Collaborative Service Networks, Case Study of Uber and Airbnb

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Abstract: *In recent years, conventional business model of ownership has been changed towards accessibility in variety of markets. Two trends can be observed in evolution of this rental-like business model. Firstly, technological development that enables emergence of new business models. These new business models increasingly become agile and flexible. For example "Spotify and SoundCloud", online music stream companies, provides consumers access to over millions of music tracks, conveniently through the smartphone, tablet or computer. Similarly, "Car2Go, Zipcar, and Getaround" car sharing companies give flexible access to nearby cars for its members. Second trend is the increasing communication and connections via social networks. This trend enables a shift to peer-to-peer accessibility based business models. Conventionally, companies provide access for their customers to own companies' products or services. In peer-to-peer model, nonetheless, companies facilitate access and connection across their customers to use other customers owned property or skills, competencies or services .The so-called the sharing economy business model which is referred as "the platform economy" as well.*

The promising start-ups that are active in this very specific and rather new market signify the potential of the so-called "the platform economy" business model. In this paper, we investigate into a new and emerging type of the platform economy business model in which role of customers and service providers may dramatically change. This new mechanism is called "Collaborative Service Networks". We probe this mechanism from different aspects. Uber and Airbnb, two successful growing companies, have been selected for our case studies. There are similar companies that are competing in the same market like Lyft and Homeaway. However, the case study companies are significantly more successful and larger. We propose the way this mechanism can capture value in five-steps, which creates a virtuous cycle and reinforces the viability of the mechanism.

Keywords: *The Sharing Economy, The platform Economy, Collaborative Service Networks, Social Media, Value Creation*

1. INTRODUCTION

In competitive business, firms look at new business models to attract more customers. Tough competitive situations force both start-ups and established companies to stand out among their competitors to succeed. Thus, firms seek to offer unique value propositions, diverse revenue streams, and creative solutions to outpace their rivals (Drell, 2014). For instance, new banks are born without any physical offices (ING Direct), and the world's fastest-growing hotel chain does not own a single room (AirBnB). The taxi industry is being affected by companies that do not own any taxis or cars (Uber and Lyft).

In many markets in recent years, the conventional business model of ownership, in which companies provide their customers with access to the products and services that are owned by those companies, has shifted toward peer-to-peer accessibility. In a peer-to-peer model, companies facilitate access and connections between their customers. What the customers are able to access within this model is other customers' property, skills, and competencies. Companies can offer such access through online platforms or marketplaces. Customers who offer their assets or skills do so because they do not need them, either at present or in the long term (European Commission, 2013). The result is the Sharing Economy business model which is referred to "the Platform Economy" as well. In this paper, we use the latter term of the platform economy which we think fit better to its context.

Figure 1 presents examples of companies and industries, which have already been flourished with the platform economy business model.

Figure 1: *Examples of the platform economy in different industries (Visioncritical, 2014)*

However, the platform economy has met some challenges and barriers in terms of diffusion. One major barrier to the platform economy is the "trust issue". However, this problem is gradually becoming resolved. The trust issue used to have the same effect in other industries, such as online shopping. For example, when Amazon started offering online shopping for the first time, people were anxious about security and trust when buying items on its site. However, customers tried Amazon and usually had positive experiences. Then they recommended it to other customers, and this cycle continued until the trust issue was no longer a major concern. These successful experiences encouraged customers to try other online shopping websites, such as eBay. The same adoption story is happening in the sharing economy. Customers have been paying more attention and credibility to businesses that work in the sharing economy. For instance, Airbnb, the self-styled worldwide accommodations leader, is growing rapidly and has already outpaced many established firms in the hotel industry. Likewise, Uber recruits more customers and drivers every day. The sharing economy lets some people buy cars just to rent them out (The Economist, 2013). Every day, new industries use the benefits of the sharing economy. Figure 1 depicts some companies and industries that are already flourishing within it. Most of these companies build on an online platform or marketplace that connects customers that possess certain assets and skills with customers who need these assets or skills for temporal or long term

duration (The European Commission, 2013). The promising start-ups that are active in this very specific and rather new market signify the potential of the so-called "sharing economy" (The European Commission, 2013).

This new model is called "Collaborative Service Networks" and probed from different aspects. Uber and Airbnb, two successful growing companies, have been selected as our case studies.

2. DEVELOPING COLLABORATIVE SERVICE NETWORKS

We propose the following mechanism in figure 2 and pursue five steps to materialize the concept. These five steps will create a virtuous cycle, which reinforces the viability of the mechanism.

2.1. Visibility and Discovery Mechanism

Technologies such as mobile devices, sensors, social networks, and online media (enabling the "internet of things") all facilitate new types of sharing services.

For instance, technological developments in social networks and online media enable the flow of communications and support the sharing of information. This system promotes easily accessible education of a high level, through a wide range of diverse services (both public and private), enabling everyone to access the information, skills and tools they need to succeed. Promoting the message 'Share More' is at the heart of collaborative service networks (Visioncritical, 2014). At the same time, social computation deals with using the potential of crowd to solve the problem of companies or society. The ever-growing numbers of crowdsourcing and open source models all implies to the progress in this part of technology. These key technical inputs are the cornerstones of collaborative service networks, and build the first step which is" Visibility and Discovery Mechanism".

