

Exploring collaborative consumption business models - case peer-to-peer digital platforms

Organization and Management

Master's thesis

Giang Thu Nguyen

2014

Author Giang Thu Nguyen

Title of thesis Exploring collaborative consumption business models – Case peer-to-peer digital platforms

Degree Master's Degree

Degree programme Information and Service Management

Thesis advisor(s) Markku Kuula

Year of approval 2014**Number of pages** 90**Language** English

Abstract

The global economic downturn is one of the reasons that make us reevaluate our relationship with possessions and consumption. Thanks to the rise of technology and the mainstream use of social networks, collaborative consumption has become a buzzword during the past few years. The literature on the field, however, is scarce and mainly comprises of industry reports and articles. This research aims to fill in this gap by exploring the business models of five leading peer-to-peer digital platforms, using a framework developed from a theoretical review. Another objective of the research is to identify lessons managers of future peer-to-peer platform startups can learn in order to launch and run a successful peer-to-peer platform.

The framework used in the study's empirical analysis is developed from a literature review on e-business models and two-sided markets. Osterwalder (2002)'s e-business ontology was chosen as the backbone of the analysis due to the comprehensiveness of the model in analyzing different elements of an e-business model, including product innovation, infrastructure management, customer relationship and financial aspects. Two-sided markets and platform management literature uncovers fundamental features of a two-sided market such as indirect network effects, multihoming, as well as pricing and critical mass challenges for two-sided platforms. Because of the idiosyncratic features of two-sided markets, peer-to-peer platform managers have to take into consideration these issues when developing strategies and activities for all the elements of the platform's business model.

The study utilizes a qualitative approach with the multiple case study method. Five leading peer-to-peer platforms from various industries are chosen as case studies and their business models are explored in-depth through the application of the developed framework. One of the most important findings is that peer-to-peer platforms' value proposition can be divided into two groups: the experience group, which makes use of idle resources such as time, space or labor, and the passion group, which connects people with the same interest and passion. The empirical analysis also reveals that critical mass, growth and trust and safety are central issues of the case peer-to-peer platforms and their entire activities circle around solving these issues, using innovative processes and continuous application of technology.

Keywords Collaborative consumption, peer-to-peer e-platforms, sharing economy, business models, two-sided markets

ACKNOWLEDGEMENTS

I started out writing my Master's Thesis two years ago with a completely different topic and ended up with a totally new topic two months before the graduation. Last minute pressure worked wonders in bringing the project to completion.

I would like to thank Professor Markku Kuula at the Department of Information and Service Economy for his continuous support and advices during my "pivots" in thesis topics and during the whole writing process. I would also like to thank other staff at the faculty for their help in getting all the last details done for me to graduate.

In addition, I would want to send huge thanks to my husband and all of my amazing friends for putting up with my constant mentions of the word "thesis" and their continuous support during my extended study time.

This thesis stems from my personal interest in intermediary digital platforms and two-sided markets and is what I believe to be a step stone to my next venture and future career.

TABLE OF CONTENTS

ABSTRACT

ACKNOWLEDGEMENTS

TABLE OF CONTENTS.....	2
LIST OF FIGURES	3
LIST OF TABLES.....	3
1. Introduction.....	4
1.1 Background	4
1.2 Objectives.....	6
1.3 Methodology and scope	7
1.4 Structure of the thesis.....	8
2. Theoretical background	10
2.1 E-business models.....	10
2.2 Review of Osterwalder’s e-Business Model Ontology.....	12
2.3 Collaborative consumption	18
2.4 Two-sided markets	19
2.5 Business model analysis for two-sided platforms.....	24
3. Industry analysis	28
3.1 Airbnb’s business model analysis	29
3.2 Etsy’s business model analysis	37
3.3 Uber’s business model analysis.....	45
3.4 TaskRabbit’s business model analysis	52
3.5 Kickstarter’s business model analysis.....	59
3.6 Industry analysis results	66
4. Conclusion	73
4.1 Managerial recommendations	75
4.2 Limitations and suggestions for future research	79
REFERENCES	81

LIST OF FIGURES

Figure 2-1: E-business model framework..... 13
Figure 2-2: The difference between two-sided platforms and merchants..... 22
Figure 2-3: Platform’s membership charge versus usage charge 23
Figure 2-4: Adapted framework for empirical analysis 27

LIST OF TABLES

Table 2-1: Nine building blocks of Osterwalder’s business model ontology..... 12
Table 3-1: Basic information on case study companies..... 29
Table 3-2: Summary of findings on business models of case companies..... 68

1. INTRODUCTION

The thesis explores the business models of collaborative consumption platform startups in order to uncover industrial practices to overcome common problems that peer-to-peer digital marketplace platforms encounter. The industrial analysis aims to gather a collection of best practices in business model development and implementation to be used as guidelines for future platform managers. In order to achieve this goal, a framework used for analysis is developed by studying and integrating literature on e-business models and two-sided markets characteristics. The adapted framework is then utilized as a tool to explore the business models of five case study peer-to-peer marketplace platforms to draw conclusions about common strategies and practices in launching and operating intermediary platforms in the collaborative consumption field.

1.1 Background

The rise of technology innovation has given way to a variety of unique and game-changing businesses that alter the way we live, work and interact with each other. Technology does not only make ideas that used to be impossible become the everyday norm but also empowers age-old concepts and brings them into unimaginable levels, both in sophistication and in scale. Collaborative consumption is one of the trends that have made a global comeback thanks to technology innovations. The 2010s has witnessed the explosion of platform and marketplace businesses, whose ultimate goal is to create global niche “tribes”, in which individuals share, swap, exchange, or work as “micro-entrepreneurs”. The potential market size for collaborative consumption is enormous with endless opportunities in any industry in which the market is scattered and inefficient. It was estimated that transactions carried out through the share economy would surpass \$3.5 billion dollars in 2013¹.

The share economy has thrived in recent years due to a number of factors, including the global economic downturn, expanding population in urban areas, climate change and distrust in big

¹ “Airbnb and the unstoppable rise of the share economy”, available at <http://www.forbes.com/sites/tomiogeron/2013/01/23/airbnb-and-the-unstoppable-rise-of-the-share-economy/>, accessed on 1 September, 2014.

brands, that make us reevaluate our relationships with material things. These factors, coupled with the rise of social networks, have created the perfect environment for peer-to-peer digital platforms to sprout and grow. From car-sharing, crowd-funding to space-swapping, various types of peer-to-peer exchanges take place on intermediary platforms, which facilitate these transactions with technology, rules, processes and support. These peer-to-peer platform businesses, besides helping the society make better use of idle resources such as space, time or labor; also benefit the society in many other ways, such as improving people's life quality and creating more jobs. For example, Uber, a leading ride-sharing platform, claimed to generate 20,000 new driver jobs every month².

Platforms are essentially information gateways that enhance efficiency in the economy by connecting supply and demand in an inefficient market. Platform businesses add value by providing a medium for two parties, usually buyers and sellers, to interact and transact. These users are attracted to a platform by indirect network externalities, which mean the more users a platform has on one side, the more users on the other side are attracted to the platform (Economides and Katsamakas, 2006). Because of this network effect, two-sided platforms generally face a critical mass constraint, which must be satisfied in order for the platform business to be viable (Evans, 2010). Literature on platform management is very limited and is mostly about how to identify and characterize the two-sidedness of platforms and platform competition, rather than looking at platforms from a business management perspective and studying how platform businesses can reach critical mass and overcome other platform-centric, as well as business-centric challenges.

Main challenges related to successfully bringing new digital services and products to the market refer to how decisions about product positioning, technical architecture and value networks interact with financial decisions. Hence, business model analysis could be a tool for policy makers to understand the dynamics of ICT innovation processes and market developments (Poel et al., 2007). Many authors have attempted to develop frameworks for business model analysis by conceptualizing elements of a business model and relationships between them (e.g., Osterwalder,

² “An Uber impact: 20,000 jobs created on the Uber platform every month”, Uber corporate blog, available at <http://blog.uber.com/uberimpact>, accessed on 15 September, 2014.

2004; Gordijn and Akkermans, 2001; Applegate, 2001). In this study, a business model analysis framework is utilized as a tool to explore different elements in a peer-to-peer digital platform business and the relationships between them.

The thesis seeks to understand in depths the business models and best practices in the management and growth of digital collaborative consumption platforms. The motivation for the research does not only stem from personal interest but also from the aspiration to contribute to the scarce collaborative consumption literature and research field. Even though collaborative consumption and peer-to-peer exchange is not a new concept, the research body for this area is few and far between as the field is just in its infancy. This study sets out to study collaborative consumption from a platform business model perspective, seeking to find out what elements and activities are comprised in a peer-to-peer platform's business model, what main characteristics define such a platform and what factors it has to consider in developing the business model.

1.2 Objectives

The objective of the research is to gain a more in-depth and practical knowledge about business models and best practices in building and operating peer-to-peer collaborative consumption platforms. This is done by studying the literature about two-sided markets, platform management and conducting an empirical research on chosen peer-to-peer digital platforms through analyzing their business models.

The main objectives of the thesis could be described as below:

- 1. To develop a framework to analyze the business model, as well as distinctive characteristics of collaborative consumption platform businesses**
- 2. To explore business models of the selected peer-to-peer collaborative consumption platforms**
- 3. Based on the evaluation of case companies' business models, identify lessons managers from peer-to-peer startups can learn in order to launch and run a successful peer-to-peer platform.**

The first objective is met by carrying out a literature review on the topic of business models, collaborative consumption and two-sided markets in order to form an adaptive framework to analyze and explore in details business models of collaborative consumption platforms startups.

The second and third objectives are achieved by collecting secondary data and analyzing the business models of five selected case peer-to-peer digital marketplace platform startups using the adaptive framework developed from the literature review. From the empirical findings, best practices in building and operating peer-to-peer marketplace platforms are also drawn as managerial recommendations.

1.3 Methodology and scope

The approach used in this research is qualitative. The qualitative approach is chosen because of the exploratory nature of the research objectives, which seeks to understand in-depth the characteristics and features of collaborative consumption business models. According to Patton (1990, p.51), “the advantages of qualitative portrayals of holistic settings and impacts is that greater attention can be given to nuance, setting, interdependencies, complexities, idiosyncrasies, and context”. Another reason the qualitative approach is selected is because qualitative research focuses on describing and understanding the subject, which fits the objectives set out for the study, which is to describe in details the elements and activities adopted in peer-to-peer platforms’ business models.

The empirical part of the thesis is conducted by analyzing five case study peer-to-peer digital platforms. Case study method is employed as it “allows investigators to retain the holistic and meaningful characteristics of real-life events - such as individual life cycles, organizational and managerial processes, neighborhood change, international relations, and the maturation of industries” (Yin, 2002, p.2). As business models comprise multiple elements in which complex activities and processes are presented, a case study methodology is appropriate. Even though a case study research is a suitable approach to describe activities and understand underlying patterns of the studied subject, it also has limitations. Two frequently mentioned limitations of case study

method are the lack of statistical generalization and the lengthy narrative findings report (Yin, 2002, p.11). In order to restrict these limitations, the researcher adopts a multiple-case study approach so that commonalities from several cases can be gathered and explored, as well as provides a summary of findings in a table form for ease of reading.

The empirical research is able to reach its goals by using purely secondary data from various sources. Data is collected from industrial and business articles, news and press releases and published video interviews from founders and managers of case companies. In addition, materials and content from the case companies' website and corporate blog are also utilized as a source of data and information. In order to ensure the validity of collected data, the sources chosen are leading and trustworthy publishers in the technology and business areas, including Forbes, Crunchbase, Economist or Fortune. The case companies are leading digital marketplace platforms following the collaborative consumption model in various industries. The companies are chosen based on the uniqueness of their business model, influence and position in their respective industry and their popularity on media. Most of the case platforms are first-movers in their respective field. For this thesis, the scope has been limited to peer-to-peer platforms that were founded and have the majority of their operations in the U.S. to produce more standardized results, giving that all of them face similar influencing regional factors.

1.4 Structure of the thesis

The research is presented in four main chapters. The first chapter presents the introduction and motivation for the study. Main objectives of the thesis are also presented with directions on how to reach them. The research methodology is discussed shortly afterwards with insights on why the chosen approach and design are suitable for the study. In this chapter, data collection approach and scope of the thesis are also presented.

The second chapter features the theoretical part in which literature on e-business models, collaborative consumption and two-sided markets are studied and discussed. Chapter two aims at providing necessary knowledge on the related fields and to develop the framework to analyze the business model of peer-to-peer digital platform. The adaptive framework is also the basis for the

empirical analysis in section three.

The third chapter uses the developed framework from the second section to analyze the business models of five case study peer-to-peer platforms. In the end of the chapter, a discussion on key findings extracted from the business model analysis is presented, given way to the managerial recommendations section in the fourth chapter.

The fourth chapter concludes the study, with the applications of findings, limitations of the research and recommended topics for future research. The applications of findings take form in a detailed managerial recommendation section, which can be used as guidelines for managers and practitioners in developing the business model, launching and operating new peer-to-peer platforms.

2. THEORETICAL BACKGROUND

This section gives an overview of relevant areas of interest among literature in business models and two-sided markets, from there a theory is chosen and adapted to use as a framework for empirical analysis.

2.1 E-business models

Business models have become a popular topic among academic fields in recent years. According to Zott et al (2011), from 1995 to 2011, there were at least 1177 academic journal articles which discussed the notion of business model. Despite the abundance of business model related literature, there has not yet been a common definition for the business model concept. For example, Amit and Zott (2001) defined a business model as “the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities”. Margetta (2002), on the other hand, used a set of questions to define a good business model, which are “who is the customer? And what does the customer value?” and “how do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?” In this study, business model is used as a conceptual tool or model to understand the nature and important elements of a business. One of the main areas in business model literature is business models for e-business and the use of technology in organizations. As our research is about business models of firms operating on the Internet, literature on e-business models will be taken a closer look on.

The term e-business generally refers to “doing business electronically” and includes e-commerce, e-markets, Internet-based business and any firms that carry out commercial transactions over the Internet (Zott et al, 2011). A large amount of literature on e-business models focused on the components of an e-business and strategic marketing in e-businesses. Applegate (2001) used a simple framework to analyze e-business models, which comprised a business concept, the organization capabilities and value delivered to all involved stakeholders. Weill and Vitale (2001) developed an atomic e-business model schematic to help analyzing an e-business initiative by highlighting its important elements. The schematic illustrates the relationships and flows of

money, products or services, and information between the involved participants, including the firm of interest, customers and suppliers and allies.

In addition to discussing different components of an e-business model, many authors also developed business model ontologies in order to conceptualize the relationship of different components of an e-business model. Gordijn and Akkermans (2001) presented a conceptual modeling approach to e-business, which is designed to “help define how economic value is created and exchanged within a network of actors”. The ontology uses concepts derived from various economic and business science literature to form a conceptual tool to analyze e-business projects. However the most cited study was Osterwalder (2004)’s business model ontology, which provided a clear and comprehensive framework to analyze generic business models. Many studies have used the Osterwalder’s ontology to analyze and explore various business models in different industries. For example Tankhiwale (2009) has applied the ontology to analyze the business model interrelationship with the change in business process architecture of a big telecommunications service provider. Osterwalder (2004)’s ontology addressed four areas of a business, which are product, customer interface, infrastructure management and financial aspects. From these four main business areas, Osterwalder broke them down further into nine building blocks, which are presented in Table 2-1.

Pillar	Building block	Description
Product	Value proposition	Value proposition is the products and services of value that the company gives to its customers
Customer interface	Target customer	The target customer is the segments that the company aims to give value to.
	Distribution channel	Distribution channel is how the company gets in touch with its customers
	Relationship	The link between the company and its customer
Infrastructure management	Value configuration	Value configuration is the arrangements and activities needed to create value for the customers
	Capability	Capability is the ability the firm has to repeatedly

		create value for the customers
	Partnership	Partnership is the cooperation between companies to provide value for customers
Financial aspects	Cost structure	Cost structure is all the means employed in the business model in terms of money
	Revenue model	Revenue model illustrates the way the company makes money through combination of all revenue flows

Table 2-1: Nine building blocks of Osterwalder’s business model ontology

Source: Osterwalder, 2004.

Osterwalder (2004)’s ontology has been widely used in many researches as a framework to analyze and describe business models in various industries. Even though this ontology can be applied to a wide variety of businesses, including traditional brick-and-mortar firms to e-businesses, Osterwalder has developed another ontology especially for e-businesses, which takes into consideration idiosyncratic features of e-businesses. Osterwalder’s work in 2002 in developing an ontology to model e-businesses is chosen to develop an adapted framework to analyze the business models of peer-to-peer digital marketplace firms.

2.2 Review of Osterwalder’s e-Business Model Ontology

Osterwalder (2002) work on business model ontology is chosen to create an adapted framework to analyze the business models of peer-to-peer digital marketplaces because the ontology provides a comprehensive framework, which covers both activity systems and financial aspects. The goal is this section is to present Osterwalder (2002)’s e-Business model ontology in order to gain a better understanding on why and how this ontology is a good fit to be used to develop a framework for the empirical study.

A formalized e-business model is needed not only to understand the different elements of e-businesses but also assists business leaders in facilitating change, communicating with different

stakeholders and identifying relevant measures to follow in an e-business (Osterwalder, 2002). Similarly to the generic business model ontology, the e-business model ontology is also divided into four main pillars, which are product innovation, customer relationship, infrastructure management and financial aspects (Figure 2-1).

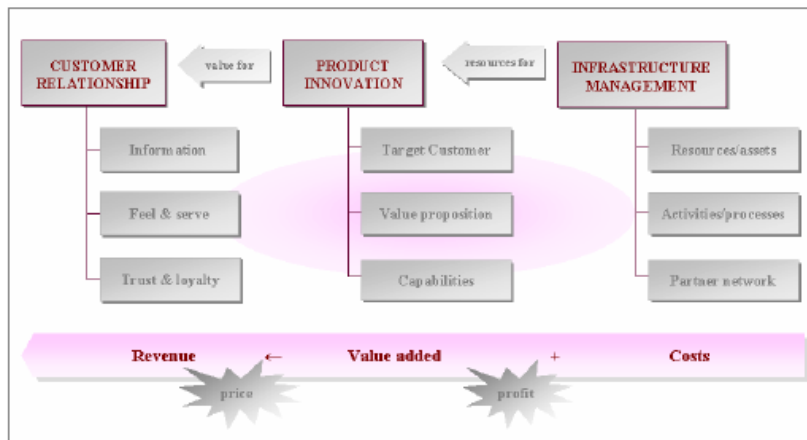


Figure 2-1: E-business model framework

Source: Osterwalder, 2002.

These four main business pillars are further decomposed into small building blocks, taking into consideration relevant characteristics of e-businesses. In the next section, the detailed building blocks of the ontology will be presented and discussed in more details.

2.2.1 Product innovation

The first pillar is about product related aspects, which include the value proposition, the target customers who receive the value and the capabilities the firm needs in order to deliver that value.

