between the platform producer and the platform providers i.e. the case marketplaces. Section 4.2 includes the within-case analyses of the three different Sharetribe marketplace types (product sales, rentals, and services) and the respective case organizations. Next, categorical cross-case analysis is used for searching patterns between the case organizations and the marketplace types in section 4.3. All findings are reviewed in the concluding section 4.4.

4.1 Sharetribe as the Platform Producer²

The current version of Sharetribe's platform was launched in November 2014. The service is – as the company themselves calls it – a meta-platform, i.e. an online platform on which anyone can build their own platform marketplace. Customers do not need any programming or developing knowledge to create a marketplace as all technological support is provided by Sharetribe seven days a week. Overall, the value proposition of the service is based on easiness: basic setup can be done in a few minutes without costs and with comprehensive support. Besides guided setup, Sharetribe also provides an open Marketplace Academy on their website including articles and a practical guide for marketplace building.

Sharetribe offers a free 30-day trial for the service, after which a customer can choose from four different subscription plans. The plans are billed monthly or bi-yearly and priced by the upper limit of expected member count and the optional add-ons. The simplest plan with a member limit of 100 users offers no additional customization features, whereas the

² Throughout this chapter, the information on Sharetribe is based on the interviews with co-founder, CEO Juho Makkonen (August 30, 2016, & October 25, 2016); email communications with him and co-founder, COO Antti Virolainen; and the company website (unless otherwise referenced).

other plans with limits of 1 000, 10 000, and 100 000 users offer additional customization features like personal domain with no visible Sharetribe branding. In addition to the subscription cost, there are no setup or transaction fees for the entrepreneurs.

Having previously been enabled only in Finland and the US, the current version made on-platform payments and commission extraction through PayPal possible in 50 countries around the world. At the moment the company has approximately 580 customers in over 40 countries. In general, the customers do not seem to share any defining characteristics, but are a heterogeneous group attracted by the general platform business model with no personal inventory and scalability. Sharetribe segments its customers according to the type of marketplace they represent i.e. whether they are focused on selling previously acquired goods, rentals, or services. Some marketplaces offer more than one of these so there is overlap in the groups.

The marketplace type defines the design of optimal payment flow, hence being crucial information for Sharetribe’s design decisions primarily targeted for service mediating customers. In addition to the existing and potential demand emerging from the global growth of service sector, the targeting choice is guided by Sharetribe’s organizational values. The driving force for the founders has been to put their personal skills to a scalable use by forming tools for future work and wellbeing. This is embodied internally in a democratic work culture and ethics, but especially in unpatented products and open source code with no kind of customer lock-in. Sharetribe customers are free to resign and keep the code of their marketplace at any point – a feature that challenges the common feature of platform producers owning the platform rights from start to finish. At least so far, the value-based drive has not led the company to select its customers, but to sell the platform for any kind of legal purposes.

4.2 Within-Case Analysis

The anonymous secondary data on Sharetribe customers is used to describe the customer base on a more general level, and to pick some details for more in-depth examination to support the comparison between the case marketplaces. As it was important to be able to segment the data according to the marketplace type (product sales, rentals, or services), those marketplaces that had not declared their type were excluded of the set. This left a total number of 526 marketplaces, which comprises of 182 product sales, 152 rentals, and 192 service mediators. Geographically the marketplaces represent 45 countries, dominated by the

almost 200 marketplaces in the United States. Other top five locations include the United Kingdom, Australia, Canada, and France. List of the countries and the respective number of marketplaces are presented in Table 8.

Table 8: Sharetribe marketplace count by geographic location

Count	Country	Count	Country	Count	Country
196	The United States	6	Malaysia	2	Taiwan
50	The United Kingdom	5	Mexico	1	Bangladesh
45	Australia	5	New Zealand	1	Bahamas
31	Canada	5	Portugal	1	Czech Republic
25	France	5	Singapore	1	Hungary
19	Finland	4	Austria	1	Israel
14	Brazil	3	Ireland	1	Japan
13	Germany	3	Italy	1	New Caledonia
11	Norway	3	Sweden	1	Peru
10	Spain	2	Argentina	1	Romania
9	Switzerland	2	China	1	Saudi Arabia
9	Denmark	2	Colombia	1	Slovenia
8	Hong Kong	2	Greece	1	Slovakia
7	The Netherlands	2	India	1	Thailand
6	Belgium	2	Philippines	1	Turkey
Total				520 ¹	

¹ Five marketplaces that declared their location as the EU and one that did not specify its location are not included in the table

In total the 526 marketplaces have 107 238 members, of which 28,3% are on rental marketplaces, 49,6% on product sales marketplaces, and 22,1% on service marketplaces. Number of members varies from one to 9 794, with an overall average and a median of 204 and 29, respectively. No exclusion of data was made because of low member count, as that would have in many cases lead to temporally limiting the data and ignoring the recently created marketplaces that still are of great importance from the viewpoint of Sharetribe. Additionally, as the data only includes active marketplaces i.e. those in operation, small marketplaces were not seen as a risk but rather a richness. The values and percentages

presented in this section and its subsections are listed in Table 9 to help building an overall picture of them.

Table 9: Summary of the secondary data analysis

Dimension	Rental marketplaces	Product sales marketplaces	Service marketplaces	All marketplaces
Count	152	182	192	526
Member count (average size, median)	30 336 (200; 27)	53 161 (293; 32)	23 741 (124; 26)	107 238 (204; 29)
Locality ¹ (members from one country)	55%	58%	48%	53%
1 admin	46%	51%	53%	50%
2 admins	28%	22%	21%	23%
3 or more	26%	27%	26%	27%
Average (median) of listing categories	20 (8)	31 (14)	18 (6)	23 (9)
Private	11%	9%	15%	12%
Invite-only	4%	8%	5%	6%
Charges commission (average commission)	77% (12%)	71% (9%)	78% (11%)	75% (11%)
Limits pricing; average min. fee ²	54%; 3,6	49%; 1,9	52%; 5,1	51%; 3,6
Average (median) number of started transactions	82 (8,5)	155 (8,5)	43 (7)	93 (8)

¹ The data does not include the locality details for all marketplaces; the percentage was counted for the 466 marketplaces of which the information was available

² Average minimum fee for transactions was counted for those who have set it to be above 0

As mentioned in subsection 3.3.1 on primary data collection methods, the semi-structured interviews were based on 38 pre-formulated questions within six thematic areas. The themes include the management of the marketplace; technological resources and development; marketplace accessibility and control; trust and perceived risk; pricing; and external relationships. All interviews also included free conversation about the covered themes, providing valuable information on additional issues considered relevant by the interviewees. Overall, there is quite a lot of variation between the answers of the marketplace entrepreneurs within each thematic area, yet also some similarities that connect them across

the three marketplace types. Next, I present the detailed analysis of the data separately for all the three marketplace types and the respective case organizations, followed by a cross-case comparison and an overview of the three in section 4.3.

4.2.1 Rental Marketplaces

Among Sharetribe customers, there are 152 rental marketplaces, the average size of which is 200 members with a median of 27. Both of these values are slightly below the overall averages. Figure 9 below presents the rental marketplaces by their member count, showing how more than 45% of them have 50 or less members.

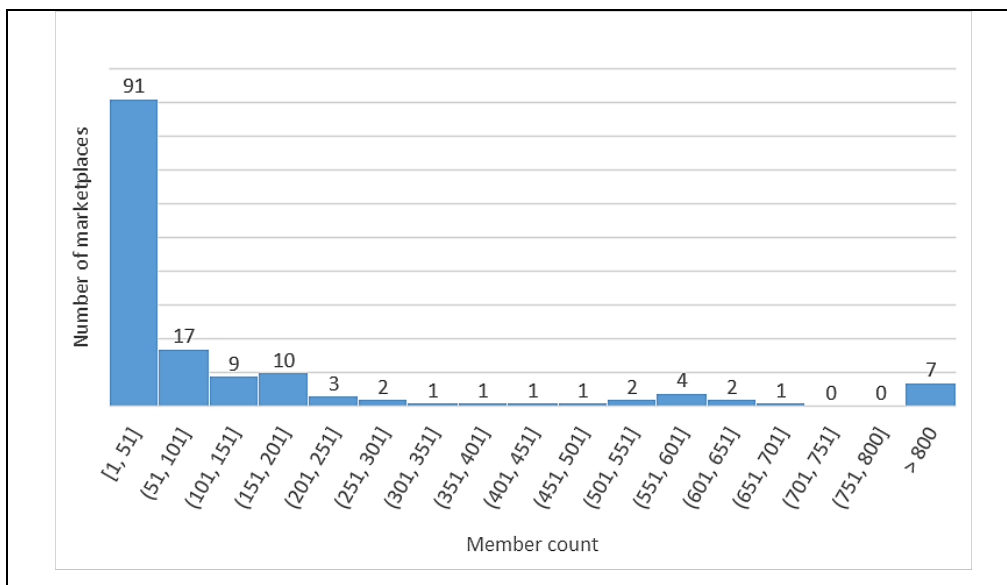


Figure 9. Rental marketplaces by the number of members

The locality of the rental marketplaces is indicated by the number of countries their members are from. 55% have members only from one country, 27% from two, and 18% from three or more countries. Although the single-country marketplaces clearly dominate the segment, is it quite surprising to see that almost half of them have members in multiple countries, as rentals by nature require physical access to the item of transaction twice. 46% of the rental marketplaces are operated by one admin, indicating them being managed by a single entrepreneur. Despite this, a notable 11% of them is operated by four to 15 admins.

The number of listing categories, i.e. how the offerings are grouped and presented on the site also show great variance, ranging from one to more than 200. Average rental marketplace has 20 listing categories, median being eight. Of the 152 marketplaces, 17 (11%) are private – requiring signing up to browse the listings, and six employ even tighter control be requiring an invite for becoming a member. It needs to be highlighted, though, that the two

requirements seem to not be interdependent, as only four out of the six invite-only platforms are in private mode.

Vast majority of 144 marketplaces have connected PayPal, although 27 (19%) of these do not charge any commission of completed transactions. The commission percentages of the remaining 117 mediators vary between one and 33 percent with a median of 10 besides one marketplace that has full 100% commission. 62 rental sites (41%) have not defined a minimum transaction fee at all, while among the rest the average fee is approximately 3,6 units of the currency in use, the ultimate high being 125 units. The number of started transactions averages at 82, with three marketplaces having passed the milestone of a thousand transaction and additional ten having mediated several hundred (these sum up to 9%). Yet, there is still a remarkable amount of 80 marketplaces (53%) with practically no meaningful traffic (<10 started transactions), indicating them being far from reaching an established position.

Kinspiring

Kinspiring is a peer-to-peer rental marketplace for high quality baby products located in Helsinki, Finland. The business sparked from the entrepreneur's personal needs and interests, embodied in launching Kinspiring in summer 2016. The marketplace has been run by the entrepreneur alone alongside her full-time job, and there are no planned changes for this. Background advisory support is received on one hand from a spouse with experience in online marketing, and on the other from friends in a community of mothers who share interest in the issue for brand- or good circulation related reasons. She does not see the lack of an API as a problem at this stage of the business, although would appreciate being able to improve personalized search engine marketing.

Anyone can browse and sign up for Kinspiring; however, initially also the option of an invite-only marketplace was considered to build a feeling of exclusivity. Currently there are 86 members, and all of them are from Finland. Even though there seems to be a need for filtering the sign ups due to the nuisance of someone repeatedly trying to sign up in irrelevant advertising purposes, there have been no serious problems with users. The marketplace employs quite a strict level of input control through an exclusive list of allowed brands, which are organized in eleven listing categories. The arrangement seems to please members, having resulted in only one incident of a listing that did not meet the requirements. The amount of started transactions between the members of Kinspiring is 79.