2.2. Bilateral Trust Mechanism

Traditional trust mechanism lies in the institutional or background check, which takes usually long time and frequently turned to be ineffective. In the new trust mechanism of collaborative service networks, service providers and customers make a dynamic reputational system based on the bilateral trust mechanism. Brian Chesky, CEO of Airbnb states this mechanism: "The more you broadcast your reputation, the more you'll have access too. You can decide to live off the grid, not

have a reputation, and that's fine and goes through life. But, fewer people will know you and you'll have access to fewer things. I actually think that's a fair proposition." (Ferenstein, 2014).

This mechanism creates solid trust between all customers and service providers. This new collaborative trust mechanism where customers and service providers rate each other has proved to be more powerful than traditional ways of create trust between people. That is why Airbnb and Uber are among the most reliable companies from the customer's points of view (Paragi, 2017).

2.3. Transaction system

Transaction system is one of the major advantages in this new collaborative social network. Increase in transaction speed and easing the payment process include in this platform economy model. This automated transaction process saves time from unnecessary actions. In Airbnb case this transaction makes it also possible to rent a place without ever meeting the customer. This might sound small improvement but it increases significantly the productivity of these services since customers and service providers do not need to do otherwise frequently occurring action. For example, Airbnb hosts don't need to schedule a meeting with every customer and customers do not need to plan how they will pay rooms in foreign currency. For taxis this means they can maximize the time they are creating value, which is moving people.

For example, Uber's transaction from the customer is done immediately when a customer steps out of the car (Uber, 2016). Recently, Uber has also introduced an option for the driver to get paid immediately after a ride or any other chosen time (Uber, 2017). Customers can also add multiple credit cards to their account. Therefore, it is possible to switch between different cards tied to a single account. Furthermore, it helps the customers in keeping all their payment at one location (Amit, 2013).

This system creates bilateral value capture and rapid value distribution among customers and service providers.

2.4. Value Capture Mechanism

In the new sharing economy models, value is seen not solely in the financial metric, but wider economic, environmental and social values are equally important and included. For example, this system underlines in

social investment and social capital and considers them as value. Thereby, this hybrid incentive system enables and stimulates customers and service provider to engage in productive activities. In this manner, waste has also a value. It can be interpreted as resource in the wrong place. Collaborative network services relocate 'waste' to somewhere that is needed and has value (Benita, 2012).

2.5. Transparent Reinvestment Mechanism

Collaborative service network is a robust and sustainable system and aims for around a long-term vision. Thus, the final step in collaborative social network is in redefining the mechanism or in other words developing it for future. Since this mechanism creates a transparent reinvestment mechanism. The earning and outcomes from previous steps can be invested to resolve shortcoming of the mechanism. As this mechanism is based on peer-to-peer connection, feedback form customers will be collected very fast. Thus, companies may find major customers concern and reinvest to meet their needs.

As the result, visibility and discovery will be improved and subsequently the entire value of mechanism will grow.

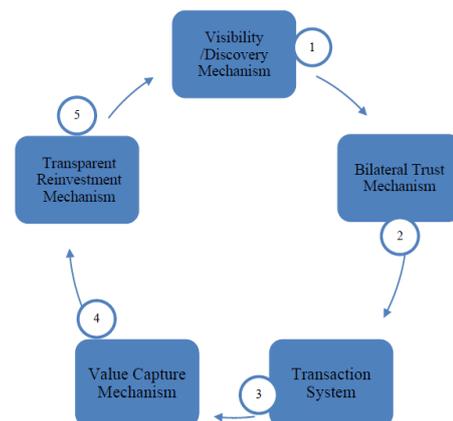Figure 2 illustrates these five steps that we call "Collaborative Social Network Mechanism"

Figure 2: *Collaborative Social Network Mechanism*

3. CASE STUDIES

In this paper, we study the cases of Airbnb and Uber, two most well-known examples of the platform economy and demonstrate that our five-step mechanism applies in these two cases.

3.1. Airbnb

First, Airbnb is an online platform, which connects travelers and local property owners together. Airbnb

business model works as in one side of the platform people are able to list their available space and earn some income in the form of rent (Juggernaut, 2015). On the other, Airbnb provides the opportunity for travelers to book these available spaces from local hosts in relatively cheaper price compared to hotels. This saves money from traveler and also gives them a chance to interact with locals. Airbnb is currently present in over 190 countries across the world (Juggernaut, 2015).

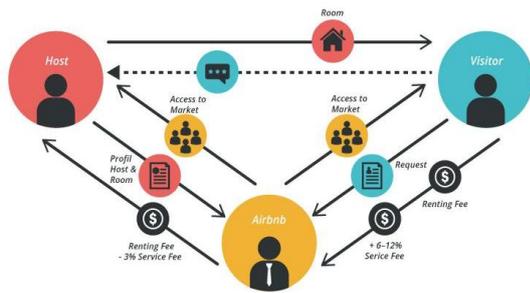Figure 3 demonstrates the stakeholders' relationship of Airbnb.