Value proposition

Due to ICT technologies, e-businesses enjoy a wider variety of opportunities to create and deliver value to its target customers than traditional brick-and-mortar businesses. Osterwalder discussed three main ways e-businesses can create value for its customers and differentiate from competitors, which are:

- A) Innovation through new, complementary or customized offerings

B) Lower price than competitors, resulting from cost saving opportunities which are then passed on to customers

C) Premium customer service and relationship from augmentary services that go with the core offering

Target customer

A business generally caters to the needs of a specific group of customers. This group of customer could be consumers (Business-to-consumers, aka B2C) or businesses (business-to-business, aka B2B) from a specific geographic or demographic segment. Businesses operating on the Internet have the opportunities to target a wider scope of customer segments compared to traditional offline businesses due to its virtual characteristics. Digital marketplaces can target a specific geographic region (e.g. a classified ad website allowing people to swap used items in the New York area) or a certain demographic group across various geographic areas (e.g. Odesk, a platform for outsourcing freelancers for specific knowledge-rich tasks from anywhere in the world). While the opportunities for e-businesses are abundant, the competition threats are also higher due to low barriers to enter any market (Porter 2001).

Capabilities

In order to be able to deliver the value proposition to customers, businesses have to ensure to possess necessary capabilities. Capabilities can be defined as “repeatable patterns of action in the use of assets to create, produce, and/or offer products and services to a market” (Wallin, 2000). In the case of digital peer-to-peer marketplaces, the firms do not only have to possess necessary technical capabilities to ensure the platform to function properly and can facilitate all the transactions carried out, but also possess the ability and technology capacities to overcome traditional two-sided market hurdles and create sufficient network effects, which will be examined in the section 2.4.

2.2.2 Infrastructure management

Infrastructure management is the value configuration system necessary to create and deliver the value proposition. According to Osterwalder (2002), the infrastructure management element for e-businesses comprises the activity configuration of the firm, which includes value creation and

delivery activities and relationship between them. Infrastructure management also includes the in-house assets and resources and the firm's partner network.

Activity configuration

Value proposition is the outcome of a configuration or set of in-house and out-house activities and processes that the firm employs. Activity configuration differs from one type of business to another, however in most cases, it includes a value creation process of service providers or brokering and intermediary activities.

Partner network

Partner network is an element in the model that defines which parts of the activity configuration are distributed among the partners of the firm. Strategic alliances, in any form, such as long term supplier-buyer relationships or joint ventures are vital in any business model, as it allows the firm to focus completely on its core competencies and "outsource" its non-core competencies and activities to its partner network. Many other terms have been used in e-business model literature to indicate partner networks, Osterwalder cited some other definitions of partner networks for e-businesses by other authors, among which are b-webs (Tapscott et al., 2000), or fluid organizations (Selz, 1999) or value networks (Brandenburger et al., 1996).

Resources and assets

A firm needs resources and assets in order to create and deliver the value proposition to its target customers. Resources include tangible and intangible resources and human assets (Grant, 1995). Tangible resources include plants, equipment and cash reserves. Technology startups usually possess very minor amount of tangible resources and tend to operate on a large amount of human assets and intangible resources, such as patents, copyrights, reputation, brands and trade secrets.

2.2.3 Customer relationship

With the advantage of ICT technologies, e-businesses have the opportunities to build premium customer relationship. Osterwalder (2002) mentioned that firms get a better feel for and understanding of target customers by outlining an information strategy, cultivate new ways to deliver proposition value by covering new and multiple channels and emphasizing the importance

of trust as e-businesses operate mostly in a virtual context with limited face-to-face contact.

Information strategy

Osterwalder outlined three main objectives of the information strategy. The firm needs to firstly define the strategy of gather customer information and secondly strategize how to leverage this gathered information to create premium customer relationships. The third goal is to use the information to discover new business opportunities and improve customer satisfaction. Data-orientation has not only become one of the foremost important strategies of e-businesses but also become the culture or way to operate of many firms in the digital era.

Feel and serve (distribution channels)

A firm might have to employ multiple distribution channels to reach its customers. This element of the ontology indicates the firm's "go-to-the-market" channel strategy - what types of direct and/or indirect channels the firm uses and whether the channels are operated by the firm or provided by third-parties, such as an agent or intermediary. ICT technologies enable firms to get in touch and interact with customers in new and innovative ways. Therefore, the distribution channels, or the means that the firm feels and serves target customers, should be studied in close details in order to discover new methods emerged and employed by innovative firms.

Trust, safety and loyalty

This element of the ontology is especially centric to e-businesses as they function mainly in a virtual environment. Transactions on the cyberspace, therefore, are carried out with a great degree of trust and all e-businesses have to take this element into consideration in their business model. Osterwalder summarized a collection of mechanisms to build trust in e-business environment, which include virtual communities, performance history, mediation services or insurance in case of harm, third party verification and authorization and a clear privacy policy. In peer-to-peer digital marketplaces, the trust issue is twofold: trust between the users and the marketplace platform and trust among users. Therefore in addition to traditional mechanisms used in e-business firms, marketplace platforms have to outline additional mechanisms in order to solve the trust and safety issues among its participants so that all transactions are carried out as expected.

Customer loyalty is vital to any business, brick-and-mortar or online as it is much cheaper to incite existing customers than acquiring new ones. According to (Hamel (2000), positive relationship dynamics, where emotional as well as transactional elements in the interaction between the firm and its customers play a central role in increasing customer loyalty.

2.2.4 Financial aspects

The financial aspects of a firm are the fourth pillar of the ontology and are influenced by all other elements. This pillar includes the revenue model of the firm, which determines the firm's profit model and its cost structure.

Revenue model

Revenue model is the element that measures the firm's ability to translate its value proposition offered to customers into monetary value. A firm's revenue model can comprise multiple revenue streams with different pricing models. Pricing models are a topic discussed considerably among e-business literature as ICT technologies have offered Internet firms the ability to create innovative pricing mechanisms.

Cost structure

The cost element measure all the expenses the firm incurs while creating, marketing and delivering proposition value to customers. Each business model incurs different types of costs, however what is common is the strategy to identify and enable cost saving opportunities during the value creating process. With appropriate use of ICT technologies, firms can discover and implement new opportunities to deliver premium customer services and additional value at relatively low costs.

Profit model

As Osterwalder concluded, even though this element is simply the difference between revenue model and cost structure, it is the expression of the whole e-business ontology. The goal of any firm is to maximize profits, which can be achieved through maximizing revenue by improving product innovation and customer relationship, while minimizing costs by effective infrastructure management.

2.3 Collaborative consumption

Despite the scarcity of literature on collaborative consumption, it is not a new concept or phenomenon. The term was already mentioned by Hawley's theory in community structure, a study emphasizing the structure of sustenance activities in 1950 (cited by Felson, 1978). Collaborative consumption can be defined as "events in which one or more persons consume economic goods or services in the process of engaging in joint activities with one or more others" (Felson, 1978). From Felson's work in 1978, no researches were found on the topic, papers regarding collaborative consumption only started to emerge again during the 2010s, signaling the growing popularity of the model. The increasingly popular use of smartphones and social media has lent way to the rise of a share economy.

The reasons why collaborative consumption is growing on popularity can be threefold. Firstly, the rise of peer-to-peer platforms can be a combination of the global financial crisis aftermath³, technologies getting sophisticated and the social-networking-oriented way of life. Secondly, environmental awareness movements have resulted in a change in lifestyles and a part of consumers are opting in for a using (e.g. leasing or sharing) rather than buying lifestyle (Leismann, 2013). And thirdly, as an increasing amount of people are moving to the cities, the tight-spaced urban life has led people to lean towards sharing and recycling rather than owning new goods.

The peer-to-peer exchange can be any aspect of life, from capacity (e.g. carpooling), goods, money, skills or services. (Botsman, 2010) organized all their researched collaborative consumption examples into three types of systems:

A) Product service systems: in this system, companies can offer products as services rather than sell them as products. The goods that are privately owned can be shared or rented on a peer-to-peer market. A product service system example is Zilok.com, a platform that offers peer-to-peer daily rental of technology and construction tools and equipment. The website arose to solve the problem that half of U.S. households own power drills, most of which are only use six to thirteen minutes during their lifetime.

³ "All eyes on the sharing economy", available at <http://www.economist.com/news/technology-quarterly/21572914-collaborative-consumption-technology-makes-it-easier-people-rent-items>, accessed on 12 August, 2014.

B) Redistribution markets: used or preowned goods are moved from somewhere they are no longer needed to somewhere they are. The preowned goods can be free, swapped or sold. Redistribution markets help either prolong goods' usage, re-purpose or recycle them, which are a key form of sustainable commerce.

C) Collaborative lifestyles: people with similar needs and interests gather together to exchange less than tangible assets such as space, skills, time or money. These exchanges can happen on a small geographic scale such as in a neighborhood or a city or on a global scale in which intangible assets can be shared through a digital platform.

As there is no official definition of collaborative consumption in the cyberspace, in this research, the concept is used to describe any movement or activity involving peer-to-peer exchange, swapping, trading and sharing on grassroots' level. As peer-to-peer markets involve the exchange or transaction between two individuals, these markets also have the common features with general two-sided markets. Therefore literature on two-sided markets would be examined in the research in order to understand better the nature and characteristics of peer-to-peer marketplaces.

2.4 Two-sided markets

Two-sided marketplaces are not a new concept in human history; the concept has dated back from the time when humans began to trade goods and assets. However technologies have taken marketplaces to a new level, enabling trading and exchanges on a global scale, making it possible for individuals and small businesses to tap into new markets without having to physically operate there. Two-sided markets are also not a new concept in academic literature. There have been many authors attempted to provide definitions to identify a two-sided market. Most authors defined a market to be two sided if there are two groups of users, in which the participation of one group increases the value of participation for the other group. Rochet and Tirole (2004) proposed a more restructure definition, in which a market is two-sided if “the platform can affect the volume of transactions by charging more to one side of the market and reducing the price paid by the other side by an equal amount”.

A prominent example of a two-sided market that has been used widely in related literature is the

credit card services. Whether a credit card is chosen by a consumer depends largely on how many merchants accept it. And the decision from a merchant to accept a credit card is based on how many consumers are using it. The decision of both sides to join a credit card platform depends mainly on the other side's network size. In the digital space, many examples of two-sided markets can be found, a few of which are search engines (connecting websites and Internet surfers), payment systems (connecting merchants and buyers), listing sites (connecting vendors and consumers), or content publishers (connecting readers and advertisers).

Literature on two-sided markets is not scarce, however most literature on this field focuses on the dynamics and characteristics of the two (or more) sides that interact with each other in the market, rather than about the platform which builds and facilitate the two-sided interactions.

2.4.1 Characteristics of two-sided markets

This part of the literature review is dedicated to discuss the most important idiosyncratic features of two-sided markets. As two-sided markets possess many features which set them apart from traditional single-sided businesses, platform providers have to study these features closely in order to create suitable strategies for the platform.

Network externalities

Network externalities or network effects are the most discussed two-sided market feature in the subject's literature. Network externalities are said to exist when the utility that a user gets from consumption of the good increases with the number of other agents consuming the good (Katz, 1985). Network effects result in a problem that many two-sided market platforms encounter, which is called the "chicken-and-egg" problem, or the problem of reaching critical mass. For example, when deciding whether to join an intermediation service platform, a buyer will take into consideration, in addition to the price he or she has to pay for the desired good or service, the number of sellers using the platform. On the other side, sellers are more likely to join a platform if there are already an adequate amount of potential buyers, in addition to any services of value that the platform offers. Therefore, the size of the opposite network acts as a quality parameter in platform adoption choice (Roson, 2005). The size influence of the opposite network is also called indirect network effects (Economides and Katsamakas, 2006), or the "cross-side" network effects (Eisenmann et al., 2006).

Another type of network effects exist in two or multi sided markets is “same-side” network effects, which are created when getting users on one side attract more users to that side. For example the more people buy PlayStation consoles, the easier it is for new users to trade games with friends or find partners to play online with. (Eisenmann et al., 2006)

Multihoming

Multihoming is the phenomenon in which a part of users on one or both sides adopt several platforms. For example in the case of credit card services, a vendor multihomes when they accept several credit cards for payment. In the same way, a consumer multihomes when he or she owns more than one credit cards to choose from. The opposite phenomenon to multihoming is singlehoming, which indicates the use of one single platform for one of both sides.

The price levels tend to be lower in multihoming as the availability of alternatives for users tends to pressure competing platforms to lower their prices (Evans, 2003). This phenomenon makes platform’s pricing strategy become complicated as the type of pricing the platform chooses to charge one side might affect the adoption or behavior of the other side. For example if the transaction fees are significantly higher for credit card A compared to credit card B, the vendor can refuse to accept credit card A, thus force the consumers towards using the vendor’s preferred payment method (Roson, 2005).

2.4.2 Two-sided platform management

A platform enables or facilitates the interaction of the two sides (buyers and sellers) who indeed want to interact with each other (Rochet and Tirole, 2006). Most of the literature on platforms serving two-sided markets focuses on the pricing models that platforms adopt in order to attract a sufficient number of members from both sides. A specific pricing strategy has to be adopted by the platform in order to balance the interest of both sides and get both of them on-board (Parker, 2005).

Examples of intermediary platforms are abundant in the business world, both online and offline. Shopping malls are typical examples of platforms, in which a buyer is more likely to visit a shopping mall if there is a wide variety of retailers to choose from and retailers are willing to set up

shop and pay more for the space if the shopping mall is more likely to provide a good flow of visitors. Television channels are also platforms bringing viewers and advertisers together, however in this case a negative cross-side network effects exist, in which viewers usually prefer to watch channels with fewer advertisements while advertisers are willing to pay more to place a commercial on a TV channel with high number of viewers (Armstrong, 2006). Two-sided platforms should be distinguished from “merchants”, such as Amazon or Walmart. The basic difference between two-sided platforms and merchants is the fact that merchants take possession of sellers’ goods and take full control over their sale to consumers, while two-sided platforms leave the control of the sale process entirely to sellers and only determine the relationship between sellers and buyers with a common marketplace (Hagiu, 2007).

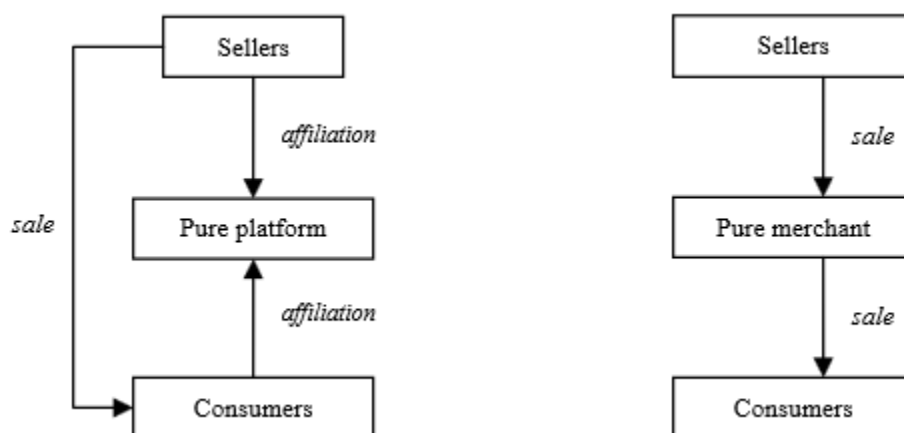


Figure 2-2: The difference between two-sided platforms and merchants

Source: Hagiu, 2007.

Pricing

Pricing is the key element in a two-sided network platform’s business model as how the platform sets a price on one or both sides can influence significantly the customer adoption rate. Even though the platform provider is able to draw revenues from both sides of the market, two-sided markets’ pricing strategies normally have a “divide-and-conquer” nature, in which the platform subsidizes the participation of one side (divide) and recovering the loss on the other side (conquer) (Caillaud and Jullien, 2003). Shopping malls rarely charge visitors and rely mainly on renting out spaces to vendors for their revenues, while a match-making website can charge both sides (males and females) to join the platform.

After deciding on which side to subsidize, platform providers have to settle on a pricing structure. Drivers of optimal prices in two-sided markets can be categorized into three groups: the platform’s costs, demand-based determinants and competition-based determinants (Zingal and Feriha, 2013). Most platforms utilized either fixed membership fees or fees per transaction or a combination of both. With the fixed fee pricing scheme, one or both sides is charged a fixed fee to participate in the platform. This pricing method does not depend on how well the platform performs on the other side of the market. Besides fixed subscription payments, many platforms also adopt a usage fee pricing strategy, in which variable fees incur from each transaction. The main difference between the two charging schemes is that the “cross-side” network effects are weaker with per-transaction charges, since if the agent only pays when a successful transaction is created, the agent does not have to worry how well the platform performs on the other side. Rochet and Tirole (2004) built a model to distinct between membership fee and usage fee and between membership externalities and usage externalities. Ex-ante, the platform might charge for interaction-independent fix fees until the point that users on one side of the markets receive a positive surplus from interacting with additional users from the other side, which membership decisions generate membership externalities. Ex-post, the platform might charge for usage, which influences usage decisions and in turn, impacts usage externalities. However gains from trade between end-users almost always arise from usage and usage decisions are dependent on how much the platform charges for usage.

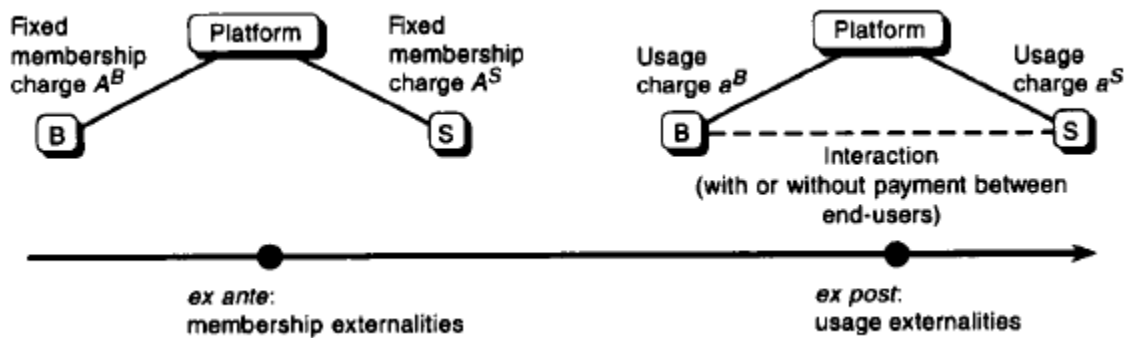


Figure 2-3: Platform’s membership charge versus usage charge

Source: Rochet and Tirole, 2004.

The “chicken-and-egg” problem

As mentioned in the previous section, the network effect character of two-sided markets presents

the classic “chicken-and-egg” problem for platform providers. The “chicken-and-egg” problem exists not only for newly launch startup platforms but also for established platform businesses. For platform startups, a critical mass constraint must be satisfied at launch in order for the business to be viable. After critical mass has been reached, platforms can harness network effects to fuel growth (Evans, 2010).

Platform providers typically have to choose a “subsidy side”, which is the side that, after reaching a certain volume, can attract the other side. The pricing strategy of the platform depends largely on how the platform goes around solving this classic problem. To develop strategies to cope with the chicken and egg problem, Eisenmann et al. (2006) proposed six critical factors platform management should look at, which include the platform’s ability to capture network effects, user sensitivity to price, user sensitivity to quality, costs of giveaway or marketing tactics to recruit one side of the market, same-side network effects and the existence of branded users. Evans (2003) discussed that many times platforms can grow sequentially by providing products and services for one side of the market before starting with the other.

