

Etiquette of Co-production with Customers: A Study of Car Sharing in Self-service

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Abstract—Today, technology-based self-service facilities have been widely implemented and are very vital in the service industry. Car sharing is one of the prominent examples of self-service in the service industry. The main objective of this paper is to design a car sharing business model for Japan based on customers' etiquette. The study is based on interviews of car sharing service providers from Japan and USA. Results show that car sharing business model based on returning car on time and cleaning of car after using (if needed), are the important etiquette (manner) of customers for car sharing business in Japan. Authors suggest for the use of new initiatives and mechanism for car sharing business in Japan.

Index Terms—car sharing, co-production, etiquette, sharing service

I. INTRODUCTION

To own assets has been seen as an important value of Japanese economy after the Second World War. Even if we look back at the history of 1950s, black-and-white TV, refrigerator, washing machine were some of the required (necessary) products of Japanese families that grew rapidly. Then, color-TV, home phone, car were emerging products in Japanese economy. Emphasis had been given for the ownership of these products (color TV, home phone and car) for the families not for individuals. Near 21st century, as an increase of nuclear families, ownership has shifted from families to individuals. For example, personal computers (PC), mobile phones and other electronic products have become the trends of economic development in the 21st century. This trend is similar to Japan and other developed countries like USA, and European countries.

Mass production and mass consumption create a new innovation that creates employment. Similarly, new innovations happen in the service industry. Self-service is one of the prominent examples of innovation in service industry that has been natured progressed very rapidly. As a result, the lifestyle of people has become diversified. In many countries, convenience stores, which is one of the self-service, service for 24 hours a day, 365 days a year, no matter the day and night, have been considered as a personal service. Technology-based self-services which

include the operations of ATM, KIOSK, and e-commerce have penetrated the society. It saves time for the customers as well. In addition, self-service creates co-production with customers. Taking the example of fast food in restaurant, there is a self salad bar and beverage service. After convey these orders to the service provider, the customer must go to take themselves. In a normal restaurant, the customer participates (as a customer do the appropriate action) to cooperate with the service provider for production of services. In health services (description of illness or injury), the transmission of accurate information to doctors, create co-production of services. Service co-production with customers, unlike production and supply of goods is essential to the whole.

Now-a-days, the concept of services has shifted from selling products to selling services [1]. Sharing of services is a new emerging concept of service industry (shared use of the product) and car sharing has been gaining much attention in USA, Japan and the European countries. Car sharing, room sharing, such as sharing office is featured in the book "The Mesh" [2], "SHARE" [3], "FREE" [4], such as a concrete example of sharing down, sharing is seeping into society the word "collaborative consumption". Sharing in many services, the authors focused on car sharing service which has seen grown rapidly in the past few years. For the cost of management, maintenance, ownership aspects, environmental issues, social issues such as ease city traffic, car sharing in many cases, is less expensive. Due to the spread and mileage car ownership in the society, car sharing and environmental impact reduction benefits are to be expected. Most of the car sharing study is based on either in North America or European countries [5]-[7], and Japan [8]-[13]. But study of car sharing from the point of view of etiquette and 'co-production with customers' are not so many. To bridge the gap, this paper discusses the etiquette of customers in car sharing business.

The aim of this paper is to design a car sharing business model based on customers' etiquette. More specific objectives of this paper are: (a) to compare the car sharing business in Japan and the United States; (b) to design a car sharing business model for Japan based on customers' etiquette and; (c) finally to put considerations for more successful car sharing business in Japan. The rest of the study is organized in the following ways: comparison of

car sharing business in Japan and the United States, car sharing business model, methodology, results, considerations and conclusion.

II. COMPARISON OF CAR SHARING BUSINESS IN JAPAN AND THE UNITED STATES

Here we describe the origin of car sharing business. We compare the car sharing business in Japan and the United States. In USA and European countries, the idea of car sharing initially developed with the aim of reducing the number of cars owned. Shaheen and Cohen [14] claimed that successful car sharing operations originated in Switzerland in 1987 and Germany in 1988. In USA, car sharing business initiated by Zipcar in 1999 [9]. Zipcar is the leading car sharing company in USA.