Figure 3: *Stakeholders relationship in Case of Airbnb (Business tool box, 2017)*

Airbnb implements very well the five steps that we suggested for our mechanism previously. At the first step, Airbnb is doing a well visibility and discovery mechanism. Airbnb is totally an online platform and Airbnb website (www.airbnb.com) is straightforward with easy steps to book a place, similar to traditional booking websites (e.g. Expedia): first to search based on destination, travel dates, and party size; then website returns a list of available spaces that can be categorized by attributes such as price, neighborhood, and amenities; while then individual listings can be selected for greater detail (Möhlmann, , 2015). Airbnb provides also its app, which is available for IOS, Android and Windows phone, and it gives Airbnb higher visibility and discovery advantage. In the second step, Airbnb is built on the bilateral trust mechanism between travelers and property owners. Airbnb describes itself as 'a trusted community marketplace for people to list, discovers, and book unique accommodations around the world' (Airbnb, 2015). In the third step, transaction system is well designed for both travelers and property owners. Airbnb only accepts credit or debit cards; however the transaction process is fast and reliable. Airbnb has integrated with local payment providers and maintained bank accounts in several currencies to expedite the massive amount of commerce that moves through its platform. By this

way, transacting the money from traveler to property owner is carried out very fast and accurate (Airbnb, 2015).

In the fourth step, Airbnb creates an innovative value capture mechanism as the interaction between travelers and property owners creates also social value beside the financial value between two sides (Möhlmann, 2015). Finally, Airbnb is a totally transparent platform. Both traveler and property owner has an opportunity to write a review and comment on each other's profile and these comments are visible in public. This gives Airbnb higher degree of viability compared to traditional hotel industry.

3.2. Uber

Uber relies on its mobile app to connect passengers with drivers of vehicles for rides. Unlike a taxicab, Uber drivers use their personal vehicles to drive passengers (Rempel, 2014). Instead of communicating with phone or taxi website to arrange for pickup, passengers request ride directly via Uber app available in all smart phone platforms. UberX is the most popular service that Uber provides which is the most affordable service. Depending on the city, Uber may also provide other types of vehicles and rates to choose from, including "Black Car" and "SUV." The "Black Car" option represents a high-end sedan, while the "SUV" option provides a larger vehicle with seat capacity for up to six people (Rempel, 2014). Uber recently offers Uber pool, which up to three passengers can share a vehicle while they travel in a same route. This will decrease the fare of the trip.

As we explained before, Uber implements five steps of our mechanism in its business model.

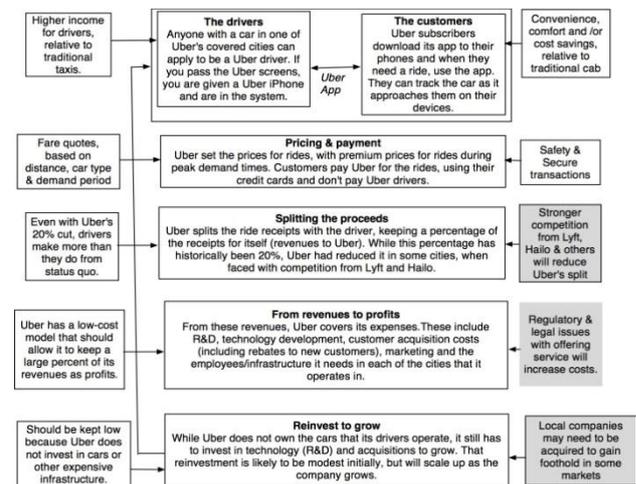Figure 4 indicates these steps in Uber's business model.

Figure 4: *Five-steps mechanism in Uber's business model (Forbes, 2014)*

4. DISCUSSION

Despite the success of collaborative service networks, some concerns are emerging gradually. The main concern is the regulatory issues. There are also problems from the point of view of practical implementation. There is still a huge controversy such as whether adding tax for room-renters should be as same as hotel taxes. In Amsterdam officials are using Airbnb listings to track down unlicensed hotels. In some American cities, peer-to-peer taxi services have been banned after lobbying by traditional taxi firms. The danger is that although some rules need to be updated to protect consumers from harm, incumbents will try to destroy competition. People who rent out rooms should pay tax, of course, but they should not be regulated like expensive hotels (The Economist, 2013, Cannon & Summers, 2014).

5. CONCLUSION

Technological development as well as increasing communication and connections via social networks have been revolutionized the conventional business model of ownership in different industries towards more rentals and the platform economy model. There are ever-growing number of companies are utilizing this type of business model to run their business.

In this paper, we investigated into a new and emerging type of the platform economy business model in which role of customers and service providers may dramatically change which we called it "Collaborative Service Networks". We analyzed this mechanism from different aspects. We suggested this mechanism could capture value in five-steps, which creates a virtuous cycle and reinforces the viability of it. Uber and Airbnb, two successful growing companies, have been selected for our case studies.

In the end, we discussed emerging issues and challenges in front of collaborative service networks predominately from legal perspectives. Future studies may examine our mechanism in different cases and with empirical data.

ACKNOWLEDGEMENT

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