2.5 Business model analysis for two-sided platforms

This section presents how Osterwalder (2002)’s e-business model framework can be integrated with two-sided market characteristics discussed in previous sections to create an adapted framework for analyzing the business models of two-sided marketplace platforms. The adapted framework is presented in the end of this section and shall be used to analyze the business models of selected case companies.

2.5.1 Product innovation

In order to analyze the business model of a two-sided market platform, three components have to be taken into consideration: the value the platform provides to both sides of the market (value proposition), the profile and characteristics of both the seller and buyer sides of the market (target customer) and the ability of the platform in order to repeat the value creation and delivery processes (capabilities).

2.5.2 Infrastructure management

For two-sided marketplace platforms, the core value proposition, which are the transactions between two sides of the market, come from the set of activities the platform provider conducts so that both sides are exposed to each other and the transactions are carried out successfully. In other words, in the business model of a two-sided platform, the management has to build processes and activities that facilitate the three crucial aspects:

- The quantity and the quality of matches of the two market sides
- Communication between the two sides
- The logistics of how both sides of the market can exchange value (for example the exchange of goods or service for payments from one side to another)

The quantity of suitable matches of the two market sides depend largely on the size of the network. The platform can only deliver significant value for its users and easily attract new users when it has reached critical mass. Therefore studying how platforms gain traction from their early days and their growth strategies would help answering how the platform solves the “chicken-and-egg” problem.

In a peer-to-peer market, quality is a twofold problem. Firstly, as service or product providers are individuals and not professionals, there is no formal quality control system in place, thus there is a risk that the product or service provided does not meet quality requirements that buyers usually expect from traditional companies. The uncontrolled product quality is also a factor contributing into the second quality problem, which is poor matching quality as the buyer does not find what he or she is looking for. The matching quality can also be a result of the platform’s technology, not being able to return the most suitable match for a buyer’s search query.

The following questions are developed, taking into account the characteristics of two-sided markets and platforms, in order to facilitate the data collection and seek understanding about how the infrastructure or key activities the case platforms adopt in order to deliver value proposition to its users.

- What did the platform do to reach critical mass?

- What does the platform do to improve quality?
- What does the platform do to facilitate communication between the two sides?
- What does the platform do about the logistics of a transaction between two users from two sides of the market?

In order to achieve fast growth, firms use partners in various areas for non-core activities. The partner element of the pillar aims to seek to understand the case company's partner networks in creating and delivering each value proposition.

2.5.3 Customer relationship

Unlike traditional businesses, two-sided platforms have to create a customer relationship strategy for both sides of the markets – users and service or product providers. The customer pillar is a particularly important set of elements in the business model for two-sided platform as the intermediary platform is in the business of growing and facilitating transactions between two or more parties.

In this pillar of the business model, firstly, the company's information strategy, which means how the company gathers and analyzes data about its customers and what they do with the data will be examined. Secondly, the channels through which the company connects with its customers and adopt new customers shall be identified. Trust and safety are especially important in the case of collaborative consumption platforms, as the platform connects strangers in peer-to-peer exchanges and interactions. Therefore how the platforms deal with trust issue and safety will be studied in more depths compared to the previous two elements.

2.5.4 Financial aspects

The finance pillar presents the cost structure and revenue models of the company. The profit element is the difference of the two elements. The cost structure is analyzed for the activities and processes outlined in the infrastructure management pillar. For two-sided markets, pricing is always a problem and is directly connected to the subsidizing decision of the platform.

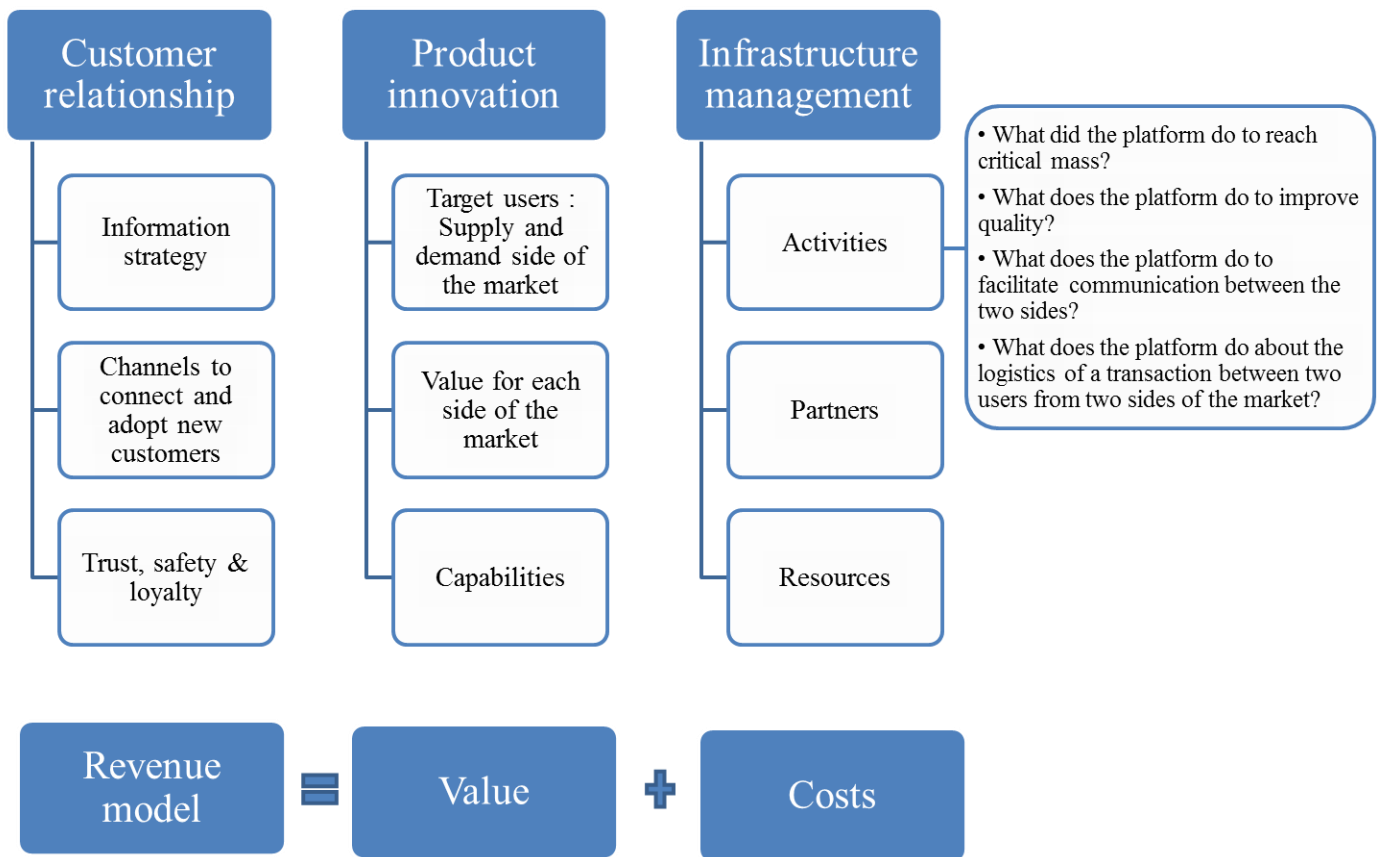


Figure 2-4: Adapted framework for empirical analysis

3. INDUSTRY ANALYSIS

The purpose of the empirical study is to apply the adapted framework developed in from the theory chapter to analyze in-depth the business models of case study collaborative consumption digital platforms. Another objective is to draw the best practices in building and managing peer-to-peer marketplace platforms. All the case study companies' business models have been elaborated by secondary data such as industry reports, articles and information from case companies' top executives' interviews published on the Internet.

The five case companies selected for this study are digital marketplace platforms using the collaborative consumption, or peer-to-peer exchange model. All the companies are considered startups that were founded within the past ten years. A startup company can be considered as “a company working to solve a problem where the solution is not obvious and success is not guaranteed” and has less than 10 years of operations⁴. The case companies are chosen based on a variety of reasons, including the amount of funding raised (according to Crunchbase's data, accessed in July 2014), the uniqueness of their business models, their coverage on press and other media means, in order to give a comprehensive touch to the study.

As the chosen case companies have not gone public, their financial records are limited to the history and track records of funding and investments. The five case companies' basic information is presented in Table 3-1⁵. The business model of each case company is studied in details in the following sections.

Company	Operating field	Year founded	Fund raised	Collaborative consumption type
Airbnb	Travel – room renting platform	2008	\$175M USD	Collaborative lifestyles
Etsy	E-commerce	–2005	\$97.3M USD	Redistribution

⁴ “What is a startup?”, available at <http://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/>, accessed on July 22, 2014.

⁵ Data on founding year and fund raised from Crunchbase.com, accessed on July 22, 2014.

	Craft selling platform			markets
Uber	Service – car sharing platform	2009	\$1.5B USD	Collaborative lifestyles
Taskrabbit	Service – Small job sourcing platform	2008	\$37.7M USD	Collaborative lifestyles
Kickstarter	Finance – crowd-funding platform	2009	\$10M USD	Collaborative lifestyles

Table 3-1: Basic information on case study companies

3.1 Airbnb’s business model analysis

Airbnb started out with only its founders renting out air mattresses for conference attendees in New York. After the first venture out, the founders had an idea that everyone can rent out his or her mattress or couch for visitors at a fee usually lower than a hotel’s stay. The platform was built in 2009 and now it is the largest room rental platform in the world, with the goal to provide tourists and other visitors an alternative way to stay in a city besides hotels. The innovative way of lodging is said to be more authentic, “warmer” and more budget friendly than staying in the hotel, and at the same time offer the opportunity for house owners to earn extra income by renting out spare rooms in their house or apartment. The case of Airbnb is one of the most prominent examples of a successful peer-to-peer collaborative consumption platform.

3.1.1 Product innovation

Home-sharing is not a new concept, many companies offering similar services have been around a long time before the launch of Airbnb. Therefore in order to compete in the market and become the leading platform in the vacation rental domain, Airbnb had to set themselves apart by an innovative product that gives the users a unique experience and at the same time employing several tactics to overcome the classic two-sided market problems to gain critical mass.

Target customer

Airbnb's target customers belong to two groups: the hosts and the visitors. On the host side in the countries where the company operates, it targets anyone who has a spare room or properties that can be rented out to visitors and want to earn extra income. These "landlords" are typically not licensed professionals. Airbnb currently has listings from hosts from in than 190 countries,⁶ which include mostly rooms, studios, apartments, houses and villas.

On the visitor side, Airbnb does not officially limit its target customers to any specific groups. However the company emphasizes the use of the platform among tourism travelers rather than business travelers, through various marketing and advertising campaigns which center around adventures, getting to know local cultures and discovering unique places. The sharing nature of the platform might be the reason why the company has been aiming at personal travelers as they are more price sensitive, flexible and comfortable with staying in a shared space. However the rise of long-term rents for the whole property, as there are increasingly more hosts renting the whole apartment or house, fuels the growth of business travelers, who look for a more authentic staying experience than in a hotel.

Even though Airbnb attracts users of a wide range of ages for both sides of its platform, Airbnb's community of users are rather young, with the average age of 35, and who are passionate of the platform and the sharing culture.⁷

Value proposition

The main value proposition that Airbnb offers to its customers is the transactions between the hosts and travelers. Airbnb provides two streams of value proposition to its two sides of the market. In addition to the wide audience that the listing is exposed to, Airbnb also sets out to improve hosts' experience in renting out their property by taking measures to ensure the quality of renters. In addition to exposing the host's listing to the wide audience of quality renters, the host side also receives value from Airbnb through a variety of services such as managing and scheduling rental

⁶ Airbnb website, <http://www.airbnb.com>, accessed on 22 July, 2014.

⁷ "Airbnb: more than a place to crash", available at <http://fortune.com/2012/05/03/airbnb-more-than-a-place-to-crash/>, accessed on 22 July, 2014.

listing, free professional photography service and payment processing.

The traveler side does not only get the value from Airbnb through the access to thousands of quality rental listings but also a spectrum of other services such as city guides, neighborhood guides and other instructions to improve the quality of each trip and stay.

For both sides of the platform, Airbnb offers a range of additional services to enhance user experience, such as 24/7 customer service. In addition to product-specific value that both hosts and travelers get out of Airbnb, the platform also promotes and fuels social interactions, which is the basis of collaborative consumption. The transaction is not only a service-money exchange but is also a cultural and social sharing experience for both sides of the market.

Capabilities

Airbnb creates and delivers the main value proposition to its customers through a digital platform that connects and handles the transactions between hosts and travelers. In order to reach current critical mass, Airbnb also possesses the ability to use technology to create “growth hacks”, which accelerated the rapid adoption rate of the platform. As the vacation rental market has already been busy and full of competitors, Airbnb’s strategy is to grow fast and reach the top position in the home sharing domain in order to take advantage of the “winner-takes-all” phenomenon.

3.1.2 Infrastructure management

Activity configuration

Airbnb employed a variety of tactics to reach critical mass, using both offline and online activities. In the early days of its operation, Airbnb followed an unscalable process to grow its user base. The founder, in order to attract more hosts to list on the platform, moved to New York, where most of their customers at the time lived, in order to meet them personally and learn how to adapt the platform to their needs. From the insights learned from its early customers, the team replaced amateur photographs of the listed properties with professional high-resolution images, this change proved to be important to attract new renters to grow the buyer side.⁸

⁸ “How design thinking transformed Airbnb from a failing startup to a billion dollar business”, available at <http://firstround.com/article/How-design-thinking-transformed-Airbnb-from-failing-startup-to-billion-dollar-busines>

The name Air Bed and Breakfast first became known nationwide was the result of the founders' decision to take advantage of the Democratic National Convention in 2008 in Denver to establish themselves as a lodging provider for the convention's attendees. Thanks to the founders' efforts in persuading bloggers and journalists writing about Airbnb's housing listing service, the company got picked up by CNN and the Airbnb brand name became known nationwide.⁹

In addition to the unscalable customer contacts, initial word-of-mouth and publicity, Airbnb combined multiple approaches in its initial marketing campaigns, with a strong emphasis in "technology hacks". According to many sources, one way that Airbnb's employees used in early days was tapping into the power of Craigslist, a worldwide leading classified ads website, by sending auto-messages to people listing their rentals on Craigslist and recommending them to list their rentals on Airbnb.¹⁰

Room quality is a problem that a peer-to-peer rental platform like Airbnb has to deal with. Unlike hotels which have clearly outlined quality control system and protocols to ensure that their rooms meet customers' expectations, Airbnb relies an array of mechanisms to filter out poor quality providers. The feedback and rating system does not only help mitigate risks for both sides of the market but also acts as a criteria to determine the quality of the user. The professional photography service, besides the role of helping hosts have better looking photos of their listed property, also plays an important role to verify and validate the quality of the host and the listed space.

The built-in search engine of the platform plays a crucial role in matching travelers with suitable hosts. Airbnb has developed a search engine that takes into account the following factors in order to return the most suitable listing results.¹¹

- Quality of the listing, which is based on the ratings, click-through and booking rates, the number of verifications the host has done

s, accessed on 24 July, 2004.

⁹ "What every startup can learn from Airbnb", interview with Airbnb's CEO and co-founder Brian Chesky, available at <http://gigaom.com/2011/02/22/airbnb/>, accessed on 24 July, 2004.

¹⁰ "\$1billion - Amazing startup, slight history of spam problem", available at <http://fortune.com/2011/06/07/1-billion-1-br-amazing-startup-slight-history-of-spam-problem/>, accessed on 24 July, 2014.

¹¹ "How search works on Airbnb", available at <http://blog.airbnb.com/how-search-works-on-airbnb/>, accessed on 24 July, 2014.

- Ease of booking, which is based on the frequency and speed of responding to guests, accepting guests' requests and the rate of canceling guests' trip
- Guest preferences: Airbnb offers guests many options to limit their search, such as according to type of accommodation, location, etc. The social connection between guest and the host (common friends and other common personal information displayed on social media networks between the host and the guest) is also taken into account when the platform displays search results.

All the communication is obliged to be carried out on the platform. Private contacts such as email address and phone number of the two parties are not revealed to either side before a reservation is booked. Airbnb provides private messaging for both guests and hosts so that on-platform communication can happen easily. Keeping the communication within the platform before a reservation is made has two key advantages. Firstly, it protects the platform's revenue by preventing two sides to transact privately to avoid the platform's cut fees. Secondly, it protects both sides from risks of frauds (for buyer side) and risks of guest cancellation (for seller side).

Transactions between hosts and guests were facilitated by Airbnb's website or application and its payment system. All the logistics related to renting out the space is done by the host. Airbnb facilitates only the reservation and monetary transaction for the two sides. Airbnb's payment system works in a way that when the guest submits a reservation request to the host, he or she also provides payment details to authorize Airbnb for a charge. If the reservation request is canceled by the guest, declined by the host or expires, the guest is not charged. On the other hand, if the reservation request is accepted, the payment is collected by Airbnb in full and held until twenty-four hours after check-in before the funds are released.¹²

Partner network

Airbnb utilizes various partners to outsource its non-core competencies. The two areas the company works with partners the most are data analysis and customer support function. Customer service is an area that Airbnb relies a lot on its partner network. At the beginning the

¹² "How does Airbnb payment system work?", available at <https://www.airbnb.com/help/article/51>, accessed on 25 July, 2014.

management team did not expect that they would need to use call centers. However as the platform grows and needs to scale quickly, the need of using call centers for better customer service was prevalent. Airbnb management team went through a lot of due diligence to choose the best fit call centers and created long-term partnerships with them.

Resources and assets

To constantly enhance customer experience and loyalty, most of Airbnb's top executives include top talents in customer service, social media and community management, which helps the platform grow its community in each new city and country fast and effectively. In addition to talent assets in community management, Airbnb also is also backed up by a team of developers, the cofounders of Airbnb are developers themselves, thus technologies are the main forces driving the platform's marketing efforts.

The company hires on the basis of identified frequent business issues. For example the customer service and experience function comprises of teams that solve four big customer related issues: resolving problems between hosts and visitors, dealing with payments and tax and government issues, host success management, and a team that ensures high quality in the marketplace, especially from a host' perspective.¹³

3.1.3 Customer relationship

Airbnb makes customer relationship and experience the center of their business, the company even created a special department in the company focusing on the making the customer happy, which is called the "Customer Love" department.

Information strategy

Airbnb is a data-driven company, the company uses its gathered data not only to serve customers better but also to pin point issues and discover new business opportunities. Airbnb has launched a number of supplementary businesses along side with its main business, such as cleaning service

¹³ "What Airbnb learned while rapidly scaling their customer service", Webinar of Jessica Semaan, Airbnb's International operations manager, available at <https://www.zendesk.com/resources/what-airbnb-learned-while-rapidly-scaling-their-customer-service>, accessed on 23 July, 2014.

for hosts or eating and sight-seeing with locals¹⁴. In order to understand its customers better, Airbnb identified and gathered three main customer service metrics, which are contacts per transaction (how many times the customer transact when they contact customer support), top issues (the most frequent issues customers contact support about) and cost per ticket¹⁵ (how much it costs the company to solve a ticket).

