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How do you trust and share?

Discussing how information sharing cultivate trust in

sharing economy programs

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Discussing information that cultivate
trust in sharing economy programs)

本論文係林芳曠君（學號 R05725040 ）在國立臺灣大學資訊管理學系、所完成之（博、碩）士學位論文，於民國 108 年 7 月 18 日承下列考試委員審查通過及口試及格，特此證明

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摘要

“共享”行為的範圍和型態因為新科技的演進而有所不同。在新的情境下，信任被認為提升使用意願的一個非常重要的元素。這篇研究借用了 Mayer 對信任的看法，認為信任的存在是因為信任者感受到被信任者的善意、誠信、及能力，進而提出資訊品質能夠節由提升乘客對於 UBER 平台已及司機的善意、誠信、及能力而提升對他們的信任，進而提升使用意圖。在研究模型中，Burt 的名譽機制及 institutional-base 的概念也被包含。收集問卷完成實驗後，儘管資料效度需要被討論，研究仍發現了有使用過 UBER 的族群跟沒使用過 UBER 的族群不同的行為反應。對有使用過 UBER 的人來說，資訊品質能夠提高對平台的信任，接著提高對司機的進任，進而提升使用意願。對於沒有使用過 UBER 的人來說，資訊品質能夠提高對平台的信用，接著分別提高使用意圖及對司機的信任。總體而言，研究結果論證了資訊品質能夠提高信任進而提高使用意圖，本研究也因此認為這證明了相比於傳統計程車，UBER 不能被去中間化的特性。

關鍵字:共享經濟、信任、名譽機制、資訊品質、使用意圖

Abstract

The “sharing” activity is different from the past on the scope and members’ familiarity due to the development of new technologies. At this moment, trust is regarded as an important factor to increase participating intention. This research leveraged Mayer’s research that trust can be cultivated by increasing trustors’ perception of benevolence, integrity, and competence of trustees, and considers that information quality can increase passengers’ trust of the UBER platform and drivers through increasing the perception of those 3 factors, further increase their participating intention. The concept of reputation mechanism and institutional-based trust are also included in this research model. After the survey is conducted by collecting questionnaires, though there was few validity issue existed, it is found that people who had used or never used UBER before have different behaviors. For people who had used UBER before, information quality can increase the trust on UBER, and then increase the trust on drivers, further increase the participating intention. In contrast, for people who had never used UBER before, information quality would increase the trust on UBER, and the trust on UBER respectively increase the trust on drivers and participating intention. Overall, information quality are proofed to increase trust further increase the intention, and this research consider that this mechanism makes UBER disintermediated comparing with traditional taxis.

Key word:Sharing economy, Trust, Reputation mechanism, Information quality, Intention

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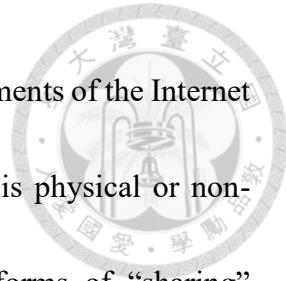
Chapter 1. Introduction



Sharing economy, which is defined as “The peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services” (Hamari, Sjöklint, & Ukkonen, 2016), has become popular in recent years. Uber, the largest global C2C transportation platform, is in the process of replacing traditional taxi services, and got 680 billion dollars evaluation at 2017. Also, Airbnb, a C2C room sharing service, has caused the hotel industry facing serious challenges. With innovative business models, sharing economy programs have attracted mass amount of users to participate in the “sharing” activities.

In sharing economy programs, the “sharing” activities are different from the past. At past, researchers focused the “sharing” activities on a relatively smaller scale. Belk proposed the prototypes of sharing (contrasting with the prototypes of marketplace exchanging and the prototypes of gift giving), which considered mothering and the pooling and allocation of household resources as classical sharing activities.(Belk, 2010).

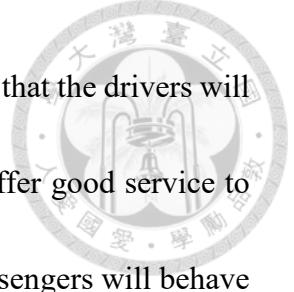
At this moment, sharing is regarded as a specific activity between small groups of people. However, the Internet and especially Web 2.0 has flourished many new ways of sharing activities on a larger scale (Belk, 2014). There are open source software sharing repositories such as GitHub, online collaborative encyclopedias such as Wikipedia, content sharing platforms like Facebook and YouTube, or even car sharing like Zipcar.



These platforms are rapidly emerging because technological developments of the Internet have simplified the process of sharing, whether the sharing object is physical or non-physical. Since these sharing economy programs have different forms of “sharing” comparing with the past, some issues behind this phenomenon should be discovered.

Sharing economy programs often operate as platforms. These platforms facilitate participants to share resources with each other. For example, Uber built the platform of car sharing. It recruits car owners to register as drivers, and these drivers provide car service during their free time. Also, people who need to be picked up can seek for service through Uber platform, and find appropriate drivers near themselves. What Uber does is to use algorithms to match the drivers and the passengers. The “sharing” activities happen because of the contribution of the platform. It directly helps people with demands to meet up with people who are willing to share, which make the scope of what to share and of who can share broader than before.

This research regards trust is a key determinant of participating in sharing economy program. As mentioned before, the sharing activity is no longer be limited within families or with small group. Rather, people start to share with someone not familiar to them on the Internet. Take Uber as example. The car sharing activity happens with the help of the matching algorithm, and passengers and drivers typically do not know each other before the encounter. For the sharing activity to occur, it is essential to establish trust between



passengers and drivers. Uber needs to persuade passengers to believe that the drivers will safely pick them up, drive them to wherever they want to go, and offer good service to them. Simultaneously, Uber also has to make drivers believe that passengers will behave well as good customers on the car. This research posits that the sharing activities will happen only when both sides of the sharing activities consider the other side is trustworthy. Otherwise they may refuse to participate the sharing activity. Therefore, this research regards trust as a strong basis in sharing economy programs that can promote people become willing to share.

Sharing economy programs had developed diverse strategies to enhance trust. These programs often provide online reviews and offer additional information such as personal photos to cultivate trust. For example, on Airbnb, a host should present his photo next to the photos of the living space. This policy can verify hosts' identity, and also deliver the sense of a personal encounter (Ert, Fleischer, & Magen, 2016). In addition, Airbnb also publicize housekeepers' rating scores to travelers, and these scores are generated by travelers' voting result according to their staying experiences. Travelers can take the score into consideration when they choose the place to stay, because the score indeed reflect customers' historical experience toward the staying house. When the score of a place get higher, travelers will know that this place is more believable. Therefore, this research tries to investigate whether these mechanisms (photos, personal information, rating scores, etc.)

indeed increase people's trust when they participate in sharing economy programs.

To sum up, this present research will firstly investigate the information UBER provides regarding its service, and describe why these information can work effectively to increase trust. Further, trust will be regarded as a mediator between these mechanisms and people's intention of participating in sharing economy programs. This study will try to use reputation mechanisms of individuals to explain the whole process, and the details will be described at Chapter 2.

Chapter 2. Literature Review

This paper considers that information will increase trust. Mayer proposed a model to figure out factors that have positive influence on trust (Mayer, Davis, & Schoorman, 1995). There are two roles in his model: trustors and trustees. Mayer proposed that a trustee's ability, benevolence, integrity will both increase trust, because they will increase the trustor's perceived trustworthiness toward the trustee. However, figuring out whether a trustee has high ability, benevolence, and integrity is a great challenge. Also, while trust means taking risk (Mayer et al., 1995), when the trustor is unable to judge these factors of the trustee, the trustor may not be willing to trust due to high potential risk. Therefore, information plays an important role to increase trust. While the trustor has enough information to the trustee, the trustor can easily know that whether the trustee has enough ability, has high benevolence to the trustor, and has high integrity. The information of

these factors can reduce perceived risk to the trustor, thereby increase the trustor's willingness to trust. While IT mechanisms grow rapidly, this present research hypothesizes that the information which provided by UBER's IT mechanisms can definitely increase people's trust on both sharing peer and the platform.

There are two sections below. First, the information which provided by UBER's IT mechanisms will be identified, and second, how these information work to increase passengers' trust will be discussed.

UBER implements various IT mechanisms to provide information and facilitate passengers' trip on picking up services. Before starting a trip on UBER, UBER calculates and displays the price of the trip in advance, and plans the best route to the destination for the passenger. When the passenger accepts the price and makes an appointment on Uber, UBER automatically assigns a driver to the passenger, further provides the driver's information and the trip's information to the passengers. When the passenger finishes his trip, UBER enables the passenger to write a review and rate for the trip. How these mechanisms work before the trip, on the trip, and after the trip will be discussed below.

Before the trip, the route to the destination and the price will be displayed. Different from the mechanisms of traditional taxis, which drivers drive their own route to the destination and inform passengers of the charge after the trip, Uber lets passengers to know such information in advance. In addition, the charge and the route is calculated by

the algorithms from Uber, rather than drivers, and usually is the best option to the passengers. This mechanism provides passengers the possibility to know much more information and make the decision before the picking up service.