As the means of output control, reviews and ratings are of “huge importance” for the marketplace, and they complement the limited information members – or even the marketplace admin – receive of other members. Besides reviews, also PayPal payments affect the levels of trust and perceived risk: while having an established secure method is a positive feature, it is not that familiar for Finnish users afraid of frauds and other issues with it. Members control pricing decisions above the minimum transaction fee of 4 € and the 8% commission. External relationships of Kinspiring involve a considerable group of individual people who use the site merely for checking out product reviews for their own needs. Organizational cooperation is currently on the table in the form of mutual charity campaign with a domestic brand for baby equipment.

Marketplace for Peer-to-Peer Bicycle Rentals³

The second rental marketplace runs peer-to-peer bicycle sharing in England. Besides direct peer-to-peer rentals, the marketplace operates few bicycle pools left outside the scope of this study, as they do not fit the definition of direct peer-to-peer interaction. The marketplace was launched in March 2016, and has since been managed by two full-time co-founders with two part-time employees. Management of the two business areas of peer-to-peer and community sharing have been divided between the co-founders. While on a general level personal knowledge and skills guide the internal division of tasks and roles, there is a need for fluidity when stepping in on emerging areas or covering for someone’s absence. The company has its roots in an incubator program, and is supported by technical and design advisors with experience from established collaborative economy companies.

The limited resources for programming or personalization the interviewed co-founder views very positively, enabling a startup to focus on “the essential; the idea – not how it is executed”. The marketplace is open for anyone to browse and sign up for; in fact, any other way would be against their idea of an open community. Inputs – the bikes – are not inspected

³ The bicycle rental marketplace was the only one to request its data being kept anonymous, and will therefore be analyzed merely on the basis of primary data.

by the company, but both parties of transaction are guided to check the vehicle is fit for the purpose, and encouraged to refuse the transaction in case of any doubts. There have been no unexpected problems neither with the cycles or their riders, which is also reflected by the intention to maintain member and input control as they currently are. Pricing is left completely in the hands of the members and, besides the quality of the bicycle, it reflects their perceptions of the value of the service: those who are keen and excited about it, tend to list lower prices.

According to a co-founder, monitoring the output through reviews is a powerful tool for the business: it lowers the barriers for transactions, even though it sometimes might channel also irrelevant personal frustration. For the highly local marketplace commenting is seen as a means for community building and it happens on the site without formal requests or active urging. At the moment, trust related issues are not a problem in any way, the biggest risks being exposed to unfriendly or brusque communication. Sign up and rental guidelines explicitly encourage members to create detailed profiles and listing posts with pictures, stories, biographies, and links to external social media platforms or personal websites. To increase the role of identification and verified member profiles, clearing the possibility to collaborate with a background checks providing firm is underway. Established cooperation within the local community (i.e. with the city council) is of high value for the marketplace, and will definitely need continuous attention as the firm plans expanding next year. A number of new operating cities involves a set of new governance decisions on new hires, employee roles, organizational structure and control.

4.2.2 Product Sales Marketplaces

In total, 182 Sharetribe customers mediate primarily sales transactions of pre-owned goods. Looking at their member counts, both the average size and median top the overall average of 204 at 293, and median of 29 at 32. Figure 10 presents the count of product sales marketplaces by their number of members. Very similarly to rental marketplaces, a majority has less than 50 members and a relatively small number pass the point of having more than 500 members.

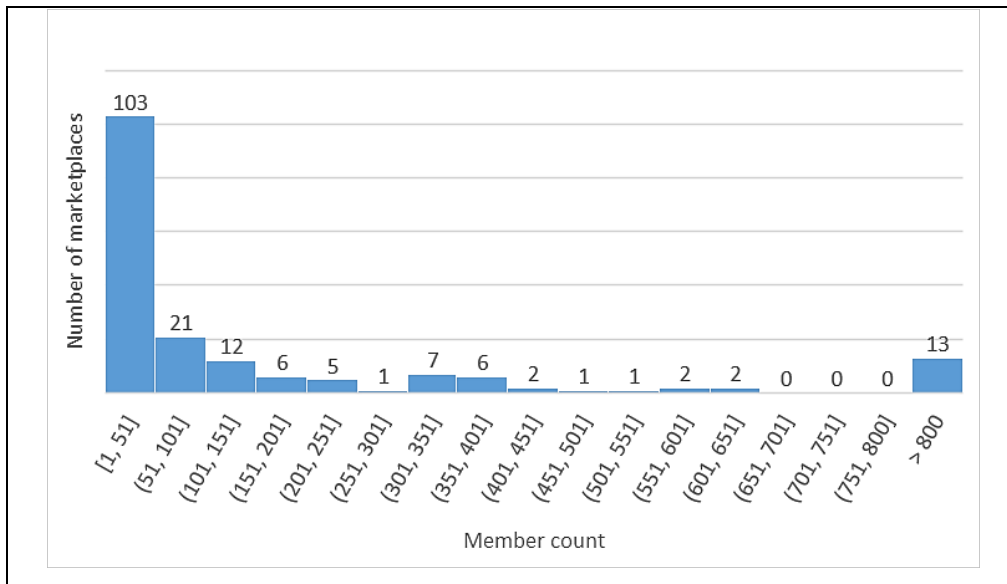


Figure 10. Product sales marketplaces by the number of members

Almost 58% of product mediators have members from only a single country, 20% from two, and 22% from three or more countries. Like rentals, product sales require physical access to the object, although it is transferred only once instead of the back-and-forward transit of a rental item. 51% of the redistribution platforms are managed by one admin – again indicating towards a single entrepreneur. Almost identically to rental marketplaces, 12% of product sales are administrated by four or more people.

The number of listing categories of product sales is on average even double as high as for rentals: 31, with a median of 14. 17 product mediators (9%) have hidden the listings from non-signed members, and 15 require an invite for becoming a member. Similar to the rentals segment, the two control mechanisms do not go hand in hand although some simultaneity occurs. 24% of marketplaces having connected PayPal (171) do not charge any commission, and overall the commissions do not exceed 30%. 52 product redistributors do not limit minimal pricing fees, while among the rest the transactions are set to start from the average of one unit of used currency, with the highest requirement of 30 units on one marketplace. 99 platforms (54%) have mediated less than ten started transactions, while the two marketplaces with most action have reached numbers of nearly 13 900 and over 6 200. The group between these two extremes gets values averaging at 96, with a median of 38.

Fairmondo UK

Fairmondo UK’s story started in 2014, when the founders planned to found an ethical version of eBay. However, after contacting and negotiating with Fairmondo Germany, the two decided to collaborate. Fairmondo UK was born, and their Sharetribe marketplace for trading

ethical goods and services launched in March 2016. Legally the two organizations are independent despite the trademark, but in reality, they have a close relationship based on trust and the shared values of transparency and ethical consumption. Fairmondo UK is currently being built and operated by the co-founders in Worth Cooperating, but will be launched as a multi-stakeholder cooperative that involves all members and stakeholders in decision-making. Far from simple, the transition is a step in the mission of becoming the giant of the “ethical community”.

All managerial decisions are shared through daily communication, and despite being described as iterative and following lean and agile principles, the processes can be backtracked. This supports the aim to reach consensus, as the cooperative’s rules require 80 % support for all initiatives. Some role division has been made in areas of networking and project management; also a new member is about to join and is assigned a central role for technological matters. Overall, members’ skills and background guide their work to some extent, yet often the emerging issues are handled simply by whoever reacts first. Further personalization or programming is not of interest for the marketplace at this point.

Fairmondo UK is open for browsing and signing up for, although the option for invite-only access is seen as potentially useful for testing phases to support expectation management of members used to the finished designs of eBay and the likes. Currently the marketplace has 166 members of which 85% are in the United Kingdom, 2% in France, and 2% in Sweden. In some cases, the sign up process may be a barrier for new members to join, and allowance of guest buyers was seen as an interesting option. As the marketplace is still bringing together its sides, clear rules for input control are yet to be developed – for a cooperative the requirements are again a subject of joint decision-making. The number of listing categories is currently very high at 99 (including nested categories), and started transactions sum up to 76.

Ultimately, the set objective of ethicalness will be the foundation of all listed offerings. Being an ambiguous concept itself, ethicalness of products and users will ultimately be validated through output reviews that are also seen as means for increasing transparency and trust. The membership in the cooperative community is viewed as trust enhancing per se, being in practice embodied in descriptive member profiles and taken actions. For the time being, no specific risks have been identified, although not being able to immediately react to problems with the platform but having to wait for Sharetribe’s answer is seen as an obstacle. Even more so is the forced use of PayPal. On one hand, the friction is about the commission extracted by PayPal, yet more importantly it is about the payment company not meeting the

requirement of ethicalness in the eyes of the community. Fairmondo UK does not charge commission, and there is no minimum fee for transactions.

As for external relationships, it is quite difficult to draw lines as Fairmondo UK is focusing on spreading the word and getting various communities to “look around” to acknowledge the synergies of cooperation. Whether this leads to them becoming members themselves, or remaining as external contacts, remains to be seen.

Used Parts 4 Harleys

Used parts 4 Harleys is a redistribution marketplace for used Harley Davidson motorcycle parts, launched in May 2015 by an entrepreneur in Montreal, Canada. He operates the marketplace by himself alongside a full-time job. No advisory roles are identified besides the communication with Sharetribe employees. Consultative support from marketing and programming specialists are seen as an option but would require revenue and income brought by business growth to be economically reasonable.

Used Parts 4 Harleys is open for anyone, and any restrictions on this are seen as merely limiting and unattractive. Currently it has 468 members; 77% of them are in Canada and 22% in the United States. The only problems with members have arose from them getting around the platform and completing transactions outside it. This is addressed by directing the transaction participants back to the marketplace with personal communication, sometimes more successfully than others. So far, a total of 66 transactions have been started on the marketplace, and no changes for access control are planned. The marketplace offerings are listed in 22 different categories wherein no input control is applied beyond the apparent brand requirement. However, a detailed template for writing listings is provided for members due to the huge variation in the properties of seemingly similar offerings regardless of their weariness. In addition, personal assistance is offered for hesitant members. Pricing is limited to start from five and to not exceed 10 000 Canadian dollars, the exact amount being up to sellers. A commission of 10% goes to the entrepreneur.

Direct linking to the marketplace’s Facebook page is viewed to strengthen trust on Used Parts 4 Harleys, as members also use the page to contact the entrepreneur, comment, and ask questions. PayPal payments are seen as counter-effective; past fraud incidents and fear of parts or money being frozen due to a violation scare members who even refuse using the payment method. Trust-issues have also been actively addressed through establishing and strengthening relationships with sellers and offering them help throughout the process.

Additionally, in case of organizational side members, their reputation outside the marketplace affects perceived risk by lowering it. External relationships are on the table, with more exact plans being on hold until the user base has been increased.

4.2.3 Service Marketplaces

Service marketplaces include 192 Sharetribe customers, and their member counts have remarkably lower average of 124 (all marketplaces 204) with a median of 26 (29). The service marketplaces are presented by their member count in Figure 11, showing an even stronger emphasis on the lower numbers than the other marketplace types with 60% of the businesses belonging to the first group of 50 or less customers.