Distribution channels

Being built with a customer-centric approach in mind, Airbnb connects with its customers via a multitude of channels: its website portal, the Airbnb mobile application, social media networks (the company is present on most major social network platforms such as Facebook, Twitter, Google Plus, LinkedIn, Pinterest and Youtube), 24/7 customer support via email and phone and its corporate blog. In addition to word-of-mouth and search engine marketing, Airbnb also launched its first global ad campaign, which appeared on popular online publishers such as Youtube, Facebook, Twitter, Lonely Planet and the BBC¹⁶.

Trust, safety and loyalty

Trust is the central theme in Airbnb's business model and the company attempts to integrate the trust issue into every aspect of its business. As both sides of the markets have to bear considerable trust and safety issues: the host side is prone to risks of theft, vandalism. On the other side, the travelers have to endure the ambiguity of booking and paying for an unknown place from a private person that he or she has never met, as well as the safety risks of staying in a stranger's home. In order to address the trust issue from both sides of the market, Airbnb implemented multiple methods in its operation, including built-in features of the platform and supplementary programs.

The trust issue is addressed in the platform's design by a reputation rating system that allows hosts

¹⁴ "Airbnb Will Help You Grab A Seat At A Stranger's Dinner Table", available at, <http://www.businessinsider.com/airbnb-will-help-you-grab-a-seat-at-a-strangers-dinner-table-2014-6#ixzz3ABMMt1HQ>, accessed on 23 July, 2014

¹⁵ "What Airbnb learned while rapidly scaling their customer service", Webinar of Jessica Semaan, Airbnb's International operations manager, available at <https://www.zendesk.com/resources/what-airbnb-learned-while-rapidly-scaling-their-customer-service>, accessed on 23 July, 2014.

¹⁶ "Airbnb Launches First Global Ad Campaign in Nine Markets", available at <http://adage.com/article/digital/airbnb-launches-global-ad-campaign-markets/293108/>, accessed on 23 July, 2014.

and travelers to leave feedback and ratings for each other after each transaction, a safe payment system that mitigates risks for both renters and travelers, a verification system to close the gap between an online profile and the person in reality by having both guests and hosts verify their email address, social media profiles, phone number and offline ID such as driving license. Other features such as user's profile picture, preferences, or how many social connections a guest and host have in common also increase the trust level in the market.

Besides the built-in features, Airbnb also implements various programs and services to improve trust and safety levels for its users. The platform offers 24/7 customer service so that all problems arising are solved as fast as possible. In order to ensure trust and safety for the host side, Airbnb created three cancellation policies for hosts to choose, enabling hosts to receive partial or full payout in case of guest cancellation. In addition, Airbnb also implemented a "Host Guarantee" program, in which hosts can receive up to \$1 million for damages created by guests.¹⁷ On the guest side, they are protected by Airbnb's Guest Refund Policy, in which guests can make a claim to request support and a refund in case the host cancels the reservation shortly before check-in time or fails to offer the space booked or the property is misrepresented or not as described¹⁸.

Succeeding in increasing the trust level in the marketplace is already a big step towards building customer loyalty. In addition, Airbnb also focuses on building communities from its customers, making peer-to-peer space renting a culture and a lifestyle rather than only a one-time transaction.

3.1.4 Financial aspects

Airbnb's revenues come from both sides of the market. The platform charges 6 to 12 percent to guests and 3 percent for hosts to list a space.¹⁹ The platform fees are not refundable in case of unsuccessful transactions, therefore Airbnb's revenues are secure once a transaction is initiated. As both sides of the markets are price sensitive individuals, Airbnb keeps their commission percentage fairly low to encourage more usage and discourage offline transactions. The platform includes features in the platform to avoid people transacting offline and protect its commission

¹⁷ "What is Airbnb Host Guarantee?", available at <https://www.airbnb.com/help/question/279>, accessed on 25 July, 2014.

¹⁸ "What is Guest Refund Policy?", available at <https://www.airbnb.com/help/article/324>, accessed on 25 July, 2014.

¹⁹ "What are the service fees?", available at <https://www.airbnb.com/help/article/384>, accessed on 26 July, 2014.

fees, such as on-site communication without revealing both sides' contact information before a reservation is officially placed or the feature that a message between a host and a guest cannot be sent if it contains an email address.

In order to deliver its value proposition, Airbnb's costs distribution go to technology, such as ongoing platform's hosting and maintaining costs and developing new features. The company's major part of total costs also goes to its customer support, marketing and sales function. The customer support and sales functions comprise mainly the costs of hiring employees while the marketing function also includes paid advertising and the costs for marketing materials and campaigns.

3.2 Etsy's business model analysis

Etsy was the oldest marketplace among the five selected case companies. However its history cannot be considered long compared to many well established business in similar field such as Ebay or Craglist. Founded in 2005, Etsy was created as a platform for individuals worldwide to sell handicrafts and other handmade goods. Unlike Ebay, Etsy does not run any auctions; all the goods are sold simply at a fixed price.

Even though Etsy's business looks a lot like Ebay from the outer side, the startup differentiates itself by only allowing goods that are handmade and not mass-produced in factories. The platform's goal is to assist small-scale artisans to sell their creations online and help handmade and vintage craft lovers find one-of-a-kind and authentic goods. Since its launch in 2005, the platform has grown to 25 million users and facilitated transactions in nearly 200 countries and employs more than 400 people in the U.S. and abroad²⁰. Etsy has raised to date more than \$97 million in fundings from at least 14 venture capital firms and angel investors²¹. In 2012, Etsy became a Certified B Corporation, which is a new kind of company that uses the power of business to solve social and environmental problems.²²

²⁰ "The 'Etsy economy' and changing the way we shop", available at <http://www.entrepreneur.com/article/226180>, accessed on 26 July, 2014.

²¹ Etsy profile at Crunchbase, available at <http://www.crunchbase.com/organization/etsy>, accessed on 26 July, 2014.

²² "Etsy joins the B Corporation movement", available at

3.2.1 Product innovation

Target customer

Etsy's peer-to-peer marketplace platform serves two sets of customers: the buyer side and the seller side. The seller side includes individuals creating crafts as a hobby, small merchants or local artisans, who want to sell their handicraft goods online. Jewelry sellers comprise the biggest part in Etsy, which accounted for nearly 25 percent of all Etsy's products²³. The platform does not target any specific demographic group, however the majority of its sellers are working-from-home women, who consider their Etsy shops to be businesses and not just hobbies²⁴.

On the buyer side, even though the platform is open for buyers of any demographics, the types of buyers Etsy is looking to attract are young adults who are looking for unique handicraft goods that cannot be found from mass-produced retail products. Etsy is thriving to build a community for its buyers and sellers, in which buyers are attracted by the life stories of the sellers whose products they buy²⁵.

Due to the fact that Etsy is a large community of handicraft enthusiasts, Etsy's two sides of the markets have a distinctive characteristic, in which a large numbers of sellers are also buyers, especially in early days of the marketplace. This characteristic makes it easier for Etsy to grow the market as by focusing on one side, the other side would grow organically.²⁶

Value proposition

The value proposition that Etsy brings to its customers is twofold. For the buyer side, Etsy has created a source of wide selections of high-quality unique handicraft goods made by local artisans from more than 200 countries. In addition to the access to locally created goods, Etsy also helps

<https://blog.etsy.com/news/2012/etsy-joins-the-b-corporation-movement/>, accessed on 26 July, 2014.

²³ "TC teardown: Etsy, it's crafty", available at <http://techcrunch.com/2010/09/11/tc-teardown-etsy/>, accessed on 26 July, 2014.

²⁴ The Economist cited a survey done by Etsy on 5500 American sellers, of whom 88% were women, 97% worked from home and even though most said they used Etsy as a way to supplement other incomes, 18% mentioned that it was their full-time job, available at <http://www.economist.com/news/business/21592656-etsy-starting-show-how-maker-movement-can-make-money-art-and-craft-business>, accessed on 26 July, 2014.

²⁵ "The art and craft of business", available at <http://www.economist.com/news/business/21592656-etsy-starting-show-how-maker-movement-can-make-money-art-and-craft-business>, accessed on 27 July, 2014.

²⁶ Interview with Etsy's CEO Chad Dickerson, available at <http://www.demacmedia.com/e-commerce-strategy/makers-marketplaces-chat-with-chad-dickerson-ceo-etsy/>, accessed on 27 July, 2014.

buyers get to know the stories of each shop and its owner and the process that the good is made through the profile and description section for each shop and by featuring specific sellers on the platform's blog.

For the seller side, besides the exposure to a large worldwide audience that are passionate about unique handicrafts, Etsy also provides sellers with tools and simple procedures to open their own e-commerce shop, start adding their product listings and get payouts. In addition, Etsy also provides sellers with comprehensive and frequent guides for sellers to run a successful handicraft business, including information from market research, hiring, product photography and inventory management.

The central value proposition of Etsy is the largest community in the world of people who are passionate about arts and handicrafts. The company aims to create a movement of sustainable living and encouraging people to turn towards small businesses' goods rather than mass-production.

Capabilities

Etsy's main capability is to build engaging and influential communities, both online and offline. The company spends very little on its marketing and advertising initiatives and remains focus on building and growing communities.

3.2.2 Infrastructure management

Activity configuration

Etsy's globally scaled community and the world's largest collection of handmade and vintage crafts are achieved through the implementation of various key activities, most of which centralize building and growing communities.

As noted previously, a big part of sellers are also buyers. Therefore even though Etsy has focused on growing the seller side, the buyer side also grows naturally. In addition, as sellers market and share their listings, Etsy also gets free advertisements and brand awareness. Another reason that helped Etsy to grow fast and hit critical mass quickly is because the company tapped into a small but open niche market, the young adults who want more authentic e-commerce experience.²⁷

²⁷ "Here is why Etsy is worth almost \$700 million", available at

While other big e-commerce platforms such as Ebay and Amazon have switched their focus to mainstream shopping and big vendors, Etsy remains its focus on small artisans and merchants to make its platform authentic and personal.

Etsy has implemented several measures to ensure the quality of its listed products and transactions. As the platform positions itself as the one-stop market for authentic and vintage handicrafts, one of the platform's challenge is to make sure all the products listed are actually handmade and authentic. Even though the platform does not forbid the use of mass-production, sellers that engage in mass production have to submit an application for Etsy's in-house team for review and if approved, the manufacturing partners have to be disclosed on the shop's About page²⁸.

Another area that the platform has been striving to improve from the beginning is the quality of each listing. For this reason, the platform has invested heavily in educating sellers in all aspects of running a small e-commerce business, in which how to create high quality listings is one of the crucial topics. Sellers are given training information on how to improve the "searchability" of the listing on both Etsy's internal search function and major search engines such as Google, Yahoo or Bing, in order to increase matching quality for both sides of the market and at the same improve visibility for both the platform and its sellers on search engines.

Within a community, communication is key. Thus Etsy creates several ways for users to interact with each other. Etsy Conversations, also called Convos is a system that Etsy members can use to communicate privately with one another. Convos is mainly intended to facilitate communication between sellers and buyers about a transaction. Etsy also enables other ways for the two sides to interact, for example buyers can "favorite" a shop, write reviews for it and share it with friends. Besides transaction-related conversations, Etsy members can also create teams and communicate with other team members that share the same interests or discuss and answer each other's questions on the forums.

<http://www.businessinsider.com/etsy-valuation-688-million-2012-5>, accessed on 27 July, 2014.

²⁸ "Etsy growing rapidly but deeply troubled", available at

<http://www.inc.com/magazine/201312/tom-foster/etsy-growing-rapidly-but-deeply-troubled.html>, accessed on 27 July, 2014.

Every shop is a separate business entity with their own terms and policies, although they are obliged to adhere to Etsy's overall policies. The seller is responsible for all the activities of running the store, including setting prices, uploading product pictures, promoting the shop and handling packaging, shipping, any possible returns and other transaction-related issues. Even though not a part of the order fulfilling chain, Etsy creates an ideal environment for successful transactions, including a low barrier to set up shop, facilitating rules, different payment options, seller support and tools such as Direct Checkout, Shipping Labels, Google Product Listing Ads, Search Ads, Gift Cards and Seller Handbook.

Etsy makes the shop set-up procedure simple and easy, there is no approval process on the platform. However as Etsy has outlined policies regarding types of products allowed to be sold on the platform, intellectual property rights, misrepresentation of merchandise, etc.²⁹ The platform employs a dedicated team in addition to the power of the community to spot policy violators. Users, when spotting item listings or shops that violate the platform's policies, can report the item or shop to Etsy. The platform also has a procedure to report copyright and intellectual property infringement.

Partner network

In 2013, Etsy launched Etsy Wholesale, a business-to-business platform by which retailers, ranging from big chains such as Nordstrom and West Elm to boutique shops, sell products created by Etsy artisans in their stores. Many retailers realized the importance of "bringing authentic and handcrafted products into customers' homes at a great value" and turned to Etsy and Etsy Wholesale to connect with handicraft designers.³⁰

In addition, Etsy also partners with various local organizations and businesses in order to promote the platform and get more local sellers onboard. Craft Entrepreneurship is one of Etsy's such campaigns. In the program, Etsy partners with local organizations in several cities in the U.S. to

²⁹ Etsy guidelines, available at <https://www.etsy.com/help/article/483>, accessed on 27 July, 2014.

³⁰ "Etsy partners with Nordstrom, West Elm: more mall stores in store?", available at <http://www.forbes.com/sites/barbarathau/2013/03/07/etsy-partners-with-nordstrom-west-elm-more-mall-stores-in-store/>, accessed on 27 July, 2014.

provide classes on how to create a small craft business on Etsy for low-income groups.³¹ Etsy's online marketing activities involve partnerships with many brands, bloggers and influential social media figures through content marketing to promote the platform and its listed products.

In order to facilitate the platform's development, Etsy also partners with various third-party developers, analytics companies and e-commerce applications to add in more features for the platform.

Resources

The world's largest handicraft enthusiast community and collection is Etsy's central resource to deliver consistent value for its users. In addition, in order for the platform and community to function smoothly and continuously evolve, Etsy has to rely on the power of its employees. Etsy releases annually a "Values and Impact Annual Report", which measures Etsy's delivery on its commitments to employees, community and the planet. According to Etsy's 2013 internal survey, 84% of its employees reported positive personal wellbeing and 80% reported positive employee engagement.³²

3.2.3 Customer relationship

Information strategy

Etsy considers data analytics a crucial role in its operations and collects data about every activity on the site, ranging from transactional data to behavioral data, which includes interactions people have while browsing the platform. The platform hires several data analysts and engineers in order to go through the statistics of the site to adjust page elements and improve site engagement. The collected data powered Etsy to create Etsy's Taste Test, which takes users through a product quiz before recommending products they might like, and at the same time is used to recommend products for visitors who come to Etsy through Google Product Listing Ads³³.

In addition, the platform also collects data to support and educate sellers about their business. The

³¹ Craft entrepreneurship website, available at <http://craftentrepreneurship.com>, accessed on 27 July, 2014.

³² Etsy's 2013 Values & Impact Annual Report, available at <https://blog.etsy.com/news/2014/etsy-values-impact-annual-report-2013/>, accessed on 29 July, 2014.

³³ "Etsy gets crafty with big data", available at <http://www.networkworld.com/article/2163643/big-data-business-intelligence/etsy-gets-crafty-with-big-data.html>, accessed on 28 July, 2014.

Shop Stats analytic system helps sellers know their target market better by showing them what people search for, how they navigate around the shop, etc.

Distribution channels

Etsy employs a wide range of online mediums to connect with current and prospective customers, including popular social media platforms such as Twitter, Facebook, Tumblr and Pinterest. The site also invests heavily in search engine marketing and advertising. The platform devoted a large budget to buy Google Product Listing Ads on behalf of its sellers so that the listed products were to be discovered easier and to drive more traffic and users to the platform.³⁴

Online communities are one of Etsy's central methods to engage current users and attract new customers. Etsy creates various ways for its community to interact, including forums, webinars, teams, online events and blogs. Etsy communities are not online active on the cyberspace but also engage in offline activities. Etsy organizes regular local events such as meetups, fairs, courses or workshops for its members to interact face-to-face and strengthen the community ties. Partnering with various local organizations and companies, Etsy organizes frequent local events to non-members to promote the concept of "craft entrepreneurship", its platform and attract more sellers to join.

Content marketing is a medium that Etsy utilizes effectively to engage, attract users and establish itself as an authority in the craft and do-it-yourself area. Etsy focuses on both its own content creation and curation power in its content marketing strategy. The content on Etsy site is created by both staff and selected users. The goal of the onsite content is four-fold: to engage the community, attract new visitors, highlight sellers and product listings on its platform and at the same time contribute to the site's authority position in search engines. All Etsy's content is highly visual and for this reason, Etsy is also very active and has large followings on visual-centric social media platforms such as Pinterest, Tumblr and Instagram. Via a feature called Etsy Pages, Etsy makes it easier for users to see products categorized by trends or uniqueness through the perspective of tastemakers, who are influential bloggers and brands. This is an innovative way of turning

³⁴ "Etsy investing in Google Product Listing Ads for sellers", available at <https://blog.etsy.com/news/2013/etsy-investing-in-google-product-listing-ads-for-sellers/>, accessed on 28 July, 2014.

partnerships and readily available content to new content to engage users and visitors.

Trust, safety and loyalty

As a peer-to-peer marketplace, Etsy takes trust and safety issues seriously through several mechanisms. One of the main systems that Etsy develops to ensure trust within the marketplace is the combination of thorough guidelines and policies and an easy procedure for the community to flag down and report suspicious shops or activities. On top of that, the platform employs a team of specialists and develops an automated system to detect fraudulent behaviors.

Etsy also has a feedback system that allows customers to leave reviews to sellers after each transaction. In addition, the site encourages transparency from sellers by showcasing not only product photos but also photos of themselves, their work space and the process employed to create the product. The transparency builds a layer of trust for the buyer about the authenticity of the product and the seller.

Etsy invests intensive efforts in raising awareness and educating sellers in complying with quality standards and regulations in product development and business operations in their country. In addition, the platform also offers a Seller Protection program, which protects a seller's account from being suspended or a shop payment account from being debited when a dispute arises about a transaction.³⁵ There is, however, no official program to protect buyers, when a problem arises about a transaction, the buyer is advised to resolve it first with the seller before opening a case or request phone support from Etsy.

Building strong communities is central for Etsy to retain trust and loyalty within its customers. Etsy focuses primarily on its sellers in order to gain loyalty from both sides of the market. The platform continuously develops and provides sellers with tools, education, environment and support to build successful Etsy shops and gain customers' loyalty. From there, shops' loyalty customers also become loyal users of the platform.

3.2.4 Financial aspects

³⁵ "What is Seller Protection Program?", available at <https://www.etsy.com/help/article/4669>, accessed on 29 July, 2014.

