

**AN ANALYSIS OF THE SUSTAINABLE CONSUMPTION OF
SHARING ECONOMY ON URBAN MOBILITY SERVICE IN
SELECTED CITIES OF PEOPLE'S REPUBLIC OF CHINA**



**A Dissertation Submitted in Partial
Fulfillment of the Requirements for the Degree of
Doctor of Philosophy (Development Administration)
School of Public Administration
National Institute of Development Administration
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SELECTED CITIES OF PEOPLE'S REPUBLIC OF CHINA**

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ABSTRACT

Title of Dissertation	AN ANALYSIS OF THE SUSTAINABLE CONSUMPTION OF SHARING ECONOMY ON URBAN MOBILITY SERVICE IN SELECTED CITIES OF PEOPLE'S REPUBLIC OF CHINA
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Promoting the sustainable consumption of urban mobility services is regarded as a strategic goal of social sustainable development. Originally, the sharing economy was initiated to facilitate sharing behaviour as a way of utilising idle resources through collaborative consumption by Felson and Joan back in the year 1978. Starting from 2010, scholars have begun conducting a variety of researches regarding the impacts of the sharing economy on specific industries such as the tourism, hotel, education and financing sectors.

However, some research gaps still remain, particularly with regard to the linkage between the key social, economic, technological, legal, and trustworthy aspects of the sharing economy and sustainable consumption behaviour, especially with mobility services. Specifically, effective policies for the sustainable development of the sharing economy are lacking in relation to the stakeholders (business operators), consumers (users) and government. Therefore, the main objectives of the study were to 1) study the public stance and attitudes towards sustainable consumption behaviour regarding urban mobility services in the sharing economy, 2) analyse the key factors affecting the sustainable consumption behaviour of urban mobility services in the sharing economy, and 3) propose effective policy for the sustainable development of the sharing economy in relation to the actions of stakeholders, consumers and governments as well as for the guidance of future research.

A methodological review of related literature on the sustainable development of the sharing economy was conducted. Based on the findings, a mixed research methodology was employed in this dissertation. Firstly, the researcher tried to identify the public stance and attitudes towards sustainable consumption behaviour in relation to urban mobility

services in the sharing economy by conducting in-depth semi-structured interviews of representatives that included stakeholders (such as the DIDI operator), the government (China Transportation) and consumers (users). A total of 10 interviewees with different backgrounds from 6 selected cities in China participated in this research. Then, two rounds of focus-group semi-structured interviews involving 30 interviewees were conducted to generate perspectives and stances from the consumer (users) groups on sustainable consumption behaviour with regard to urban mobility services in the sharing economy. Next, 393 sets of data were collected from the stakeholders, consumers and government representatives in 6 designated cities of China to enable analysis of the sustainable consumption of urban mobility services in the sharing economy. Lastly, policies were recommended to support the sustainable development of the sharing economy to guide actions and future research based on the results and findings from both the qualitative and quantitative analysis of this study.

The integrated research results found that: 1) the significant economic benefits arising from cost-effective consuming behaviour and greater conditions of financial flexibility and access over ownership via sharing platforms make urban residences consume sustainably on urban mobility platforms in the sharing economy; 2) people consume more sustainably through the sharing mobility platform depending on the higher levels of trust towards the app and digitalised E-payment systems, the reputation of the business operators, the quality of the services, and the reviews provided by other consumer (users); 3) citizens with a positive sustainability ideology and cultural orientation towards urban mobility services on the sharing economy continue to utilise the mobility services; 4) positive government stances and the legalisation of the sharing platforms will determine the sustainable development of the sharing economy by enabling urban residences to participate and consume the shared services sustainably; 5) the economic benefits of good price levels, the financial flexibility enjoyed by consumers, and ease of access to the services will determinate the sustainable development of the sharing economy by encouraging a high frequency of consumption; and 6) people with higher levels of trust towards technology and the good reputation of the service providers affects the sustainable development of the sharing economy.

Lastly, based on the research findings, the researcher recommended policies to promote the sustainable development of the sharing economy by guiding the actions of stakeholders, consumers and governments as well as informing future researchers on how to add another layer of insight into the complexity of the sustainable model of the sharing economy in other related areas.



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CHAPTER 1

INTRODUCTION

1.1 Background of study

In 1978, Marcos Felson and Joan Spence initiated the original concept of "collaborative consumption" (i.e., the sharing economy) when studying the issue of personal car sharing. At that time, idle resources were shared through means of an online platform, also known as the sharing economy. Later, Porter & Kramer (2011) proposed that the sharing economy is nothing more than an occasional renting model. Belk (2014) expanded the discussion by pointing out that sharing is an alternative to the private ownership that is emphasised in both marketplace exchange and gift-giving. Zervas, Proserpio, & Byers (2014) described the sharing economy as an economic system based on sharing underused assets or services, for free or for a fee, directly from individuals.

In 2017, the Center for Sharing Economics Research of the China National Information Center made the following statement: "Sharing economy refers to the use of modern information technology such as the Internet characterised by the sharing of rights of use, the integration of massive needs, decentralised idle resources, and user's satisfaction."

Su Jian (2017) considered the development of the sharing economy from the perspective of various items in the marketplace. On two paths, individual details can be shared, and public goods can be exclusive (Su Junhua & Wu Danjie, 2018). A related study on the business model of a sharing economy based on a mobile Internet platform can be divided into four categories: technological factors, demand factors, competition factors and policy factors. However, the author believes that the sharing economy, especially with regard to the sharing of mobility services, is a new economic form that

uses the Internet as a medium to improve the efficiency of resource allocation between supply and demand by integrating various resources. Sharing economy has the following characteristics: temporarily idle resources, dual rights (user rights and ownership), separate resources, an Internet-based trading platform, and higher public participation. In short, the most prominent feature of the sharing economy is “not seeking for ownership, but seeking to use”.

Promoting sustainable consumption in cities and communities is a significant aspect of the sustainable development goals in our society. Significantly, the social, economic, technological, and legal issues of sustainable development have become prominent concerns faced by the sharing society and the government. Since 2015, the Chinese central government has initiated five promoting concepts: innovativeness, coordination, green, openness and the sharing economy. Thus, the sustainable development of the sharing society is regarded as the overall goal of China's social construction (World Bank, 2015). The popularity of this concept is related to the requirement of "building a harmonious Chinese socialist society" claimed by the Fourth Plenary Session of the Sixteenth Central Committee of the Communist Party of China in 2004 and the practical fields of social construction of the 17th National Congress of the Communist Party of China (2007) has emphasised the construction of a harmonious society and the improvement of people's livelihoods.

At present, many countries advocate this concept in responding to the basic orientation of global development that is to build a sustainable economic development society. However, in the 1990s, the World Bank advocated the concepts of "broad-based growth" and "pro-poor growth" (Rongxin, 2019). Then in 2007, the Asian Development Bank proposed the concept of "inclusive growth", emphasising that economic growth must have the characteristics of sharing, sustainability and popular acceptance (The World Bank, 2008). These related events come from international and domestic activities, which have laid the political foundation for the development of China's sharing economy.

Since 2015, the central Chinese government has vigorously advocated the concept of sharing in society development, which is demonstrated by a series of public policy documents. For example, China's 13th Five-Year Plan emphasises the concept of industry-sharing development and interprets it as a development path that relies on the masses, promotes people's unity, and leads to common prosperity (Xin Huashe, 2016). The implementation of these policy developments is bound to stimulate the need for theoretical research. A Google Academic Search shows that tens of thousands of research papers and articles have been published on the topic of "the sharing economy". Some of these studies define the connotation and extension of the concept of sharing development. Others discuss the conditions of sharing services development and the connotation of policy orientation (Dahuai, 2016). There are also studies on the influences of the sharing economy on Airbnb employment and discussions on the sharing economy according to the levels of consumer acceptance. From the connotation of the concept of the sharing economy, we can interpret it from four aspects: sharing by all people (everyone enjoys and gets his own place), sharing in an all-round way (sharing development should cover all aspects of economic, political, cultural, social and ecological achievements), building and sharing together (full developing democracy and involving all the people), sharing as a process of continuously improving the level of sharing behaviours in the city (Zhiqiang, 2016). These studies have a positive significance on deepening the understanding of the concept of sharing economy development. The development of the sharing economy, especially in the field of sharing mobility services, is particularly important for the development of China's sharing economy as a whole.