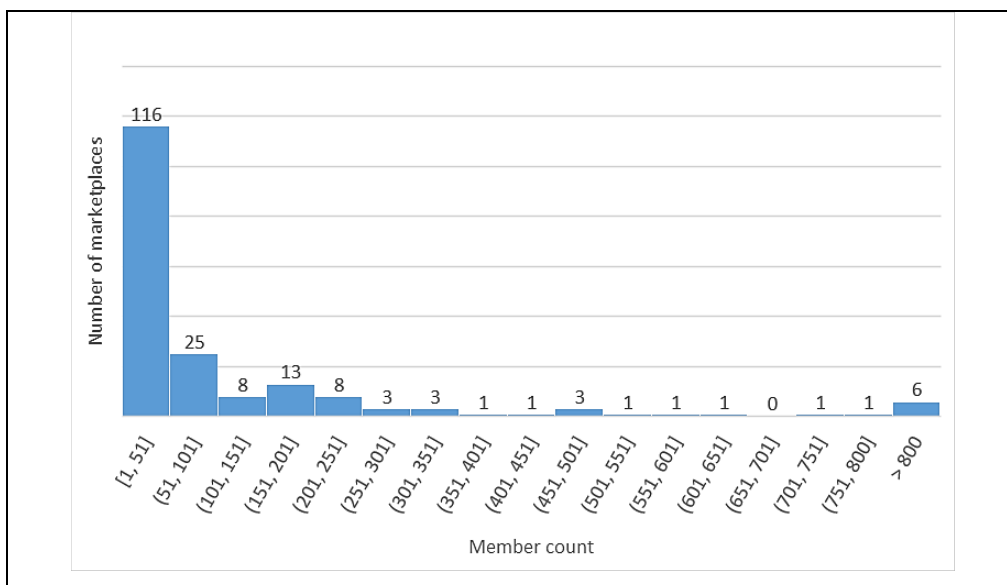


Figure 11. Service marketplaces by the number of members

48% of the service marketplaces have members from one country, 32% from two, and 20% from three or more. Services being the only type not necessarily requiring the transacting members accessing the same object, the locality of the marketplaces is still quite notable. Most of the marketplaces are run by a single admin, with a combined 12% being operated by more than three people.

Service marketplaces tend to have fewer categories for the offered listings, average value being 18, with a median of mere six categories. 29 (15%) platforms have their listings closed from those not signed up as members, and ten (5%) require an invite from potential members. 175 marketplaces have PayPal connected, of which 27 do not charge any commission. The remaining 148 have an average of 11% commission fee, with a median of 10%. Three service mediators charge 90% or more of the transactions. 48% (92) of the

platforms do not set any minimum fees for transactions. Those who do, average at 5,1 units of the used currency, with a median of 1 unit. 112 service marketplaces (58%) have facilitated less than ten started transactions, the top mediator reaching over 2 000. The rest have an average of 74 and a median of 34 started transactions.

Boateasy

Boateasy is a marketplace for boaters and boating professionals launched in South Florida in November 2015. Having been initiated from personal need, it has been built to connect boat owners with people who work around boats or do for example maintenance, repairs, or cleaning. During the year in operation, Boateasy has grown to include also sales of parts and boat-related goods, and has now 1 420 members of which 96% are in the United States and a marginal percentage in Canada. Further plans for expansion also include peer-to-peer rental services, also potentially leading to additional hires for supportive roles. Currently the entrepreneur operates Boateasy part-timely on his own, but receives advice and gets to pretest ideas among the boating community and familiar boating service providers in the area.

Regardless of the minimal custom development possibilities and lack of API, the Sharetribe platform is seen as a developed option for current peer-to-peer boating communities based on online forums. Browsing is not limited and no invite is needed for signing up, which supports the entrepreneur's objective to attract new members through word of mouth. Interaction between the entrepreneur and members is often sparked by the need for advice or guidance for pricing. There are no explicit pricing limits, however accuracy is expected so that it is possible to reasonably estimate the final cost in their situation. The listed price levels and their accuracy tend to reflect the nautical experience of the member in question. Boateasy extracts a 2% commission from all transactions. Non-monetary interaction also occurs, as some members look for chances to gain experience of network through their offered services. In addition, a few cases of requesting help for minor tasks without explicit financial compensation have been noticed. Overall, the relatively complicated and often negotiated price formation of services is a critical issue for Boateasy.

Inputs among the 43 listing categories are monitored only to remove irrelevant spam and off-topic i.e. not boating-related posts as the entrepreneur tries to stay "hands free". No specific problems have arisen, and interventions have only been made to increase the quality of posts through content improvements and editing. At the time of research, 134 transactions have been started on the marketplace. Reviews are perceived very positively, and there have

been some efforts to encourage them through showing example. On average, members of Boateasy tend to give negative feedback easier and in larger extent, while positive ones are of few words. As reviews are seen as a means for peer validation, they also affect the perceived trust alongside the experience of members. As for perceived risk, the quality of a listing - built already in the microlevel of choice of words is of impact. In addition, it needs to be highlighted that not all services are equal in riskiness by nature: unsupervised maintenance work or captaining exemplifying this well. PayPal is viewed as risk reducing. Current external relationships of Boateasy limit to advertising collaboration.

Doerz

Doerz is a peer-to-peer marketplace for experiences: it matches people who want to share their hobby, skill, or a sport with other people looking for things to do. The marketplace was launched in April 2016 and is located in Turku, Finland. Doerz was founded by the interviewed full-time entrepreneur and a co-founder, but has been managed by the entrepreneur only since early fall 2016. At the time of the interview, another partner was just entering the company, accompanied by a part-time sales team of six people. As the new partner is moving also to work for Doerz full-time, is the division of responsibilities a work in progress. However, due to their skills and background, the entrepreneur will continue with more general tasks as the new partner focuses on marketing and metrics. A wide range of support is gained through personal networks and a mentor, as well as from two local accelerator programs Doerz has been part of. Overall, support is viewed as important for growth and development.

Having no API has been more a relief than a problem for the marketplace, and in its current state there are no special needs for custom development. Browsing and signing up do not presume having an invite, which was briefly considered as an option for building a more “premium” image. Currently Doerz has 174 members, of which 85% are in Finland and 4% in Spain. Some unwanted cases of marketing efforts and personal online branding were mentioned, the overall experience of member behavior being strongly on the positive side. The listings are made most often by members who have already been in contact with the marketplace, which seems to limit the need for input control. Some restrictions have been introduced to exclude services that do not represent the described mutual experiences: in general, they should not be sold elsewhere, and offer “a little bit of wow factor”. Offerings are at the moment accepted in six listing categories, and they have led to the start of 75 transactions. Control is executed through personal communication, followed by closing the

listing and banning the member if necessary. Output control through reviews is appreciated and their importance for trust is noticed.

Overall, trust is viewed to form mainly through high-quality posts with enough content, details, more than three pictures and in some cases also videos. Translated and descriptive listings indicate dedication, whereas unprofessional posts repel customers as they are perceived riskier. For some members PayPal feels unfamiliar and thus unreliable, and its forced use is not preferred. This affects Doerz significantly, as currently all listings include paid transactions. Pricing involves a 10% commission and has been limited to be above 10 Euros; advice and average prices are offered for those in need for further guidance. There are no unpaid transactions, which was highlighted as a trust-related thing: people are more likely to fulfil their promises when money is included in transactions. External relationships include ties in both local and national startup communities, membership in the chamber of commerce and the association of entrepreneurs, as well as the polytechnic university. Doerz has also started an internalization project together with the Finnish Funding Agency for Innovation (Tekes).

4.3 Cross-Case Analysis

This section reviews the commonalities and differences found among the three types of marketplaces. Each sub-section starts with a short description of the respective highlights from secondary data, and continues with the cross-case analysis. The findings are presented in summary tables followed by detailed descriptions dimension by dimension. Finally, in section 4.4 the findings among each marketplace type are compared and analyzed reflecting the theoretical framework for platform governance by Hein et al. (2016; introduced in section 2.3).

4.3.1 Rental Marketplaces

To sum up, according to the secondary data rental mediators seem to represent an average Sharetribe marketplace quite well. Both average and median sizes of rental platforms are close to those of all the marketplaces. They seem to be a little more local than service mediators and little less local than product redistributors, and are less often managed by single entrepreneurs than either of the other two types. Their average and median amounts of listing categories are typical to the data in general; as are also commissions, average transaction fees, and the figures describing started transactions. Rental marketplaces have the lowest percentage of limiting the access exclusively for members with invites.

The findings from the primary data analyses are summarized in Table 10 below. I have used grey shading to highlight the essential points of similarity between cells. The similarities as well as notable differences on each dimension are discussed in more detail in the following parts.

Table 10: Summarized findings from the cross-case analysis of rental marketplaces

Dimension	Findings	
	Kinspiring	Bicycle rentals
<i>Governance structure</i>	entrepreneur manages by herself	2 co-founders with separate roles & part-time employees on supportive roles
	Multiple advisory roles outside the organization	Multiple advisory roles outside the organization
	Reactive development	Proactive development
<i>Resources & documentation</i>	Seen important for sophisticated development in more mature phase	Seen important for sophisticated development in more mature phase
<i>Accessibility & control</i>	No access restrictions	No access restrictions
	Input control through a list of allowed brands	No input control
	No output control; matter of technical features	No output control; matter of communality
<i>Trust & perceived risk</i>	Trust built through secure payments and output control	Trust built through fine-tuned profiles
	Trust reduced through PayPal and incomplete member profiles	Trust reduced through unfriendly communications
<i>Pricing</i>	Minimum transaction fee 4€; 8% commission	No pricing limits
<i>External relationships</i>	Brand enthusiasts	The local community

Dimension 1: Governance Structure

Primary data from the case interviews two marketplaces that have both been established less than a year ago, but which have developed at quite a different pace. Kinspiring is a more hobby-like project of a part-time entrepreneur, while the bicycle rental platform employs

part-time people on top of the two co-founders working full-time. Yet, a notable commonality is that both marketplaces have several people or groups in important advisory roles outside the organizational decision-making. The differing levels of work intensity are reflected by the other governance mechanisms of the two. Kinspiring is managed with a more reactive touch, meaning that things are taken care of as they arise. The actions taken by the bicycle sharing platform decision makers are more proactively aimed at growing and developing the marketplace. The quote below describes well the level and the intensity of engagement of the bicycle sharing platform managers:

“In the beginning it is more about how do you do this dance of having a startup; finding right roles, how do you train and share values with new people. -- You have to grow with the startup and be fluid – ready to step in. You pretty much know what’s going on in every corner.”

- Co-founder, the peer-to-peer bicycle rental marketplace

Dimension 2: Resources and Documentation

The boundary resources and documentation supporting custom development of the platform are quite limited for the hosted Sharetribe customers (as explained also earlier in this thesis). The role of these were seen very similarly by both of the case interviewees, who noted them as more important for later, more mature phases of their marketplaces. The more detailed and sophisticated the improvements and the development tasks get, the more important role an API and other custom development features get.

Dimension 3: Accessibility and Control

Both Kinspiring and the bicycle platform currently control accessibility similarly: they do not restrict browsing or signing up in any way. However, the interview with Kinspiring revealed a need for more careful screening of sign ups to increase control on this. This, together with the detail that it was initially considered an invite-only marketplace, seems to reflect the difference in the nature of the marketplaces. While Kinspiring focuses on mediating straightforward rental interactions, the bicycle rental platform is aiming more towards building an open community.

This difference is reflected also in the input and output control mechanisms employed by the two marketplaces. Kinspiring has a list of brands that are allowed on it, and while exceptions do happen, they are always screened separately. Bicycle sharers’ input is not

controlled, and initiatives to widen the selection are not only allowed but supported. The following words were used to describe how the marketplace ended up adding charity bikes among their offering:

“I think it’s something about what we have learned about... I think what is nice about this community and marketplaces that you learn a lot of things; like people come with ideas and different things that they are excited about, and some of those things – you know – just take off.”