Etsy makes it free for both buyers and sellers to join the platform. The platform remains free for buyers to be a member, browser, contact sellers and purchase products. Sellers can set up their shop without a fee and are only charged when listing products for sale. Etsy charges \$0.20 USD for each published listing and a listing lasts for four months or until the item is sold. On top of that, when the seller makes a sale on Etsy, he or she is charged with a transaction fee of 3.5 percent of the item's price³⁶, which is lower compared to the 10 percent transaction fee that Ebay enlists³⁷. In addition to revenues from product listings and sales from its marketplace, Etsy also earns revenues from in-side advertising. Its advertising service, which is called Search Ads, is paid advertising spots that sellers can use to promote their items to shoppers. Search Ads is keyword-based and allows the paying merchants' products to appear first in the shopper's search result.

Etsy's cost structure mainly includes platform maintaining and development, community management and customer support. In addition to employing a wide range of third-party tools and resources needed for its platform, most of its expenses come from human resource costs. According to an analysis by Carpenter (2010),³⁸ 47 percent of Etsy's staff is for engineering function, 21 percent of its staff is devoted for customer support, the remaining are divided among community management, business operations and marketing.

3.3 Uber's business model analysis

Uber, a San Francisco based technology startup, was founded in 2009 and provides an innovative and reliable way to connect riders with drivers of vehicles for hire and ridesharing services. The company had 822 employees (as of July, 2014) and has raised more than \$1.5 billion USD in fundings from various ventures and angel investors³⁹.

Among the five case companies, Uber has received by far the largest fundings. In the latest funding round in 2014, the company raised \$1.2 billion USD from various investors, making the

³⁶ Etsy's fee policy, available at <https://www.etsy.com/help/article/2144>, accessed on 29 July, 2014.

³⁷ Ebay's standard selling fees, available at <http://pages.ebay.com/help/sell/fees.html>, accessed on 29 July, 2014.

³⁸ "TC Teardown: Etsy, it's crafty", available at <http://techcrunch.com/2010/09/11/tc-teardown-etsy/>, accessed on 27 July, 201

³⁹ Uber profile on Crunchbase, available at <http://www.crunchbase.com/organization/uber>, accessed on 1 August, 2013.

company's valuation become \$18.2 billion USD.⁴⁰

3.3.1 Product innovation

Target customer

Uber's target users include two sides, which are riders and drivers. From the rider side, the company targets people living in big cities where in-city transportation, especially transportation by taxi, is a problem. As Uber's main platform is a smartphone application, the company aims towards tech-savvy, young urban professionals on-the-go. In early 2014, the company also launched "Uber for business" service, which let employers create a business account and add employees to the account. Employees can charge the account when they use Uber rides for work. On the driver side, Uber divides its target drivers into three groups: UberBlack – professional chauffeurs with commercial license and commercial auto insurance, UberTaxi – current taxi drivers certified and licensed by the city and UberX, who are at least 21 years old, with personal license and personal auto insurance.

Value proposition

Uber's main value proposition for both sides of its marketplace is an application that facilitates the on-demand nature of the transportation service and the transaction between drivers and passengers. For passengers, Uber provides a convenient, fast and reliable way to travel within the city. The application makes it easy for passengers to request a ride, track how long the wait will take and be able to pay without cash. The company also aims to make its UberX service cheaper than taxi, so that private rides are accessible to more people. After a series of fare cuts, UberX became 20 percent cheaper than New York traditional yellow taxi in July 2014.⁴¹

Uber provides drivers, both professional and personal license holders, an opportunity to earn extra income by giving the access to a large pool of passengers. With Uber application and system, drivers feel safer knowing who is in their car and not having to carry cash. In addition, while working with Uber, drivers are given a smartphone with the built-in application.

⁴⁰ "Uber gets a uber valuation", available at <http://online.wsj.com/articles/uber-gets-uber-valuation-of-18-2-billion-1402073876>, accessed on 1 August, 2014.

⁴¹ "Uber cuts the price of an UberX by 20% in New York City, making it cheaper than a taxi", available at <http://www.businessinsider.com/uberx-is-now-20-cheaper-in-new-york-city-2014-7>, accessed on 2 August, 2014.

Capabilities

Uber's main technical capability is its smartphone applications, which enable easy and safe transactions between drivers and passengers. The company's other capabilities include quality control and the ability to deliver consistent high quality customer experience and service. As a pioneer in ride-sharing service field, Uber possesses the ability in overcoming regulatory hurdles and gaining legal status to disrupt the strictly regulated taxi industry.

3.3.2 Infrastructure management

Activity configuration

The company started its operations in San Francisco with the initial goal of connecting users with luxury vehicle drivers. The service aimed to create a luxurious transporting experience for users, rather than only a means to get from one place to another. The focus on quality resulted on a lot of word-of-mouth buzz for the company. In addition, the company added in its application a feature that encouraged riders to share a Uber promo code as a gift to their friends and social media following and in return the rider can get extra credits in their Uber account. After the launch in San Francisco, Uber rolled out its service city by city in order to focus on making the operation fully functional in each city before moving on to the next.

Uber does careful research before choosing the next city to launch. The city should have enough demand and meet Uber's predefined criteria to facilitate its growth, which are vibrant restaurants and nightlife, a lot of "weather events" – days of weather conditions that discourage people from walking outside and the abundance of sports or culture events.⁴² Before launching in any city, Uber follows a simple model, which involves a team researching the city's potential regulatory hurdles, a team recruiting drivers by cold calling car services and limo companies, a team starting social media outreach to promote the launch and hosting a launch party for VIPs.⁴³

⁴² "Chicago - Uber's biggest launch to date?", available at <http://blog.uber.com/2011/09/22/chicago-ubers-biggest-launch-to-date/>, accessed on 5 August, 2014.

⁴³ "Resistance is futile", available at <http://www.inc.com/magazine/201307/christine-lagorio/uber-the-car-service-explosive-growth.html>, accessed on 3 August, 2014.

Uber matching mechanism is simple; the application uses GPS to match passengers with their closest drivers. There is no search function in the platform. However in order to improve matching satisfaction for two sides of the market, Uber implements a few mechanisms for both sides. For passengers to get a ride that meets their budget, quality and style preferences, besides having a strict quality control policy in place, Uber also offers passengers three vehicle options, from luxury vehicles such as limo and towncars to budget friendly non-commercial vehicles. On the other side, drivers can decide whether they want to pick up a passenger, based on his or her previous review score.

All communication between drivers and passengers is carried out through Uber application. Passengers signal their pickup location by pinning the location in the Uber application or entering manually their address. Passengers can also contact directly their driver when he or she is on the way to pickup location by phone or SMS from the application.⁴⁴

Uber facilitates a normal transaction between drivers and passengers through its application and credit card payment system. The application allows the passenger to confirm his or her pickup location in the application's map and match him or her with the nearest Uber vehicle. In order to take out the guess work from the transactions, Uber provides passengers with a fare estimate tool, an estimate of how long it will take for the vehicle to arrive and the driver's name and review score. All payments and tips are handled through Uber credits, Google Wallet and credit cards, whose details passengers have to enter when requesting a ride.

Partner network

Uber has a wide partner network that facilitates its operations and growth in both sides of the markets. In order to scale its payment processing, Uber partners with Braintree services for both its U.S. and international payments. Braintree provides Uber with a payment gateway that is specially designed for mobile transactions⁴⁵.

On the passenger side, Uber partners with several brands to create new passenger adoption

⁴⁴ "How do I contact my driver when he or she is enroute?", available at <https://support.uber.com/hc/en-us/articles/201836596-How-do-I-contact-my-driver-when-he-or-she-is-enroute->, accessed on 4 August, 2014.

⁴⁵ Uber as a case study customer for Braintree, available at <https://www.braintreepayments.com/case-studies/uber>, accessed on 4 August, 2014.

channels. For example Uber partnered with NFL Player Association to enable NFL players to call for rides when traveling from or to sport events and avoid driving under influence of alcohol⁴⁶.

In addition, Uber also partnered with Google for a variety of value-added services, such as the integration with Google Maps application so that users of Google Maps are presented with the option of taking an Uber car to their destination when looking up transportation directions⁴⁷. Uber has also released an application programming interfact (API) that allows external application or software developers to integrate with the platform, including showing different Uber product options, fare and time estimates and other specific user details and activities.

In order to fuel the growth of its supply side, Uber partnered with GM, Toyota and various financial institutions to help drivers reduce monthly car payments and obtain financing easier⁴⁸.

Resources

Uber's main resources include its smartphone applications to make the connections and transactions between passengers and drivers possible, human resources, including community management and support, engineers to maintain and develop its applications and driver operations. The brand Uber also has become widely known in many cities around the world, and is associated mainly with its luxury towncar service, which creates a premium feel for the brand. In addition, Uber is one of the most valuable venture-backed startups in the world, being evaluated at \$18.2 billion USD in June 2014⁴⁹. Besides financing, Uber also receives support, guidance and access to more networking opportunities and partnerships through the help of its venture investors.

3.3.3 Customer relationship

Information strategy

⁴⁶ "Uber inks its first sports deal, partners with the NFL to promote safe rides for pro footballers", available at <http://techcrunch.com/2013/09/04/uber-inks-its-first-sports-deal-partners-with-the-nfl-to-promote-safe-rides-for-pro-footballers/>, accessed on 4 August, 2014.

⁴⁷ "Google Maps app updated to include Uber integration", available at <http://www.theguardian.com/technology/2014/may/07/google-maps-app-uber-minicab-taxi>, accessed on 4 August,

⁴⁸ "Financing 100,000 entrepreneurs", available at <http://blog.uber.com/financing100000entrepreneurs>, accessed on 4 August, 2014.

⁴⁹ "At \$18.2 billion, Uber worth more than Hertz, United Continental", available at <http://www.forbes.com/sites/ellenhuet/2014/06/06/at-18-2-billion-uber-is-worth-more-than-hertz-united-airlines/>, accessed on 4 August, 2014.

Uber is a data-driven company and has dedicated one data science team to collect data about its users, including location and temporal data to continuously improve its service and deliver high quality customer experience. The platform uses data about how users move around in different neighborhoods of a city and behavior of users in each neighborhood in different time spots to predict demand, which is used to come up with mechanisms to shorten waiting times⁵⁰.

Data also plays a central role in Uber's pricing strategy as it allows Uber to adopt a flexible pricing scheme, depending on the demand for a ride at any given time. Uber's surge pricing means that when the demand is high, for example on New Year's Eve, Uber rates increase to get more cars on the road to ensure availability during busy times and the rates go down when enough cars are on the road⁵¹. The passenger is notified by the application when surge pricing is in effect.

Distribution channels

Uber acquires passengers mainly through word-of-mouth. In order to facilitate this channel, the company builds a reward system in which passengers can refer Uber to their friends and earn Uber points, which can be used in future rides. Uber makes the referral more attractive by giving out discount codes to friends of passengers. The share feature is included in the application so that the passenger is prompted with the feature after each ride. Besides, passengers who have referred at least 15 customers are enlisted to the Uber Evangelist program and are entitled to various privileges such as free gifts and invitations to special Uber events.

In addition, Uber also uses partnerships with brands for customer adoption. In its partnership with Google, Google Maps users are presented with the option to use Uber cars when searching for directions and transportation options in Google Maps application. Uber also increases customer awareness through free-ride events, in which people can try out Uber service. Uber's goal is to turn early adopters and trial riders into customers by offering excellent customer experience and competitive prices.

In order to get drivers into its system, Uber has employed a wide variety of channels, such as

⁵⁰ Brad Voytek, data scientist at Uber's talk, available at <http://www.psfk.com/2013/12/bradley-voytek-uber-data-science.html>, accessed on 4 August, 2013.

⁵¹ "What is surge pricing and how does it work?", available at <https://support.uber.com/hc/en-us/articles/201836656-What-is-surge-pricing-and-how-does-it-work->, accessed on 4 August, 2014.

advertisements on Craigslist, recruiting events and centers and promotions on street corners. The company even approaches drivers from competitors directly and offering cash bonuses to switch to Uber⁵².

Trust, safety and loyalty

As trust and safety is central issue for both sides of Uber marketplace, the company implemented various measures, from the ride's track-ability via its applications, several rounds of background checks on drivers, review systems for both sides, a \$1 million USD driver liability insurance for every ride and a system of cashless payments.

Background check comprises a big part of Uber's operation. A multi-component background check process, including three levels of screening – county, multi-state and federal, is carried out on every driver on the platform to ensure that all drivers meet its defined criteria, such as free of violent crimes, fatal accidents, history of reckless driving or sexual offenses.

The review system helps Uber keep its quality in control by deactivating drivers from the system if his or her review score is lower than a certain point. Drivers also have the option to rate riders after each ride, even though this option is not visible to passengers or made public, which allows drivers to choose whether to pick up a passenger if his or her score is low.

3.3.4 Financial aspects

By standard, Uber makes money by keeping 20 percent of each ride's fare and the rest goes to the drivers. However to fuel its growth, when launching a new service or in a new city, the company tends to lower its take-in percentage. In selected cities, Uber keeps only 5 percent from the fares of its UberX service, as an incentive to get more drivers to sign up⁵³.

Besides costs to develop and maintain its applications, the cost structure of Uber also includes insurance, employee costs and costs to acquire passengers such as offering free rides and credits in its reward program. As of July 2014, Uber employed more than 900 employees in different

⁵² "How Uber and Lyft are trying to kill each other", available at <http://www.forbes.com/sites/ellenhuet/2014/05/30/how-uber-and-lyft-are-trying-to-kill-each-other/>, accessed on 5 August, 2014.

⁵³ "Uber will start charging more for some rides because it was losing money", available at <http://www.businessinsider.com/uberx-reinstate-20-commission-2014-4>, accessed on 5 August, 2014.

locations for various functions, mainly including data analysis, community management and support, driver recruiting, background checks and training, marketing and PR⁵⁴. In addition, as the company is disrupting a strictly regulated industry, it faces various regulatory hurdles, thus a part of Uber's costs go to legal and lobbying efforts to defend its service against taxi organizations and local governments in each launch city.⁵⁵

3.4 TaskRabbit's business model analysis

TaskRabbit is an online and mobile labor sourcing marketplace founded in 2008. The platform allows users to outsource small errands and tasks for other people in their neighborhood. The platform is based on the old "neighbors helping neighbors" concept with a technology twist. The company is still at the phase of adjusting parts of its business model to align better with the market. In its original model, people could post tasks to be done, when and where it needed to be done, a price they were willing to pay and the contractors could place bids on the tasks. However in July 2014, the platform turned to an on-demand model, enabling instantly bookable services in four of its most popular categories: cleaning, handyman, personal assistance and moving help. The bidding system, because of that, was removed in this pivot and replaced by a system in which contractors are paid by their hourly rates.⁵⁶

The original name of the platform was RunMyErrand and was changed in 2010 into TaskRabbit. The company has raised so far \$37.7 million USD⁵⁷ in fundings and employed a team of 65 employees.⁵⁸

3.4.1 Product innovation

⁵⁴ "A disruptive cab ride to riches: the Uber payoff", available at <http://www.forbes.com/sites/aswathdamodaran/2014/06/10/a-disruptive-cab-ride-to-riches-the-uber-payoff/>, accessed on 5 August

⁵⁵ "Lessons from Uber: why innovation and regulation don't mix", available at <http://www.forbes.com/sites/larrydownes/2013/02/06/lessons-from-uber-why-innovation-and-regulation-dont-mix/>, accessed on 5 August, 2014.

⁵⁶ "Unveiling the new TaskRabbit", available at <http://blog.taskrabbit.com/2014/06/17/unveiling-the-new-taskrabbit/>, accessed on 30 July, 2014.

⁵⁷ TaskRabbit profile on Crunchbase, available at <http://www.crunchbase.com/organization/taskrabbit>, accessed on 30 July, 2014.

⁵⁸ "TaskRabbit debuts tools for hiring ongoing temp work as it hones focus on business users", available at <http://techcrunch.com/2013/05/23/taskrabbit-for-business-temp-workers/>, accessed on 30 July, 2014.

Target customer

TaskRabbit aims to facilitate transactions among people living in close neighborhoods to carry out domestic tasks or tasks that need expert help. As most tasks are real-time and on-demand, the tasks can usually only be performed by people living in close proximity with the person in need of help. On the demand side, the platform targets people who need an extra hand for small tasks and domestic errands every now and then, for example busy professionals, working mothers or elderly people. In 2013, the company launched a portal for businesses looking for temporary workers for short-term jobs, which was called “TaskRabbit for business” and aimed to be “more reliable than online classifieds and less costly than traditional temp agencies”.⁵⁹

On the supply side of the market, the platform targets people who are in need of extra income or want to work with flexible hours and a wide variety of tasks, such as stay-at-home mothers and fathers, young professionals, students and retirees looking to stay active. The demographics of TaskRabbits, the contractors bidding on work on the platform, varies, however their education levels are relatively high, taking into account the fact that most tasks on the platform do not require any formal education. According to Newton (2013), 70 percent of TaskRabbits had at least a bachelor’s degree, 20 percent had masters’ degree and 5 percent had a PhD⁶⁰.

Value proposition

As other peer-to-peer marketplaces, the value proposition of TaskRabbit is two-fold. On the demand side, the platform’s main value proposition is the medium for people to “live smarter” by focusing on what’s most important and outsourcing non-competent daily chores to quality and safe contractors in the neighborhood. The platform provides task posters with a large pool of

⁵⁹ “TaskRabbit launches business dashboard aimed at companies looking for temp workers at SXSW”, available at <http://techcrunch.com/2013/01/28/taskrabbit-launches-business-dashboard-aimed-at-companies-looking-for-temp-workers-at-sxsw/>, accessed on 30 July, 2014.

At the time of writing this thesis paper (July, 2014), the business portal has disappeared on TaskRabbit platform. However the company explained the move to be “better serve both constituents (consumers and businesses), giving them the best of both worlds (i.e., hourly payment options, recurring hiring options, etc.)”. The statement was cited by Techcrunch, available at <http://techcrunch.com/2014/04/01/taskrabbit-for-business-service-portal-quietly-disappears/>, accessed on 30 July, 2014.

⁶⁰ “Temping fate: can TaskRabbit go from side gigs to real jobs?”, available at <http://www.theverge.com/2013/5/23/4352116/taskrabbit-temp-agency-gig-economy>, accessed on 30 July, 2014.

contractors (25000 contractors as of 2014⁶¹) who are fully-vetted and background checked.

On the supply side, TaskRabbit provides contractors, who are called “Taskers” on the platform, a way to get in touch of nearby people in need of their help and earn extra income on a flexible schedule. Experienced and well-performing Taskers also gain additional value from the platform by receiving more exposure and trust from future clients from their Elite status. Via the website or mobile application, Tasker can set availability and schedule their work, get notified if he or she has been chosen for a task, get information about the task and communicate with Clients and accept the job in real-time.

Both sides of the market receive 24/7 customer service from the platform and an easy-to-use mobile application that facilitate real-time and on-the-go communication between Taskers and Clients.

Capabilities

The mobile application offers major capability to facilitate the on-demand nature of the transactions. The application is simple to use and allows Clients to hire and pay contractors within clicks and Taskers to accept work on-the-go.