Practically, compared with the emerging needs of the sharing society, the progress of theoretical research on sharing economy development is still limited in that the problems, conditions and bottlenecks faced by sharing economy development are not systematically understood. In particular, few scholars have made in-depth analysis on how the sustainable development of the sharing economy can be achieved, especially in recent years. In the field of the sharing economy, people often regard it as a creative idea worth pursuing, but there is still a lack of analysis of the realistic conditions needed

for realising this idea. Some studies are based on popular political discourse, lacking unique analytical perspectives and specific empirical data.

However, since 1994, a significant amount of research has remained at the theoretical level. Even for the definition of the connotation and extension of the concept of shared development, there is also a trend of "empty concept" because the definition of the meaning is too broad and the related fields are too far-reaching. To deepen the discussion on the concept of shared development, we can study it from political, economic, social and cultural aspects. Among them, the construction of the sharing economy depends on the continuous development of social democracy and consensus politics, and the development of the sharing economy can reflect the concept of sharing in the emerging economic form. They all reflect the concrete content of the concept of "sharing economy development" from different angles.

Furthermore, due to the abundant human resources and stable economic growth in China, coupled with the rapid development of science and technology and the impact of economic globalisation, the sharing economy has followed a positive development trend in China. In recent years, the government has successively introduced incentive policies and regulatory policies for the development of shared prosperity, guiding the sound and orderly development of the sharing economy, especially in the report of the 19th National Congress, which clearly defines the important role and potential kinetic energy of the sharing economy in China's economic growth. Local governments in various parts of China have also formulated relevant policies to promote the development needs of the sharing economy.

Table 1.1 Policy Evolutions on Sharing Economy

Date	Organisation	Key Contents/Policy Evolution
Mar 2007	Shenzhen, Chengdu, Beijing, Tianjin and other cities	Policy for sharing economy management has been introduced or is being discussed to encourage the standardisation of the development of sharing bicycles.
Oct 2015	Communique of the Fifth Plenary Session of the Eighteenth Central Committee of China	It's the first time starting to talk about "sharing the economy", implementing the strategy of "network power", implementing the "Internet +" action plan, developing the sharing economy and implementing the national big data strategy.
Feb 2016	Outline of the Thirteenth Five-Year Plan for China's National Economic and Social Development	"Promoting the innovation of the" Internet + "new format, encouraging the establishment of an open and sharing platform for resources, exploring the establishment of a pilot area for a national information economy, and actively developing a sharing economy.
Mar 2016	Government Work Report	"Support the development of the sharing economy and improve the utilisation rate of resources, let more people participate and become wealthy". Put forward the idea of "promoting the development of the sharing economy through innovation of system and mechanism".
July 2016	Outline of National Information Development Strategy	Laid on "developing the sharing economy, establishing a networked collaborative innovation system", and the sharing economy has become an important part of the national information development strategy.

Date	Organisation	Key Contents/Policy Evolution
Oct 2016	The Ministry of Transport and seven other departments jointly promulgated the Interim Measures for the Management of Business Services of Network Reservation Taxis.	It marks "legalisation of special vehicles", that is, the government has approved the legality of special vehicles, and has formulated clear standards for the access of drivers of restricted vehicles, which was implemented on January 1, 2016.
Apr 2017	“Vice Director Lian Weiliang, China National Development and Reform Commission	Credit construction is an important basis for sharing bicycles and other sectors of economic development. Special attention should be paid to the establishment and improvement of credit systems in the sharing economy.
Dec 2017	China National Development and Reform Commission	Supporting and encouraging qualified industries and regions to try first, giving full play to the leading role of demonstration, promoting healthy and sound development of the sharing economy, and promoting the development of a number of shared economic demonstration platforms
May 2018	China National Development and Reform Commission	Guiding and Regulating the Sharing of Work Related to the Healthy and Benign Development of the Economy

Source: (Xie Yipeng, 2017).

At the same time, the sharing economy is regarded as a new economic form in the digital age of social development. China's central government has also issued relevant policy guidelines to promote the development of the sharing economy in China as shown Table 1. For example, in 2017, the China National Development and Reform Commission, the Internet Information Office, the Industry Information Office and other departments issued "Guiding Opinions on Promoting Shared Economic Development".

Local governments at all levels are required to support rational regulation with new attitudes to promote the development of new economic forms, thus breaking down barriers to industrial activities and overcoming regional restrictions. To remove or relax the restrictions on the access of idle resource providers to the market, local governments need to do a good job in formulating relevant tax collection regulations, strictly controlling the transparency of customer evaluation on the platform to protect consumers' rights and interests (Zhiyong, 2017). Driven by these government policies, the sharing economy has developed rapidly in China. Statistically, according to “China's Sharing Economy Development Analysis Annual Report 2019” published by the State Information Center, the scale of China's sharing economic transactions in 2018 was 2,942 billion yuan, an increase of 41.6% over the previous year. From the perspective of market structure, the scale of shared economic transactions in life services, production capacity, and transportation and travel rank the top three, with a value of 1,589.4 billion yuan, 823.6 billion yuan and 248.7 billion yuan respectively. In 2018, the scale of direct financing in China's sharing economy was approximately 149 billion yuan, down 23.2% year-on-year. The scale of direct financing in the fields of knowledge and skills, transportation, and production capacity ranked highest, with values of 46.4 billion yuan, 41.9 billion yuan and 20.3 billion yuan respectively. The scale of employment in the sharing economy platform is also expanding. With the continuous expansion of the sharing economy, ranging from travel, accommodation and other life services to industrial manufacturing, agriculture and other production areas, new platforms are emerging, and the number of employees of platform enterprises has increased from 5.56 million in 2017 to 5.99 in 2018.

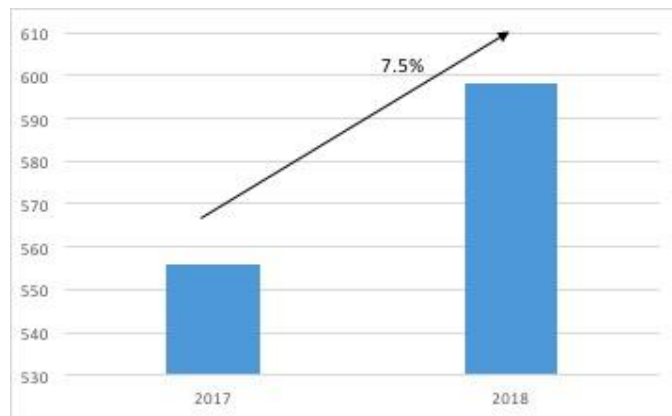


Figure 1.1 Increased Staff Numbers (Units: Millions)

Source: The State Information Center

By the end of 2018, 83 of the 305 unicorns in the world were Chinese enterprises, of which 34 had typical sharing economy attributes, accounting for 41% of the total number of Chinese unicorns. From 2015 to 2018, the proportion of net taxi passenger traffic to total taxi passenger traffic increased from 5% to 36.3%, and the average annual growth rate of net taxi service revenue was 35.3%, which was 2.7 times that of cruise taxi services. From 2015 to 2018, travel, accommodation, catering and other industries share the new format of the industry to promote the growth of the whole industry was 1.6%, 2.1% and 1.6% per year, respectively. From 2015 to 2018, the penetration rate of Internet users increased from 26.3% to 43.2%.

In 2018, China's sharing economy still maintained high-speed growth, while the market structure became more reasonable, and the driving role of new employment was further highlighted. In addition, the pace of the application of AI technology innovation was significantly accelerated, and the development of some industries triggered social reflection and normative development as shown below:

Table 1.2 The Development of the Sharing Economy (Units:100 Million Yuan)

Sector	Year 2017	Year 2018	Increased Rate
<u>Transportation</u>	2010	<u>2478</u>	23.3%
Accommodation	120	165	37.5%
Knowledge	1382	2353	70.3%
Life services	12924	15894	23.0%
Medical Sharing	56	88	57.1%
Administration	110	206	87.3%
Productivity	4170	8236	97.5%
Total	20772	29420	41.6%

Source: The State Information Center

Furthermore, according to China's Sharing Economy Development Analysis Annual Report 2019, this study also clearly points out that the emerging online mobility services represent an industrial revolution in the field of travel, which has brought about significant changes in the form and modes of service. One of the most notable signs is the urban mobility passenger volume. Expenditure on services has increased substantially. With the development of different network platforms, we compare people's actual needs and quality of service. Here we can also see that urban mobility will also maintain a certain position in the follow-up development.