In contrast, car sharing began in Japan in 1999, mainly for demonstrating and testing new technologies, such as Intelligent Transport Systems (ITS) and electric cars. But Japan started car sharing business commercially in 2002 by CEV and CEV merged into ORIX in 2007 [9]. Times 24, Orix and Car sharing Japan are the leading three car sharing companies in Japan.

Fig. 1 and Fig. 2 show the number of members and vehicles in Japan and USA. The spread of car sharing business in Japan begins in 2010 and shows a rapid growth after 2011. But the rapid growth of car sharing business in the United States starts since 2007.

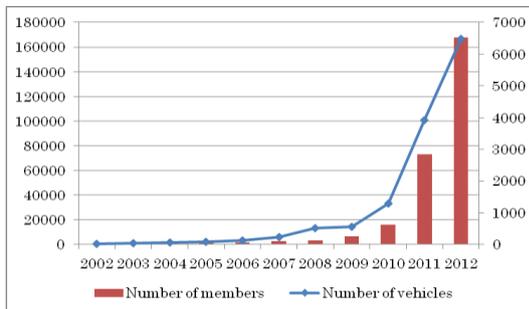


Figure 1. Number of members and vehicles in Japan
http://www.ecomo.or.jp/environment/carshare/carshare_graph2012.1.html

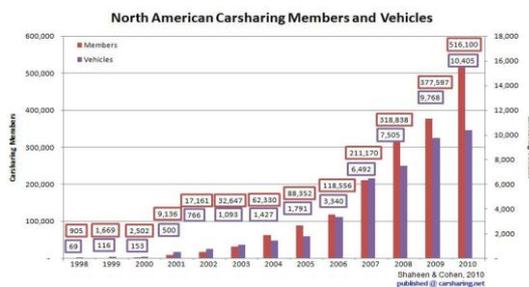


Figure 2. North American carsharing Members and Vehicles,
<http://www.carsharing.net/>

Car sharing companies of Japan expect to gain more popularity of car sharing as an environmentally-friendly behavior that is common in European countries and USA. Car sharing is taking root in Japan due to increased public awareness of car sharing and to secure parking spaces for car sharing service providers, through cheaper fares of

publicly-owned parking lots, tax and soaring gas incentives. By incorporating car sharing systems into local transportation systems, it might be possible to not only reduce CO₂ emissions, but also to restore people-to-people connections by sharing something in common that society has come to neglect.

III. CAR SHARING BUSINESS MODEL IN USA

According to Zipcar, the community of car sharing customers has six rules to be followed including report damage, keep it clean, no smoking, fill'er up, return on time, and pets in carriers [15]. Fig. 3 shows the six simple rules of Zipcar. Before drive away, customer has to inspect car inside and out. To report damage, a dirty car or low fuel, customer has to call to the company. In the car sharing business in the United States, reservation has been made so easily through internet by means of PC or any mobile devices.



Figure 3. Zipcar's six simple rules of car sharing business
<http://www.zipcar.com/is-it/rules>

IV. METHODOLOGY AND RESULTS OF INTERVIEWS

This study has been carried out by unstructured interview. An interview is a process in which a researcher and participant engage in a conversation focused on questions related to a research study [16]. The main purpose of this interview is to get information regarding etiquette of car sharing business. Five interviews have been conducted from Japanese (4) car sharing companies and USA (1) car sharing specialist. The interviews include two local companies in Ishikawa Prefecture Japan, one big car sharing company in Tokyo, Japan, and another big car sharing company from USA. The collected data was thematically analyzed and interpreted.