3.4.2 Infrastructure management

Activity configuration

TaskRabbit’s founder and CEO Leah Busque grew early user base by recruiting Taskers off Craigslist to run tasks for her neighborhood’s 600 mothers. From there the service spread to other neighborhoods in Boston by word-of-mouth⁶².

TaskRabbit’s growth strategy is to launch city by city in the U.S. instead of launching nationwide. The company chooses to move to a new city slowly to “make sure that the liquidity is the same” in each place the service is launched so “customers can expect the same level of quality everywhere

⁶¹ “Unveiling the new TaskRabbit”, available at <http://blog.taskrabbit.com/2014/06/17/unveiling-the-new-taskrabbit/>, accessed on 30 July, 2014.

⁶² Founder and CEO of TaskRabbit’s talk on growing the early user base, available at <http://ecorner.stanford.edu/authorMaterialInfo.html?mid=3347>, accessed on 1 August, 2014.

at once”⁶³. The platform’s management places a strong emphasis on customers’ experience in scaling their service, which explains their cautious approach in growing. The platform also fosters the power of community in deciding their next geographic destination. The company has a section on its website that people can request TaskRabbit’s presence in their city, and as London was the most requested city outside the U.S., the platform launched in London in 2013.⁶⁴

Taskrabbit’s ability to improve match quality between two sides of the market relies heavily on the algorithm of its platform’s search function. The algorithm takes into account the Taskers’ past behavior on the platform, the skill preferences they set in their profile, their schedule and availability⁶⁵. With these parameters, the platform⁶⁶ presents the Clients with three most suitable Taskers that can be hired for the task right away and a few more closely matches as suggestions. The search parameters such as task, zip code, time, day and supplies needed help the Client limit the search result down to Taskers that fit his or her requirements the most. The platform also provides an area for keyword-based searches so that the Client can look for Taskers outside the four main categories or to meet specific needs.

Its user forum also collects customers’ feedback and suggestions and the company takes them into account when making changes and updates to the platform. The continuous feedback loop helps TaskRabbit improve service quality and customer experience. TaskRabbit’s 24/7 support function also communicates with both sides of the market to resolve any dispute or issues in order to improve the experience for both Taskers and Clients.

The communication between Taskers and Clients is taken place via the platform website’s or application’s communication feature. TaskRabbit emphasizes the mobility and instant nature of the transactions by promoting and educating both sides about its application for iOS and Android mobile devices. The communication can take place after the Client has decided to hire the

⁶³ Interview with TaskRabbit’s ex-CEO Eric Grosse, “TaskRabbit plans to multiply”, available at http://bits.blogs.nytimes.com/2011/12/13/taskrabbit-announces-17-8-million-in-series-b-funding/?_php=true&_type=blogs&_r=0, accessed on 30 July, 2014.

⁶⁴ “TaskRabbit takes its errands marketplace to London for its first move outside the U.S.”, available at <http://techcrunch.com/2013/11/20/taskrabbit-takes-its-errands-marketplace-to-the-uk-for-its-first-move-outside-the-u-s/>, accessed on 30 July, 2014.

⁶⁵ “Unveiling the new TaskRabbit”, company’s official blog, available at <http://blog.taskrabbit.com/2014/06/17/unveiling-the-new-taskrabbit/>, accessed on 30 July, 2014.

⁶⁶ The new system of matching instead of bidding was replaced on 10 July, 2014.

contractor. The messaging feature of the application allows communication to happen in real time and on-the-go.

As the company has a unique business model and is one of the first startups to tackle the local labor optimization problem, the company's main tool is a defined set of processes to create a smooth and satisfying transaction between a Client and a Tasker. A transaction takes place when the Client chooses to hire one of the contractors that the platform has matched him or her with through its platform's search algorithm. The platform enables the messaging function for both sides after the Client has confirmed hiring a Tasker, the Client's credit card is not charged until after a task has been completed. If the hire is found out not to be a good match after communication is initiated, TaskRabbit allows the Client to cancel the task. If the task does not need to be done any more, the Client can also place a cancellation request. However the Client will be charged one hour of work if the cancellation request is placed within 5 hours before the agreed start time.

After the Tasker has accepted and completed the task, he or she will submit the hours through the application or website. The Client will receive an invoice of the service and his or her credit card will be charged automatically. In addition to clearly defined processes, both sides of the market can contact TaskRabbit's support team at any point during the transaction in case of complexities, problem or dispute.

Partner network

TaskRabbit has cooperated with many big consumer brands in order to raise awareness about the platform and attract more users. The majority of big consumer brands' partnerships involved issuing of TaskRabbit gift vouchers for the customers or fans of the big brands, for example in the partnership with Gap, the clothing retailer, in December 2012, Gap customers shopping in stores in San Francisco and New York received \$25 USD TaskRabbit gift vouchers for spending \$75 USD or more at the stores.⁶⁷

When launching into a new market, TaskRabbit enlists the help of media partner in order to gain awareness about its brand and platform. When launching to the Austin market in 2011, TaskRabbit

⁶⁷ "TaskRabbit Partners Up With Gap, Giving Free Gift Vouchers To Customers Who Spend \$75 Or More In SF And NYC Stores", available at <http://techcrunch.com/2012/12/07/taskrabbit-gap/>, accessed on 31 July, 2014.

partnered with Bravo TV to be featured on the show “Watch What Happens Live”⁶⁸.

The company releases HTTP API and other mobile applications on iOS and Android for current and potential technology partners to build applications to interact with TaskRabbit platform’s marketplace. The platform currently offers API access to only selected partners and not to the public in order to ensure the quality of partnering applications and partners’ commitment to utilizing the platform⁶⁹.

The platform also cooperates with partners whose value or brand image aligns with its own. For example, as a company fueled with female leadership, the company became a launch partner for LeanIn.org, the organization catalyzed by the book “Lean in: women, work and the will to lead” by Facebook Chief Operating Officer Sheryl SandBerg⁷⁰.

For various parts of its operations, TaskRabbit uses third-party companies to outsource its non-competencies. For example for payment handling, TaskRabbit uses Braintree’s Marketplace service, which collects money from Clients, routing it to Taskers and forwarding TaskRabbit its fees⁷¹.

Resources

TaskRabbit’s main resources are its technology platform, well defined processes and its team for platform development and customer support. Even though not a direct resource, TaskRabbit benefits from the recent economic downturns, resulting in a pool of unemployed and underemployed individuals who seek out for short-term work to earn extra income and fill in idle time.

3.4.3 Customer relationship

⁶⁸ “Plays well with others: brand partnerships and your business”, available at http://www.huffingtonpost.com/leah-busque/plays-well-with-others-br_b_2238835.html, accessed on 31 July, 2014.

⁶⁹ TaskRabbit Platform integration, available at <https://www.taskrabbit.co.uk/platform>, accessed on 31 July, 2014.

⁷⁰ “TaskRabbit signs on as a launch partner for Leanin.org”, available at <http://blog.taskrabbit.com/2013/03/06/taskrabbit-signs-on-as-launch-partner-for-leanin-org/>, accessed on 31 July,

⁷¹ “TaskRabbit doesn’t want the headache of handling your money”, available at <http://www.businessweek.com/articles/2013-08-14/taskrabbit-doesnt-want-the-headache-of-handling-your-money>, accessed on 31 July, 2014.

Information strategy

The company collects various types of analytic data about its user base and behavior on site to make changes to the design, features and user experience for its website and applications. The platform uses KISSmetric to perform A/B testing on all design elements and features of the website and applications in order to become more user-friendly and attract more sign-ups⁷². In addition, the platform taps into the community power by listening to users' feedback and suggestions and issuing feedback forms in order to update the platform to incorporate users' needs.

Distribution channels

TaskRabbit adopts new users for both sides of the market through a variety of channels, the biggest ones are word-of-mouth and partnerships. As 75 percent of the platform's business comes from word-of-mouth⁷³, the company invests heavily in its user support team, pays close attention to its user community and adapts their feedback into changes in the system to ensure high customer satisfaction and chance of referrals. In addition, TaskRabbit leverages partnerships with consumer brands and other startups, such as Etsy and Groupon, in order to garner more brand awareness and attract more users to the platform.

Trust, safety and loyalty

Like other peer-to-peer marketplaces, TaskRabbit also has in place a review system that encourages Clients to rate and leave feedback for the contractors after the task is done. The platform also displays other personal information of the contractor, such as platform joining date, how many jobs the Tasker has done or what supplies or vehicle the Tasker owns that could help with the job he or she is available for. Clear information helps the Client get to know the Tasker better than thus improve trust. In addition, to address Clients' fear of strangers running their errands, TaskRabbit creates a thorough process to validate and ensure the Tasker's quality, in which interested people can apply to become a Tasker, the selected ones will go through an identity check, criminal record check, in-person interview and a training session.

⁷² "TaskRabbit's Leah Busque on staying competitive", available at <http://www.entrepreneur.com/article/223323>, accessed on 31 July, 2013.

⁷³ "TaskRabbit takes its errands marketplace to London for its first move outside the U.S.", available at <http://techcrunch.com/2013/11/20/taskrabbit-takes-its-errands-marketplace-to-the-uk-for-its-first-move-outside-the-u-s/>, accessed on 31 July, 2014.

All the tasks also belong to the “TaskRabbit Insurance Guarantee”, which compensates both Clients and Taskers up to \$1 million USD for each occurrence of losses, theft, property or body damages during the performance of a task⁷⁴. In addition to the insurance for every task, the platform also has a resource section for Clients and Taskers on the site, in which advices and guidelines are given to guide both sides to smooth and safe transactions.

In order to ensure that both sides have a satisfying and safe experience with the platform, TaskRabbit has a team of 24/7 member service staff and a button in its mobile application for both sides to connect to the support function right away any problem or confusion occurs.

3.4.4 Financial aspects

TaskRabbit’s main revenue comes from the transactions on its platform. The company takes a 20 percent service fee for each task. Despite its clear revenue model, TaskRabbit was suffering financial difficulties after five years from its launch date. In 2013, the platform had to lay off 13 employees, which was 20 percent of its staff to realigning its efforts⁷⁵.

TaskRabbit’s main costs come from developing and maintaining its website and applications, customer support, operation and insurance costs. Other costs for the platform include online advertisements, such as Facebook Ads and search engine ads, partnership marketing and administrative costs such as carrying out background checks on the Taskers.

3.5 Kickstarter’s business model analysis

Kickstarter is the world’s biggest crowd-funding platform for creative projects. The startup was launched in 2009 and has helped raise more than \$900 million USD from more than five million people for aspiring entrepreneurs. The platform has received \$10 million USD in fundings for

⁷⁴ TaskRabbit Insurance Guarantee, available at <https://www.taskrabbit.com/guarantee>, accessed on 1 August

⁷⁵ “TaskRabbit confirms layoffs as it realigns to focus on mobile and enterprise”, available at <http://techcrunch.com/2013/07/08/taskrabbit-confirms-layoffs-as-it-realigns-to-focus-on-mobile-and-enterprise/>, accessed on 30 July, 2014.

itself from various venture and angel investors.⁷⁶ Kickstarter works on an all-or-nothing model, which means that no one is charged for their funding, or pledge, towards a project unless it reaches its funding goal. Kickstarter is chosen as one of the five case companies as it is a prominent example for the crowd-funding movement, which became a buzzword for the past few years.

3.5.1 Product innovation

Target customer

Kickstarter connects two sides of users through its platform, one side is the project creators and the other side is project backers. Kickstarter's project creators are at the moment residents of U.S., UK, Canada, Australia, New Zealand and the Netherlands, who are at least 18 years old. Project creators can be creative types such as artists or designers, entrepreneurs at startups and small businesses or social enterprises and non-profit organizations. The categories of fund-able projects on Kickstarter run from art, comics, craft, film and video, design and fashion to games or technology. The project can be about anything but must be clearly defined, completed eventually and the outcome must be presented to the community. The platform does not allow a certain types of projects, such as raising for charity, resale, political raising or travel and business marketing services.⁷⁷

Kickstarter does not target any specific demographic group as project backers. Project backers can be anyone in the world, who wants to pledge money in projects that they find interesting in order to bring it to life. Even though Kickstarter opens the ability to pledge a project to anyone, a major part of backers are friends, family and close networks of the project creators and communities the project appeals to⁷⁸.

Value proposition

Kickstarter creates two different types of value for each side of its marketplace. For project creators, Kickstarter serves as a platform for entrepreneurs and artists to help their project reach a

⁷⁶ Kickstarter's profile at Crunchbase, available at <http://www.crunchbase.com/organization/kickstarter>, accessed on 5 August, 2014.

⁷⁷ Kickstarter's prohibited items, available at <https://www.kickstarter.com/rules/prohibited>, accessed on 7 August, 2014.

⁷⁸ "Where do Kickstarter supporters come from", available at <http://www.forbes.com/sites/suwcharmananderson/2012/03/28/where-do-kickstarter-supporters-come-from/>, accessed on 7 August, 2014.

large audience of interested backers for fundings and guidance and mental support. The platform provides value especially for creative and out-of-the-box projects, which would have a slim chance to get fundings from traditional venture capitalists.

For project backers, the platform is a place to discover and get involved in the development of innovative projects and can become early adopters of creative products. Backers also get tangible and intangible rewards from the projects they support, for example a copy of a music album or an experience such as a visit to a concert of the project creator.

Capabilities

In addition to its capability in developing its platform's features, Kickstarter's main capabilities also lie in developing mechanisms for project discovery so that its projects are exposed to potential backers.

3.5.2 Infrastructure management

Activity configuration

Kickstarter first started out by only accepting projects that were in the creative fields of film, music and art and gradually added more categories to its platform. The platform started out with creative projects posted by founders and their friends. The platform attracted early project creators and backers mainly through word-of-mouths in the form of invites given out to the founders' networks⁷⁹. In addition, Kickstarter's all-or-nothing model forced creators to promote their Kickstarter project in order to hit the funding goal⁸⁰, which in turn raised awareness and exposure to Kickstarter as a platform.

In order to get more of its projects funded, Kickstarter employs a variety of mechanisms to showcase them to potential backers. First, the platform has developed an algorithm to automate the project approval process, which used to be handled by community managers. The algorithm incorporates a number of data points, such as project description, rewards, funding goal and

⁷⁹ Yancey Strickler, Kickstarter founder and CEO's answer to question "How was the first year of Kickstarter?", available at <http://www.quora.com/Kickstarter/How-was-the-first-year-of-Kickstarter>, accessed on 7 August, 2014.

⁸⁰ "True to its root: why Kickstarter won't sell", available at <http://www.fastcompany.com/3006694/where-are-they-now/true-to-its-roots-why-kickstarter-wont-sell>, accessed on 7 August, 2014.

previous launching history, to check whether a project is ready to be live on the platform⁸¹. The algorithm is a mechanism to make sure that the project meets the publishing standards and appeals to prospective backers.

Second, the platform increases the chances of a project getting funded by educating both sides of the market. On the creator side, the platform provides instructions in details about steps the creators should take to make their projects attractive to investors. On the backer side, Kickstarter provides a detailed list of frequently asked questions so that backers understand the process fully and how to find interesting projects.

Third, Kickstarter implements a number of ways for backers to discover projects to fund, including the Kickstarter Newsletter, advanced search function, a Staff Picks section to showcase projects recommended by Kickstarter staff and the ability of users connecting Facebook account to Kickstarter to check out projects their friends are backing. The platform also has a “curated pages” section, in which well-known organizations and communities can feature projects that they are backing or find interesting.

Kickstarter created several ways to facilitate communication between creators and backers. For each project, creators and backers can communicate with each other privately through Kickstarter’s private messaging feature or publicly through the comment section under each project. In addition, creators can post updates about the project’s progress to keep his or her backers informed.

Kickstarter creates rules, processes and technology platform to enable the transaction between creators and backers. Kickstarter’s key activities include supporting and educating both sides of the market, developing features of the platform to handle project launch screening, project discovering and communication, marketing and partnership development. Transfers of fundings from backers to U.S. based creators are handled through Amazon Payments and to non-U.S. creators through another third-party payment processor. Kickstarter purely acts as a medium to bring project creators and backers together and does not guarantee or take responsibility for any project posted on its platform. The site’s Terms of Use however obliges creators to fulfill any

⁸¹ “Kickstarter simplifies its rule and lowers the barrier for project acceptance”, available at <http://techcrunch.com/2014/06/03/kickstarter-simplifies-its-rules-and-lowers-the-barrier-for-project-acceptance/>, accessed on 8 August, 2014.

rewards that they have promised or refund any backer whose reward they do not or cannot fulfill⁸².

Partner network

Kickstarter partners with Amazon to process payments from backers and creators in the United States. Amazon takes 3-5 percent from the value of each transaction as credit card processing fees⁸³. Kickstarter also partners another credit card processor to handle payments outside United States. The platform also partners with various organizations and brands to showcase and feature projects that they find interesting or are backing up. Each organization or brand has its own page in the “Curated pages” section on the platform to display featured projects. This type of partnership taps in the existing following of the brand or organization to draw more awareness towards Kickstarter projects.

Resources

The main resources that fuel the operations and growth of Kickstarter are its platform technology, human resources for IT, user educating and community support, a loyal artist and art enthusiast community and the Kickstarter brand name as the first mover in the crowd-funding area.

3.5.3 Customer relationship

Information strategy

Kickstarter collects and publishes a wide range of data publicly through its blog and Stats section of the website, including the amount of money invested throughout different categories on the platform, the number of projects launched and success rate.⁸⁴ The data does not only help Kickstarter understand the dynamics and funding progress and behavior of different categories on its site for research and development purpose, but also plays an important role in helping creators understand who their backers are and from which referral sources they are from.

Distribution channels

⁸² Kickstarter basics, available at <https://www.kickstarter.com/help/faq/kickstarter%20basics>, accessed on 10 August, 2014.

⁸³ Fees for the United States, available at <https://www.kickstarter.com/help/fees?country=US>, accessed on 10 August, 2014.

⁸⁴ Kickstarter Stats, available at <https://www.kickstarter.com/help/stats>, accessed on 10 August, 2014.

Kickstarter acquires traffic and new users through various channels, including press, blogs, social media and word-of-mouth. The platform's creative and out-of-the-box projects are usually featured and written about in related blogs and popular media sites and frequently shared across various social networks such as Twitter, Facebook or Reddit. A number of Kickstarter projects got featured extensively on mainstream press and online news for getting a large amount of fundings, such as the Pebble project, a smartwatch with the capability of running iPhone and Android applications that raised more than \$10 million USD⁸⁵. These popular projects in turn, attracted a lot of awareness and new users for the platform. In addition, Kickstarter also acquires new creators and backers by featuring interesting projects on its own social media channels, which are Twitter, Facebook, Tumblr, Instagram and Vine.

Trust, safety and loyalty

Even though the platform does not offer guarantee or insurance for its backers, Kickstarter developed a system to ensure that both sides of the market can trust the platform and each other, which includes an algorithm to screen quality of projects before launch, an identity verification process for creators to prevent frauds, a set of rules for both sides to follow, extensive resources to educate both creators and backers to ensure good experience on the platform and a community reporting system to flag down suspicious behavior or projects that violate the rules. Kickstarter employs a team of community managers to monitor and moderate the system to ensure all community reports are handled. The platform also has in place algorithms to identify suspicious activities.⁸⁶

Even though there is no feedback system in place on Kickstarter, the platform encourages the creators to update their backers regularly about the process of the project and provides detailed information about their project, including an introduction video about themselves and the project to increase validity and trustworthiness.