Additionally, about 20 billion sharing economy mobility services were completed in China, accounting for 36.3% of the total taxi passenger traffic, which is equivalent to at least one taxi per three taxi drivers from year 2018. This proportion has increased by 26.8% compared with 2015. Net taxi services have become an increasingly important part of urban residents' commute service system. However, sharing mobility plays an increasingly important role in urban public travel services, and it has become an important supplementary tool for urban mobility services. It not only meets the travel needs of urban residents, but also promotes the development of urban mobility services. In the period of 2015-2017, urban residents' transportation expenditure was calculated according to the per capita transportation expenditure of urban residents and the number

of urban residents; the per capita transportation expenditure of urban residents was deducted from the per capita telecommunications consumption announced by the Ministry of Industry and Information Technology according to the per capita transportation and communication expenditure of urban residents announced by the National Bureau of Statistics. Expenditure calculations are estimated in 2018. The expenditure of sharing mobility service by urban and rural residents in 2015-2018 is presented below.

Table 1.3 Expenditure on Sharing Mobility from 2015-2018

Year	Expenditure on Sharing Mobility Services (Million)	Expenditure on Transportation for Urban and Rural Residents (Millions)	Percentage of Expenditure on Sharing Mobility (%)
2015	1,000	16,016	6.2%
2016	1,280	18,348	7.0%
2017	2,010	20,939	9.6%
2018	2,478	24,061	10.3%

Source: Ministry of Industry and Information Technology, 2019

From this, we can see that people's consumption on sharing mobility services increased from 6.2% to 10.3%. In this study, 6 cities will be selected and analysed regarding sustainable development and shared mobility services. However, due to the enormous sectors involved in the sharing economy during recent years, the mobility sectors in the urban areas contributed a huge amount of propositions within the sharing economy, which was calculated at 85% in 2018 based on the data from the National Statistic Department.

Therefore, this study is mainly focused on the urban mobility sector of the sharing economy, particularly exploring the sustainable consumption of the urban mobility sector of the sharing economy. In addition, the study will seek to identify what the key factors are affecting the sustainable consumption of urban mobility services in

the sharing economy. Theoretically, this study contributes to the sustainable development of the sharing economy by analysing the sustainable consumption which meets the goal of sustainable development. Finally, the study will provide policy guidelines that respond to the sustainable development of the sharing economy in China.

1.2 Significance of the study

Firstly, this section will begin with a discussion of the importance or motivation of this study from two aspects. The first is to talk about the topic of past researches and the second is to talk about the importance of the present research from the current data level. For example, from the research topics that have been studied in the past, it can be concluded which research topics of the sharing economy have been completed by relevant scholars, and which research fields of the sharing economy have seldom been explored. The table below summarises the main research issues or topics from 1994 to 2018. Since the previous research on the sharing economy was mainly theoretical research dating back to 1987, the actual research topics or fields were seldom subject to applied research. Cravens & Piercy (1994) only discussed relationship marketing and collaborative networks in service organizations, which can be said to be the earliest application of research into the sharing economy. Later, Hennig-Thurau, T., Henning, V., & Sattler (2007) further talked about the effects of motion picture file sharing on commercial channels.

This study reflects the role of photo-to-share in extending business channels to relationships. The latest social software, such as Facebook, also conforms to the conclusion of this study. In their research on how Uber and the Sharing Economy Can Win Over Regulators, Cannon, S. and Summers (2014) addressed the issue of how the government's legal departments began to pay attention to sharing economy platforms. In the same year, most scholars began to study the impact of the law, government regulation and policy on sharing platforms. Nica & Potcovaru (2015) mentioned in their research that the sustainable development of the sharing economy opened the door to

the economic phenomenon of the sharing economy in the field of sustainable development.

In their survey on the sharing economy and its effect on human behavioural changes, Abdar & Yen (2017) also began to talk about the viewpoint of the sharing economy and consumer behaviour, which is also the motivation of the analysis of consumer behaviour in this study. Since then, more scholars have talked about the problem of cooperative consumption in the sharing economy, although few have talked about the topic of sustainable consumption in the sharing economy, especially in relation to the sharing of urban mobility services. This is to define the importance of this present research from the academic research level.

Table 1.4 Researches on the Sharing Economy

Scholars (Source)	Research Problem/Statement
(Cravens & Piercy, 1994)	Relationship between online marketing and collaborative networks in service organizations.
(Durgee & Connor, 1995)	An Exploration into Renting as Consumption Behavior
(Zou, Fang, & Zhao, 2003)	The effect of export marketing capabilities on export performance: an investigation of Chinese exporters
(Hennig-Thurau, Henning, & Sattler, 2007)	The influences of motion picture file sharing on commercial channels
(Orsi, 2013)	The legal problems of the sharing economy just got real
(Cannon & Summers, 2014)	How Can Uber and the Sharing Economy Can Win Over Regulators
(Cohen & Kietzmann, 2014)	How do the existing sharing mobility models attempt to optimise the relationship between service providers (agents) and the local governments (principals) to achieve the common objective of sustainable development?
(Belk, 2014)	Sharing and collaborative consumption online.
(Posen, 2015)	Ridesharing in the sharing economy: Should regulators impose Uber regulations on Uber
(Nica & Potcovaru, 2015)	The social sustainability of the sharing economy

Scholars (Source)	Research Problem/Statement
(Fang, Ye, & Law, 2016)	The impact of the sharing economy on tourism industry employment
(Martin, 2016)	The sharing economy as a pathway to sustainability or a nightmarish form of neoliberal capitalism
(Ert, Fleischer, & Magen, 2016)	Trust and reputation in the sharing economy: The role of personal photos in Airbnb.
(Wu & Zhi, 2016)	The influences of the Sharing Economy on Urban Sustainability: From the Perspective of Social, Economic, and Environmental Sustainability
(Bonciu & Bâlgăr, 2016)	The sharing economy as a contributor to sustainable growth: an EU perspective
(Hasan & Birgach, 2016)	Critical success factors behind the sustainability of the Sharing Economy
(Abdar & Yen, 2017)	A survey on the sharing economy and its effect on human behavior changes
(Benoit, Baker, Bolton, Gruber, & Kandampully, 2017)	A triadic framework for collaborative consumption (CC): motives, activities and resources & capabilities of actors
(Y. Liu & Yang, 2018)	Empirical examination of users' adoption of the sharing economy in China using an expanded technology acceptance model
(Zhang, Gu, & Jahromi, 2018)	What Makes the Sharing Economy Successful?
(ter Huurne, Ronteltap, Guo, Corten, & Buskens, 2018)	Reputation effects in socially driven sharing economy transactions
(Penz, Hartl, & Hofmann, 2018)	Collectively building a sustainable sharing economy based on trust and regulation
(Santos, 2018)	Sustainability and shared mobility models
(Geissinger, Laurell, Öberg, & Sandström, 2018)	How sustainable is the sharing economy? On the sustainability connotations of sharing economy platforms.

Secondly, China is a sharing frontier of mobile services. Even if technologies such as autonomous driving can fundamentally change traffic and mobility in the medium and long term, car sharing will become an important part of China's shared

mobile ecosystem in the near future. If car-sharing operators try to make profits by reducing production, operation and maintenance costs, car-sharing will begin to increase. The key to success lies in advanced technology, innovative and inspiring products, business models suitable for different customer groups, high standards of service, commitment to environmental protection, and strong cross-industry alliances and partnerships.

Over the past few years, China has become a pioneer in new mobile services, such as car sharing, bicycle sharing and car greeting. In fact, the number of users of the Chinese version of Uber (DIDI acquired UBER China in 2018) is six times that of UBER. By the end of 2018, DIDI has 450 million registered users in China, travelling about 20 million times a day, and generating a value of 41 billion euros. Uber, by contrast, has 75 million registered users worldwide, travelling about 15 million times a day, and generating a value of 52 billion euros (see Figure 2).

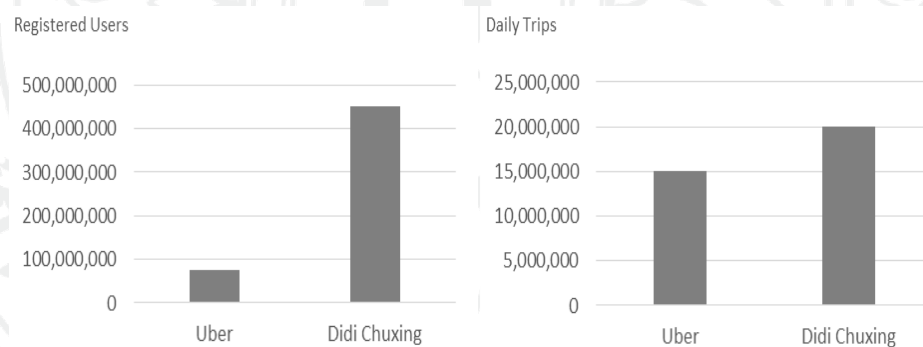


Figure 1.2 Number of registered users of Uber and Didi Chuxing (2018)

Source: Uber; DMR 2018

Urban Mobility services in the sharing economy in China is also increasing year by year, and by a significant amount. China uses its own shared transport digital platform, and the consumers' acceptance levels are very high. In 2018, the sharing mobility platform in the sharing economy accounted for 85% of the total sharing economy, which shows again the importance of shared platforms.