When the passenger accepts the price and makes an appointment on Uber, UBER assigns a driver for the trip, and provides more information about the driver and the trip. Uber assigns the driver automatically, including the consideration of the driver's rating, the distance between the driver and the passenger, and the willingness of the driver to pick up the passenger. After the driver is determined, Uber provides the information of the driver. UBER provides the driver's personal information, the driver's reputation information, and the driving car's information to the passenger. The driver's personal information includes the driver's real name, photos, his speaking language, and his history records of driving UBER car. The driver's reputation information contain the driver's average rating, and every passengers' reviews to him. The driving car's information includes the car's license plate number, the type, and which company the car is rented from. In addition, while it needs time for the driver to arrive to the place where the passenger stands, UBER will show the instant location of the driver, and this lets the passenger knows the distance between the driver and himself. After the passenger gets in the car, UBER will use GPS to keep monitoring their location, and keep the driver from driving deviated from the route scheduled by UBER. This makes sure the driver pick off

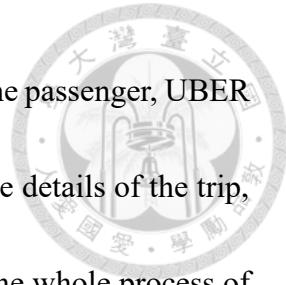
the passenger at the right destination and at right time. These information provide passengers to have clearer expectations of the trip during the process of using UBER service.

And after finishing the trip, the reviews and ratings have considerable impact on UBER platform. As mentioned above, after passengers rate and comment drivers, these information will be updated to the drivers' profile, and other passengers will regard it as a reference of the drivers' performance. Also, the rating score will be checked by UBER regularly. If a driver's rating score is too low (ex: less than 3 stars), his UBER account will be prohibited by UBER for a period of time. Hence, this makes that only if a driver's rating score is high enough will be shown on UBER's map for passenger's appointment.

While the information which UBER discloses are listed systematically, the next section is to illustrate how they can increase passengers' trust on the company(Uber), and the sharing peer(the driver) as well. First, this paper will discuss how these information can increase passengers' trust on Uber, and later it will also discuss how these information can increase passengers' trust on the driver.

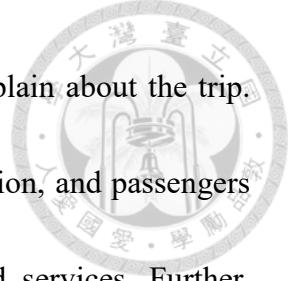
This paper posits that these information can increase passengers' trust on Uber through increasing passengers' perception on Uber's ability, integrity, and benevolence, which are three factors that can increase the trustee's trustworthiness.

First, these information show that Uber has enough ability to handle this trip. While



lots of information of the driver and the trip are provided by Uber to the passenger, UBER persuades passengers that Uber would have the ability to know all the details of the trip, further delivers the message that UBER can control and participate the whole process of the trip. For example, the trip is continuously been monitored by GPS, and the route is always been recorded. While the passenger's instant location is always shown on the APP when s/he is on the UBER car during the trip, the passenger would be persuaded that UBER tries to make sure the car would always follow the assigned route to the destination. Besides, the passenger would know that once the driver does something harmful to the passenger, the driver cannot escape because UBER can immediately provide the location information to the police. In addition, UBER persuades the passenger that they can maintain the service quality by prohibiting drivers whose rating score are less than three stars from providing services. These mechanisms show that UBER has huge controlling power. Even though passengers get on strangers' car, UBER still provide users enough information to evaluate the capability of the drivers.

Second, the transparency of information delivers the message to the passenger that UBER has high integrity. While Uber provide information to the passengers as more as they can, it means that UBER is responsible for the trip. At past, when passengers take taxis and face bad services, they can hardly do reactions because there is no one to complain to after getting off the car. However, while UBER provide information of the



driver and the trip to passengers, passengers are more able to complain about the trip.

UBER would become the target to complain and ask for compensation, and passengers are able to point out the driver and the car which provided bad services. Further, passengers can literally react through rating and reviewing for the bad experience they faced. Therefore, passengers would feel that UBER would be responsible for the trip due to the information disclosure, and increase their perception of integrity on UBER.

Third, this paper considers that the disclosure of information in advance, especially the sensitive information including the price, can persuade passengers to regard Uber as a company that really think of them. Different with the taxis' policy that they always show the price after the trip, and passengers have no rights to refuse to pay the price, Uber gives the passengers the rights to decide whether to accept the price for the service or not in advance. While passengers can know more critical information before being charged, they will more believe that Uber does consider of their perspective and provide a fair sharing process.

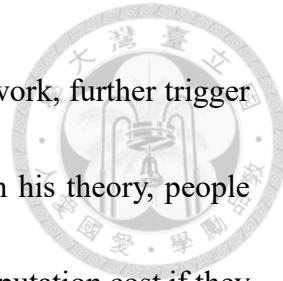
Thus, this study adopts the concept of information quality (Bock, Lee, Kuan, & Kim, 2012), and proposes that the increasing of information quality will leads to the increasing of people's trust of the sharing economy platform. According to Bock's theory, while information is regarded as high quality, it is because the information is sufficient, accurate, timely, and helpful. In this case, people can have higher perception of drivers'

benevolence, integrity, and competence only when the information UBER provide is sufficient, accurate, timely, and helpful to them. With high quality information, peoples will be more able to judge whether the trustee is trustworthiness. Therefore, the hypothesis is raised below,

H1: Information quality has a positive influence on people's trust of the sharing economy company.

Also, this paper posits that these information can increase the passenger's trust on the driver. While information is important to the trustor (the passenger) to judge whether the trustee (the driver) is trustworthy, especially when the trustor and the trustee are strangers before, the trustor tends to seek information of the trustee for his judgement. It is not easy for the trustor to seek the trustee's information in the past. However, with the development of technologies, the mechanisms of UBER nowadays can provide such information to the trustor's needs, which is unable for the trustor to collect before. The difference of information collecting between the past and the present will be described below.

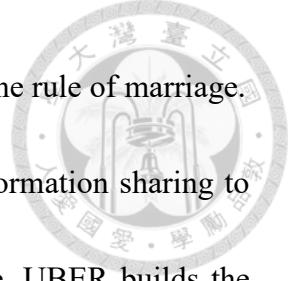
At past, there are little ways for the trustor to fetch the trustee's information and increase trust on the trustee, especially when the trustor and the trustee are strangers. The trustor can only rely on a third-party to fetch information. Under this situation, Burt



proposed a model to interpret how information travel in a social network, further trigger reputation mechanisms and increase members' trust (Burt, 2007). In his theory, people would care about their own reputation. This cause people suffering reputation cost if they do something inappropriately because the information of one's bad reputation would travel through the indirectly mutual contacts in a network. Hence, based on this rationale, people tend to behave well to maintain their reputation well, and cause trust become less risky in the network (Burt, 2007). However, this mechanism would only happens under specific conditions.

In Burt's theory, the reputation mechanism would happen only when the social network is close enough to create reputation stability, and is hard to escape. Burt used the phenomenon of the investment bank industry and an Indian small village called Jati for explanation respectively. First he used the phenomenon of the investment bank industry to conclude that the closure is an essential element of creating reputation stability. There are mainly two roles working in investment banks, bankers and analysts. In each year, there are peer reviews between people who had cooperated with each other in the past year. Through the accumulated data of their peer evaluations, Burt found that only when the colleagues were strongly connected in the network, the evaluations became stable (Burt, 2007). He considered that this is because when the network is close, good works of a person would be remembered by colleagues in the network, and the one's reputation

would continue over time. However, when the evaluating colleagues were not connected, good works and bad works would easily be forgotten, further led the evaluations became unstable. People would not care so much about reputation while it reset each year because nobody remembered their behavior. Thus, creating a close network would definitely protect stability. Second, the transformation of the Indian village Jati demonstrated that a network should be hard to escape to protect reputation mechanism works. Before, the rule in Jati is that members are not allowed to marry outside the village, and people can only find their jobs by other members' referral. At that time, reputation was strongly credible because the direct or indirect link tie closely through the rules of marriage and finding jobs. This improved information flow to make sure the members of the network follow their social obligations (Burt, 2007). However, when time past, when the members started to establish connections outside the village, the community network became eroded. People got married outside the Jati, and parents were encouraged to move their children to English-language school to make their children be able to compete desired jobs. This made people not so rely on the network in Jati before, because they have ways to escape outside the obligation of Jati. At this moment, the reputation mechanism became hard to continue in Jati. Hence, creating a close and hard-to-escape network is essential to make sure reputation stability. But it should also be noticed, fulfilling these requirements are cost-consuming in the past, just like the investment banks establish the peer evaluating

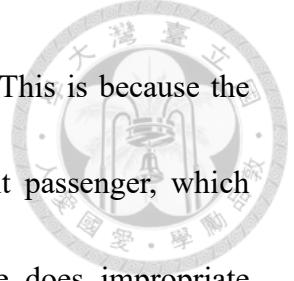


mechanism for years, and Jati used hundreds of years to implement the rule of marriage.