- Co-founder, the peer-to-peer bicycle rental marketplace

Member reviews as output control mechanisms follow the same pattern: acknowledged as important by both of the organizations, not controlled in any specific way, yet approached from different angles. The entrepreneur of Kinspiring sees output control linked to having more in-depth member profiles – i.e. something that should be technically executed by the platform. On the bicycle rental marketplace output control is in the hands of members and encouraged through the sense of communality and locality.

Dimension 4: Trust and Perceived Risk

The two interviewed rental marketplaces have similar plans for the future development of trust and risk related issues: to strengthen the possibilities for member background checks for identification purposes. However, their thoughts on the current state of trust and perceived risk differ. On Kinspiring, trust is seen being strengthened by secure payment methods and output control i.e. writing and reading reviews. On the other hand, PayPal payments were highlighted as a trust-reducing feature due to it being a rather uncommon method in Finland; also, incomplete member profiles were mentioned here. Interestingly, for bicycle sharing, not just complete but refined profile descriptions were named as a trust strengthening character, and unfriendly communications as trust reducing.

Dimension 5: Pricing

One noteworthy detail about pricing mechanisms arises from the case comparison. Bicycle sharers seem to take a more personal stand on their pricing levels also; besides the quality of the item for rental, the enthusiasm they feel about the overall rental possibility seems to affect the price they set. Overall, it seems that on neither marketplace the decision-maker(s) take any significant role for pricing.

Dimension 6: External Relationships

The external relationships of the two rental marketplaces indicate again the difference of their focus. Besides its member groups, Kinspiring lists people seeking product reviews as its stakeholders. The bicycle rental platform's co-founder names here not just bicycle enthusiast but also for example the city councils, stating that the marketplace “is a product that sits within a community”. Besides the different focus, there are no interesting points of difference among the sixth dimension.

4.3.2 Product Sales Marketplaces

Product sales marketplaces are by far the biggest of the marketplace types in member size: in total they have more than double the amount of members on service marketplaces, and 1,75 times the amount of those on rental marketplaces. They also have significantly high average size, while median is closer to the overall average. Not surprisingly, product sales have the highest locality percentage of the marketplace types. The number of admins is almost identical to those of the overall average. While the amount of listing categories is significantly higher than for other marketplace types, they are more often public for anyone to browse than other platforms yet also require an invite from members-to-be more frequently. The frequency and the rates of charging commission are the lowest at slightly below the overall average. In addition, the frequency of limiting pricing is the lowest for product sales, as are the minimum average fees for transactions. Product redistribution platforms almost double the average of started transactions on rental platforms, and nearly quadruple that of service mediators while their medians are very close to each other. Again, Table 11 summarizes the cross-case analysis and is followed by the more detailed examination of the dimensions.

Table 11: Summarized findings from the cross-case analysis of product sales marketplace

Dimension	Findings	
	Fairmondo UK	Used Parts 4 Harleys
<i>Governance structure</i>	4 directors with partly separate roles	entrepreneur manages by himself
	No advisory roles outside the organization	No advisory roles outside the organization
	Proactive development	Reactive development
<i>Resources & documentation</i>	No significant findings	No significant findings
<i>Accessibility & control</i>	No access restrictions	No access restrictions
	Input control through a requirement of ethicalness	Input control through the brand requirement
	No output control; complicated matter of ethicalness	No output control
<i>Trust & perceived risk</i>	Trust built internally through membership and reviews	Trust built externally through social media presence
	Trust reduced through the inability to react immediately for support requests	Trust reduced through the forced use of PayPal
<i>Pricing</i>	No minimum transaction fee, no commission	Transactions limited between 5-10 000 CAD; 10% commission
<i>External relationships</i>	Wide range of local communities; ethical communities; the cooperative movement	Not yet any; interested in motorcycle clubs

Dimension 1: Governance Structure

When comparing the primary data on Fairmondo UK and Used Parts 4 Harleys, their governance structures seem to differ mostly due to the number of the marketplace’s decision-makers. On Fairmondo UK, management is shared between four directors, while Used Parts 4 Harleys is a project of one entrepreneur. The interviews did not reveal either having significant advisory or other type of roles for people outside the case organizations.

On both marketplaces, current tasks involve addressing emerging issues as well as design and development tasks that also involve networking. However, a point of difference

arose when discussing the goals of the marketplaces and the driving forces behind them: Used Parts 4 Harleys aims to answer the need for more secure peer-to-peer sales, and on Fairmondo UK every decision and step is considered in the light of ethical and sustainable values and principles. Especially this was expressed when discussing the possible needs for additional work force or skills. For Used Parts 4 Harleys, a need for certain professional skills like marketing was expressed and seen prevented due the costs of it. For Fairmondo UK, the need for example for technical expertise was also indicated, but approached values first, like well exemplified by the following quote about the future development of the marketplace’s management:

“We’ll need to be making sure the project doesn’t become captured by a group of professional managers who may be technically competent but do not share the original values.”

- Co-founder, Fairmondo UK

Dimension 2: Resources and Documentation

There were no notable findings in the data regarding resources and documentation on peer-to-peer product sales marketplaces.

Dimension 3: Accessibility and Control

Neither of the product sales mediators is interested in restricting marketplace accessibility. On the contrary, the discussion around the mechanisms focused more on the ways to lower potential barriers for entry for anyone interested. The interviewed directors of Fairmondo UK even viewed the option of not controlling the access as an attractive one, suggesting that letting guest buyers participate in transactions would be good for the business.

Offering i.e. input control plays quite a different role on the two redistribution marketplaces. On Used Parts 4 Harleys, there are no restrictions on this beyond the obvious requirement of listed parts being for Harley-Davidson motorcycles. The written listings need to have certain components – defined by the entrepreneur – on them, but this does not limit the parts being sold per se. On Fairmondo UK, the requirement of the sold products being ethical is more complicated one. First, the definition of ‘ethical’ is neither clear nor common, but further value-based choices regarding its contents and meaning are needed. Second, as the decision-making of the marketplace is shared, reaching a clearly outlined scope requires not only choosing between terms but also balancing between the different perceptions of various participants. Output control through ratings reflects the same phenomenon: for Fairmondo

UK it is not just a way to boost trust between members but also a means for the validation of ethicalness.

Dimension 4: Trust and Perceived Risk

Platform characteristics related to trust and perceived risk are viewed differently by the case redistribution marketplaces. On Fairmondo UK, trust is said to be built internally, i.e. within the marketplace, through things like membership, reviews, and customer support. For Used Parts 4 Harleys external connections matter more: the marketplace's presence on Facebook is seen as important for building trust, while PayPal payments are viewed decreasing it due to the threat of frauds. Despite these differences, rather uniform actions have been taken by the decision makers to affect the trust and perceived risk of their members. Both marketplaces named reputation building through fieldwork – meeting and speaking with people – as their primary mechanism on this dimension.

“Being new is hard – people have to know you; they have to be exposed to you multiple times... It's pure marketing.”

- Founder, Used Parts 4 Harleys

Dimension 5: Pricing

On Fairmondo UK, all possible pricing decisions are left for members to make. According to the interviewed co-founders, this freedom would be even greater if they were able to let members negotiate prices before transactions. The founder of Used Parts 4 Harleys has decided to restrict transaction prices between 5–10 000 Canadian Dollars. Both marketplaces share a worry about PayPal driving transactions or even members away, and wished to be able to affect the choice of payment method more.

Dimension 6: External Relationships

On the sixth dimension both Fairmondo UK and Used Parts 4 Harleys are looking for to do more, yet their targets differentiate them. While the latter is planning on finding ways to cooperate with specific, targeted groups of motorcyclists, Fairmondo UK is on a more communal mission. Besides connecting with closely related communities of ethical consumers and the cooperative movement, they eventually want to affect how value chains work and promote life cycle thinking and sustainability. The societal drivers are exemplified by the following quote from a discussion about the reasons for cooperation:

“We are trying to support the towns and fight the corporations that suck out everything from them. - - Fairness is more effective way than charity is.”

- Co-founder, Fairmondo UK

4.3.3 Service Marketplaces

Service marketplaces are most common type of Sharetribe customers, although they have the smallest number of members. With less than half the member count of product selling platforms, they end up with remarkably low average and median member counts. They are the less local than the two others, with the highest number of single entrepreneurs. The average and median of listing category amount are also lowest among the three marketplace types. Service marketplaces are private more often than the others while they do not require an invite from potential members as often as an average marketplace. Service mediators tend to charge commission more often than the others, with a commission percentage similar to the average. The minimum fee for transactions is notably higher than for rentals or product sales. Started transactions sum up to less than half of the general average.

Table 12: Summarized findings from the cross-case analysis of service marketplaces

Dimension	Findings	
	Boateasy	Doerz
<i>Governance structure</i>	Entrepreneur manages by himself	2 partners with separate roles and a part-time sales team of 6
	Multiple advisory roles outside the organization	Multiple advisory roles outside the organization
	Reactive development	Proactive development
<i>Resources & documentation</i>	Frees resources for other tasks	Frees resources for other tasks
<i>Accessibility & control</i>	No access restrictions	No access restrictions
	No input control	Input control through detailed criteria and screening of all offerings
	No output control	No output control
<i>Trust & perceived risk</i>	Trust built through high-quality listings, reviews, and reputation outside the marketplace	Trust built through high-quality listings
	Trust reduced through incomplete member profiles	Trust reduced through the forced use of PayPal
<i>Pricing</i>	No minimum transaction fee, 2% commission	Transactions limited above 10 EUR; 10% commission
<i>External relationships</i>	Marketing cooperation	Wide range of communities: local and interest-focused

Dimension 1: Governance Structure

The marine service mediator Boateasy is a part-time project of an entrepreneur who is planning to keep the decision-making to himself also in the future. While the free-time experiences mediating Doerz is currently run by two partners and a part-time sales team, its founder clearly has the steering role being the only person on board since the start. Both interviewees mention several parties – both personal and marketplace-connected – outside their organizations from whom they receive sparring and support.

Dimension 2: Resources and Documentation

Neither of the service platform entrepreneurs see the lack of custom development possibilities as restricting their decision-making too much but rather as freeing them to focus on other things. The following comment is from our discussion about the meaning of boundary resources or documentation:

“[The lack of boundary resources causes] no particular disadvantages as in the end of the day success is about attracting users, and nothing on the platform prevents Boateasy from that.”

- Founder, Boateasy

Dimension 3: Accessibility and Control

The access controlling decisions of the service marketplace entrepreneurs seem similar based on the interviews. Both Boateasy and Doerz are open for browsing and signing up, and neither of them was able to think of any reasons to change this. Despite this, an interesting detail about the consequences of minimal access control was brought up in the conversation with the entrepreneur of Doerz:

“The personal nature of the marketplace brings about these weirdos who just want to raise their own social media presence and boost ego.”

- Founder, Doerz

Input control, on the other hand, separates the two service mediators. The founder of Boateasy describes his role as a facilitator: he is attempting to stay “hands free” of controlling the offerings listed on the platform, and only take action when there are no other choices left. On Doerz the control is stricter, yet its guidelines are harder to define exactly as they are also used for building the image and the right niche for the platform:

“I always tell them to offer something people wouldn’t otherwise do: a little bit of wow-factor, something you’d want to tell your friends.”

- Founder, Doerz

Output control is viewed important on both marketplaces, yet no specific actions were revealed to be done to encourage them.

Dimension 4: Trust and Perceived Risk

The mechanisms for building and strengthening trust are approached similarly in the two case marketplaces. Detailed descriptions of the offering and member biographies play a critical role as successful services require experience and knowledge from their providers. This is interesting as the nature of the services mediated by the platforms are so different. Both host a community for sharing activities, yet for Doerz this is the main focus as for Boateasy it is another category among the professional-level marine services that are offered to ease the tasks of boat owners. On Doerz the requirement of minimum transaction price is placed to enhance trust by encouraging members to take agreements more seriously and by preventing no-shows.