To increase transparency in the platform, Kickstarter publishes in its Stats section regularly

⁸⁵ Pebble - e-paper watch for iPhone and Android project, available at <https://www.kickstarter.com/projects/597507018/pebble-e-paper-watch-for-iphone-and-android>, accessed on 10 August, 2014.

⁸⁶ Kickstarter trust and safety, available at <https://www.kickstarter.com/trust>, accessed on 10 August, 2014.

updated raw data about the funding and number of launched, successful and unsuccessful projects across various categories on the platform. The Stats helps current and prospective users to know exactly what are happening on the platform and make decisions regarding their project or investment.

3.5.4 Financial aspects

Kickstarter's revenue comes from the 5 percent fee it collects from successfully funded projects, which are projects that have met its funding goal. If the project does not meet the funding goal, backers' credit cards are not charged and Kickstarter does not earn its fee either. Kickstarter only raised one round of funding, which was in total \$10 million USD.⁸⁷ The startup was already profitable from 2010 but decided never to sell to bigger companies or go public⁸⁸.

Kickstarter's main costs include the development and maintenance of its platform, data collection and analysis, costs to develop education materials for its users and human resources costs, including IT, community management, support and marketing costs.

⁸⁷ Kickstarter profile at Crunchbase, available at <http://www.crunchbase.com/organization/kickstarter>, accessed on 10 August, 2014.

⁸⁸ "Kickstarter CEO: we will never sell to a bigger company", available at <https://www.yahoo.com/tech/kickstarter-wont-be-raising-funds-from-google-or-79099001596.html>, accessed on 10 August, 2014.

3.6 Industry analysis results

A summary discussing business models of five case companies showcased in this research is showed below in Table 3-1.

	Airbnb	Etsy	Uber	TaskRabbit	Kickstarter
Target customer – Subsidy side	People with spare room to rent out	Young, passionate about handicrafts	Tech-savvy, young urban professionals	People who want to help neighbors and earn extra income	Micro financial supporters
Target customer – Money side	Leisure and business travelers	Craft hobbyists, small merchants or local artisans	Drivers with and without commercial license	People who need help with small tasks	Artists, designers, entrepreneurs who create innovative projects
Value proposition	- Cheaper and more authentic experience for travelers - Extra income for hosts	- High quality, authentic handicraft selection - Platform and education for craft sellers	- Convenient, fast and safe way to travel in the city - Safe system for drivers to earn extra income	- A safe medium for people to save time by outsourcing errands - A way to earn extra income with flexible hours	- A platform for creative and out-of-the-box ideas to come to life
Capabilities	Digital platform	Digital platform, communities	Smartphone applications	Smartphone applications	Digital platform
Activity	Easy to use	Quality	Easy to use	Real-time	Project

configuration	website, quality control, customer support	control, educating sellers, regulation violating monitor	applications, quality control, driver recruiting	applications, recruiting and screening Taskers	approval process, project discovery, support and monitoring
Partner network	Data analysis partner, call centers	Retailers, local organizations and businesses	Companies and organizations, car makers and financial institutions	Consumer brands, media, publishing organizations	Payment processors, curating brands and organizations
Resources	Technology and human resources	Communities, human resources	Smartphone applications, human resources, investor network	Smartphone applications, human resources	Technology, human resources
Information strategy	Website analytics and customer data	Analytics to educate sellers and give recommendations to buyers	Data to predict demand for rides and estimate pricing	Community listening, analytics data to improve website and applications	Platform's stats available for public, backer data for creators
Distribution channels	Social media, word-of-mouth, content marketing	Social media, search engine and content marketing, online communities	Word-of-mouth, referral program, free rides, advertisements to recruit drivers	Word-of-mouth, partnerships	Word-of-mouth, social media, press
Trust &	\$1M USD	Review	Review	Review	Project

loyalty	host insurance, review system, verification for hosts and guests	system, violation monitoring team, Seller Protection Program	system, \$1M USD insurance for every ride, driver background check	system, Tasker's background check and training, \$1M USD insurance for each task	screening, rules, community management and monitoring, project updates required from creators
Revenue model	Charge both sides: 6-12% from guests and 3% from hosts	Charge sellers \$0.2 USD for each listing and 3.5% of each sale	20% of each ride fare	20% fee for each task	5% of each successfully funded project
Cost structure	Technology, staff salaries, insurance	Platform development, staff salaries	Application development, staff salaries, insurance, background checks, legal costs	Application development, staff salaries, insurance, background checks	Platform development, staff salaries

Table 3-2: Summary of findings on business models of case companies

3.6.1 Product innovation

All the selected case companies do not limit the service or access to their platform to any specific demographic group of users. However because all the platforms operate on the cyberspace and two out of three case peer-to-peer platforms required the use of a smartphone application, most peer-to-peer platform users belong to the young and tech-savvy population.

Each platform tends to choose one side of the market as the “customer side” and tailor its website, application, service or marketing campaigns for the use of customer side. However all platforms

invest heavily on the supply side to make them appeal better to the customer side. Four out of five case companies choose to charge the transaction fee on the supply side of the market, except for Airbnb which charges both sides, with a higher percentage for the demand side. However as sellers take this transaction fee into consideration when setting their prices, this cost reflects in the price that the customer side has to pay.

Among five selected case companies, three platforms (Uber, Airbnb and TaskRabbit)' value proposition focuses on utilizing of idle resources or unused capacity and making customers' lives easier (which can be called "the experience group", as end customer experience is central in these platforms' strategy) while the other two (Etsy and Kickstarter)'s value lies in connecting two parties based on the same interest or passion (which can be called "the passion group"). The difference in value proposition of these two groups also determines key activities taken to fulfill each company's value proposition.

3.6.2 Infrastructure management

All case platforms started out in a small trial group in their early days and gained users mainly through word-of-mouth. All three startups belonging to the experience group started their operations in one city first, and only launched in another city before the service had been fully functional. The two passion group startups, however, covered a wider geographic area when first launched. Kickstarter first allowed creators anywhere from the U.S. to launch their projects while Etsy made it available for artists anywhere in the world to join and start selling.

All five companies have developed both a website version and a smartphone application version of its marketplace to facilitate transactions on-the-go, however for platforms such as Uber and TaskRabbit, the smartphone applications are more vital because of the on-demand nature of the services. All communication is designed take place on the platform and all contact details such as phone numbers or email addresses of the two sides are hidden from each other to avoid people bypassing the platform, which both increase the safety of peer-to-peer transactions and prevent loss of revenues for the platform.

Except for Uber, which automatically connects drivers and passengers through GPS data, four other case platforms have developed a robust in-site search engine with detailed search criteria to improve the possibility of customers finding a suitable match. All platforms invest heavily on screening and training the supply side in order to ensure high quality presentation and experience for the customer side. Another key activity of the five case platforms is the emphasis in developing customer support resources. Most platforms have responsive customer service email and phone support to solve emerging problems. On platforms in which transactions involve in-person encounters between the two sides of the market, such as Airbnb, Uber and TaskRabbit, 24/7 phone support is provided to solve problems on the spot and increase transaction safety.

All case platforms do not involve in fulfilling the order and creating of the product or service. The supply side acts as independent businesses and is responsible for delivering value to customers. All platforms, however provide the medium for the transaction to happen, including supply discovery and payment solutions for buyers to pay and sellers to get paid via the platform. Three out of five platforms use Braintree as a payment processor, which collects the money from the buyer to the seller and forwards the transaction fee to the platform.

Platforms' involvement in the transaction varies among selected studied platforms. Platforms belonging to passion group tend to involve less in the transactions than platforms belonging to the experience group. Kickstarter, for example, does not provide any insurance or guarantee to backers for the completion or delivery of each project. Uber, on the other hand, has a deeper involvement, from recruiting and training drivers, having a \$1 million USD driver liability insurance for every ride, monitoring and dismissing drivers with low review score, and providing drivers with car loan assistance and car rental to perform their work.

3.6.3 Customer relationship

All five selected companies are highly data-driven and base a large part of their strategies from collected data. Data collected for analysis includes both website and application performance metrics and user behavior when using the service. Platforms belonging to the experience group focus on using collected data to predict demand and opportunities to serve the customer side while

platforms belonging to the passion group tend to make certain customer analytic data available for the supply side to better understand and serve the customers.

Trust and safety are vital issues that all five selected platforms strive to address. All platforms have a section on their website about trust and safety, in which the platform shows the customer side the measures the platform has taken to ensure the transaction's safeness. The case platforms integrate a system that requires identity verifications from the supply side, two platforms with on-demand services, Uber and TaskRabbit, even employ a strict recruiting process with multiple background and criminal checks. In addition, a peer rating and community powered monitoring system are also employed by peer-to-peer platforms for quality control and rule violating detection.

Word-of-mouth is the biggest customer adoption channel for all case platforms. All case platforms have the "sharing-to-social networks" option integrated so that users can spread the word about the service to their social networks. Uber, for example, implemented a reward program for users who refer its service to their friends and networks, both through social media and offline. Other platforms, such as Kickstarter, let users see and support projects that their friends are backing. Two platforms belonging to the passion group use curation as an important tactic to increase awareness about the platform and attract new users, in which listings on its platform are featured onsite and offsite by various popular brands and online figures.

Communities are also another central element in platform user development. However the efforts and investments to build communities of users are different across platforms. Platforms with a higher number of users belonging to both supply and demand sides tend to spend more resources in building and engage user communities than platforms in which there is a clear division between supply and demand groups.

3.6.4 Financial aspects

Even though all case platforms represent innovative business ideas and three out of five companies are first-movers in their domain, all five companies face different degrees of competition in their area. As most peer-to-peer platforms are free or low-cost for at least one side of the market to join

and start using the service, peer-to-peer platform users tend to multihome in order to enjoy a wide selection or additional exposure. This might be the reason why all case companies earn revenues through charging a transaction fee which is a percentage of the transaction value, except for Etsy, which charges \$0.2 USD for each published listing on top of the transaction fee.

Most platforms place the charge on only one side of the market, except for Airbnb, which charges both hosts and guests a percentage out of every transaction. This revenue model lowers the barrier to join the platform, and in turn helps increase user number and network effects in the marketplace. All case platforms, except for Etsy which earns additional revenue through providing advertisement spots for sellers, are not currently implementing other revenue models.

4. CONCLUSION

As collaborative consumption has gained its popularity in recent years and there has been little research done on the businesses operating in this field, the thesis aims to fill in the gap and contribute to the share economy research landscape.

The thesis is explanatory in nature and is set out to study in-depth the business models of selected peer-to-peer collaborative consumption digital platforms, using an adapted version of Osterwalder's e-business ontology framework and desk research through industry articles and published official materials from the case companies. Qualitative data about six chosen peer-to-peer collaborative consumption platforms, namely Airbnb, Etsy, Uber, TaskRabbit and Kickstarter, was used in the research. The case platforms are in different phases in their growth and operating history, however they are considered to be the leading platform or first mover in their respective industry. The selected case companies, to varying extents, have disrupted the economy in the field they operate in and might in the future change the whole way the industry operates. These share economy platforms are also on the way in changing consumers' lifestyles and behaviors on a global scale and pressuring policy makers and local business communities to adapt to the new way of doing business.

The objectives of the thesis are met in which a framework to analyze business model for peer-to-peer collaborative consumption platforms was developed and empirical data was collected and applied to the framework to explore in details the business model of each case company, from which characteristics of case study platforms are summarized and discussed in order to draw a bank of best practices as managerial implications.

The strategic elements of an e-business model identified in the research were product innovation, infrastructure management, customer relationship and financial aspects. The adapted framework was developed to analyze collaborative consumption digital marketplace platforms, which was a combination of the four aforementioned elements and a set of criteria set out to explore the impact of two-sided market characteristics on the business models of the case companies. The added set of criteria took in the form of simple questions and lists under critical elements to be used as develop

the generic framework further.

In addition, an empirical analysis was carried out based on data collected according to adapted framework on five case study peer-to-peer platforms across several industries. The companies were chosen based on the amount of funding raised, the innovativeness of their business models, especially businesses that disrupt their operating industry, and the media coverage to ensure sufficient data can be gathered for each case. Secondary data was collected and analyzed for each of the predefined element in the case company's business model. By analyzing the collected data, business model of each case platform was studied in-depth to find out common characteristics of collaborative consumption platform startups, as well as distinctive strategies of each business were identified and presented.

One of the most important findings is the categorization of the five selected case platforms' value proposition into two groups: the experience group, which aims to improve life quality by utilizing idle resources and the passion group, which connect individuals with the same passion and interest. This finding is important in the way that it influences most of the platform management's decisions and strategies. Growth, customer adoption, trust and safety are central issues that all the collaborative consumption platforms focus in. All these areas are supported and fueled by technology and data analysis. All the companies invest their efforts in providing education and training to help the supply side appear appealing to the demand side. Word-of-mouth is the key customer adoption channel for collaborative consumption startups and community development is the main activity of case companies to retain customers. In addition, all the platforms designate a large amount of its activities and resources in ensuring trust and safety for transactions carried out on its platform.

The results of the empirical analysis imply that the case study platforms are functioning in consistence with the nature of the share economy and adapting to the characteristics of two-sided markets, as presented in the literature review. The platforms seek out to solve fundamental collaborative consumption problems such as trust and safety issues and embrace community power for growth. Two-sided markets basic issues such as reaching critical mass and solving the "chicken-and-egg" problem are also taken into account by the case platform management through

different tactics from early days of the startup, from starting out city by city to tapping into existing communities. The lessons learned from each business model element of case study platforms are summarized as recommendations for other peer-to-peer marketplace platforms' management in the following section.

4.1 Managerial recommendations

From the empirical results of the study, a number of recommendations and best practices can be extracted to benefit managers and founders of future collaborative consumption platform startups. The suggestions and implications discussed below are presented for each element of Osterwalder's business model framework and can be served as guidelines for business leaders to launch and operate a peer-to-peer digital platform.

Product innovation

In order to clearly define all the values the platform would provide each side of its market, platform managers should carry out deep market research during the development of the platform to understand the underlying needs and wants of their target users. Once the nature and problems of each side of platform's target users are understood, the platform can know which technical features needed to be developed and which supporting services the platform needs to implement. In addition, platform managers need to be aware that as the platform matures, its value propositions might have to be modified to cater changing or new customer requirements and as new competitors enter the market. As many collaborative consumption platforms represent innovative and one-of-the-kind products and services, platform managers should be open for potential undiscovered values that the platform can bring to the economy or communities. For example Etsy started out to connect handicraft enthusiasts but evolved to be a prime promoter of micro-entrepreneurship in local communities.

Infrastructure management

Peer-to-peer platforms need to employ a variety of activities during different phases of its operating history. As critical mass and growth are essential areas in launching and operating a peer-to-peer platform, there are a few practices managers should take into consideration during the

early operating phase of their platform or when launching into a new market segment:

- ***Start with the supply side:*** in order to attract end customers (the demand side) to a new platform, platform owners have to build up their supply side before the platform being launched to public. As word-of-mouth places a central role in a collaborative consumption platform's growth and end customer adoption, new platforms cannot risk turning customers away because of low quality listings or service quality from suppliers. For this reason, platform owners should invest in educating and training, as well as equipping the supply side with necessary tools to make their listings appealing and informative, and ensure that high quality service is given to end customers.
- ***Start with a group of early adopters:*** if the platform is location-dependent, for example Airbnb, platform manager should start acquiring users in one geographic area at the time. New platforms should focus on serving one group of customers in the beginning stage and ensure high quality customer experience before moving to the next group, in order to leverage word-of-mouth.
- ***Prepare necessary technical infrastructure:*** depending on the nature of each peer-to-peer platform, sufficient technical features should be included in the platform development to facilitate transactions from day one. On-demand platforms should develop features to support the mobility of users, such as GPS enabling feature, simple ordering procedure and a process to garner enough instant supply for peak-time demand. Platforms with listings, on the other hand, should develop a rigorous search engine algorithm to provide high quality matches for both sides. All peer-to-peer platforms should include in the development an internal communication system for its users to facilitate fast and convenient communication needs between two sides of users, and at the same time avoid users bypassing using the platform after finding a match. In addition, a suitable payment system should be integrated to the platform to process orders, collect money from end customers, route it to suppliers and forward the fees to the platform, in case of transaction fees being employed. A review system is also essential to all collaborative consumption platforms as a means of collective quality control.

As the platform matures and gains traction, ongoing platform activities include providing customer service to users, community building and monitoring, marketing, acquiring new users, developing partnerships, technology development, data analysis and quality control. Platforms that involve direct personal contact between two sides of the market also engage in screening and background checking to ensure safety for every transaction.

Customer relationship

Data plays a central role in peer-to-peer digital platforms. New platforms should develop a clear data collection and analysis strategy to understand user behavior and modify the platform's features and processes based on the validated data. In case of platforms involving listings, the supply side should also be provided with necessary statistics about the end customers so that they can improve listings and provide better customer service.

Trust and safety should be taken seriously in collaborative consumption platforms, especially those in which interactions in person take place. In addition to a review and feedback system, platforms should take the ambiguity out of each transaction by making both sides providing as much information about themselves as possible, creating a thorough verification process and if necessary providing sufficient insurance for each transaction.

Customers are the blood of any business, both online and brick-and-mortals. Platform managers should take into consideration the following areas in their customer adoption and retaining strategy:

- ***Foster communities***: communities should be the key in peer-to-peer platforms' customer strategy. This includes building on-site, off-site and offline communities and activities for users and prospective users. This is especially true for passion centric platforms, whose growth can be totally dependent on the power of communities.
- ***Optimize for search engines and social media sharing***: Online marketplace platforms, especially platforms with listings, can benefit immensely search engine traffic. On-demand platforms even though rely less on search engines can also earn extra visitors by optimizing

their blog or other online content. Like search engines, social networks can benefit peer-to-peer platforms in various ways, from extra exposure from users sharing platform's content to their circles, a means to verify a user's identity to a way to increase trust between two sides of the market by showing overlapping social network circles.

- ***Invest in content development:*** Content, including text articles, images or videos, serves many purposes to a platform, including attracting new visitors, engaging current users and educating both sides to improve the quality of their transactions.
- ***Develop partnerships with relevant organizations and businesses:*** Partnerships do not only help the company free up their resources to focus on its core competencies but also serve as a channel for customer adoption. Platform managers can develop relationships with popular online figures and brands for their content marketing strategy, as well as, local organizations and authorities to raise awareness about the platform and the social benefits that it can bring to local communities.

Financial aspects

A revenue model has a big influence in all activities of an intermediary platform. For new platforms, it is recommendable to employ a fee from each successful transaction instead of a participation fee in order to create low barriers for new users to join and start transacting. This is especially true for new platforms with unique services or entering or creating a new market. The decision of which side of the market to subsidize (subsidizing can either mean a fee waiver or enjoying a lower fee than the other side of the market) depends largely on the possibility of one side of the market to multihome and the price sensitivity level. The subsidy side many times falls on the demand side, or the end customer side of the market, except for labor sourcing platforms.