Nowadays UBER uses IT mechanisms which can facilitate information sharing to save the cost of building trust between peers. As mentioned before, UBER builds the mechanism which drivers and passengers can rate and write reviews for each other after the service is completed. Actually, it exactly creates a more efficient way to cultivate trust. It remarkably increase the trustor's perception of the trustee's ability, integrity, and benevolence, further increase the trustworthiness of the trustee.

First, this research proposes that the information which provided by UBER's IT mechanisms can strongly raise the driver's willingness of being benevolent to the passenger, further increase the passenger's perception of the driver's benevolence.

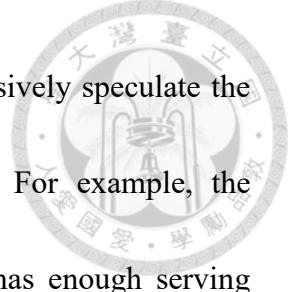
This research considers that the reason why the driver would tend to be benevolent is because the driver cares about his reputation on UBER's review and rating system, which means the reputation mechanism works on the system. In Burt's theory, he proposed that the members in the network should be close because of the consideration of information flow. However, the passenger can directly find out the driver's past behavior through the reviews and ratings on the system, instead of figuring out indirectly through their mutual contacts, and this keeps reputation mechanism stable. Secondly, all the data of drivers' reviews and ratings are accumulated on the system, which makes UBER drivers impossible to escape from the evaluation. When an individual just drives



a taxi, actually he doesn't really need to care about his reputation. This is because the previous passenger would almost has no connection with the next passenger, which allows the driver to escape from having reputation cost even he does inappropriate behaviors. In contrast, each trip would be evaluated on UBER and be explored by others, so when a driver provides a service which is not good enough, he has to bear the result of receiving bad evaluation, and this would instantly reflect on his personal score that appears on the system. And certainly, passengers will never take a driver's car who has low score which directly cause the driver has less income in the future. Hence, the reputation is worthy because reputation cost is literally existed and unescapable, and this is why reputation mechanism works on the system.

While drivers would care about their evaluation because of the reputation mechanism, passengers would tend to perceive the benevolence of drivers. In the context that all the drivers are evaluated by passengers, drivers tend to behave well and provide good services in order to gain higher scores. Accordingly, passengers would know that their evaluation to drivers are effective. Thus, when passengers know that drivers would do their best to get higher evaluations from them, it means that passengers would perceive high benevolence from drivers because of the evaluating system.

Second, information can increase the transparency of the driver's ability and integrity. While the historical ratings and reviews and the personal information of the driver are

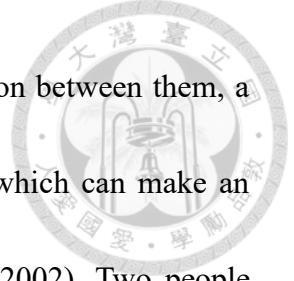


shown to the passenger on the network, passengers can comprehensively speculate the driver's upcoming serving behaviors through these information. For example, the passenger will consider the driver is competent when the driver has enough serving experiences recorded on the system, which means the passenger recognizes the driver has enough ability to provide the service. Also, when the passenger see positive comments of the driver written by previous passengers, the passenger would consider the driver has good reputation, which means the driver's integrity is recognized. Hence, the trustor's ability and integrity are much more easily to express to the trustee than before in this network, because the system would remember each previous behaviors, and publish all of them for the trustee's future judgement.

To sum up, while the review and rating system raises passengers perception on drivers' ability, integrity, and benevolence, this research consider it is exactly because of its high quality information that truly helps passengers for judgment of the trustworthiness of the drivers. Therefore, this research develops the hypothesis below:

H2: Information quality has a positive influence on people's trust of the sharing peer.

This research posits that information can increase people's trust on the sharing peer through a special kind of trust called institutional-based trust. Institution-based trust is based on third-party structures (Pavlou & Gefen, 2004). While two people have to share



and be shared with the other one, and there is no previous interaction between them, a third party will be helpful. A third party would create a structure which can make an environment feel trustworthy (McKnight, Choudhury, & Kacmar, 2002). Two people would trust each other and start their sharing activity based on both of their trust on the third party institution, which is independent of the dyadic action. Therefore, this research considers that while information have a positive influence on people's trust of the sharing economy platform, these kind of information can also increase people's trust of the sharing peer through the effect of institutional-based trust, that causes the trust on the platform become the mediator between the information quality and the trust on the sharing peer. The hypothesis is below,

H3: Information quality which can facilitate information sharing has a positive influence on people's trust of the sharing peer through the mediation effect of trust on the sharing economy platform.

After arguing that information will increase people's trust towards sharing peers and the sharing economy platform, this research would further propose that these information will increase people's participating intention of sharing economy platform by the mediation effect of trust. Trust is a subjective feeling that the trustee will behave in a certain way according to an implicit or explicit promise he makes (Gefen, Karahanna, &

Straub, 2003). It is an essential ingredient for transactions in sharing economy programs.

In the process of participating in the sharing economy program, an individual would receive specific services from another person by the assistance of the platform (Ert, Fleischer, & Magen, 2016), but the individual often does not know that person before, and the individual also may not be familiar with the platform. At this moment, if the individual can trust that person and the platform, it means that the individual believes that his expectation of participating in the sharing economy platform will be met by both of them, s/he should be more likely to participate in the sharing economy program, which means s/he has high participating intention. Thus, while trust would increase people's intention of participating sharing economy programs, it would be the mediator between the information quality and participating intention, that information quality indirectly increase participating intention through the effect of trust on the sharing peers and the sharing platform:

H4: Information Quality has a positive influence on people's intention of participating in sharing economy programs through the mediation effect of people's trust on the sharing economy platform.

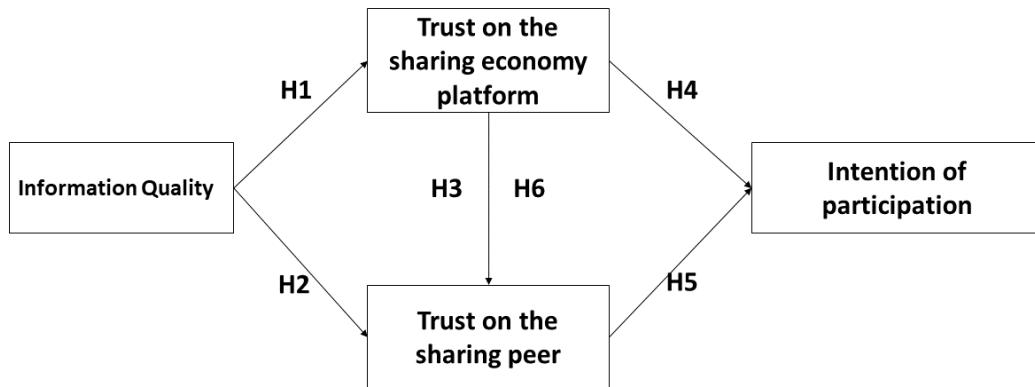
H5: Information Quality has a positive influence on people's intention of participating in sharing economy programs through the mediation effect of people's trust on the sharing peer.



Further, extended hypothesis 3, a hypothesis is also developed below,

H6: Information Quality has a positive influence on people's intention of participating in sharing economy programs through the mediation effect of people's trust on the sharing economy platform and then through the sharing peer.

Figure 1

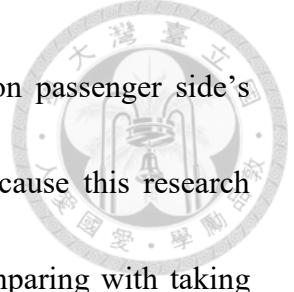


Chapter 3. Methodology

3.1. Research Method

3.1.1. Research Target

This research would mainly focus on figuring out how information increase peoples' trust on the operating company and the peers, further increase people's participating intention. UBER is selected as the sample of the sharing economy program, which their



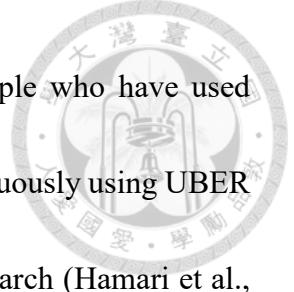
users include drivers and passengers. This research would focus on passenger side's intention of using UBER service rather than the driver's side, because this research considers that theses information mainly focus on passengers. Comparing with taking taxis in the past that there was seldom information disclosure before the trip, UBER mainly provides passengers flourish information which mentioned before. Drivers have to fill in their personal information, car information before they can officially accept passenger's service requesting, while passengers don't, and these information are disclosed to passengers. Therefore, because this study mainly focus on the effect of information, UBER passengers will be the research sample instead of drivers.

3.1.2. Variables

This present research attempts to conduct surveys, which includes questions and statements to which the participants are expected to respond anonymously. As the research model (Figure 1) shows, intention of participation is the dependent variable, information quality is the independent variable, and trust on the sharing company, trust on the sharing peers are independent and dependent variables.