At present, the sustainable development of the sharing economy has received relatively little attention, but academic research is increasingly interested in the relationship between “sustainable development” and “innovation” in the sharing economy. Cohen and Kietzmann (2014) argued that the sharing economy has achieved disruptive innovation, which undermines established business models, generates economic activity, and leads to joint social and environmental benefits. Heinrichs (2013) sees the sharing economy as a social innovation that helps solve the injustices and inequalities of the market economy and creates potential ways for sustainable development.

In this regard, the sustainable consumption of consumers has a particularly important impact on the sustainable development of the sharing economy. In addition to these data facts, according to the previous relevant studies already mentioned, there are few scholars who have studied the impact of persistent consumption behaviour on the sharing economy. Thus It is vital to discuss sustainable consumption in the field of the sharing economy.

1.3 Objective of the study

- 1.3.1. To study the public stance and attitudes towards sustainable consumption behaviour regarding urban mobility services in the sharing economy.
- 1.3.2. To examine the key factors affecting the behaviours of sustainable consumption of urban mobility services in the sharing economy in 6 selected cities of China.
- 1.3.3. To propose effective policy for the sustainable development of the sharing economy in relation to the actions of stakeholders, consumers and governments as well as for the guidance of future research

1.4 Scope of Study

Firstly, despite there being several studies on how the sharing economy has impacted certain industries or sectors, this study focuses only on sustainable consumption perspectives of the sharing economy in relation to urban mobility. In particular, this study aims to explore the behaviours of policy makers in promoting the sharing economy in China because doing so provides the opportunity to analyse the overall conditions and factors affecting the behaviour of the sustainable consumption of urban mobility services through the sharing economy. This research begins by seeking the perspectives and stances of customers, users, and government actors to explore the real factors. The factors affecting the sustainable consumption of urban mobility services in the sharing economy are then analysed. The dissertation will examine the key factors affecting the sustainable consumption of urban mobility services in the sharing economy and analyse how these are likely to affect the level of sustainable development of sharing economy. Data will be collected through focus group discussions and a case study. The correlations among those key factors and the behaviours of sustainable consumption of urban mobility services in the sharing economy will then be studied.

This study includes a case study, which indicates changes in the public stance and attitude in China towards the sharing economy over the past 5-10 years. This paper focuses on the sustainable consumption of urban mobility services in the sharing economy by investigating the relationship between variables in overall conditions by collecting data from various sectors.

Lastly, since the sharing economy involves many sectors and various services, including accommodation, tourism, food sectors and financing, this study confines itself to analysing the area of urban mobility studies in the sharing economy. However, this represents only a small part of the total field dedicated to the sustainable development of the sharing economy in China. As a result, there might be some missing variables from the total key factors that affect the sustainable consumption of urban mobility services in the sharing economy in the cities in China covered in this study. This study, therefore, can only explain the behaviours, stances and attitudes of the public towards the urban mobility sector of the sharing economy and the development studies of the sharing economy.

1.5 Contributions of the Study

The contributions devoted to this study were highly valued and knowledgeable when conducting this research. The study will contribute substantially to the literature on the sustainable consumption and development of the sharing economy. The results from this research could be applied to make a contribution to academic research in this field as well as to policy makers in the listed folds:

- 1) The findings of this study are expected to provide significant reinforcement to the robustness of the theory and concepts of sustainable consumption and sustainable development. The study's findings can also explain the situation of the sharing economy in China during the period 2015-2019. New research into other sectors of the sharing economy can be directed and motivated by the findings of this study.

2) The examining of the key factors affecting the sustainable consumption of urban mobility services in the sharing economy can reveal the public stance and attitude towards promotion of the sharing economy in China at the overall level. In particular, it is expected that the results of this research can contribute to filling the research gap in the field of the sustainable consumption and development in the sharing economy. The new knowledge and understandings discovered through this research can be particularly useful in informing public policy guidelines for promoting the sharing economy.

3) This study investigated the public stance and attitude towards the sharing economy and how appropriate policy can be made in light of the changing situation. The results provide a valuable source of reference for governments when developing and analysing policy to encourage the sustainable development of the sharing economy.

4) The proposed policy guidelines obtained from this study can be applied to the making of policy in relation to the good governance of other emerging issues in the sharing economy.

1.6 Definition of Key Terms

This study partially employs a limited scope of perspectives as reference based on the research questions addressed by previous scholars. The definitions of key terms such as sustainable consumption, sustainable development, reputation and trust are provided below. Additionally, each of these key terms is defined only as it applies to the scope of this study's context.

Sharing Economy

Refers to the sum of economic activities that utilise modern information technology with the right-to-use sharing as the main feature integrating massive and decentralised resources to meet diversified needs.

Sharing Mobility	Refers to a new mode of transportation in which people do not need to own the vehicle but rather share vehicles with other people and pay the corresponding user fees according to their mobility requirements. This includes taxi software and the sharing of bicycles as examples of the large number of innovative models.
Sustainable Consumption	Refers to efforts made towards achieving a sustainable way of life, concerning the recognition of environmental and societal influences during the consumption process of individuals or groups.
Sustainable Development	Sharing mobility is one of the development directions of the automobile industry in the future as the pattern of the automobile industry is reshaped. More and more vehicle factories are transforming from car dealers to mobile travel service providers, and more and more consumers are tending to use sharing mobility to promote sustainable development.
Financial Flexibility	Refers to cooperative consumption that enables owners and non-owners to obtain financial income more flexibly and work independently of authorisation.
Access Over Ownership	Refers to providers offering the rights of access to their assets for a variety of reasons and desires.
Sustainability Ideology	Refers to users; sustainable consumption of sharing mobility.

1.7 Chapter Summary

This chapter aimed to elaborate on the rationale and research problem of this study by analysing perspectives on the sustainability of the sharing economy, particularly in relation to mobility services. To answer the research questions, the author studied relevant documents produced by the central government as well as regional administrative policies related to the sharing economy in an attempt to identify the government stance and attitude towards the sharing economy, specifically in relation to mobility services.

Statistically, to analyse the data on sharing mobility released from the period 2015 to 2019, it was necessary to reflect on the sustainable consumption behaviour as

a critical factor contributing to the sustainable development perspectives of the sharing economy. The objectives of this study were hereby related to the analysis of the vital factors affecting sustainable consumption as the mediation variable for sustainable development. The author stated the purposes and benefits of the research, practically and theoretically. Finally, the scopes and limitations of the study were outlined by the author.



CHAPTER 2

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Current Public Stances and Attitudes towards SE in China

As a core component of the newly emerging world, the sharing economy is a term that mainly refers to people's right to access idle resources without the need for full ownership. The sharing economy does, however, differ from the general leasing relationship. The main premise is that the rights to own property are superfluous and excessive, which is the most fundamental understanding of the sharing economy among early scholars.

In European and American countries, the sharing economy first appeared as a result of the high socialisation of productivity, the excess of products, and the large number of middle class people. This was mainly because people in the middle class and above tended to have a surplus of housing, idle transportation, and other under-used property. Therefore, monetising these idle assets is the premise of the sharing economy. However, it has two characteristics: first, in order to make the surplus property profitable and save money, the right of use is leased to strangers, which is an economic relationship that benefits both sides. Secondly, this economic transaction relationship is based on the fact that the total number or volume of social assets has not increased. The system provides limited time for some people to use the resource in knowledge and culture sharing and financing sectors.

However, Chinese politicians were also influenced by data collated from OTA Sikh, an economist in the Czech Republic in the early 1980s. In his academic works, he discovered a surprising fact: Czech Republic produced too many warehouse products, while subsidies were paid to enterprises, creating waste across the whole production process (Sikh, 1988)."