Dimension 5: Pricing

Besides the minimum transaction limit only employed by Doerz (see dimension 4 above), the interviews paint quite a uniform picture of the service mediators who do not control pricing in a specific way.

Dimension 6: External Relationships

Interpretation of the external relationships shows the two platforms to perceive the value of cooperation differently. The entrepreneur of Boateasy mentions cooperation possibilities that directly utilize the marketplace either as an advertising channel or means for signing up for races. Doerz's founder, on the other hand, highlights the role of more indirect cooperation with for example several startup communities that do not directly generate traffic or revenue on the site but create opportunities for networking and peer support.

4.4 Observations from Empirical Analysis

This concluding section of chapter 4 shortly recaps the empirical findings of the study, reflecting them with the introduced theoretical framework for platform governance. As is often typical for the first phase of analysis in multiple-case studies, the findings of within-case analysis are mostly descriptive. They can be reviewed in the respective subsections of section 4.2. The analysis of the secondary data was used to describe each of the three marketplace types in relation to the overall data set as well as the other marketplace types. Overall, the differences and similarities between the three marketplace types can be summarized as follows.

Product sales marketplaces have the highest amount of members with quite a lot of variation in both member count and offerings. They are local and often public, and let their members transact without commission or price limits more often than the others. Members on the product redistribution platforms are clearly the most active in comparison with the others. Service marketplaces, on the other hand, are small and not as tied to a single location, yet they are often run by one entrepreneur. Their offering is categorized more uniformly and private, with high tendency to charge commission and the highest transaction fees. Service providers and seekers have transacted more rarely. Rental marketplaces rank in between the two in most categories, yet two of their features could be highlighted: they have the lowest amount of single entrepreneurs, and they limit pricing more often than the others do.

The analysis of the governance dimensions first and foremost indicates variation between the case organizations. The selection includes entrepreneurs who run their marketplace in a hobby-like setting as well as full-time teams with detailed business development plans. However, this does not mean they would differ on the level of knowledge or motivation of entrepreneurs but merely on the size of the organization (reflected by the first mechanism of the first dimension). As a result, special attention was paid to carefully review the transcribed interview data in order to avoid letting the pace or drive of business development affect analysis on the other governance dimensions.

After completing the individual cross-case analyses, however, the governance mechanism of business development seemed worth more detailed investigation. As shown in Tables 10 - 12, all three marketplace types seem to include one organization with a reactive approach to platform development as well as another with a proactive approach. This enables reviewing and comparing the cross-case findings from the viewpoint of developmental stance to explore whether similarities among the other dimensions seem to be connected to the choice between a reactive or proactive approach. Following subsections 4.4.1 and 4.4.2 aim to shed light on this by examining the governance mechanisms utilized by the three reactive platforms (Kinspiring, Used Parts 4 Harleys, and Boateasy) and the three proactive ones (Bicycle rentals platform, Farimondo UK, and Doerz), respectively. Finally, subsection 4.4.3 returns to the theoretical framework by Hein et al. (2016), which will be adapted according to the findings from empirical analysis to fit the specific context of peer-to-peer marketplaces.

4.4.1 Marketplaces with Reactive Development Approach

The ‘reactive approach’ – used to describe Kinspiring, Used Parts for Harleys, and Boateasy – refers to their stance on platform development, meaning that the entrepreneurs revealed to develop their marketplaces primarily by reacting to occurring issues and situations. Reactiveness was something that was clearly discussed during the case interviews, and while naming different reasons for it, all three founders indicated it to result from their conscious decisions.

In all three, authority and responsibilities are in the hands of the entrepreneur alone. None of them however indicated that limited resources would be the primary reason for reactivity: the founder of Boateasy aims to stay hands-free from practical level marketplace governance in the future as well; for Kinspiring and Used Parts 4 Harleys the reactive stance goes hand in hand with the phase of their marketplace growth, and proactiveness might to be on the agenda only after reaching a wider user base with more established amount of transactions. While Kinspiring and Boateasy have outsiders in advisory roles; Used Parts 4 Harleys does not. The same goes with other external relationships: Used Parts 4 Harleys reports not having any (yet), and Kinspiring and Boateasy both have them based on business-related grounds of shared interest in brands or marketing efforts.

None of the three explicitly indicate the current technical adaptability of the platform as restrictive, but two of them mention a concern of limited future possibilities. For Boateasy this seemed to be a matter of less uncertainty. None of the three limit member access to any sides. Boateasy does not control input either, while Kinspiring and Used Parts 4 Harleys have both implemented input control through brand requirements. Enhanced output control refers to any features besides the default possibility to reviewing transactions: this could be for example emphasized communications highlighting the role of reviews or specific guidelines for reviews. None of the three marketplaces were actively working on this dimension.

The factors affecting the dimension of trust and perceived risk could in general be divided into internal and external ones. These refer to details and features that are either fully controlled by the marketplace decision makers or dependent on some other actors, respectively. Kinspiring named only internal factors as trust-increasing, on contrary to Used Parts 4 Harleys, which perceives trust to be mainly enhanced through external factors. Boateasy listed the both kinds. Interestingly, Used Parts 4 Harleys sees also perceived risk to

be increased by external factors. For Kinspiring both kind of factors were recognized, while Boateasy named internal factors mainly as risk increasing. All three charge commission on transactions, Boateasy being the only one to leave pricing otherwise unrestricted.

4.4.2 Marketplaces with Proactive Development Approach

The bicycle rental platform, Fairmondo UK, and Doerz represent peer-to-peer marketplaces with a proactive approach to platform development. Instead of reacting to arising issues or feedback from side members, they operate with a drive towards continuous improvement. They share a governance structure of multiple decision makers: on the bicycle platform and Doerz the roles of these are separated, while on Fairmondo UK authority and responsibility are primarily shared. Fairmondo UK is also the only one not having outsiders in advisory roles. All three seem to have strong ties to external interest groups based on locality (all three marketplaces), communality (bicycle rentals marketplace and Doerz), and ideology (Fairmondo UK).

Regardless of a proactive way of developing their business, the three interviewees do not share an opinion of the current technical adaptability restricting them too much. While the founder of Doerz primarily describes it as enabling, on the bicycle rental marketplace it is seen as a potential future problem, and on Fairmondo UK already now as somewhat restrictive. Similar to their reactive counterparts, none of the three marketplaces employ access restrictions on side members. The bicycle rental mediator restricts neither the input, while Fairmondo UK and Doerz both screen the listings on their platform to ensure they are according to their guidelines. No enhanced output control was recognized to have been implemented on any of the marketplaces.

The three all share a view of trust being built on internal factors. The bicycle rental mediator sees internal issues also as a reason for increased perceived risk, while Fairmondo UK and Doerz list external matters as more influential. When it comes to pricing related mechanisms, Fairmondo UK and Doerz have chosen the opposite paths: the first-mentioned has not set any price restrictions or commission while the latter has employed both. The bicycle mediator also lets its customers to freely decide on pricing (commission cannot be reviewed as it is information that would only be accessible through the secondary data).

4.4.3 Theoretical Framework for Governing Peer-to-peer Marketplaces

The above-introduced findings from all case organizations are summarized in Table 13.

		Findings						
Dimension	Mechanisms	Kinspiring	Bicycle rentals	Fairmondo UK	Used Parts 4 Harleys	Boateasy	Doerz	
Governance structure	Authority and responsibility	Single decision maker	Multiple decision makers with separate roles	Multiple decision makers with shared roles	Single decision maker	Single decision maker	Multiple decision makers with separate roles	
	Outside advisory roles	Yes	Yes	No	No	Yes	Yes	
	Platform development	Reactive	Proactive	Proactive	Reactive	Reactive	Proactive	
Resources & documentation	Stance on technical adaptability	Enabling; might become restrictive in the future	Enabling; might become restrictive in the future	Somewhat restrictive	Might become restrictive in the future	Enabling	Enabling	
	Access restrictions	No	No	No	No	No	No	
	Input control	Yes	No	Yes	Yes	No	Yes	
Accessibility & control	Enhanced output control	No	No	No	No	No	No	
	Factors increasing trust	Internal	Internal	Internal	External	Internal & External	Internal	
	Factors increasing perceived risk	Internal & External	Internal	External	External	Internal	External	
Pricing	Pricing restrictions	Yes	No	No	Yes	No	Yes	
	Commission	Yes	N/A	No	Yes	Yes	Yes	
External relationships	Existence	Yes; brand interest	Yes; local & communal interest	Yes; local & ideological interest	No	Yes; business interest	Yes; local & communal interest	

Table 13: Summarized findings from multiple-case analysis

As mentioned, the cross-case analysis did not reveal notable similarities or shared characteristics within the different marketplace types. The same can be concluded when comparing the reactive and proactive development approach. However, while there are no characteristics that could immediately be connected with certain developmental stance, the analysis reveals some areas worth further and more detailed investigation.

First, due to the nature of Sharetribe’s platform and its fixed features for technical adaptability, the dimension of resources and documentation cannot be granted too high a value for this study. For more informed observations, the dimension needs to be reviewed in cases, which allow entrepreneurs to impact more on technical characteristics of their platform. The same can be remarked on the mechanisms of output control – when it comes to the customers of Sharetribe, the platform providers significant role in guiding side member interaction makes comparisons more complicated. None of the notions from the empirical findings points to perceive access restrictions as of significant value to peer-to-peer marketplace governance. However, the third mechanism of the dimension, input control, might be linked to it indirectly, as some of the interviewees pointed out the meaning of high-quality listings for internally increasing trust on the marketplace.

Another speculative point of interest could be seen in the relation of internal and external factors for trust and perceived risk. For reactive developers, external factors seem to play bigger role, while those with a proactive approach mention internal factors more often as significant. If confirmed, the connection could reveal if the development approach is actually also linked to entrepreneurs’ perceptions of their possibilities to impact on the interactions on their platform. Of similar tentative interest is also the role of external relationships. While meaningful external stakeholders were identified for the representatives of both development approaches, it seems that the ones of proactive developers reach in more directions and beyond straightforward commercial interest, including relationships for peer support and communal development.

Table 14 returns to the theoretical framework by Hein et al. (2016), but is now adapted to correspond the findings from empirical analysis and thus present a tool especially useful for examining peer-to-peer platforms as one form of collaborative consumption. When compared with the original framework, it can be noted that all of the mechanisms can eventually be described in a rather simplified manner. They are represented either by one of two or more alternatives (e.g. the dimension of governance structure) or by a position in a continuum between two extremes (e.g. the dimension of resources and documentation).

Table 14: Multisided platform governance dimensions and mechanisms for peer-to-peer online marketplaces (adapted from Hein et al., 2016)

Dimension	Mechanisms	Description
<i>Governance structure</i>	Authority and responsibility	Single decision maker / Multiple decision makers with separate roles / Multiple decision makers with shared roles
	Outside advisory roles	Yes / No
	Platform development	Reactive / Proactive
<i>Resources & documentation</i>	Stance on technical adaptability	Restrictive ~ Enabling
<i>Accessibility & control</i>	Access restrictions	Yes / No
	Input control	Yes / No
	Enhanced output control	Yes / No
<i>Trust & perceived risk</i>	Factors increasing trust	Internal / External
	Factors increasing perceived risk	Internal / External
<i>Pricing</i>	Transaction fee	Yes / No
	Commission	Yes / No
<i>External relationships</i>	Existence	Yes / No; Grounds for relationship

Of course simplifications are not a goal per se, and especially not so in an exploratory study. However, they were seen critical for this research to reach the level of detail, which allows comparisons between various different marketplaces. Due to the study's nature as an exploratory, qualitative multiple-case research, no hypotheses or broad generalizations are made. The theoretical contributions and managerial implications of this work are discussed in more detail in the final chapter, alongside the study's limitations and further suggestions for future research.