3.1.3. Intention of Participation

When measuring passenger side's participating intention, the way of participation should be discussed first. Hence, this research would firstly distinguish people into two parts by their past experience, people who have used UBER before, and people who have



never tried UBER before. Then, the participating intention of people who have used UBER before will be defined and measured as the intention of continuously using UBER in the future, which the questionnaire is adapted from Hamari's research (Hamari et al., 2016). In contrast, to people who have never used UBER before, their participating intention will be defined and measured as the intention of starting to try UBER, which is adapted from Klopping's research (Klopping & McKinney, 2004). By measuring with different questions, people's true intention of using UBER in the future will be observed correctly under different conditions.

3.1.4. Information Quality

While UBER uses IT mechanisms to provide flourish information to passengers which are mentioned before, this research adapts the concept of information quality, which is an essential element of the IS successful model, for measurement. In E-commerce field, Bock progressed and examine the quality of information in four perspective, content, accuracy, timeliness, and usefulness. Through the questionnaire derived from these perspectives, passengers would be asked whether they consider the information that UBER provides have enough quality according to these perspectives.

3.1.5. Trust on the Sharing Company and the Sharing Peers

To measure trust, this research adapts McKnight's research (McKnight et al., 2002) to focus on measuring the trustee's ability, benevolence, and integrity. In passengers'



perspective, the sharing company would be UBER, and the sharing peers would be drivers.

3.2. Research Procedure

This research conducts surveys to examine the research model. Survey participants will be recruited from the Internet, and the participants must have heard about UBER before. The survey will be conducted in a laboratory with computers for participants to finish the survey. There are five parts of the survey. At the beginning part, this research will firstly ask whether the participant have used UBER before, and the answer of this question will influence the measurement of participating intention later. Second, this research will briefly introduce UBER to participants again. The introduction mainly includes two parts, the passenger's platform using process, and the information that UBER provides to the passenger. To deliver these two parts of information to participants, the introduction will provide screenshots of the process of using UBER by each steps, and the information which UBER provides to passengers at each steps will also be marked and emphasized. Thus, before answering the following questions, participants will have the knowledge of UBER which this research needs. Then, while the information which UBER provides is described to participants at the previous part, information quality will be implemented and measured in this part. Fourth, participants would be asked about their perception of trust on the UBER company and drivers, and their participating intention in the future as well. As mentioned, the measurement participating intention will depend on

the participant's previous using experience on UBER. And finally, demographic questions will be asked. Demographic information collected from the participants will be compared against the results of a field survey conducted by Market Intelligence & Consulting Institute (MIC) (2016), the largest survey institution in Taiwan's information and communication technology industry, on sharing economy usage, purpose and behavior. After finishing the surveys, participants will be rewarded with NT\$150 as compensation for their involvement.

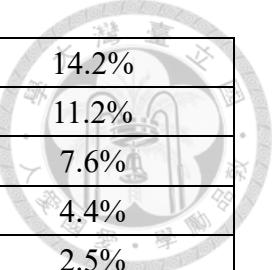
3.3. Participants

This study has collected 394 participants as the research sample. In this sample, 288 of the participants had used UBER before, whereas the other 106 of the participants had no using experience of UBER. Besides, the demographic distributions and sharing economy usage of the sample is listed and compared with MIC's reports for examination of external validity at the following section,

Table 1. Demographic Information and Sharing Economy Usage Comparing against That of MIC's Report

Demographic information and sharing economy usage		Sample of this study	MIC's report
Gender	Male	56.1%	48%
	Female	43.9%	52%
Location	Northern Taiwan	93.9%	46.2%
	Central Taiwan	2.5%	19.7%
	Southern Taiwan	3.3%	28.4%

	Eastern Taiwan	0%	5.7%
	Else provision	0.3%	0%
Operating System of Cellphone	Windows	1%	4.1%
	Android	40.4%	67.2%
	IOS	58.6%	28.7%
Age	13~15	0%	2.5%
	16~20	20.1%	10.2%
	21~25	69.3%	10.2%
	26~30	7.1%	11.1%
	31~35	2%	11.1%
	36~40	1%	9.7%
	41~45	0.3%	8.8%
	46~50	0.3%	12.1%
	51~55	0%	10.3%
	56~60	0%	8.3%
	Equal or more than 61	0%	5.7%
Contracts of the Mobile Internet traffic	No Internet Traffic	2%	11.6%
	Less than 3GB/month	5.8%	21.7%
	>3GB, but <5GB/month	6.6%	13.1%
	>5GB, but <10GB/month	12.4%	8.8%
	>10GB/month, but has limitation	10.2%	6.3%
	Without limitation	62.7%	38.4%
	Other(Please Describe)	0.3%	0.2%
Job Status	Full time	9.4%	51.1%
	Part time	9.1%	8.9%
	Student	78.9	12.8%
	Freelancer	0%	9.7%
	Retired	0%	4.6%
	Looking for Job	1.5%	4.4%
	Housewife/Househusband	0%	0.3%
	No need to work	0.8%	0.3%
	Other(Please Describe)	0.3%	0.9%
Availability of Income	Less Than \$5,000	12.7%	15.2%
	\$5,001 ~\$10,000	36.8%	12.2%
	\$10,001~\$20,000	29.9%	14.4%



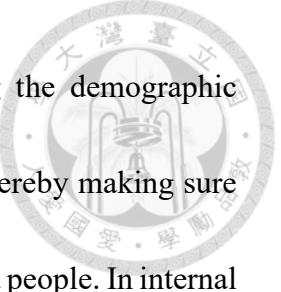
	\$20,001~\$30,000	11.2%	14.2%
	\$30,001~\$40,000	4.3%	11.2%
	\$40,001~\$50,000	3%	7.6%
	\$50,001~\$60,000	0.5%	4.4%
	\$60,001~\$70,000	0.3%	2.5%
	\$70,001~\$80,000	0%	1.3%
	More Than \$80001	1.3%	2.7%
Reasons to use sharing economy programs	Cost Saving	32.2%	37.2%
	Resource sharing	9.6%	27.9%
	Environment protection	2.8%	13.1%
	Relationship building	1%	9.5%
	Convenience	53.8%	34.8%
	Other(Please Describe)	0.6%	0.5%
Most used service of sharing economy programs	Multimedia entertainments	33%	48.4%
	Second-hand trading	18.5%	39.3%
	Picking up service	18.8%	34.2%
	Knowledge sharing	8.9%	33.1%
	House renting	2.5%	21.3%
	Lessons by experts	0.3%	15.3%
	Pets keeping	0%	15.3%
	House cleaning	0%	19.9
	Food delivering	7.1%	20.8%
	Online course	9.6%	14.6%
	Other(Please Describe)	1.5%	0%

Note: This survey collected data on March, 2017. The survey totally recruited 1208 respondents.

Chapter 4. Empirical Results

4.1. Procedure of Data Analyzing

This study adopted the following methods to analyze the data. First, the reliability and validity of the data will be examined. The validity includes external validity and



internal validity. External validity will be examined by comparing the demographic information between the sample of this study and MIC's research, thereby making sure the results of this study can be generalized across various situations and people. In internal validity, EFA will firstly be conducted to exclude items with low loadings, cross-factor loadings, or loaded on a wrong factor, and then CFA will be conducted to examine the construct validity (convergent and discriminant validity). On the other hand, reliability will be assessed with Cronbach's α . After the examinations above, a structural equation model analysis will be adopted to test the research hypothesis.

4.2. Reliability and Validity

First of all, to examine the external validity, the demographic information of this study is compared with MIC's report. While this study is conducted in National Taiwan University, it is found that the percentage of participants' career status is extremely different from MIC's report. There are 78.9% of the participants in this study are students, whereas MIC's report contains only 12.8% as students. This also caused strong difference of participants' salary and age distribution between this study and MIC's report, which are shown in table 1 above. Due to the difference, this research conducted alternative examination. Since the percentage of the students may be the main issue, this research conducted ks-test to the responses between students and non-students in the sample. After taking averages of the responding items respectively by

each constructs (i.e., information quality, trust on the platform, trust on the sharing peer,

and participating intention), the result is below,

Table 2. ks-test result of comparison between student and non-student groups

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of IQ_average is the same across categories of is_student.	Independent-Samples Kolmogorov-Smirnov Test	.316	Retain the null hypothesis.
2	The distribution of UT_average is the same across categories of is_student.	Independent-Samples Kolmogorov-Smirnov Test	.581	Retain the null hypothesis.
3	The distribution of DT_average is the same across categories of is_student.	Independent-Samples Kolmogorov-Smirnov Test	.508	Retain the null hypothesis.
4	The distribution of INTENTION_average is the same across categories of is_student.	Independent-Samples Kolmogorov-Smirnov Test	.417	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Note: IQ_average: Information Quality, UT_average: Trust on UBER, DT_average:

Trust on Drivers, INT_average: Intention.

Table 2 shows that the responses of each construct between students and non-students are not significantly different. Based on the result, whether a person is a student or not can be assumed to have no impact on the research model, which means this study has acceptable external validity.