New platforms should be aware of the largest cost components in developing and operating a peer-to-peer platform, which include technology and human resources costs. Human resources costs usually divide among costs to employ developers, community managers and marketing staff.

From the study, besides lessons about strategies and practices that can be learned from the case

platforms, a lesson about motivation and a sense of inspiration can also be transferred from the founders of the case platforms. All the case collaborative platform founders are young, innovative and vision-oriented individuals who build one-of-the-kind businesses from scratch, against all odds. Future founders of peer-to-peer platforms should be aware that the business might have to pivot, changing its direction and model several times during the startup's life in order to adapt to the societal and customer behavioral changes.

4.2 Limitations and suggestions for future research

As far as limitations as concerned, the paper did not take into consideration the business performance of case study platforms, and mainly focus on the novelty of the business concept, as well as their influence in respective industry. Therefore the empirical findings are qualitative and exploratory in nature and can be used as general guidance for practitioners rather than used as validated benchmarks for future studies. The study also only centrals around the platforms' business model without discussing in details their surrounding business environment and ecosystem and how it affects the business.

In addition, as all case companies, even though are roughly in similar growth phase and are the leaders in their respective field, are not in the same stage with their business model development. As most collaborative consumption platforms represent innovative and one-of-the-kind solutions to common social problems, their business models tend to evolve to respond with trends, customer demand and new changes in their ecosystem. Therefore the business models presented in the study were the model at the research time point and might be modified and grow in a different direction in the future. This calls for longitudinal researches in the changes and evolvement of collaborative startups' business models throughout different development phases.

Other interesting future research topics could include the relationship between platform's profits and their chosen strategy for each element in the business model. As the subject is still in its infancy, there are many directions future researchers can take in exploring the field. Future research topics can range from platform and firm specifics to bigger pictures such as the impacts of collaborative consumption on customer behaviors, society and even government's regulations.

Collaborative consumption, in its essence, is a combination between free market efficiency and technology innovation. To take the subject to the next level, questions can be raised in whether the share economy is a better way to serve the general public or a step backwards in economic history to the time when capitalism was wild and unregulated.

REFERENCES

- Amstrong, M. (2006), "Competition in Two-sided Markets", *RAND Journal of Economics*, Vol. 37, No. 3, Autumn 2006, pp. 668–691.
- Applegate, L. (2001), "Merging e-business models: lessons from the field." Boston: Harvard Business School, HBS No. 9-801-172.
- Botsman, R. (2010), "Beyond Zipcar: collaborative consumption.(Idea Watch)." *Harvard Business Review*, Oct, 2010, Vol.88(10), p.30(1) 88(10): 30.
- Brandenburger, A., Nalebuff, B. (1996), "Co-opetition", New York: Doubleday.
- Caillaud, B. and Jullien, B. (2003), "Chicken & Egg: Competition among Intermediation Service Providers", *The RAND Journal of Economics*, Vol. 34, No. 2 (Summer, 2003), pp. 309-328
- Dolan, R. J. (2000), "Going to Market", teaching note, Harvard Business School.
- Economides, N. and Katsamakos, E. (2008), "Two-sided competition of proprietary vs. open source technology platforms and the implications for the software industry", *Management Science*, Vol. 52, No. 7, July 2006, pp. 1057–1071
- Eisenmann, T., Parker, G., and Van Alstyne, M. (2006), "Strategies for two-sided markets", *Harvard Business Review*, HBR OnPoint 1463.
- Evans, D. (2003), "The Antitrust Economics of Multi-sided Platform Markets", *Yale Journal on Regulation*, Vol. 20:325, 2003.
- Evans, D. and Schmalensee, R. (2010), "Failure to Launch: Critical Mass in Platform Businesses", *Review of Network Economics*, Volume 9, Issue 4 2010 Article 1.
- Felson, M. (1978) "Community Structure and Collaborative Consumption A Routine Activity Approach." *The American Behavioral Scientist* (pre-1986) 21(4): 614.
- Gordijn, J., & Akkermans, H. (2001), "Designing and evaluating e-business models", *Intelligent e-Business*, July/August: 11-17.

- Grant, R. M. (1995), "Contemporary Strategy Analysis." Malden MA: Blackwell.
- Hagiu, A. (2007), "Merchant or Two-Sided Platform?", *Review of Network Economics*, 2007, Vol.6(2) 6(2).
- Hamel, G. (2000), "Leading the evolution." Boston: Harvard Business School Press.
- Katz, M. and Shapiro, C. (1985), "Network Externalities, Competition, and Compatibility", *The American Economic Review*, Vol. 75, No. 3. (Jun., 1985), pp. 424-440.
- King, S. P. (2013), "Two-Sided Markets." *Australian Economic Review*, Vol.46(2), pp.247-258
46(2): 247-258.
- Leismann, K. (2013), "Collaborative Consumption: Towards a Resource-Saving Consumption Culture." *Resources*, 2013, Vol.2(3), pp.184-203 2(3): 184-203.
- Magretta, J. (2002), "Why business models matter". *Harvard Business Review*, 80(5): 86-92.
- Osterwalder, A. (2002), "An E-business Model Ontology for Modelling E-business", 15th Bled Electronic Commerce Conference, e-Reality: Constructing the Economy, July 17-19, 2002.
- Osterwalder, A. (2004), "The business model ontology – A proposition in a design science approach", Doctoral Dissertation, Universite de Lausanne.
- Parker, G. and Van Alstyne, M. (2005), "Two-sided Network Effects: A Theory of Information Product Design", *Management Science*, Vol. 51, No. 10, October 2005, pp. 1494–1504.
- Patton, M. (1990). "Qualitative evaluation and research methods", Beverly Hills, CA: Sage.
- Poel, M., Renda, A., and Ballon, P. (2007) "Business model analysis as a new tool for policy evaluation: policies for digital content platforms", *info*, Vol. 9 Iss: 5, pp.86 – 100.
- Porter, M. (2001), "Strategy and the Internet", *Harvard Business Review*, 79 (3): pp.62-78.
- Rochet, J., and J. Tirole (2004) "Two-Sided Markets: An Overview," IDEI University of Toulouse.

Rochet, J., and J. Tirole (2006), "Two-Sided Markets: A Progress Report." *The RAND Journal of Economics* 37(3): 645-667.

Roson, R. (2005), "Two-Sided Markets: A Tentative Survey", *Review of Network Economics* Vol.4, Issue 2 – June 2005.

Selz, D. (1999), "Value Webs: Emerging forms of fluid and flexible organizations. Thinking, organizing, communicating and delivering value on the Internet, Dissertation at the University of St.Gallen, Switzerland, Bamberg: Difo-Druck OHG.

Tankhiwale, S. (2009), "Exploring the interrelationship between Telco business model innovation and the change in business process architecture", *Journal of Telecommunications Management*, 2: 126-137.

Tapscott, D., A. Lowi, D. Ticoll (2000), "Digital Capital - Harnessing the Power of Business Webs", Boston: Harvard Business School Press.

Wallin, J. (2000), "Operationalizing Competencies", 5th Annual International Conference on Competence-Based Management, Helsinki, June 10-14.

Weill, P., & Vitale, M. R. (2001), "Place to space: Migrating to e-business models." Boston: Harvard Business School

Yin, R. K. (2002). "Case study research: Design and methods", Newbury Park, CA: Sage., 3rd edition.

Zingal, F. and Becker, F. (2013), "Drivers of optimal prices in two-sided markets: the state of the art", *J Betriebswirtsch* (2013) 63:87–116, *Wirtschaftsuniversität Wien, Austria*.

Zott, C. and Amit, R. (2001), "Value Creation in E-business", *Strategic Management Journal*, 22: 493-520 (2001).

Zott, C., Amit, R., and Massa, L. (2011), "The Business Model: Recent Developments and Future Research", *Journal of Management*, Sage Publications.

Online industrial news and articles:

“\$1billion - Amazing startup, slight history of spam problem”, available at <http://fortune.com/2011/06/07/1-billion-1-br-amazing-startup-slight-history-of-spam-problem/>, accessed on 24 July, 2014.

“A disruptive cab ride to riches: the Uber payoff”, available at <http://www.forbes.com/sites/aswathdamodaran/2014/06/10/a-disruptive-cab-ride-to-riches-the-uber-payoff/>, accessed on 5 August

“Airbnb and the unstoppable rise of the share economy”, available at <http://www.forbes.com/sites/tomiogeron/2013/01/23/airbnb-and-the-unstoppable-rise-of-the-share-economy/>, accessed on 1 September, 2014.

“Airbnb Launches First Global Ad Campaign in Nine Markets”, available at <http://adage.com/article/digital/airbnb-launches-global-ad-campaign-markets/293108/>, accessed on 23 July, 2014.

“Airbnb Will Help You Grab A Seat At A Stranger's Dinner Table”, available at, <http://www.businessinsider.com/airbnb-will-help-you-grab-a-seat-at-a-strangers-dinner-table-2014-6#ixzz3ABMMt1HO>, accessed on 23 July, 2014

“Airbnb: more than a place to crash”, available at <http://fortune.com/2012/05/03/airbnb-more-than-a-place-to-crash/>, accessed on 22 July, 2014.

“All eyes on the sharing economy”, available at <http://www.economist.com/news/technology-quarterly/21572914-collaborative-consumption-technology-makes-it-easier-people-rent-items>, accessed on 12 August, 2014.

“At \$18.2 billion, Uber worth more than Hertz, United Continental”, available at <http://www.forbes.com/sites/ellenhuet/2014/06/06/at-18-2-billion-uber-is-worth-more-than-hertz-united-airlines/>, accessed on 4 August, 2014.

“Etsy gets crafty with big data”, available at <http://www.networkworld.com/article/2163643/big-data-business-intelligence/etsy-gets-crafty-with-big-data.html>, accessed on 28 July, 2014.

“Etsy growing rapidly but deeply troubled”, available at <http://www.inc.com/magazine/201312/tom-foster/etsy-growing-rapidly-but-deeply-troubled.html>, accessed on 27 July, 2014.

“Etsy partners with Nordstrom, West Elm: more mall stores in store?”, available at <http://www.forbes.com/sites/barbarathau/2013/03/07/etsy-partners-with-nordstrom-west-elm-more-mall-stores-in-store/>, accessed on 27 July, 2014.

“Google Maps app updated to include Uber integration”, available at <http://www.theguardian.com/technology/2014/may/07/google-maps-app-uber-minicab-taxi>, accessed on 4 August,

“Here is why Etsy is worth almost \$700 million”, available at <http://www.businessinsider.com/etsy-valuation-688-million-2012-5>, accessed on 27 July, 2014.

“How design thinking transformed Airbnb from a failing startup to a billion dollar business”, available at <http://firstround.com/article/How-design-thinking-transformed-Airbnb-from-failing-startup-to-billion-dollar-business>, accessed on 24 July, 2014.

“How Uber and Lyft are trying to kill each other”, available at <http://www.forbes.com/sites/ellenhuet/2014/05/30/how-uber-and-lyft-are-trying-to-kill-each-other/>, accessed on 5 August, 2014.

“Kickstarter CEO: we will never sell to a bigger company”, available at <https://www.yahoo.com/tech/kickstarter-wont-be-raising-funds-from-google-or-79099001596.html>, accessed on 10 August, 2014.

“Kickstarter simplifies its rule and lowers the barrier for project acceptance”, available at <http://techcrunch.com/2014/06/03/kickstarter-simplifies-its-rules-and-lowers-the-barrier-for-project-acceptance/>, accessed on 8 August, 2014.

“Lessons from Uber: why innovation and regulation don’t mix”, available at <http://www.forbes.com/sites/larrydownes/2013/02/06/lessons-from-uber-why-innovation-and-regulation-dont-mix/>, accessed on 5 August, 2014.

“Plays well with others: brand partnerships and your business”, available at http://www.huffingtonpost.com/leah-busque/plays-well-with-others-br_b_2238835.html, accessed on 31 July, 2014.

“Resistance is futile”, available at <http://www.inc.com/magazine/201307/christine-lagorio/uber-the-car-service-explosive-growth.html>, accessed on 3 August, 2014.

“TaskRabbit debuts tools for hiring ongoing temp work as it hones focus on business users”, available at <http://techcrunch.com/2013/05/23/taskrabbit-for-business-temp-workers/>, accessed on 30 July, 2014.

“TaskRabbit confirms layoffs as it realigns to focus on mobile and enterprise”, available at <http://techcrunch.com/2013/07/08/taskrabbit-confirms-layoffs-as-it-realigns-to-focus-on-mobile-and-enterprise/>, accessed on 30 July, 2014.

“TaskRabbit doesn’t want the headache of handling your money”, available at <http://www.businessweek.com/articles/2013-08-14/taskrabbit-doesnt-want-the-headache-of-handling-your-money>, accessed on 31 July, 2014.

“TaskRabbit launches business dashboard aimed at companies looking for temp workers at SXSW”, available at <http://techcrunch.com/2013/01/28/taskrabbit-launches-business-dashboard-aimed-at-companies-looking-for-temp-workers-at-sxsw/>, accessed on 30 July, 2014.

“TaskRabbit Partners Up With Gap, Giving Free Gift Vouchers To Customers Who Spend \$75 Or More In SF And NYC Stores”, available at <http://techcrunch.com/2012/12/07/taskrabbit-gap/>, accessed on 31 July, 2014.

“TaskRabbit takes its errands marketplace to London for its first move outside the U.S.”, available at <http://techcrunch.com/2013/11/20/taskrabbit-takes-its-errands-marketplace-to-the-uk-for-its-first-move-outside-the-u-s/>, accessed on 30 July, 2014.

“TaskRabbit’s Leah Busque on staying competitive”, available at <http://www.entrepreneur.com/article/223323>, accessed on 31 July, 2013.

“TC teardown: Etsy, it’s crafty”, available at <http://techcrunch.com/2010/09/11/tc-teardown-etsy/>, accessed on 26 July, 2014.

“Temping fate: can TaskRabbit go from side gigs to real jobs?”, available at <http://www.theverge.com/2013/5/23/4352116/taskrabbit-temp-agency-gig-economy>, accessed on 30 July, 2014.

“The ‘Etsy economy’ and changing the way we shop”, available at <http://www.entrepreneur.com/article/226180>, accessed on 26 July, 2014.

“The art and craft of business”, available at <http://www.economist.com/news/business/21592656-etsy-starting-show-how-maker-movement-can-make-money-art-and-craft-business>, accessed on 27 July, 2014.

“True to its root: why Kickstarter won’t sell”, available at <http://www.fastcompany.com/3006694/where-are-they-now/true-to-its-roots-why-kickstarter-wont-sell>, accessed on 7 August, 2014.

“Uber cuts the price of an UberX by 20% in New York City, making it cheaper than a taxi”, available at <http://www.businessinsider.com/uberx-is-now-20-cheaper-in-new-york-city-2014-7>, accessed on 2 August, 2014.

“Uber gets a uber valuation”, available at <http://online.wsj.com/articles/uber-gets-uber-valuation-of-18-2-billion-1402073876>, accessed on 1 August, 2014.

“Uber inks its first sports deal, partners with the NFL to promote safe rides for pro footballers”, available at <http://techcrunch.com/2013/09/04/uber-inks-its-first-sports-deal-partners-with-the-nfl-to-promote-safe-rides-for-pro-footballers/>, accessed on 4 August, 2014.

“Uber will start charging more for some rides because it was losing money”, available at <http://www.businessinsider.com/uberx-reinstate-20-commission-2014-4>, accessed on 5 August, 2014.

“What Airbnb learned while rapidly scaling their customer service”, Webinar of Jessica Semaan, Airbnb’s International operations manager, available at <https://www.zendesk.com/resources/what-airbnb-learned-while-rapidly-scaling-their-customer-service>, accessed on 23 July, 2014.

“What are the service fees?”, available at <https://www.airbnb.com/help/article/384>, accessed on 26 July, 2014.

“What every startup can learn from Airbnb”, interview with Airbnb’s CEO and co-founder Brian Chesky, available at <http://gigaom.com/2011/02/22/airbnb/>, accessed on 24 July, 2014.

“Where do Kickstarter supporters come from”, available at <http://www.forbes.com/sites/suwcharmananderson/2012/03/28/where-do-kickstarter-supporters-come-from/>, accessed on 7 August, 2014.

Airbnb website, <http://www.airbnb.com>, accessed on 22 July, 2014.

Brad Voytek, data scientist at Uber’s talk, available at <http://www.psfk.com/2013/12/bradley-voytek-uber-data-science.html>, accessed on 4 August, 2013.

Craft entrepreneurship website, available at <http://craftentrepreneurship.com>, accessed on 27 July, 2014.

Ebay’s standard selling fees, available at <http://pages.ebay.com/help/sell/fees.html>, accessed on 29 July, 2014.

Etsy profile at Crunchbase, available at <http://www.crunchbase.com/organization/etsy>, accessed on 26 July, 2014.

Fees for the United States, available at <https://www.kickstarter.com/help/fees?country=US>, accessed on 10 August, 2014.

Founder and CEO of TaskRabbit's talk on growing the early user base, available at <http://ecorner.stanford.edu/authorMaterialInfo.html?mid=3347>, accessed on 1 August, 2014.

Interview with Etsy's CEO Chad Dickerson, available at <http://www.demacmedia.com/ecommerce-strategy/makers-marketplaces-chat-with-chad-dickers-on-ceo-etsy/>, accessed on 27 July, 2014.

Interview with TaskRabbit's ex-CEO Eric Grosse, "TaskRabbit plans to multiply", available at http://bits.blogs.nytimes.com/2011/12/13/taskrabbit-announces-17-8-million-in-series-b-funding/?_php=true&_type=blogs&_r=0, accessed on 30 July, 2014.

Kickstarter profile at Crunchbase, available at <http://www.crunchbase.com/organization/kickstarter>, accessed on 10 August, 2014.

Pebble - e-paper watch for iPhone and Android project, available at <https://www.kickstarter.com/projects/597507018/pebble-e-paper-watch-for-iphone-and-android>, accessed on 10 August, 2014.

TaskRabbit profile on Crunchbase, available at <http://www.crunchbase.com/organization/taskrabbit>, accessed on 30 July, 2014.

Uber as a case study customer for Braintree, available at <https://www.braintreepayments.com/case-studies/uber>, accessed on 4 August, 2014.

Uber profile on Crunchbase, available at <http://www.crunchbase.com/organization/uber>, accessed on 1 August, 2013.

Yancey Strickler, Kickstarter founder and CEO's answer to question "How was the first year of Kickstarter?", available at <http://www.quora.com/Kickstarter/How-was-the-first-year-of-Kickstarter>, accessed on 7 August, 2014.

"What is a startup?", available at <http://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/>, accessed on July 22, 2014.

Case companies' websites:

Airbnb: <http://www.airbnb.com>, accessed on 20 July, 2014.

Etsy: <http://www.etsy.com>, accessed on 20 July, 2014.

Kickstarter: <http://www.kickstarter.com>, accessed on 20 July, 2014.

TaskRabbit: <http://www.taskrabbit.com>, accessed on 20 July, 2014.

Uber: <http://www.uber.com>, accessed on 20 July, 2014.