From this background, after the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China, the whole Party formed a consensus on the problems existing in the economic system of "one big couple". One of the problems is that the ownership of the public economy cannot be viewed in isolation. The ownership of the public economy is closely related to the right to use. Mr. Hu Yaobang had been thinking about this problem for many years. He began to realise that the problem was the need to distinguish between economic organisations and public-owned labour patterns. For example, on 26 July 1980, he said at a conference, "How can we confuse ownership and working methods?" In this respect, he mentioned that a person engaged in agricultural and industrial labour must establish various systems of responsibility. At the same time, he firmly opposed the idea of introducing small private ownership in large rural areas. Finally, according to the successful practice of the household contract responsibility system in China over the past few years, document No. 1 of the Five Rural Areas finally made a breakthrough policy explanation of this economic form: "the whole is divided into the long-term use of reserved". Secondly, of the reserved hills and residential land, the ownership is still collective, which is the earliest sharing economy in China in practice.

At that time, in order to ensure the coordination and unification of land ownership and management rights, the land contracted by members must be engaged in production according to the contract stipulations in the collective unified planning arrangement. The core content of land management rights includes not only land use rights, but also land possession, disposal and income rights. It should be pointed out that the ownership of rural land is sustainable, but the management right is limited. The right to operate does not infringe upon the rights and interests of the owner. The successful practice of the household contract responsibility system has gradually separated farmers from the management system of the people's commune, the integration of the government and society, the system of the division of labour and remuneration distribution, the system of grain purchase, and purchase under purchasing and sales control. Based on the above historical background, the author is of the belief that the success of rural reform is the first area of China's sharing economic practice.

In 1984, the Decision of the Central Committee of the Communist Party of

China on Economic System Reform was another important decision on the reform of urban state-owned enterprises. As outlined in the Decision, "According to Marxist theory and socialist practice, ownership and management can be separated appropriately." Starting from theory and practice, the judgement of this policy form makes the management power of state-owned enterprises begin to break the integration of government and enterprises. Only in this way can enterprises change from passive management to active management so as to get rid of the highly centralised planned economic system, the unified revenue and expenditure financial system, and the unified purchasing and selling circulation system. At the same time, it should be pointed out that state-owned enterprises have acquired the right to operate. The state should also pay attention to preventing enterprises from being controlled by insiders and workers from being marginalised. Because regardless of whether they are state-owned enterprises or local state-owned enterprises, and whether they are restructured or set up hybrid companies, the ultimate property right of their operation and management belongs to all the people (or the whole region), and the company belongs to the company. All rights of companies and enterprises should also be enjoyed by the whole people. However, the legal perspective promotes the sustainability of the sharing economy. From the above information, the practice of the sharing economy in China not only maintains the ownership of property under public ownership, but also liberates the right to use property, and promotes the innovation of management rights, and then begins to explore the practice of sharing ownership. Originally, ownership has the characteristics of exclusiveness, absoluteness and sustainability. Because the property of socialist public ownership is shared by the whole people and everyone has a share, there will be a vivid example of a "shared property house".

In 2017, Cao Lei, Director of the China Electronic Commerce Research Center, said that China's stock economy has gone through three stages: Firstly, China's stock economy was still in its infancy before 2008.; Secondly, China's stock economy was still in its infancy, affected by the tide of foreign stock economy, after the spring rain, many domestic leaders were in the stage of development from 2009 to 2012,. Joint-stock enterprises in the region sprung up like bamboo shoots after a spring rain. Lastly, such as drip travel, piglet short rent, etc., has been in a rapid growth stage since 2013.

With the continuous maturity of Internet technology and business models, the extensive participation of users and a large amount of capital investment, the number and influence of representative enterprises in some regions has expanded rapidly. China's Internet economy has greatly promoted the substantial development of China's sharing economy.

Over the last two years, both the "Report on the Work of the Government" of the "Two Sessions of China" and the "13 Five-Year Plans" of the state have emphasised encouraging the development of the sharing economy. However, Zhang Xinhong, Director of the Center for Sharing Economy Research of the National Information Center, told the China Economic Report that although policies at the central and national levels are very clear, there are often many uncertainties in implementation. It is easy to deal with new formats when they maintain the original methods and ideas, which makes the new formats easier. Consequently, there is uncertainty in the development of the sharing economy.

2.2 The Development of the Sharing Economy

At present, the sharing economy operates under the combined action of many different factors. However, the factors that support the sharing economy mainly include technology, digital software, economics, hardware and so on. Through an analysis of the background of the sharing economy, it can be summarised into the following six different aspects based on the research of Shuai (2016). The first aspect is the rapid development of the mobile Internet. Since the first generation of smartphones appeared in 2000, they had reached 1.9 billion users worldwide by 2015. This trend shows that among the younger and higher-income groups, the mobile smartphone as the representative of terminal devices has a more obvious penetration effect, which is also an aspect of a sharing economy. To gain a deeper understanding of the cases of the SE, some representative viewpoints of the sharing economy are presented:

Table 2.1 Viewpoints of Sharing economy

Period	Scholars	Perspectives
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Theoretical Initiatives Period

(Thunenv, 1966) It holds that the solution to the contradiction between capitalist labour and capital is not to abolish private ownership, but to make everyone the owner of capital through a sharing system.

(T, 1925) It is believed that by decentralising property rights, income can be rationalised, labour relations can be improved, workers can be encouraged and productivity can be improved.

(Johnston, 1950.) The concept of "people's capitalism" was put forward.

(Kelsolo, 1958) This paper puts forward the concept of the "new capitalist" and holds that the "employee stock ownership plan" is the concrete practice of this theory.

(Kelso L O, 1961) This paper puts forward the theory of "human capital", and holds that human capital, like material capital, is the main productive resource.

Period	Scholars	Perspectives
	(Schultz, 1962)	Collaborative Consumption plays a more important role in economic growth.
	(S., 1964)	The paper proposed "collaborative consumption", that is, several or more individuals consume economic goods or services together in a common action.
Theoretical Formation Period		
	(Marcos Felson & Joan Spence, 1978)	The nature of public ownership of means of production determines that China will inevitably adopt the form of distribution.
	Lee Bingyan	Linking workers' wages with enterprises' earnings will help both sides of the labour force and management change from hostile relations to cooperative relations.
	Martin Witzman	Economic sharing is divided into two forms: net profit sharing and net income sharing.
	James Mead	Reviewing and comparing two types of sharing: traditional sharing and Internet-based sharing
Rapidly Developing Period		
	R. Belk	The sharing economy is defined as an economic model of sharing idle resources such as space, skills and goods for monetary or non-monetary gains.
	R. Botsman And Rogers	The sharing economy is called a peer-to-peer economy (P2P model), which is a social and economic ecosystem based on the sharing of human and material data.
	M. Bauwens	The two core concepts of the sharing economy are "use not possession" and "use is waste".

Period	Scholars	Perspectives
	(Ganskyl., 2010)	It holds that the sharing economy pursues social and cultural values and is fundamentally a change in values, and that the real implementation of the sharing economy lies in mutual trust among people.
	(Laura P, Cooper T, 2015)	The essence of the sharing economy is that we can create more value and make the market more efficient.
	Robin Chase	It is pointed out that the sharing economy is the concrete manifestation of the new stage of knowledge economy development and Hayek's spontaneous order, that is, the active coordination of different knowledge in order to achieve equilibrium.
	(Zhigang, 2015) (Huateng, Xiaorong, & Sun Yi, 2016)	The sharing economy is an economic phenomenon in which the public shares idle resources with others through socialised platforms and then gains income.
	(Zhang Xinhong & Gao Tai Shan, 2017)	It holds that the sharing economy refers to the sum of economic activities that utilise modern information technologies such as the Internet to integrate and share a large number of scattered idle resources to meet diversified needs.

Source: (Zhang Xing, 2018)

Second, the Central Bank of China issued the first batch of photo requests for a third-party payment platform in 2011, resulting in third-party payment formally entered the fast development field, which also laid a certain foundation for the development of the sharing economy. Third, with the emergence of new technologies such as the development of location technology and virtual computing technology, transaction costs have been significantly reduced while transaction matchmaking rates have improved, which provides the necessary technical support for the development of the sharing economy. Fourthly, with the emergence of the sub-prime crisis in the United

States, economic crises to varying degrees have arisen in all parts of the world, and resources have been greatly increased. As a result, seeking ways of ensuring that the utilisation rate of idle resources can be effectively improved has become an urgent problem to be solved at this stage, resulting from the sharing economy.

Fifthly, both the supplier and the demander are gaining certain benefits from the process of sharing. Providers can benefit by transferring the right to use idle resources and obtain corresponding satisfaction in the process of providing services. Demanders can obtain all kinds of services and products with higher cost-effectiveness than those provided by traditional commercial organisations. In the process of consumption, demanders have higher transparency and more initiative than before, which is very beneficial to demanders. Sixthly, at this stage, economic development has already begun. Entering the new normal, under the traditional economic model, enterprises need to complete the work processes through the industrial chain. However, due to the lack of efficient cooperation and the serious situation of adding codes to the industrial chain, the growth trend of transaction costs has always been unable to be properly controlled and market efficiency has been affected. From this, we can see that it is the influence of traditional business models that provides opportunities for the development of the sharing economy.