After that, whether participants had used UBER before would influence the participants' responses should also be verified. Thus, another ks-test was conducted below,

Table 3. ks-test result of comparison between groups that participants had used UBER

before and had never used UBER before



Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of IQ_average is the same across categories of used_before.	Independent-Samples Kolmogorov-Smirnov Test	.217	Retain the null hypothesis.
2	The distribution of UT_average is the same across categories of used_before.	Independent-Samples Kolmogorov-Smirnov Test	.405	Retain the null hypothesis.
3	The distribution of DT_average is the same across categories of used_before.	Independent-Samples Kolmogorov-Smirnov Test	.027	Reject the null hypothesis.
4	The distribution of INTENTION_average is the same across categories of used_before.	Independent-Samples Kolmogorov-Smirnov Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Note: IQ_average: Information Quality, UT_average: Trust on UBER, DT_average: Trust on Drivers, INTENTION_average: Intention.

According to table 3, however, participants' responses of trust on drivers and their

participating intention are significantly different. Participants with different using experience may influence their behavior in the survey. Hence, These two groups of people cannot be treated as one sample in the following analysis. This research would later separate the whole sample into two subsamples. 288 participants of which had the experience of using UBER before, while the remaining 106 people don't, and both of which will respectively being assessed.

4.2.1. Sample with participants which had used UBER before

The validity and reliability of the sample which had used UBER before is examined firstly. This research adopted Exploratory factor analysis (EFA) to eliminate low loadings, cross-loadings, or items loaded on the wrong factors. To test the suitability of the EFA analysis, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adopted for assessment beforehand. While KMO index is considered to be greater than 0.50 for factor analysis (Hair, Anderson, Tatham, & Black, 1998), the KMO index of this study is 0.893 and is significant ($p<0.001$), which is regarded to be suitable. The EFA result with varimax rotation is listed below in table 4,

Table 4. EFA and Cumulative Percentage of Variance Explained before taking average on sample which participants had used UBER before

	Component					
	1	2	3	4	5	6
IQ1					.829	
IQ2					.711	
IQ3					.739	
IQ4					.791	
INT1			.802			
INT2			.911			
INT3			.909			
INT4			.906			
UT1		.681				
UT2		.710				
UT3		.771				
UT4		.796				
UT5		.761				
UT6		.635				
UT7		.794				
UT8					.752	
UT9					.682	

UT10						.583
DT1	.706					
DT2	.729					
DT3	.742					
DT4	.811					
DT5	.775					
DT6	.663					
DT7	.842					
DT8				.669		
DT9				.730		
DT10				.838		
				.812		
Eigen Value	4.864	4.433	3.381	3.159	2.833	2.152
% variance explained	16.771	15.286	11.658	10.892	9.768	7.422
Cumulative % variance explained	16.771	32.057	43.715	54.607	64.375	71.798

Extraction method: Principal component analysis; rotation method: Varimax with Kaiser normalization; IQ: Information Quality, UT: Trust on UBER, DT: Trust on Drivers, INT: Intention.

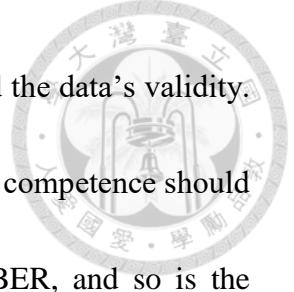
Based on the result of EFA, there are few issues to discuss. One item from the scale of participants trust on UBER (UT11) was dropped due to **wrong** factor loading (perceived trust on drivers: 0.608). Besides, the number of factors extracted should also be discussed. The construct “trust” in this study contains 3 elements: benevolence, integrity, and competence, and trust on UBER and drivers are measured respectively. Hence, the number of factors should theoretically be 8 (Information Quality, perceived benevolence, integrity, and competence respectively on UBER and drivers, and participating intention). However, the factors of perceived benevolence and integrity on UBER cannot be distinguish through the EFA analysis, and so is the perception of

benevolence and integrity on drivers. Therefore, there are finally 29 items only loaded on 6 factors, which is shown in table 4. Further, while benevolence, integrity, and competence are formed to be trust, this study took averages respectively by the perception of benevolence, integrity, and competence on UBER and drivers to became trust on UBER and drivers, and did another EFA analysis below,

Table 5. EFA and Cumulative Percentage of Variance Explained after taking average on sample which participants had used UBER before

	元件			
	1	2	3	4
IQ1		.811		
IQ2		.743		
IQ3		.744		
IQ4		.821		
INT1	.808			
INT2	.921			
INT3	.913			
INT4	.910			
UTB			.845	
UTI			.836	
UTC				.631
DTB			.733	
DTI			.700	
DTC				.881
Eigen Value	3.325	2.736	2.596	1.714
% variance explained	23.751	19.543	18.544	12.239
Cumulative % variance explained	23/751	43.294	61.838	74.077

Extraction method: Principal component analysis; rotation method: Varimax with Kaiser normalization; IQ: Information Quality, UTB: Trust on UBER_Benevolence, UTI: Trust on UBER_Integrity, UTC: Trust on UBER_Competence, DTB: Trust on Drivers_Benevolence, DTI: Trust on Drivers _Integrity, UTC: Trust on Drivers _Competence, INT: Intention.



Unfortunately, the result of table 5 reveals few concerns toward the data's validity. Theoretically, the perception on UBER's benevolence, integrity, and competence should be categorized to the factor which represent people's trust on UBER, and so is the elements on people's trust on drivers. However, through the EFA result, people's perception on UBER's benevolence, integrity and people's perception on drivers' benevolence, integrity are regarded as one factor. On the other hand, the perception on UBER's competence and the perception on drivers' competence are regarded as another factor. The result threatens this research's construct validity, which includes convergent validity and discriminant validity. As the perspective of convergent validity, the trust on UBER do not contain benevolence, integrity, and competence as one construct, and the trust on drivers have the same concern. And as the perspective of discriminant validity, theoretically trust on UBER and trust on drivers should be separated. However, the benevolence and integrity of UBER are related with the benevolence and integrity of drivers, and UBER's competence are related with drivers' competence. Therefore, due to the concerns on the convergent validity and discriminant validity, this research conducted additional analysis for further examination on validity.

Confirmatory factor analysis (CFA) is performed for further evaluation. For discussion of construct validity, table 6 shows the factor loadings, AVEs, CRs as assessments of convergent validity, and displays Cronbach's α as an index of reliability.

Besides, table 7 shows the square root the AVEs and the correlation of between each constructs to discuss discriminant validity. The tables are shown below,

Table 6. Reliability and Validity: Standardized Factor Loadings for the Construct Indexes, Cronbach's α , Average Variance Extracted, and Construct Reliability of sample which participants had used UBER before

Latent Construct	Indicator	Standardized Loading	AVE	CR	Cronbach's Alpha
Information Quality	IQ1	0.73			
	IQ2	0.69			
	IQ3	0.7	0.53	0.82	0.81
	IQ4	0.79			
Trust on the sharing economy platform	UTB	0.8			
	UTI	0.82	0.51	0.75	0.71
	UTC	0.46			
Trust on the sharing peer	DTB	0.85			
	DTI	0.9	0.62	0.82	0.81
	DTC	0.56			
Intention of participating	INT1	0.75			
	INT2	0.93			
	INT3	0.91	0.76	0.93	0.92
	INT4	0.88			

IQ: Information Quality, UTB: Trust on UBER_Benevolence, UTI: Trust on UBER_Integrity, UTC: Trust on UBER_Competence, DTB: Trust on Drivers_Benevolence, DTI: Trust on Drivers_Integrity, UTC: Trust on Drivers_Competence, INT: Intention.

Table 7. Discriminant Validity: The Square Root of AVEs of sample which participants had used UBER before

	1	2	3	4
1. Information Quality	0.729			
2. Trust on the sharing economy platform	0.436	0.713		
3. Trust on the sharing peer	0.314	0.625	0.784	
4. Intention of participating	0.161	0.234	0.274	0.870



Note: The diagonal numbers are square root of AVE.

Factor loadings, AVEs, CRs in table 6 will be assessed to examine convergent validity. Factor loadings are suggested to be greater than .40 (Hair et al., 1998), and the result reveals that the standardized loadings of all items exceed the threshold. Besides, the AVEs and CRs of all the items are above the recommended cut-off level respectively, which AVE is suggested to be more than 0.5 and CR should be more than 0.7 (Fornell & Larcker, 1981). Further, the Cronbach's α value of the items also exceed the satisfactory level which is above 0.7, which means that the items have good reliability. Therefore, convergent validity is considered to be acceptable when regarding factor loadings, AVEs, and CRs as its reflections, that the indexes show the constructs, especially trust, can still be formed by their original sub items, like benevolence, integrity, and competence.

After that, discriminant validity is assessed by comparing the root square of AVEs of each constructs and their correlation coefficient between other constructs. As illustrated in table 7, it is found that the diagonal numbers which representing the root square of AVEs of all the constructs are higher than off-diagonal values which means the correlation coefficients. The result is considered reaching the satisfactory level of discriminant validity (Fornell & Larcker, 1981).

According to the result revealed by EFA and CFA analysis above, this study would like to discuss the construct validity again, especially focus on trust on UBER and trust on drivers. Based on the analysis of EFA, this research admits that the convergent validity and discriminant validity would be questioned because benevolence, integrity, and competence cannot be formed as one factor that represent trust, and trust on UBER and trust on drivers have components that are categorized as same factors. However, the indexes through CFA not only suggest convergent validity of the measurements is acceptable, but also indicated the discriminant validity of all construct are suitable. Therefore, collecting the perspective from different analysis, this research suggests that though the issues of construct validity existed, but is still tolerable.