5 Conclusions

In the beginning of my study I sketched a research question and objectives to guide the choices to be made regarding the theoretical and methodological approach. It was clear from the initial steps on that collaborative consumption and platform governance are topics with solid roots in the economic literature. However, the confluence of the topics has yet remained uncovered with the exception of a few very recent studies. As suggested for example by Saunders et al. (2009), this kind of new topics are best to be studied inductively. This means reflecting themes arising from data with the ones derived from literature, remaining adaptive, and even reformulating the research design and setting as the work proceeds. Following this iterative approach led to the final format of my research question:

How do platform entrepreneurs govern peer-to-peer marketplaces?

Three research objectives were defined to answer the research question:

- 1. to map different definitions and theories in the two relevant research areas*
- 2. to identify a theoretically justified approach for studying the governance mechanisms of collaborative peer-to-peer consumption*
- 3. to explore the governance mechanisms of peer-to-peer platforms in real life situations*

Chapter 5 concludes the research by pulling together both the theoretical and empirical lines of inquiry. My goal here is to summarize the results for reflecting and evaluating how well they address the research question and objectives. The first section reviews the motivation, contents and findings of my work and discusses their relation and contributions to previous research. Section 5.2 looks at the topics and themes from a more practical viewpoint and presents the managerial implications of them. Finally, the limitations of the study as well as the suggestions for further research are presented in sections 5.3 and 5.4.

5.1 Main Findings and Theoretical Contribution

The motivation for my research originates from the phenomena chosen by a burgeoning number of other recent studies: digitalization and platform businesses. However, to approach the themes from a fresh viewpoint, I decided to focus on the governance of transactions on peer-to-peer platforms. It is not just the Ubers and Airbnbs of today exercising it, but the rising league of multisided platforms that will be the workplace of more and more people in

the future. Especially fascinating is the mission of balancing the level of freedom that platforms need to innovate and the regulation of labor. While these topics have lately received quite a lot of attention in media and public discussions, academic studies on platform governance are still sparse.

The first and second research objectives are addressed in the literature review, which introduces and conjoins the most relevant existing knowledge among the two research streams. I approach collaborative consumption as technological – not cultural – phenomenon, and outline it by compounding suggestions from Botsman and Rogers (2010), Botsman (2013), and Hamari et al. (2015). To address the lack of common definition in previous research, I define collaborative transactions in 2010’s to include technology-enabled online peer-to-peer selling, renting, lending, swapping, sharing, bartering, and gifting. These are further divided into three systems: product-service systems, redistribution markets, and collaborative lifestyles (Table 15).

Table 15: Systems of collaborative consumption (Botsman & Rogers, 2010)

Product Service Systems	Redistribution Markets	Collaborative Lifestyles
Pay to access (or extend) the benefit of a product versus needing to purchase	Unwanted or underused goods redistributed	Non-product assets such as space, skills and money are exchanged in new ways

Collaborative economy transactions are mediated by multisided platforms in all the three systems. Despite the soaring number of recent research on this area, literature still has not been able to present a fundamental definition, and the term multisided platform is used for various purposes. I participate in the discussion to form an overview of current knowledge and to contribute to the selection of a definition initiated by many before me (e.g. Gawer, 2009a; Porch et al., 2015; Rochet & Tirole, 2003; 2006). In addition to separating multisided platforms from ‘one-sided’ technological architectures within and between companies, they need to be distinguished from resellers, vertically integrated firms, and input suppliers (Hagiu & Wright, 2015). A theoretical basis by Hagiu and Wright (2011) was chosen for this. In short, they are organizations in a loose sense i.e. not necessarily following organizational boundaries. Additionally, their key activity is to host direct interactions of distinct, affiliated customers, thus enabling communication, exchange, or consumption between them.

To construct a theoretically justified approach for governance mechanisms, discussions around network effects and platform competition cannot be ignored. I connect these fundamental characteristics of multisided platforms with the strategic decision-making of platform entrepreneurs, adding to the perceptions of Hagiu (2014), Gawer (2014), and Rysman (2009). Recent studies have begun to acknowledge the importance of the governance decisions, yet Hein et al. (2016) are among the few to look at them on a concrete level. My work forwards their initiatives on multisided platform governance mechanisms as their framework guided the empirical part of this study.

I conducted a multiple-case study to address the third research objective of exploring governance mechanisms of peer-to-peer platforms in real life. Within- and cross-case analyses were done on data collected from six customers of the marketplace producer Sharetribe. The analysis describes the case organizations, as well as the three marketplace types and their relation to the overall secondary data. Some differences were found between the separate types. The cross-case analysis on the governance dimensions revealed the complicatedness of examining entrepreneurial governance decisions as a unity. The study showed that the selection of young peer-to-peer transaction mediators still involves a huge variety of organizations – even when technological platform design and development is excluded from the decisions. Several suggestions for future research can be derived from the findings, and they are discussed in section 5.4 after the managerial implications and limitations of the study.

5.2 Managerial Implications

In the introduction of this research I pointed out that part of my personal motivation for this study comes from the possibility to produce helpful information for platform decision makers. First, the distinct nature of multisided platforms has been emphasized in the theoretical part. Reviewing network effects, platform competition characteristics and the autonomy role of platform members should help the founders and managers of them to tackle emerging issues better. This could decrease the alarming numbers of platform businesses that fail because of being managed like ‘non-platforms’ i.e. more traditional businesses.

In addition to explaining the distinct characteristics, this study sheds light on the wide scope of strategic decisions for platforms; it is not restricted to the often-studied topic of pricing or technological platform design. Instead, the fact that side members are largely responsible for the value creation on platforms should bring the dimensions of platform

governance in the strategic decision-making of all platforms. My analysis on the six case organizations gives a glimpse on the concrete mechanisms that take the strategic decisions into action. Some of the mechanisms are easier to change than others, while some of them might not be of much use to a more mature platform. However, introducing them may help an entrepreneur or manager to reflect on tools they have at hand and to even get new ideas.

For those only planning the set-up of a multisided platform, the research may offer invaluable insight. As digital businesses can be got to market faster and cheaper than ever before, competition is harsh and contenders may appear almost immediately and from anywhere in the world. This means that a multisided platform business needs to be ready to handle transactions between member groups right away, focusing on capturing the user bases before using extensive resources for technological investments. In the end, it is the interactions that keep a platform alive, not the design.

Overall, the research can be of value to anyone operating in the field of so-called collaborative economy. It helps managers to navigate the jungle of terms and definitions, and, most importantly, offers tools to comprehend and proportion the trends of labor and regulation. Successful collaborative economy managers cannot afford to be surprised by the speed and scope of upcoming changes – not to even mention the current ones. For example, in the UK the Financial Conduct Authority has opened a regulatory sandbox to address the challenges of startups that do not meet the current regulation (Financial Conduct Authority, 2016). Simultaneously, Estonia is planning to fully legalize ride-sharing services and to provide a digital taxation system for drivers and small companies, both due late 2016 (Mardiste, 2016). Besides the income taxation of individuals, the taxes paid – and especially those unpaid – by collaborative platform corporates will receive more attention as officials worldwide follow the ongoing OECD discussions about transparency (Brunsdon, 2016).

5.3 Limitations of the Study

Even though the literature review looks at the studied topics from multiple viewpoints, it does not include every related research and theory. Some of these have been excluded intentionally and are therefore justified in the respective parts of the thesis. However, some may have been missed in the process unintentionally, as the time and resources for master's thesis are rather limited. Furthermore, the two research streams of collaborative economy and multisided platforms both involve an ongoing debate on fundamental definitions. This leaves

room for misunderstanding and misinterpretation as many concepts overlap and have inaccurate boundaries.

My methodological choices for conducting the study also pose some further limitations. First of all, the interpretive research philosophy means I am viewing reality subjectively. This means it is socially constructed and changing i.e. unique to me. The data could be analyzed with same methods by another researcher with different interpretations. Hence, I approach the research problem through understanding meanings and intentions, not deductive explanations. The decision to conduct a multiple-case study research prevents statistical generalization of findings. However, this was not my intention in the first place, as the study was designed to explore previously unfamiliar research areas.

Some further limitations have to do with the primary and secondary data used for analysis. First, the selection of the case organizations was made by Sharetribe, and even though the selection criteria is known, this is something I have not been able to control myself. Second, the secondary data has two noteworthy imperfections on it. Although the data set presents each organization as belonging to a group of either rental, product sales, or service marketplaces, in reality it may mediate multiple types of transactions. Another issue is that only the number of started transactions was trackable: at the moment Sharetribe cannot extract data on completed transactions, which would naturally depict the activity on marketplaces more accurately.

5.4 Suggestions for Future Research

This research has shown multiple possibilities for further research; not least because of its nature as an exploratory study, which maps previously uncovered areas. Although both of the research streams have received quite a lot of attention recently, they still have scope for more enquiries. First, collaborative consumption has been mostly examined from the behavioral point of view, and lacks especially academic research with regard to the rapid development of ICT. Besides the categorical approach formed by Botsman and Rogers (2010), its various forms could also be studied more from the sectoral view, like in the conceptualization by Martin (2016). Another interesting and topical way of looking collaborative consumption is through communal lenses: as geographical borders do not limit digital interactions, how do the ideological ones affect our transactions?

While my study examined the platform providers as the customers of a platform producer, the relationship between the end customers i.e. platform side members and the

producer would be another interesting one to explore. Current technologies enable collecting data of platform members and their behavior every time they visit it, resulting in huge amounts of information on for example preferences, connections, and even clicking. If somehow accessed without privacy violations, this kind of data would make possible (at least somewhat controlled) testing of changes in platform governance mechanisms, thus simplifying this complicated unity.

The dimensions and mechanisms initially listed by Hein et al. (2016) also propose multiple possibilities for future research. The authors' used the framework for studying different business models, whereas I utilized it for exploring the three types of peer-to-peer marketplaces. While the dimensions and the mechanisms should be further clarified through various empirical studies, I would suggest first conducting them among companies with a same business model. This would stabilize the environmental factors affecting the research, and hence smooth the messy setting of real life situations.

References

- Albinsson, P. A., & Perera, B. Y. (2012). Alternative marketplaces in the 21st century: Building community through sharing events. *Journal of Consumer Behaviour*, *11*, 303-315.
- Alsawalqah, H. I., Kang, S., & Lee, J. (2014). A method to optimize the scope of a software product platform based on end-user features. *Journal of Systems and Software*, *98*, 79-106.
- Armstrong, M. (2006). Competition in two-sided markets. *The RAND Journal of Economics*, *37*(3), 668-691.
- Arnould, E. J., & Rose, A. S. (2016). Mutuality: Critique and substitute for Belk's "sharing". *Marketing Theory*, *16*(1), 75-99.
- Bakos, Y., & Katsamakas, E. (2008). Design and ownership of two-sided networks: Implications for internet platforms. *Journal of Management Information Systems*, *25*(2), 171-202.
- Baldwin, C. Y., & Woodard, C. J. (2009). The architecture of platforms: A unified view. In A. Gawer (Ed.), *Platforms, markets and innovation* (pp. 19-44). Cheltenham, UK: Edward Elgar.
- Bardhi, F., & Eckhardt, G. M. (2012). Access-based consumption: The case of car sharing. *Journal of Consumer Research*, *39*(4), 881-898.
- Belk, R. (2007). Why not share rather than own? *Annals of the American Academy of Political and Social Science*, *611*, 126-140.
- Belk, R. (2010). Sharing. *Journal of Consumer Research*, *36*, 715-734.
- Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, *67*, 1595-1600.
- Benlian, A., Hilbert, D., & Hess, T. (2015). How open is this platform? The meaning and measurement of platform openness from the complementors' perspective. *Journal of Information Technology*, *30*, 209-228.
- Boateasy (2016). Online. Available at: www.boateasy.net, [25.11.2016].