2.3 The Concept of the Sharing Economy

In 2018, sharing bicycles, sharing rechargeable treasures, sharing umbrellas, online shopping, e-government and many other activities represented the concept of the sharing economy. Ancona & Reavis (2014) mentioned that what people really need is the right to use cars, but not the ownership. The digital platform has connected the owner and user of respective mobility facilitators and consumers can easily access the services provided by the leasing company. The background of the emergence of the sharing economy is the rapid development of Internet information technology since 2000, which has laid the foundation for the digital society. The People's Republic of China has deeply integrated the sharing economy and the access of its citizens to

various types of service resources has changed and the convenience of life has increased sharply.

There are many reasons for the rapid development of the sharing economy. For example, some people believe that this is due to the changes in consumer demand. The growing ecological consciousness leads some consumers to choose to rent or reuse goods instead of buying new products. The essence of the sharing economy, therefore, is to have the right to use idle goods, not to own them. On the supply side, the emergence of urbanisation has brought about an agglomeration of population and products. People in metropolitan areas are more likely to find opportunities to share and rent houses. The large volume of idle labour caused by unemployment and underemployment has promoted the emergence of the "odd jobs" business.

The concept of the sharing economy promotes the transition from a traditional capital-dominated "unit system" to an industrial capital and human capital-dominated "dual system" in enterprise profit distribution, and forms a system of production surplus distribution adapted to the development of modern enterprises. Many scholars have referred to the business model of the sharing economy as shown in Figure 5 (Jiang Baojun and Tian Lin, 2016).

In recent years, with the popularisation of Internet technology and the growing maturity of the social network ecology, the sharing economy has not only become a business model to mobilise idle social resources and serve social consumption, but also a macro-economic model for innovation of the consumption concept, cultivation of a new economic growth mode, construction of a conservation-oriented society, and innovation of mass entrepreneurship. Hot economic and social issues, a large number of sharing websites have sprung up like mushrooms after a spring rain, widely infiltrating into various industries from consumption to production, effectively promoting industrial innovation in transformation and upgrading.

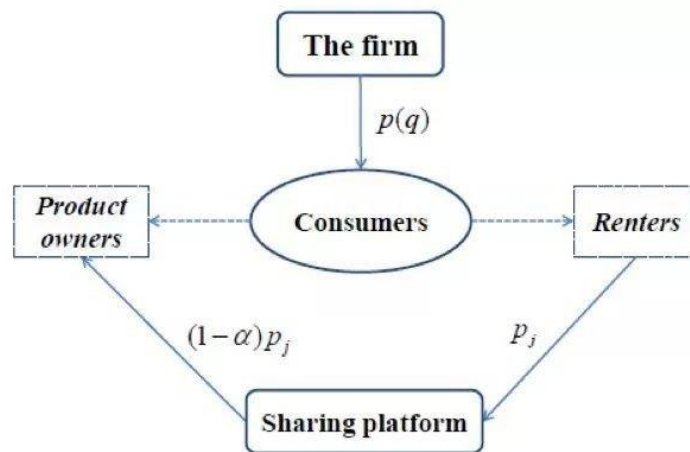


Figure 2.1 The model of the sharing economy

Source: (Jiang, Baojun and Tian, Lin, 2016).

The term "sharing economy" was first proposed in 1978 by Marcus Felson, professor of sociology at Texas State University, and by Joan Spence, professor of sociology at the University of Illinois. The "sharing economy" refers to the transfer of the right of use of resources to others by organisations or individuals in possession of idle resources, and the repeated transaction of goods. The process is described as efficient utilisation. The sharing economy applies to many types of resources, including food, transportation, housing, and office space. For example, "sharing" is mainly around cameras and UAV enthusiasts; the sharing economy in the "office" is well understood and defined; and "live" is now very popular with a foreign valuation that has exceeded 20 billion. DIDI Chuxing and droplets are the most typical examples of "line". However, many scholars have also given their own definitions of the concept of the sharing economy (Table 6).

Table 2.2 Definition of the Sharing Economy based on Past Studies

Scholars (Source)	Perspectives
Felson & Spaeth, 1978	Collaborative consumption is a daily activity performed to meet daily needs and establish relationships with others, such as sharing the use of washing machines in communities.
Li, 1980 (World Economic Forum, 2016)	Li put forward the systematic idea of a "socialist sharing economy" in his book "Need Value Theory" published in 1990.
Robin Chase, 2000	What people really need is the right to use cars, not ownership. The Internet can connect the owner and user of the car directly; consumers can easily use the car provided by the leasing company.
Felson & Spaeth, 1978	Felson and Spaeth divided collaborative consumption into three different consumption modes: contact consumption mode, correlation consumption mode and separation consumption mode. Collaborative consumption is the result of the change of an individual's concept of exclusive resources and their willingness to participate in consumption with others.
Belk, 2014	Sharing is an alternative to the private ownership that is emphasized in both marketplace exchange and gift giving.
Porter & Kramer, 2011	The sharing economy is nothing more than an occasional renting model.

Scholars (Source)	Perspectives
Jeremy Rifkin, 2014	Zero marginal cost and co-sharing consumption will gradually become one of the main economic models of human production and development.
Allen & Berg, 2014	The authors pointed out that the key logic of sharing economy economics lies in the "transaction cost"
Demailly & Novel, 2014	The sharing economy business model's economic sustainability drivers are based on the power of income toward access over ownership
Botsman, R., 2015	An economic system based on sharing underused assets or services, for free or for a fee, directly from individuals.
Jia Kaijie, 2015	The development of the sharing economy varies from place to place and from person to person. Cultural differences in different regions and countries may have considerable impact.
Matofska, B., 2016	A socio-economic ecosystem built around the sharing of human, physical and intellectual resources.
Zervas, G. et al., 2016	Multisided technology platforms.
Chen Xiaoyun, 2016	The idea of a sharing economic model is to seize the fragmented needs of commodity users and achieve orderly market transactions through the Internet platform.
Su Junhua & Wu Danjie, 2018	Factors that affect the business model of the sharing economy based on a mobile Internet platform can be divided into four categories: technological factors, demand factors, competition factors and policy factors.

From the various definitions of the sharing economy provided by various experts and scholars, we can also find that many scholars define the sharing economy from the overall phenomenon of the sharing economy, and some scholars also try to

explain its impact on society from the specific field of the sharing economy. However, we can learn a lot from the definitions provided in recent years by scholars who also began to explain the sustainable development of the sharing economy. However, we can see from its principle that the sharing economy is essentially the sharing of idle resources, although the participation of people and their consumption behaviour are also vital factors. Nevertheless, we need to supplement the knowledge gap in this field. In view of the fact that shared urban transport accounts for 85% of China's sharing economy, this paper also focuses on the sustainable sharing of urban transport.

Mobility services in the sharing economy are represented by the key stakeholder “DIDI” fast on its financing basically in half a year for a round, from the name can be seen, in the speed of business focus is king with merger and acquisition of Uber (China). First of all, from the perspective of financing and its entry point is what the researcher just mentioned. On the left is resources, that is whether mobility services in the city or private transport, the idle space is large and the transaction cost is declining. First, China's car ownership is over 172 million, distributed in cities all over the country, of which 2 million are owned. There are 11 cities with an average usage time for Uber of less than 2 hours. It shows that the resource stock is large, but the utilisation rate is low. At the same time, the existing way of travelling cannot meet people's transportation needs. The various transportation modes of bus, subway, taxi, or private car all have their own weaknesses. Through the development of the mobile Internet, we can now match a user's needs with the new system of transportation to achieve a cost-saving, convenient means of travelling.