Another issue is discovered through table 7 that the coefficient correlation between trust on UBER and trust on drivers is 0.625. The number is high and reveals that collinearity may existed between these two factors. Thus, this research conducted Variance Inflation Factor (vif) examination below to test whether the factors have collinearity effect,

Table 8. Vif Table of sample which participants had used UBER before

Construct	Collinearity Statistics	
	Tolerance	VIF
IQ_average	.807	1.239
DT_average	.608	1.646
UT_average	.546	1.831

IQ_average: Information Quality, DT_average: Trust on Drivers, UT_average: Trust on



Constructs will be considered having collinearity effect when vif value is greater than 10 (Cohen, West, & Aiken, 2014). Table 8 shows that all the vif value of the constructs are much less than 10. Thus, even though trust on UBER and drivers have high coefficient correlation in table 7, the vif result eliminate the concern of their collinearity to a certain extent.

4.2.2. Sample with participants which had never used UBER before

After examining the validity and reliability of the sample which people had used UBER before, this study would move on to discuss the validity and reliability of the sample which participants had never used UBER before. EFA with varimax rotation is conducted firstly below. The KMO index is 0.911 in a significant level ($p<0.001$).

Table 9. EFA and Cumulative Percentage of Variance Explained before taking average of sample which participants had never used UBER before

	元件						
	1	2	3	4	5	6	7
IQ1							.681
IQ3							.630
IQ4							.690
IN1			.738				
IN3			.797				
IN4			.794				
IN5			.726				
UT1				.746			
UT2				.668			
UT3				.713			
UT4	.626						

UT5		.804					
UT6		.740					
UT7		.745					
UT8						.760	
UT9						.779	
UT10						.587	
DT2	.651						
DT3	.783						
DT4	.853						
DT5	.803						
DT6	.724						
DT7	.799						
DT8					.808		
DT9					.741		
DT10					.716		
Eigen Value	5.153	3.335	2.868	2.762	2.515	2.390	2.039
% variance explained	19.819	12.828	11.030	10.622	9.672	9.191	7.841
Cumulative % variance explained	19.819	32.647	43.677	54.298	63.971	73.162	81.003

Extraction method: Principal component analysis; rotation method: Varimax with Kaiser normalization; IQ: Information Quality, UT: Trust on UBER, DT: Trust on Drivers, INT: Intention.

Based on the EFA result, 26 items are extracted to 7 factors. IQ2, INT2, UT11, DT11 are dropped due to wrong loading or cross-loading. Besides, theoretically there are 8 factors extracted (Information Quality, perceived benevolence, integrity, and competence respectively on UBER and drivers, and participating intention). However, perceived benevolence, integrity of drivers are not distinguishable through EFA. Further, another EFA were conducted after taking averages respectively by the perception of benevolence,



integrity, and competence on UBER and drivers, which becoming trust on UBER and drivers. The result is below,

Table 10. EFA and Cumulative Percentage of Variance Explained after taking average of sample which participants had never used UBER before

	Component		
	1	2	3
IQ1			.692
IQ3			.735
IQ4			.771
IN1		.758	
IN3		.805	
IN4		.813	
IN5		.719	
UTB	.688		
UTI	.731		
UTC	.637		
DTB	.888		
DTI	.887		
DTC	.741		

Extraction method: Principal component analysis; rotation method: Varimax with Kaiser normalization; IQ: Information Quality, UTB: Trust on UBER_Benevolence, UTI: Trust on UBER_Integrity, UTC: Trust on UBER_Competence, DTB: Trust on Drivers_Benevolence, DTI: Trust on Drivers _Integrity, UTC: Trust on Drivers _Competence, INT: Intention.

EFA shows that items are extracted to 3 factors. Through table 10, trust on UBER and trust on drivers are regarded as a same factor which is undistinguishable. Similar with the sample which participants had used UBER before, this result threaten the construct validity especially discriminant validity. Thus, CFA were adopted to provide more evidence to discuss construct validity and reliability.

Table 11. Reliability and Validity: Standardized Factor Loadings for the Construct Indexes, Cronbach's α , AVE, and CR for the Construct of sample which participants had never used UBER before

Latent Construct	Indicator	Standardized Loading	AVE	CR	Cronbach's Alpha
Information Quality	IQ1	0.7			
	IQ3	0.64	0.46	0.72	0.81
	IQ4	0.71			
Trust on the sharing economy platform	UTB	0.87			
	UTI	0.87	0.67	0.86	0.71
	UTC	0.71			
Trust on the sharing peer	DTB	0.94			
	DTI	0.93	0.75	0.90	0.81
	DTC	0.71			
Intention of participating	INT1	0.6			
	INT3	0.68			
	INT4	0.9	0.56	0.83	0.75
	INT5	0.78			

IQ: Information Quality, UTB: Trust on UBER_Benevolence, UTI: Trust on UBER_Integrity, UTC: Trust on UBER_Competence, DTB: Trust on Drivers_Benevolence, DTI: Trust on Drivers _Integrity, UTC: Trust on Drivers _Competence, INT: Intention.

Table 12. Discriminant Validity: The Square Root of AVEs of sample which participants had never used UBER before

	1	2	3	4
5. Information Quality	0.684			
6. Trust on the sharing economy platform	0.610	0.820		
7. Trust on the sharing peer	0.448	0.759	0.867	
8. Intention of participating	0.391	0.473	0.452	0.785

Note: The diagonal numbers are square root of AVE.

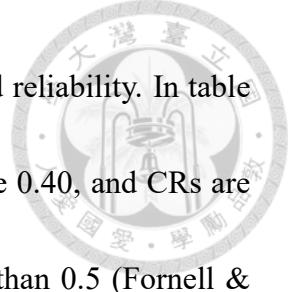


Table 11 and table 12 discusses about the construct validity and reliability. In table 11, all the factor loadings of the items are above the suggested value 0.40, and CRs are also exceed 0.70. While AVE is commonly suggested to be higher than 0.5 (Fornell & Larcker, 1981), information quality has 0.46 which is a little bit lower than the threshold, and the other constructs both fulfill the suggested value. Besides, the Cronbach's α are all greater than the threshold 0.70. These indexes points out the sample still has acceptable convergent validity and good reliability. Table 12 presents the square root of AVEs and the coefficient correlation between constructs for judgement of discriminant validity. Since all the square root of AVEs are all greater than the coefficient correlations, discriminant validity can also be regarded as acceptable.

The result of validity and reliability examination through EFA and CFA analysis presents similar condition to the result of the sample which participants had used UBER before. The EFA result is not ideal because trust on UBER and trust on drivers are regarded as similar factors. However, CFA provided different perspective to propose that the sample still has acceptable construct validity. Thus, the conclusion this study raises at this part is similar to previous sample, that the validity is not favorable, but still tolerable.

Also, when focusing more on table 12, it is discovered that the coefficient correlation between trust on UBER and trust on drivers is 0.759, which is considerably high. Hence, vif examination is also conducted below,

Table 13. Vif Table of sample which participants had never used UBER before

Construct	Collinearity Statistics	
	Tolerance	VIF
IQ_average	.627	1.594
DT_average	.333	3.007
UT_average	.423	2.362

IQ_average: Information Quality, DT_average: Trust on Drivers, UT_average: Trust on UBER

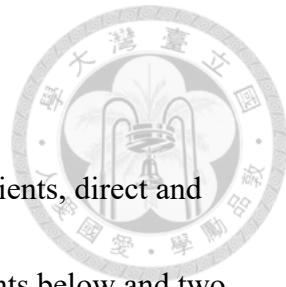
The numbers of vif value from table 13 are all less than the threshold 10.0 (Cohen et al., 2014). Thus, in this sample, even though trust on UBER and drivers have high coefficient correlation in table 12, the vif result eliminate the concern of their collinearity to a certain extent.

4.3. SEM Analysis

Structural equation model was run on LISREL8.54 program to test the research model. Because of the separation of two samples, this study respectively construct the SEM model based on the samples which participants had used or never used UBER before. The goodness of fit of two models will be provided firstly, and then hypothesizes will be tested afterward. Table 14 shows the goodness of the models.

Table 14. Goodness of Fit Statistics Results of SEM Analysis

Sample	χ^2/df	GFI	AGFI	CFI	NFI	NNFI	IFI	RMSEA	SRMR
Used UBER	4.06	0.87	0.81	0.93	0.91	0.92	0.93	0.10	0.09
Never Used UBER before	2.17	0.84	0.76	0.95	0.91	0.93	0.95	0.11	0.07



Hypotheses will be tested by looking at the correlation coefficients, direct and indirect effect between constructs. Table 15 displays all the coefficients below and two samples will be discussed respectively.