From the results of the interviews, cause-effective car sharing service business model depends on etiquette of co-production with customers. There are somewhat differences in car sharing business both in Japan and USA. Customers' etiquette is generally high. Also those who do not have good etiquette, who repeat violation of rules, create problems in car sharing business. If we compare the business model of car sharing in big cities of Japan and the

U.S., the arrangement of the car is made in the center around the station that is densely populated in Japan, but it is different for customers in USA. For example, a university in a big city in USA, the placement of car station is in the campus and/or at around the campus. As many of the college students in USA live inside the campus. Application for the students to use his or her own vehicles is limited and it is also the chance to drive the car for the first time without having a car. Consciousness to protect the violation of rules is inevitably necessary in car sharing. In some cases of Japan, as a workaround on the reservation system, there is a case that has been given 30 minutes between the booking and reservation in case of not returning the car on time. But in case of USA, it is recommended for a margin of 30 minutes to 1 hour in advance for customers. Delay is an act without notice to exert many troubles and the offender will be charged extra fees in particular. In case of our model, interviewees reported two important etiquette of car sharing. Returning the car on time and cleaning the car after using.

The interviewees both Japan and USA reported that many customers keep time while returning the car on time. However, some of people do not keep on time and forget to clean the car after using, if needed. In this case, big companies of Japan and USA, manage the problems giving another car to the prospective customers. Cars are parked in the same station or near station so that next customers do not have to suffer for this. But in case of small companies in Japan, they do not offer another car to the customers. As they have limited cars. In this case, small companies contact with prospective customers in advanced to inform that the car will be late. The defaulted customers have to pay penalty to the companies if they do not contact with the companies in his or her stipulated time.

The results show that customers have to inform to the companies for any damages of cars (which include scratched body of the car or puncture of tires or no fuels, etc) before using the car. This practice is similar to big and small companies in Japan and USA. Recently in Japan, “standing empty can” and “littering” of tobacco in the streets has decreased. In the railway, as well as take-away of garbage (waste to the trash), and the act of folding of the seats after using, are excellent Japanese etiquette found everywhere. Cleaning equipment, such as cleaning issues and cleaning kits are bringing attention to customers. However, there are other problems of keeping foods and drinking inside the car. Operators, decisive solution from the point of car sharing business model of today's service, etiquette has been mentioned as a major challenge to be overcome in car sharing business.

V. PROPOSED CAR SHARING BUSINESS MODEL FOR JAPAN

Here we design a car sharing business model in respect of etiquette of co-production with customers. Car sharing is one of the concrete examples of self-service and etiquette is very important in car sharing business model. It is believed that car sharing will change the face of

transportation and every one will be the part of the change as a means of collaborative consumption.

Consumers will get highly convenient services such as a 24-hour a day, 365 days a year in almost all countries. In the model, collaborative consumption is an important point. Here in our car sharing business model, returning car on time and cleaning the car after use (if needed) are the two main etiquette of consumers. In case of any customers are late to return the car, he or she will be charged a late fee. If customers get any emergency situation, he or she has to call the car sharing company to know if their reservation can be extended or not. Our car sharing business model based on cause-effect nature. After using by first customer, he or she will return the car on time and he or she becomes fail to return on time, then the next customer will contact with company and if any damage or fuel shortage he or she will inform it to the customer. Then the next customer will return the car on time and simultaneously the next customer will check everything and use the car (see Fig. 4).

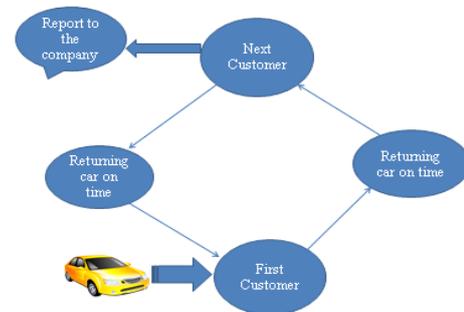


Figure 4. Car sharing business model based on returning the car on time

On the other hand, customers have to take personal belongings with them when they go out and throw away or recycle any trash that means customers of the car have to clean the car after using the car. In our cause-effective model, after use by the first customer, he or she will clean (if needed) the car and if he or she does not clean the car, the next customer will contact with company. Fig. 5 shows the car sharing business model.