- Bond, A. T. (2015). An app for that: Local governments and the rise of the sharing economy. *Notre Dame Law Review*, 90(2).
- Botsman, R. (2013, Nov 21). The sharing economy lacks a shared definition. *Fast Company*. Retrieved from: <https://www.fastcoexist.com/3022028/the-sharing-economy-lacks-a-shared-definition>
- Botsman, R. (2015, Oct 20). *The sharing economy: Dictionary of commonly used terms*. [Blog]. Retrieved from: <https://medium.com/@rachelbotsman/the-sharing-economy-dictionary-of-commonly-used-terms-d1a696691d12#.by3s4f1mc>
- Botsman, R., & Rogers, R. (2010). *What's mine is yours: The rise of collaborative consumption*. New York, NY: Harper Collins.
- Boudreau, K. J. (2010). Open platform strategies and innovation: Granting access vs. devolving control. *Management Science*, 56(10), 1849-1872.
- Boudreau, K. J., & Hagiu, A. (2009). Platform rules: Multi-sided platforms as regulators. In A. Gawer (Ed.), *Platforms, markets and innovation* (pp. 163-191). Cheltenham, UK: Edward Elgar.
- Boudreau, K. J., & Lakhani, K. R. (2009). How to manage outside innovation. *MIT Sloan Management Review*, 50(4), 69-76.
- Brunsdon, J. (2016, February 8). Multinational companies face tax avoidance EU crackdown. *Financial Times*. Retrieved from: <https://www.ft.com/content/fl1797650-ce7c-11e5-831d-09f7778e7377>
- Brusoni, S., & Prencipe, A. (2009). Design rules for platform leaders. In A. Gawer (Ed.), *Platforms, markets and innovation* (pp. 306-321). Cheltenham, UK: Edward Elgar.
- Bucher, E., Fieseler, C., & Lutz, C. (2016). What's mine is yours (for a nominal fee) – Exploring the spectrum of utilitarian to altruistic motives for Internet-mediated sharing. *Computers in Human Behavior*, 62, 316-326.
- Cabral, L., & Hortaçsu, A. (2010). The dynamics of seller reputation: Evidence from eBay. *The Journal of Industrial Economics*, 58(1), 54-78.
- Caillaud, B., & Jullien, B. (2003). Chicken & egg: Competition among intermediation service providers. *The RAND Journal of Economics*, 34(2), 309-328.

- Ceccagnoli, M., Forman, C., Huang, P., & Wu, D. J. (2012). Cocreation of value in a platform ecosystem: The case of enterprise software. *MIS Quarterly*, 36(1), 263-290.
- Chou, C., & Shy, O. (1990). Network effects without network externalities. *International Journal of Industrial Organization*, 8(2), 259-270.
- Constantiou, I., Eaton, B., & Tuunainen, V. K. (2016). The evolution of a sharing platform into a sustainable business. *2016 49th Hawaii International Conference on System Sciences (HICSS)*.
- Cusumano, M. A. (2012). Platforms versus products: Observations from the literature and history. *Advances in Strategic Management History and Strategy*, 29, 35-67.
- Doerz (2016). Online. Available at: www.doerz.sharetribe.com, [27.11.2016].
- Eaton, B., Elaluf-Calderwood, S., Sorensen, C., & Yoo, Y. (2015). Distributed tuning of boundary resources: The case of Apple's iOS service system. *MIS Quarterly*, 39(1), 217-243.
- Eisenhardt, K. M. (1989). Building theories form case study research. *Academy of Management Review*, 14(4), 532-550.
- Eisenmann, T., Parker, G., & Van Alstyne, M. (2006). Strategies for two-sided markets. *Harvard Business Review*, 84(10), 92-101.
- Eisenmann, T., Parker, G., & Van Alstyne, M. (2011). Platform envelopment. *Strategic Management Journal*, 32(12), 1270-1285.
- Eriksson, P. & Kovalainen, A. (2008). *Qualitative methods in business research*. London: Sage Publications.
- European Commission. (2016, March). *The use of collaborative platforms* (Flash Eurobarometer 438). Retrieved from: <http://ec.europa.eu/COMMFrontOffice/publicopinion/index.cfm>
- Evans, D. S. (2003). Some empirical aspects of multi-sided platform industries. *Review of Network Economics*, 2(3). 191-209.
- Evans, D. S. (2009). How catalysts ignite: The economics of platform-based start-ups. In A. Gawer (Ed.), *Platforms, markets and innovation* (pp. 99-128). Cheltenham: Edward Elgar.

- Evans, D. S., & Schmalensee, R. (2007). *Catalyst code: The strategies behind the world's most dynamic companies*. Boston, MA: Harvard Business School Press.
- Evans, D. S., & Schmalensee, R. (2016). *Matchmakers: The new economics of multisided platforms*. Boston, MA: Harvard Business Review Press.
- Fairmondo UK (2016). Online. Available at: www.fairmondo.uk, [29.11.2016].
- Feeney, M. (2015, January 27). Is ridesharing safe? *Policy Analysis 767*. Cato Institute. Retrieved from: <https://object.cato.org/sites/cato.org/files/pubs/pdf/pa767.pdf>
- Felson, M., & Spaeth, J. L. (1978). Community structure and collaborative consumption. *The American Behavioral Scientist* 21(4), 614-624.
- Financial Conduct Authority. (2016, September 9). *Regulatory sandbox*. Retrieved from: <https://www.fca.org.uk/firms/project-innovate-innovation-hub/regulatory-sandbox>
- Gawer, A. (2009a). Platforms, markets and innovation: An introduction. In A. Gawer (Ed.), *Platforms, markets and innovation* (pp. 1-16). Cheltenham, UK: Edward Elgar.
- Gawer, A. (2009b). Platform dynamics and strategies. In A. Gawer (Ed.), *Platforms, markets and innovation* (pp. 45-76). Cheltenham, UK: Edward Elgar.
- Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. *Research Policy*, 43(7), 1239-1249.
- Gawer, A., & Cusumano, M. A. (2002). *Platform leadership: How Intel, Microsoft, and Cisco drive industry innovation*. Boston, MA: Harvard Business School Press.
- Ghazawneh, A., & Henfridsson, O. (2013). Balancing platform control and external contribution in third-party development: The boundary resources model. *Information Systems Journal*, 23(2), 173-192.
- Gillespie, T. (Forthcoming, 2017). Governance of and by platforms. In J. Burgess, A. Marwick and T. Poell (Eds.), *Sage handbook of social media*. Preprint retrieved from: <http://culturedigitally.org/wp-content/uploads/2016/06/Gillespie-Governance-of-by-Platforms-PREPRINT.pdf>.
- Grimmelmann, J. (2015). The virtues of moderation. *Yale Journal of Law and Technology*, 17(1), 42-68.
- Hagi, A. (2007a). Merchant or two-sided platform? *Review of Network Economics*, 6(2), 115-133.

- Hagi, A. (2007b). Multi-sided platforms: From microfoundations to design and expansion strategies. *Harvard Business School, Working paper 07-094*.
- Hagi, A. (2014). Strategic decisions for multisided platforms. *MIT Sloan Management Review, 55*(2), 71-80.
- Hagi, A., & Spulber, D. (2013). First-party content and coordination in two-sided markets. *Management Science, 59*(4), 933-949.
- Hagi, A., & Wright, J. (2011). Multi-sided platforms. *Harvard Business School, Working Paper 12-024*.
- Hagi, A., & Wright, J. (2013). Marketplace or reseller? *Harvard Business School, Working Paper 13-092*.
- Hagi, A., & Wright, J. (2015). Multi-sided platforms. *International Journal of Industrial Organization, 43*, 162-174.
- Hamari, J., Sjöklint, M., & Ukkonen, A. (2015). The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology, 67*(9), 2047-2059.
- Hein, A., Schrieck, M., Wiesche, M., & Krcmar, H. (2016). Multiple-case analysis on governance mechanisms of multi-sided platforms. *Multikonferenz Wirtschaftsinformatik 2016*.
- Huang, G. Q., Zhang, X. Y., & Liang, L. (2005). Towards integrated optimal configuration of platform products, manufacturing processes, and supply chains. *Journal of Operations Management, 23*(3-4), 267-290.
- Iansiti, M., & Levien, R. (2004). *The keystone advantage: What the new dynamics of business ecosystems mean for strategy, innovation, and sustainability*. Boston, MA: Harvard Business School Press.
- Isaac, E. (2014). Disruptive innovation: Risk-shifting and precarity in the age of Uber. *Berkeley Roundtable on the International Economy, Working Paper 2014-7*.
- John, N., A. (2013). Sharing, collaborative consumption and Web 2.0. *London School of Economics and Political Science, Working Paper no. 26*.

- Joliet, G., Jullien, B., & Postel-Vinay, F. (2016). Reputation and prices on the e-market: Evidence from a major French platform. *International Journal of Industrial Organization*, 45, 59-75.
- Jones, K., & Leonard, L. N. (2008). Trust in consumer-to-consumer electronic commerce. *Information & Management*, 45(2), 88-95.
- Katz, M., & Shapiro, C. (1985). Network externalities, competition, and compatibility. *The American Economic Review*, 75(3), 424-440.
- Katz, M. L., & Shapiro, C. (1994). Systems competition and network effects. *Journal of Economic Perspectives*, 8(2), 93-115.
- Kinspiring (2016). Online. Available at: www.kinspiring.com, [2.12.2016].
- Koopman, C., Mitchell, M., & Thierer, A. (2015). The sharing economy and consumer protection regulation: The case for policy change. *The Journal of Business, Entrepreneurship & the Law*, 8(2), 529-545.
- Krishnan, V., & Gupta, S. (2001). Appropriateness and impact of platform-based product development. *Management Science*, 47(1), 52-68.
- Laamanen, M., Wahlen, S., & Campana, M. (2015). Mobilising collaborative consumption lifestyles: A comparative frame analysis of time banking. *International Journal of Consumer Studies*, 39, 459-467.
- Liebowitz, S. J. (1995). Are network externalities a new source of market failure? *Research in Law and Economics*, 17, 1-22.
- Liebowitz, S. J., & Margolis, S. E. (1994). Network externality: An uncommon tragedy. *Journal of Economic Perspectives*, 8(2), 133-150.
- Liebowitz, S. J., & Margolis, S. E. (1998). Network externalities (effects). *The New Palgrave's Dictionary of Economics and the Law*. Retrieved from: <https://wwwpub.utdallas.edu/~liebowit/palgrave/network.html>
- Lorenzoni, G., & Lipparini, A. (1999). The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study. *Strategic Management Journal*, 20(4), 317-338.
- Makkonen Juho, Co-founder and Chief Executive Officer, Sharetribe, Helsinki, August 30, 2016 & October 25, 2016.