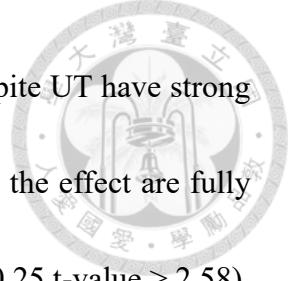
Table 15. Results of SEM Analysis

Sample	Hypothesis	Direct Effect Coefficients (std.)	Indirect Effect Coefficients (std.)			Total Effect Coefficients (std.)	Results of Hypothesis Testing
			X->M	M->M' (If existed)	M(M')->Y		
Used UBER before	H1 IQ->UT	0.45** (0.09)	-	-	-	0.45** (0.09)	Supported
	H2 IQ->DT	0 (0.10)	-	-	-	0 (0.10)	Not Supported
	H3 IQ->UT->DT	0 (0.10)	0.45** (0.09)	-	0.72** (0.12)	0.33** (0.10)	Supported
	H4 IQ->UT->INT	-	0.45** (0.09)	-	0.06 (0.10)		Not Supported
	H5 IQ->DT->INT	-	0 (0.10)	-	0.25* (0.08)	0.11** (0.04)	Not Supported
	H6 IQ->UT->DT->INT	-	0.45** (0.09)	0.72** (0.12)	0.25* (0.08)		Supported
Never Use UBER before	H1 IQ->UT	0.78** (0.28)	-	-	-	0.78** (0.28)	Supported
	H2 IQ->DT	-0.32 (0.29)	-	-	-	-0.32 (0.29)	Not Supported
	H3 IQ->UT-	-0.32 (0.29)	0.78** (0.28)	-	1.11** (0.38)	0.55** (0.29)	Supported

	>DT						
	H4 IQ->UT->INT	-	0.78** (0.28)	-	0.50* (0.18)	0.41** (0.13)	Supported
	H5 IQ->DT->INT	-	-0.32 (0.29)	-	0.03 (0.13)		Not Supported
	H6 IQ->UT->DT->INT	-	0.78** (0.28)	1.11** (0.38)	0.03 (0.13)		Not Supported

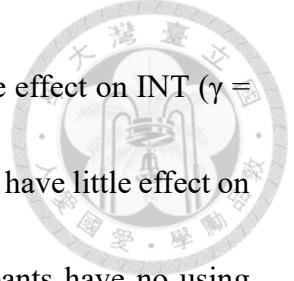
Note: (): Standard error; * $t > 1.96$; ** $t > 2.58$; IQ: Information Quality, UT: Trust on UBER, DT: Trust on Drivers, INT: Intention.

The model of the sample which participants had used UBER before will be discussed first. Information quality(IQ) have positive effect on people's trust on UBER(UT, $\gamma = 0.45$) with strong significant level (t value >2.58), which supports hypothesis 1. Hypothesis 3 is supported because IQ have positive total effect on people's trust on drivers(DT) ($\gamma = 0.45$), and the effect between IQ and UT ($\gamma = 0.45$), which is the mediator, and the effect between UT and DT ($\gamma = 0.72$) are also positive at a significant level (both of their t-values are greater than 2.58). Furthermore, while the direct effect of IQ on DT is insignificant (t value < 1.96), it demonstrates that the effect of IQ on DT is fully mediated by UT. This full mediation effect of UT on IQ to DT causes hypothesis 2 (IQ has positive effect on DT) being not supported, and leads to hypothesis 5 (IQ has positive effect on participating intention through the effect on DT) is not supported as well. After that, hypothesis 4 is not supported because UT have little direct effect on participating



intention (INT). This study did a further analysis and found that despite UT have strong positive total effect on INT ($\gamma = 0.24$) significantly (t value > 2.58), the effect are fully mediated by DT (UT to DT: $\gamma = 0.72$ t-value > 2.58 , DT to INT: $\gamma = 0.25$ t-value > 2.58), and this causes that there is no positive path from IQ to UT further to INT. Finally, the path from IQ to UT further to DT and finally to INT existed, that the total effect of IQ to INT is positive ($\gamma = 0.11$) with strong significant level (t value > 2.58), and the effect from IQ to UT ($\gamma = 0.45$), UT to DT ($\gamma = 0.72$), and DT to INT ($\gamma = 0.25$) are all positive, which supports hypothesis 6. To sum up, H1, H3, H6 are supported, and H2 H4 H5 are not supported due to the fully mediating effects from UT and DT.

Moving on to the sample which participants had never used UBER before, all the hypothesis are being tested respectively as well. Information quality(IQ) have positive effect on people's trust on UBER(UT, $\gamma = 0.78$) with strong significant level (t value > 2.58), which supports hypothesis 1. UT is also performed as a mediator between IQ and DT, that IQ have positive effect on UT ($\gamma = 0.78$), UT have positive effect on DT ($\gamma = 1.11$), IQ have positive total effect on DT ($\gamma = 0.55$), and IQ have insignificant direct positive effect on DT ($\gamma = -0.32$, t-value < 1.96). This supports hypothesis 3 that UT fully mediates the effect between IQ and DT, and hypothesis 2 and hypothesis 5 are not supported because little direct effect existed between IQ and DT. Hypothesis 4 is supported that IQ have positive effect on INT through the mediation of UT, that IQ have



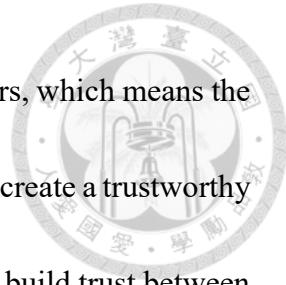
positive effect on UT which is being validated, and UT have positive effect on INT ($\gamma = 0.41$, t-value > 2.58). However, H5 and H6 is not supported while DT have little effect on INT ($\gamma = 0.03$, t-value < 1.96). Therefore, in this case that participants have no using experience on UBER, H1, H3 H5 are supported. And in contrast, H2, H5, H6 are not supported because of the mediation effect and the lack of experience.

Chapter 5. Conclusion, Theoretical Contribution, and Managerial Implications

This research tries to proof that information which UBER provides regarding its service by IT mechanisms can increase trust, further increase users' participating intention. This concept is proofed after statistically examining the hypothesizes. Below are the findings through the results.

Overviewing the result of people who had used UBER before, information quality can indirectly increase participating intention. Interestingly, the only path that information quality can increase people's intention is to increase trust on the UBER platform, and then increase the trust on drivers, and finally increase their intention. Two conclusions are made through the finding of the only path.

First, information quality can definitely increase trust, but more importantly, institutional-based trust plays as the key factor that cause the trust on drivers is mainly increased through information quality by the mediator, the trust on the UBER. This proofs



this study's argument that while the trustor and the trustee are strangers, which means the relationship between passengers and drivers, a third party is needed to create a trustworthy environment. UBER uses IT mechanisms to provide information and build trust between users and itself first, and through the information which UBER provides by the IT mechanisms, passengers can further know more about the drivers though they are strangers before, so they are more able to perceive benevolence, integrity, and ability from the drivers, thereby increase the trust on the drivers. In this process, UBER successfully anchors itself as an third party information provider.

Second, trust on UBER cannot directly increase passengers' participating intention, but through their trust on drivers instead. This research considers that this is because drivers are the actual service providers who literally carry passengers to destinations. While this sample contain only passengers who had used UBER before, they know more clearly that their using experience are strongly influenced by the service from the drivers. People's trust on UBER persuade them more willing to trust drivers, but the trust that the drivers would fulfill their expectation of the driving services and improve the experiences of the trip will be the key determinant to use UBER. Thus, the trust on drivers become the mediator between the trust on UBER and participating intention.

Therefore, to sum up, information quality will increase people's trust on UBER first, and then increase trust on drivers. And when users indeed trust the drivers, they would

finally become more willing to use the UBER service.

Comparing with the sample which participants had used UBER before, people who had never used UBER before present few different behaviors. Similar to the previous sample, information quality can increase trust on UBER, and the trust on UBER fully mediate the effect between information quality and the trust on drivers. However, it is found that the trust on UBER can directly increase intention, and the trust on drivers do not have positive effect on intention. This research considers that prior knowledge may be the main reason. This research have proposed that when the passengers have higher trust, they will have higher participating intention because they consider their expectation can be fulfilled. However, things go different when people are unexperienced of taking UBER. People's trust of UBER can increase their intention because they've at least already heard of UBER, and this research have revealed the information UBER provided again, so they have a clearer image of what UBER platform can help reaching their expectation. However, while they had no actual interacting experience with drivers before, they do not clearly know what the drivers can do for them additionally, which means they have no actual expectation, and this leads to that the trust on drivers do not have the power to influence their participating intention. Thus, in this sample, information quality would increase the trust on UBER, and further increase the trust on drivers and the intention respectively, but not through the trust on drivers.

The theoretical contribution of this research is proofing that IT mechanism can be regarded as an innovative way to increase trust by facilitating information sharing. In the past, information sharing between peers is not easy, and Burt proposed the social network as a solution. He considered that a social network which is closed enough and hard to escape can force people to behave well, because bad reputation will spread from the connections of the social network, and trust will increase through information sharing in this network. But nowadays, in this research, IT mechanism is proofed to be an alternative way to build an environment with trust by providing high quality information. Information do not necessary to be shared through social networks. Instead, IT mechanisms become another efficient information discloser. Take UBER as an example, passengers and drivers are not formed to be in a social network, and most of them are strangers to each other. Trust is being built through the information UBER provide, and they are still willing to participate in this sharing economy program. This research argues that precisely because of the IT mechanisms which can facilitate information sharing, new business models like UBER and Airbnb are able to rise. Users' willingness to engage in such sharing economy programs are based on the high quality information, which is provided by the IT mechanisms. Therefore, this research believes that new opportunities with innovative sharing types will be invented based on the contributions of information provided by the IT mechanisms.