The sharing economy is characterised by the temporary transfer of the idle supplier's right to use a resource to the demander on the basis of a third party platform, so as to enhance the intensity of the socialised characteristics of the factors of production, create greater value on the basis of increasing the utilisation rate of stock assets, and realise the sustainable development of society. Through an analysis of the sharing economy, we can find that the shared economic platform, the supplier, and the demander are all indispensable components as shown

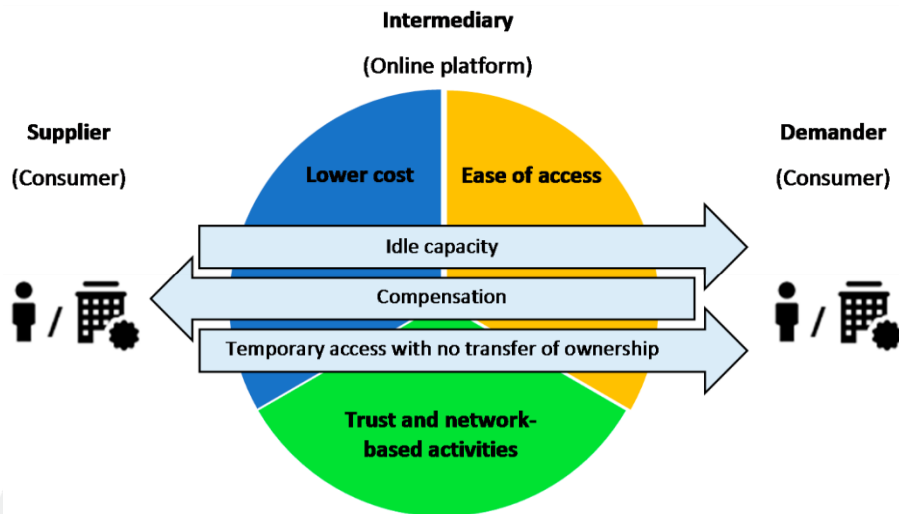


Figure 2.2 The proposed framework for SE

Source: Ranjbari, Morales-Alonso, & Carrasco-Gallego (2018)

From the supplier's point of view, both enterprises and individuals have the right to be suppliers of services and products. Only enterprises or individuals are willing to transfer the right to use idle resources outward. Compared with the previous market capacity, the supplier has a very prominent expansion potential. There has also been an increase in the utilisation rate of stock resources, which is the motivation of the supplier.

From the point of view of the demander, both enterprises and individuals have the right to be the demander. Here we need to pay attention to the fact that the demander needs to rent, borrow or share the goods in order to obtain temporary ownership. The service provided by the supplier or the performance-price ratio of the products have a direct impact on the income of the demander. Affection, service demand pool is based on this demander side (Xiaoxie, 2015).

Under the background of the sharing economy, the demander has the initiative, choice and participation rights, while the transparent transaction activities carried out through the shared economic platform as the main channel mean that the expenditure of the demander is significantly reduced compared with the traditional business model.

Generally speaking, the connotation of the sharing economy can be summarised as the process of de-intermediation and re-intermediation. Among these, de-intermediation means that the supplier and the demander do not need to be attached to traditional commercial organisations any more. Taking P2P lending as an example, the supplier and demander can complete the allocation of funds without relying on the financial organisations represented by banks. The emergence of taxi software makes drivers and passengers no longer need to rely on it.

Attached to the leasing company or other business organisations, you can complete the corresponding matching work. From this, we can see that the connotation of the sharing economy is mainly de-intermediation, and many industries represented by taxi and finance have achieved the goal of coal removal. Similarly, the connotation of the sharing economy also includes re-intermediation. The supplier and the demander can depend on the corresponding shared economic platform according to their actual needs, and still take the P2P lending as an example. The supplier and demander of funds can complete the matching work on the platform and provide convenience for the next series of work development.

2.4 Transaction Cost Theory

The most intuitive explanation for the phenomenon of the sharing economy comes from the transaction cost theory (R. H. Coase, 1937). The value of the sharing economy is reflected in the matching between the owner of the resources (assets or skills) and the consumer who needs those resources, creating a match at an acceptable transaction cost at a certain time. The existence of digital platforms reduces transaction costs, including search costs, contact costs and contract costs. Before the emergence of shared platforms, high transaction costs lead to many transactions not being able to be achieved. For example, before the emergence of shared transportation, the time cost for passengers to find suitable empty vehicles when they needed them was often prohibitively high. For taxi drivers, in order to avoid the time waste caused by empty driving, they tend to concentrate on the places where the demand for cars is high, such as hotels and airports.

In this way, the taxi service has a high search cost and low effective supply, which ultimately reduces the amount of effective transactions. The emergence of Uber, Droplet and other sharing traffic business models has basically eliminated the search costs of the demanders, and improved the efficiency of precision services. At the same time, taxi drivers of sharing platform provided services have greater flexibility in entering and leaving the market, thus creating an effective market which is really determined by supply and demand. The sharing economy has made the private accommodation market and private car market develop rapidly, which largely solves the problem of information asymmetry and complements the traditional market. The complementarity and substitution between the two products and the two markets are the key to understanding the emergence and development of the sharing economy by using the transaction cost theory.

2.4.1 The Theory of Shared Tenancy

Chang (1966) put forward the tenant farmer theory, which emphasised the importance of the right to use, believing that in the case of there being little difference in competitive conditions, the landlord's income from self-cultivation is roughly the same as that from contracts, such as employing farmers. From the perspective of the tenant theory, the result of resource allocation is the same when the transaction cost is zero. It can be seen that with the decrease of the transaction cost in the market, the lease contract of the transaction right can replace the contract of sale emphasising a real right, and its core is the sharing economy.

The sharing economy can be seen as an economic lease contract which can reduce transaction costs by means of utilising an Internet platform. It is worth noting that in order to prevent the depreciation of leased assets due to improper use, there are regulatory costs in leasing contracts. While safeguarding the interests of both parties in the contract, only when the transaction cost of the lease contract is lower than that of the sale contract can the sharing economy operate.

2.4.2 The Long Tail Theory

The long tail theory holds that the future development space of business lies not in the head of the best-selling commodity on the traditional demand curve, but in the long tail, which represents the often forgotten products. Compared with the traditional commercial economy, the demand focus of the sharing economy has shifted from the mainstream product market at the head of the demand curve of the scale economy to the decentralised niche product market at the end of the demand curve of the scope economy. The main body of the transaction has also changed from enterprise to individual, which will bring the available price of idle resources into full play. At the same time, the advantages of individual dominance are highlighted, and the network effect can be brought into play flexibly.

2.5 The Development of the Sharing Economy Model

According to different standards and analysis perspectives of the consumption concept, sharing behaviour and sharing model, scholars have classified the model of the sharing economy as shown as the table:

Table 2.3 Division of Sharing Economy Model

Representative	Classification	Category	Main Providers
Basis			
Botsman & Rogers, 2010)	Sharing Concept	Product System Lifestyle Redistribution Market	Service Shared eBay sharing bicycles
Xiaode, 2015	Sharing Behaviour	Paid Sharing, Peer-to-Peer Sharing, Crowdsourcing Sharing	Urban and Rural Experience Instacart Lu Jin Su
Ma Huateng	Sharing Mode	Usage Sharing Time Sharing Ownership Sharing	Way Home Accommodation Doctor

Source: (Zhang Xing, 2018)

2.5.1 The Consumption Behaviour

People exchange products and services, but ownership does not change, only the transfer of product use rights will occur. People only need to pay for the usage value of the goods, with no other considerations necessary. Its main forms are leasing and sharing. For example, in the business model of sharing bicycles, people can find the nearest vehicle in real time, and only pay the rental fee after use, while the cost of vehicle maintenance and repair has nothing to do with consumers. This model is similar to the traditional second-hand commodity market, but its development is more dependent on the Internet, and its resources and demand information are both massive and large-scale. In this model, when a transaction takes place, ownership and usage

rights will be transferred. In the redistribution market, goods may be free or interchangeable, but most are for profit, such as those made available through eBay, Swap.com, Idle Fish and other business models. Regardless of the form of transaction, the redistribution market places more emphasis on the recycling of goods, hoping that people will put old and unused resources back into the market where they can reach the hands of the needy through this circulation facilitation model. Most of the transactions in this model are invisible. According to different demands, the Internet classifies and aggregates them into a professional group or organisation, which facilitates the exchange of intangible assets such as time, skills and knowledge. In this model, people quantify intangible assets through a series of measurement standards, and then make consumption more diversified.

2.5.2 The Sharing Behaviour

The key to paid sharing is the profit attribute of sharing. As long as a profit can be achieved, the right to use and the ownership of the goods can be shared. This mode is also the most widely covered mode at present, such as mobility services, accommodation and other modes. For most enterprises in the sharing economy, their development aims are mostly for profit. Even though some enterprises are still in the state of free sharing, with the increase of users and the development of enterprises, they will eventually move towards the mode of paid sharing. The main feature of peer-to-peer sharing is unpaid sharing. In this model, the two sides will exchange their own goods, space, knowledge, skills and so on. The emphasis of this model is not the revenue itself, but the hope that with the help of a platform, the two sides can achieve the effect of " $1 + 1 > 2$ " without investing more resources. In this mode, there is no clear buyer and seller, and the participants are both the supplier and the demander.