- Manner, J., Nienaber, D., Schermann, M., & Krcmar, H. (2012). Governance for mobile service platforms: A literature review and research agenda. *2012 International Conference on Mobile Business, Paper 14*.
- Mardiste, D. (2016, June 9). Embracing Uber, Estonia shows tax needn't be an issue. *Reuters*. Retrieved from: <http://www.reuters.com/article/us-estonia-uber-idUSKCN0YV1PS>
- Martin, C., J. (2016). The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism? *Ecological Economics*, *121*, 149-159.
- Matzler, K., Veider, V., & Kathan, W. (2015). Adapting to the sharing economy. *MIT Sloan Management Review*, *56*(2), 70-77.
- Mattila, J. & Seppälä, T. (2016, Jan 7). Digital trust, platforms, and policy. *ETLA Brief No 42*. Retrieved from: <http://pub.etla.fi/ETLA-Muistio-Brief-42.pdf>
- Myers, M., D. (2009). *Qualitative research in business & management*. Thousand Oaks, CA: Sage Publications.
- Möhlmann, M. (2015). Collaborative consumption: Determinants of satisfaction and the likelihood of using a sharing economy option again. *Journal of Consumer Behaviour*, *14*, 193-207.
- Owyang, J. (2013). *The dark side to the collaborative economy* [Blog]. Retrieved from: <http://www.web-strategist.com/blog/2013/06/18/the-dark-side-to-the-collaborative-economy/>
- Owyang, J. (2016). *Honeycomb 3.0: The collaborative economy market expansion* [Blog]. Retrieved from: <http://www.web-strategist.com/blog/2016/03/10/honeycomb-3-0-the-collaborative-economy-market-expansion-sxsw/>
- Parker, G. G., & Van Alstyne, M. W. (2005). Two-sided network effects: A theory of information product design. *Management Science*, *51*(10), 1494-1504.
- Pasquale, F., & Vaidhyanathan, S. (2015, July 28). Uber and the lawlessness of 'sharing economy' corporates. *The Guardian*. Retrieved from: <https://www.theguardian.com/technology/2015/jul/28/uber-lawlessness-sharing-economy-corporates-airbnb-google>
- Pavlou, P. A., & Gefen, D. (2004). Building effective online marketplaces with institution-based trust. *Information Systems Research*, *15*(1), 37-59.

- Perrons, R. K. (2009). The open kimono: How Intel balances trust and power to maintain platform leadership. *Research Policy*, 38(8), 1300-1312.
- Piscicelli, L., Cooper, T., & Fisher, T. (2015). The role of values in collaborative consumption: Insights from a product-service system for lending and borrowing in the UK. *Journal of Cleaner Production*, 97, 21-29.
- Porch, C., Timbrell, G., & Rosemann, M. (2015). Platforms: A systematic review of the literature using algorithmic historiography. *Proceedings of the 23rd European Conference on Information Systems, Paper 143*.
- PwC UK. (2016, April). *Assessing the size and presence of the collaborative economy in Europe*. Vaughan, R., & Daverio, R.
- Qu, T., Bin, S., Huang, G. Q., & Yang, H. D. (2011). Two-stage product platform development for mass customization. *International Journal of Production Research*, 49(8), 2197-2219.
- Roberts, J. J. (2015, July 29). As "sharing economy" fades, these 2 phrases are likely to replace it. *Fortune*. Retrieved from: <http://fortune.com/2015/07/29/sharing-economy-chart/>
- Rochet, J., & Tirole, J. (2003). Platform competition in two-sided markets. *Journal of the European Economic Association*, 1(4), 990-1029.
- Rochet, J., & Tirole, J. (2006). Two-sided markets: A progress report. *The RAND Journal of Economics*, 37(3), 645-667.
- Rohlfs, J. (1974). A theory of interdependent demand for a communications service. *The Bell Journal of Economics and Management Science*, 5(1), 16-37.
- Rysman, M. (2009). The economics of two-sided markets. *Journal of Economic Perspectives*, 23(3), 125-143.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Harlow: Prentice Hall.
- Selander, L., Henfridsson, O., & Svahn, F. (2013). Capability search and redeem across digital ecosystems. *Journal of Information Technology*, 28(3), 183-197.
- Shapiro, C., & Varian, H. R. (1999). *Information rules: A strategic guide to the network economy*. Boston, MA: Harvard Business Press.

- Sharetribe (2016). Online. Available at: www.sharetribe.com, [1.12.2016].
- Shibata, T., & Kodama, M. (2015). Managing the change of strategy from customization to product platform: Case of Mabuchi Motors, a leading DC motor manufacturer. *International Journal of Technology Management*, 67(2/3/4), 289-305.
- Scholz, T. (2016). How platform cooperativism can unleash the network. In T. Scholz & N. Schneider (Eds.), *Ours to hack and to own* (pp. 20-26). OR Books.
- Sriram, S., Manchanda, P., Bravo, M., Chu, J., Ma, L., Song, M., Shiver, S., & Subramanian, U. (2015). Platforms: A multiplicity of research opportunities. *Marketing Letters*, 26(2), 141-152.
- Sundararajan, A. (2012, October 22). Why the government doesn't need to regulate the sharing economy. *Wired*. Retrieved from: <https://www.wired.com/2012/10/from-airbnb-to-coursera-why-the-government-shouldnt-regulate-the-sharing-economy/>
- Sutton, M., Johnson, C., & Gorenflo, N. (2016, August 16). *A Shareable explainer: What is a platform co-op?* [Blog]. Retrieved from: <http://www.shareable.net/blog/a-shareable-explainer-what-is-a-platform-co-op>
- Ulrich, K. (1995). The role of product architecture in the manufacturing firm. *Research Policy*, 24(3), 419-440.
- Used Parts 4 Harleys (2016). Online. Available at: www.usedparts4harleys.com, [8.12.2016].
- Wittel, A. (2011). Qualities of sharing and their transformations in the digital age. *International Review on Information Ethics*, 15, 3-8.
- Yin, R., K. (2009). *Case study research: Design and methods* (4th ed.). Thousand Oaks, CA: Sage Publications.
- Zervas, G., Proserpio, D., & Byers, J. (2015, January 28). A first look at online reputation on Airbnb, where every stay is above average. Retrieved from: <https://ssrn.com/abstract=2554500>
- Zhu, F., & Iansiti, M. (2012). Entry into platform-based markets. *Strategic Management Journal*, 33(1), 88-106.
- Zirpoli, F., & Caputo, M. (2002). The nature of buyer-supplier relationships in co-design activities. *International Journal of Operations & Production Management*, 22(12), 1389-1410.

Appendix A: Interview Frame

Introductions of the interviewer & the project

- The public nature of thesis; discussions about privacy concerns
- Taping and taking notes

Introducing the interview

- There is no need to follow a strict question-answer pattern but free discussion is welcome and preferable especially if interviewee feels like something relevant or connected is being left out
- In case the interviewee does not understand something or feels unsure about a question, they are encouraged to say it and ask also questions themselves
- The term “user” may refer to any side member of the platform; buyers, sellers, renters, etc. alike, and will be clarified in each question if needed

Introduction of the interviewee and their marketplace

- Please describe shortly your marketplace and how it was established

The interview topics

1. Governance/management of the marketplace

- 1.1. How would you describe the management of your marketplace?
- 1.2. Who makes decisions about the daily operations of the marketplace? How about the more long-term things like the brand of the marketplace or the customers it aims to attract?
- 1.3. *If multiple decision makers:*
 - 1.3.1. How would you describe the roles or responsibilities of the decision makers? If there are differences, how would you summarize them?
 - 1.3.2. Why are the roles and responsibilities divided as they are/identical?
 - 1.3.3. How are disagreements between decision makers handled?
- 1.4. Is there someone you would describe having an important role for the marketplace even though they do not make any decisions themselves? [E.g. advisory roles]
- 1.5. Have you faced some kind of difficulties with this kind of management / governance structure? Please describe.
- 1.6. Have you planned any changes to the current management or governance of the marketplace?
 - 1.6.1. *If so, what kind? Why?*

2. **Resources & documentation** [All customers have a hosted version of Sharetribe platform → not highly relevant as Sharetribe takes care of the dimension]
 - 2.1. Currently, Sharetribe does not provide an API (Application Programming Interface), which would allow you to programmatically read, write and perform operations on your own on data in the service. Has this affected your marketplace in some particular way? If so, please elaborate.
 - 2.2. The hosted version of Sharetribe offers limited possibilities for custom development. Is there some particular way in which you see this as a disadvantage for your marketplace?
3. **Marketplace accessibility & control**
 - 3.1. Output control & monitoring
 - 3.1.1. It is currently not possible to disable reviews and ratings of paid transactions in Sharetribe platform [users may still skip them; however, they cannot refuse a review about themselves]. How do you feel about this?
 - 3.1.2. How have you communicated about reviews and ratings with your marketplace customers?
 - 3.1.3. How do you see the role of reviews and ratings in the future?
 - 3.2. Input control & monitoring
 - 3.2.1. How do you control the offering [products, services, rental equipment etc.] placed on your marketplace?
 - 3.2.2. Have you confronted situations in which your control of the offering has caused any problems?
 - 3.2.3. How do you feel about your ability to control the offering?
 - 3.2.4. Are you planning to change your control in some way in the future?
 - 3.2.4.1. *If so, why?*
 - 3.3. Platform accessibility, process control & platform openness
 - 3.3.1. Is anyone able to browse your platform or have you employed any restrictions on this? [registration is needed by default from anyone who wants to do transactions]
 - 3.3.2. Can anyone register in your marketplace or do they need an invite?
 - 3.3.2.1. *If an invite is needed, why so?*
 - 3.3.2.1.1. Who is able to get an invite?
 - 3.3.2.1.2. Who makes the decisions about invitations and accepting users?
 - 3.3.2.1.3. How do you think the invite system affects your marketplace?
 - 3.3.2.2. *If not, have you considered an invite-only marketplace? Why so?*
 - 3.3.3. Have you had any problems with unregistered users? If so, please describe those situations
 - 3.3.4. What about registered users? If so, please describe those situations
 - 3.3.5. Are your marketplace members in charge of..
 - 3.3.5.1. ..deciding who they transact with [i.e. are they able to refuse transacting with someone]?
 - 3.3.5.1.1. *If not, why?*
 - 3.3.5.2. ..deciding the price of transactions freely?
 - 3.3.5.2.1. *If not, why?*
 - 3.3.6. Are you planning to do any changes regarding..
 - 3.3.6.1. ..who gets to browse and/or register on your marketplace?
 - 3.3.6.2. ..the decisions (about transactions and prices) of users?

4. **Trust & perceived risk**

- 4.1. How would you describe trust is built in your marketplace?
 - 4.1.1. What kind of things strengthen it?
 - 4.1.2. What kind of things reduce it?
- 4.2. Have you had any trust-related problems? Please describe the problems and how they were solved.
- 4.3. Would you say the users of your marketplace may feel at risk in some specific situations? Are there some situations where the perceived risk is lower than in others?
- 4.4. What kind of actions have you taken in order to strengthen the trust on your marketplace?
- 4.5. When looking forward from now, do you think you are going to change any/some things that affect the trust or the perceived risk of users?

5. **Pricing**

- 5.1. Have you disabled paid transactions in your marketplace?
 - 5.1.1. *If yes, why so?*
- 5.2. Are users able to pay with credit cards or is PayPal the only option?
- 5.3. Are there also some order types on your marketplace that do not include any paid transactions?
- 5.4. Are there some restrictions on pricing on your marketplace?
- 5.5. On what grounds are different offerings priced on your marketplace?
- 5.6. Are you thinking about changing any/some things that affect pricing on your marketplace?

6. **External Relationships**

- 6.1. How would you describe your stakeholders; besides individual users, do you have other types of relationships?
- 6.2. Do you cooperate or have you considered cooperating with some organization? [local communities, non-profit organizations, etc.]
 - 6.2.1. Why / Why not?
 - 6.2.2. Would you see this as a possibility in the future?

Concluding comments and questions

Thank you

- Identification permission for the Sharetribe data
- Allowance to be contacted again in case of some additional questions