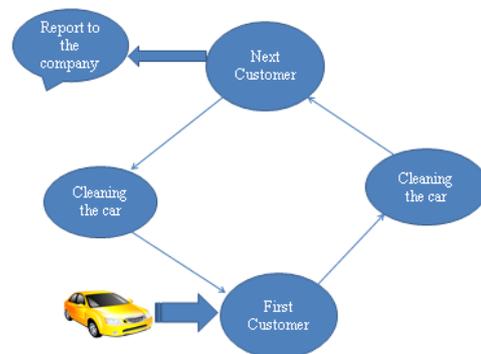


Figure 5. Car sharing business model based on cleaning the car

VI. CONSIDERATIONS

In this section, we discuss the maintenance of etiquette of customers that are essential to the success of the

business of car sharing service. First, we will look at an example of successful business of car sharing services. Zipcar is a world-renowned car sharing service company in USA [17]. Services are provided in major cities across USA, Canada and UK. In case of Zipcar, the members are called Zipster. Zipcar requires strong rules named “six simple rules” to keep etiquette of each customer. The rules include report damage; keep it clean, no smoking, fill’er up, return on time and pets in carriers. In Japan, many companies have rules but even large companies, they don’t require so much severely (e.g. a dirty or low fuel). Almost cases, there is in some of trouble or no cars at booking time.

We think etiquette of ‘emotional attachment’ will increase the business of car sharing services. In case of car sharing business, the emotional attachment will enhance the car sharing services effectively. For example, Zipcar gave first name all of their cars. We can not tie people to the animals and things, pets’ name have generally attached, pet owners are referred to by name. We think the name and emotional attachment are highly relevant for car sharing services. We also think the name of Zipster that will help to enhance the sense of belonging of members. For the success of etiquette of car sharing services in Japan, the emotional attachment to the car, will lead to the improvement of customers’ etiquette.

It is true that by strengthening ties with customers through social party (concert with members), Zipcar has attempted to maintain the etiquette of the customers and the connection between the customers and the vehicles. By strengthening the ties between customers based technology, the authors propose a method to maintain the etiquette of the customers in the following ways. For each car, customers’ preferred sites, reservation of car sharing services, the time available is displayed, are now well developed. The reservation screen shows the person who has already made the reservation. In this way, each customer will get to know to get in touch with other customers if they are captured on the system and this will enhance the improvement of etiquette of customers. Reservation system which is supplied by the many operators, now view the availability by nickname or first name of each customer. The authors propose an additional function of reputation among members to contact each other which enhance the etiquette of car sharing services. As an advantage, membership information has been revealed to some extent, lead to a sense of security among members. For example, if we can get to know each other, such as display name, desired time of use overlap each other, then they are easier to adjust the time zone. The customers will put a star in high etiquette customers and we think that the way to improve the service to use the same information that will ultimately enhance shared consciousness (mind sharing) also. Today, the people who share information with photos and profiles on social networking site (SNS) by real name and face are many. Sharing of customers’ information through SNS, customers will get to know each other that will lead to a willingness to use car services comfortably. In this case, if

acquainted with each other by first name or nickname through SNS, it will likely to be a mechanism of car sharing services.

VII. CONCLUSION

Car sharing services are based on the maintenance of the high “etiquette” of customers. Returning car on time and cleaning the car (if needed) after using are the main etiquette of customers for car sharing services. These points were confirmed by interviews with operators of three Japanese companies and one USA car sharing specialist. We believe that incorporating the mechanism of communication to the existing reservation system, via a first name or nickname, to be effective in maintaining etiquette among customers. The effect of this mechanism, we hope to clarify through research in the future. Conducted interviews to the customers of car sharing in practice, not just the company side, the future it will continue to capture the etiquette from the viewpoint of the customers’ side.

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