Two managerial implications can be derived from this research. First, it is found that

UBER cannot to be disintermediated between passengers and drivers. Through the

models of this study contain sample that had used or never used UBER before, the path

to increase users' intention are both pass through the trust on UBER. This demonstrates

the value of UBER itself. A trustful environment is built by UBER as a third party, which

is completely different from traditional taxi that is less trust as foundation of interactions.

Second, by segmenting target customers into two groups which are respectively

customers who had used UBER before, and customers who had never used UBER before,

UBER should develop different strategies. For people who had used UBER before, UBER

should put more effort on increasing people's trust on drivers, because their continue

using intention in mainly depend on their trust on drivers. To increase people's trust on

drivers, Uber should increase their perception of the drivers' benevolence, integrity, and

competence. For example, some innovative picking up platform encourages the

passengers to reveal their tendency of chatting in the car, and the drivers will decide

whether to talk to the passengers according to their record. This policy will make the

drivers being regarded more benevolent to the passenger. In contrast, for people who had

no using experience of UBER, UBER should persuade them to trust more on UBER itself,

which can attract them more willing to give a first try on UBER service. For example, it

may be a good option for UBER to post ads and demonstrate their benevolence, integrity,

and ability to the potential passengers. Thus, UBER should position itself as an disintermediated third party service provider, and set different strategies on different types of people.



Chapter 6. Limitations and Future Research

There are few limitations in this research. First, while this research is conducted in the campus, the percentage of students are relatively high, and this is why this research also conducted the ks-test and tried to eliminate the sample bias. Second, UBER is the only sharing economy platform selected as the research target, and future research can consider to expand the scope to other platforms with various service models and other industries. Third, the group of people this research focuses on is only the passenger. While the roles in the UBER platform contain drivers and passengers, the sample of drivers are more difficult to reach because of the budget limitation and its scarcity comparing with the passengers. Future research can focus more on investigating the behaviors of the service provider side in the sharing economy programs.

Therefore, future research can expand to few directions. First, as previous mentioned, researchers can consider to put more emphasize on other types of sharing economy platforms and different roles within the platforms. Second, while this research suspects that prior knowledge and experience may influence people's trust toward their participating intention, future research could consider to verify this argument. At last,

while friends and families surrounded an individual may have different opinion to specific sharing economy platforms, these tendency and attitude of the opinions can also be taken into considerations as another way of information sharing. Future research can discuss more about how theses opinion influence trust, participating intention, or even having impact on the effects discussed in this model.



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Appendix A: Informed Consent

共享經濟參與行為之研究

感謝您的熱心參與！

這是一份學術研究問卷，目的是瞭解您的共享經濟參與行為。

您的填答對我們的研究非常重要，所以請按實際狀況作答。

填答問卷過程，全程使用無痕視窗填答，

且您所填寫的任何資料僅用於學術研究，絕對保密。

因此，絕不可能將您的個人資料洩漏予第三人，亦不會移作任何商業使用。

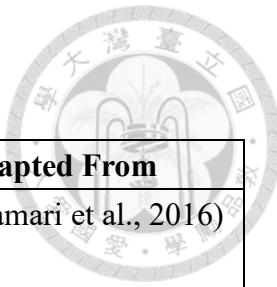
未來資料的結果也將以集體數據的方式呈現，以保護您個人的隱私。

敬請安心依照您的個人狀況完整填寫。

最後非常感謝您的參與，有任何問題歡迎您隨時與我們聯繫。

指導教授 國立臺灣大學資管系 吳玲玲 教授

指導學生 國立臺灣大學資管系 碩士生 林彥礪 敬上

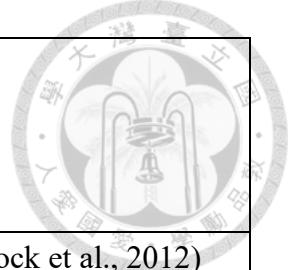


Appendix B: Survey items

Item	Statement	Adapted From
Intention of keeping participation	經過全面考慮，我預期在未來持續將 UBER 作為我的通勤選項之一。 我可以預見自己在未來更頻繁的將 UBER 作為我的通勤選項之一 我可以預見自己更常將 UBER 作為我的通勤選項之一 在未來，我有可能頻繁地將 UBER 作為我的通勤選項之一	(Hamari et al., 2016)
Intention of starting participation	我認為相較於傳統的計程車, UBER 更適合用來通勤 就我個人而言, 相較於傳統計程車, 我傾向在通勤時使用 UBER 對我來說, 通勤時 UBER 比傳統計程車來得更好 使用 UBER 是個不錯的通勤方式 總的來說, 我喜歡在通勤時使用 UBER	(Klopping & McKinney, 2004)
Trust on the sharing peer	我相信 UBER 的司機會以我的最佳利益行事 (Benevolence) 如果我需要幫助, UBER 的司機會盡力幫助我。 UBER 的駕駛員會在乎我的滿意度, 而不僅僅關注其自身利益。 (Benevolence) UBER 的司機在與我打交道時是真誠的 (Integrity) 我會認定 UBER 的駕駛員是誠實的 (Integrity) UBER 的司機是會遵守承諾的。 (Integrity) UBER 的司機誠摯而真誠的	(Bock et al., 2012; McKnight et al., 2002)



	<p>(Integrity)</p> <p>UBER 的駕駛員在提供叫車服務方面有競爭力且有效率(Ability)</p> <p>UBER 的駕駛員很好的扮演了提供叫車服務的角色</p> <p>(Ability)</p> <p>總體而言，UBER 的駕駛人是一個適任且專業的叫車服務提供者。</p> <p>(Ability)</p> <p>一般而言，UBER 的駕駛員對於叫車服務非常了解</p> <p>(Ability)</p>	
Trust on the company	<p>我相信 UBER 會以我的最佳利益行事</p> <p>(Benevolence)</p> <p>如果我需要幫助，UBER 會盡力幫助我。</p> <p>(Benevolence)</p> <p>UBER 會考量到我的利益，而不僅僅關注其自身利益。</p> <p>(Benevolence)</p> <p>UBER 在與我打交道時是真誠的</p> <p>(Integrity)</p> <p>我會認定 UBER 是誠實的</p> <p>(Integrity)</p> <p>UBER 是會遵守承諾的。</p> <p>(Integrity)</p> <p>UBER 是誠摯而真誠的</p> <p>(Integrity)</p> <p>UBER 在提供叫車服務方面有競爭力且有效率</p> <p>(Ability)</p> <p>UBER 很好的扮演了提供叫車服務的角色</p> <p>(Ability)</p> <p>總體而言，UBER 是一個適任且專業的叫車服務提供者。</p>	(Bock et al., 2012; McKnight et al., 2002)

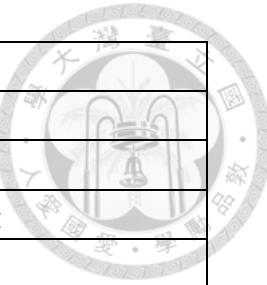


	(Ability) 一般而言，UBER 對於叫車服務非常了解 (Ability)	
Information quality	UBER 提供了充分的服務訊息 UBER 提供了準確的服務訊息 UBER 即時地提供服務訊息 UBER 提供的服務資訊十分有幫助	(Bock et al., 2012)



Appendix C: Demographic Information

Questions	Choice
性別	男
	女
居住地	北
	中
	南
	東
	離島
智慧手機作業系統	Windows
	Android
	IOS
年齡	13~15
	16~20
	21~25
	26~30
	31~35
	36~40
	41~45
	46~50
	51~55
	56~60
	61(含)以上
選用的行動網路方案	無使用任何行動上網方案
	每月行動上網流量 3GB 以下
	每月行動上網流量超過 3GB，未滿 5GB
	每月行動上網流量 5GB 以上，未滿 10GB
	每月行動上網流量 10GB 以上 (但有流量上限)
	每月行動上網流量無上限
	其他(請說明)
工作狀態	全職工作
	兼職工作
	全職學生



	自僱者
	已退休
	待業中
	全職家庭主婦／家庭主夫
	目前不需要工作
	其他(請說明)
可支配所得	5,000 元 (含) 以下
	5,001 元~10,000 元
	10,001 元~20,000 元
	20,001 元~30,000 元
	30,001 元~40,000 元
	40,001 元~50,000 元
	50,001 元~60,000 元
	60,001 元~70,000 元
	70,001 元~80,000 元
	80001 以上
使用共享經濟服務的主因	節省生活開支
	資源共享互惠
	達成環保效益
	與人建立關係
	服務足夠便利
	其他(請說明)
最常利用的共享經濟服務	影音娛樂社群
	二手物品拍賣
	App 叫車服務
	知識分享社群
	房屋短租服務
	達人開課的課程
	平台寵物寄養服務
	家居清潔到府服務
	美食跑腿快送服務
	大規模線上開放課程
	其他(請說明)