2.5.3 The Sharing Mode

Usage-sharing products are mainly those resources that do not need to be used in the short-term and whose long-term ownership does not want to change. In this model, shared resources are mainly idle goods or funds. For example, with the help of

an online accommodation platform, people realise the transfer of the right to use idle houses. For idle funds, people can transfer the right of regular use of the funds to third parties on a P2P lending platform, from which they can collect certain interest as remuneration. The occurrence of contemporary shared economic activities mostly depends on the network platform, which creates more employment and entrepreneurship opportunities for people. In the past, when people stopped using certain items, they would leave them idle or even throw them away. Although the idle resources had lost their value to the owners, the resources themselves still had unexplored potential value. At this time, only re-matching the resources can bring multiple benefits to the supplier, the demander and the society.

2.6 Sharing Mobility Services

Sharing mobility service is mainly embodied in a new consumption behaviour of sharing cars and bicycles. Earlier studies (e.g. Kemp, R., 2000) argued that major changes in users' personal lives and their mobility were the main reasons for the rise of consumer car-sharing organisations. In a sense, this car-sharing is an example of the growing number of private property alternatives in what Rifkin (2000) calls the “Age of Access”. However, there is more evidences that people who belong to the European Car-Sharing Organisation drive far fewer cars than they did before they became members (Steininger, K., Vogl, C. & Zettl, 1996). These are the main theoretical studies on car-sharing in the early Western countries. Although these sharing mobility service models have existed for decades, recent enhancements have made them commercially viable due to the continuous improvement of information and communication technologies (Orsatto, R., & Clegg, 1999). With the constant growth of the urban population and land use, especially after China's reform and opening-up, the urbanisation of the rural population is a serious matter and many members of the rural population are moving closer to the city. As a result, the reliability of urban transport systems is under increasing pressure (Noland, R., & Polak, 2002). In his research, Banister (2008) mentioned that high transport efficiency could be achieved for public transport by improving energy efficiency. Transport services and incentives to reduce the footprint of individual vehicles are related to reducing the environmental impact of

the transport system, which includes the social environment, economic environment, and natural environment.

Table 2.4 Sharing Mobility Services

Scholar	Perspectives
Kemp, R. (2000)	Consumer car-sharing is increasing due to users' personal lives and their mobility needs
Rifkin (2000)	“Age of Access over ownership”
Steininger, K., Vogl, C. & Zettl (1996)	Members of car-sharing organisations drive far fewer cars than they did before they became members
Orsatto, R., & Clegg (1999)	The continuous improvement of information and communication technologies leads to more car-sharing
Noland, R., & Polak (2002)	The reliability of urban transport systems is under increasing pressure
Banister (2008)	High transport efficiency for public transport can be achieved through improving energy efficiency

Scholar	Perspectives
Cohen & Kietzmann (2014)	Offered potential solutions to this complex challenge
Owyang, J., Samuel, A., & Grenville (2014)	Key sectors of the economy, including goods (e.g., rental runways), professional services (e.g., Elance), transportation (e.g., Uber, DIDI Chuxing), and space (Airbnb) and money (for example, Kickstarter, Alipay etc.)
Hansen, E., Grosse-Dunker, F., & Reichwald (2009)	Users support the introduction of sustainability-oriented innovation
Shaheen, S., Guzman, S., & Zhang (2010)	Distinguishable bicycles and designated parking stations with locks as digital systems
Shaheen, S., Guzman, S., & Zhang (2010)	The third generation bicycle-sharing plan in many urban areas
Ruihui, P (2018)	Mobility-sharing including the car-sharing and bike-sharing types of transport which refer to a kind of consumption behaviour in which people rationally choose to participate.

Later, mobility-sharing operators offered potential solutions to this complex challenge (Cohen & Kietzmann, 2014). For example, sharing business models have emerged in recent years in key sectors of the economy, including goods (e.g., rental runways), professional services (e.g., Elance), transportation (e.g., Uber, DIDI Chuxing), space (Airbnb), and money (e.g. Kickstarter, Alipay etc.) (Owyang, J., Samuel, A., & Grenville, 2014). Especially in growing cities, many users support the introduction of sustainability-oriented innovation (Hansen, E., Grosse-Dunker, F., & Reichwald, 2009) to explain car-sharing from the concept of sustainable development, from imperfect markets (Cohen & Kietzmann, 2014) and environmental regulations (Rugman, A., & Verbeeke, 2000) to the tripartite understanding of sustainability among users, businesses and consumers. The new demand for a solution is an explanation from government stakeholders (Hart, 1997) the governments have begun to establish a system of relationship between the sharing economy and the government.

The mobility sharing business models provide important value for users, but also has a positive impact on local transportation networks. For example, for each shared vehicle, 9 to 13 private vehicles are removed from the road, sold to members, or delay planned purchases (Fleeson et al., 2017). As a scanner system, it uses distinguishable bicycles and designated parking stations with locks (Shaheen, S., Guzman, S., & Zhang, 2010). All car-sharing business models try to reduce the demand for personal ownership of cars, because people who install the 1997 theory choose to live in a way of sharing because of the cross-provincial and municipal This explains that the basic principle of the sharing economy is access over ownership as a major economic factor influencing users' consumption behaviour towards the sharing economy.

Secondly, car-sharing has proven able to reduce the number of buses on the road (Martin, E., Shaheen, S., & Lidicker, 2010). This emphasises the institutional alliance that develops between car-sharing operators and cities in seeking solutions to congestion and air pollution. In this study, Chengdu, Chongqing and Changsha, as the cities that have been selected for investigation, are reasonable choices because they can explain the current sustainable use behaviour of users from the general public.

In terms of government regulation, whether or not they are supported by local governments, there have been many shared mobility services seeking to address the gap between supply and demand for sustainable urban mobility (Firnkor, J., & Muller, 2011). The basic principle of the sharing economy is that it is a relationship between supplier, demander and digital platform, especially in China after 2015 due to its national policies. Even though the pace of Chinese cities is fast and the urban population is increasing continuously, the rapid development of China's sharing economy, especially in the area of shared mobility, has solved the problem of people's sustainable travel. Sustainability scholars believe that there is growing interest in expanding sharing business model research to explore new sustainability-oriented business models (Boons, F., & Lüdeke-Freund, 2013).

More specifically, despite the increasing demand and opportunities for sustainable mobility solutions from providers, it is surprising that public policy and management disciplines lack research on the factors that contribute to the success or failure of cooperation between providers and cities in solving urban problems. With this in mind, this study also seeks to explain sharing economies, especially shared mobility services, from the perspective of the providers. More specifically, it aims to explain the problem of the sustainable consumption behaviour of users, because sustainable consumption can promote the sustainable development of the sharing economy in China (Alexandrescu, F., Martinát, S., Klusáček, P., & Barke, 2014). Today, aside from car-sharing, there are four unique characteristics of the third generation bicycle-sharing plan in many urban areas (Shaheen, S., Guzman, S., & Zhang, 2010). At present, there are many bicycle-sharing systems in many cities in China with the purpose of sharing bicycles and encouraging healthy travel. Based on the above explanation, shared migration can be divided into car-sharing and bicycle-sharing. In this paper, mobility sharing is defined as a kind of consumption behaviour by which people choose to share travel, because the research question is which factors affect people's sustainable consumption behaviour with regard to shared mobility. Therefore, we do not need to see specifically whether people choose to share cars or bicycles. In the next part of the study, we will look at the explanation of shared mobility from the perspective of sustainable consumption.

2.7 Sustainable Consumption of the Sharing Economy

Stern et al. (1997) initially pointed out that the meaning of consumption itself was diverse, because physicists, economists, ecologists and sociologists at that time all had different interpretations of the concept. According to Meat P (1998), there are two definitions of sustainable consumption in literature. The definition of the concept of sustainable consumption and its criticism are "vagueness" without vagueness (Green, Ryder, Monaghan, & Levett, n.d.). The time horizon of the reference point of sustainable consumption remains unclear because of problems such as scale and scope. Because we are talking about consumption throughout the article, we need to answer some basic question first. How do people consume? Why do people consume? What

are the benefits of consumption? However, the point of view of consumption itself is to emphasise the function of consumption or people's utilitarianism, which is essentially an economist's point of view.

The traditional consumption concept says that consumption cannot further promote the development of sustainable consumption because the main goal of sustainable consumption is to protect our current ecological environment (Lorek, S., Spangenberg, 2001).

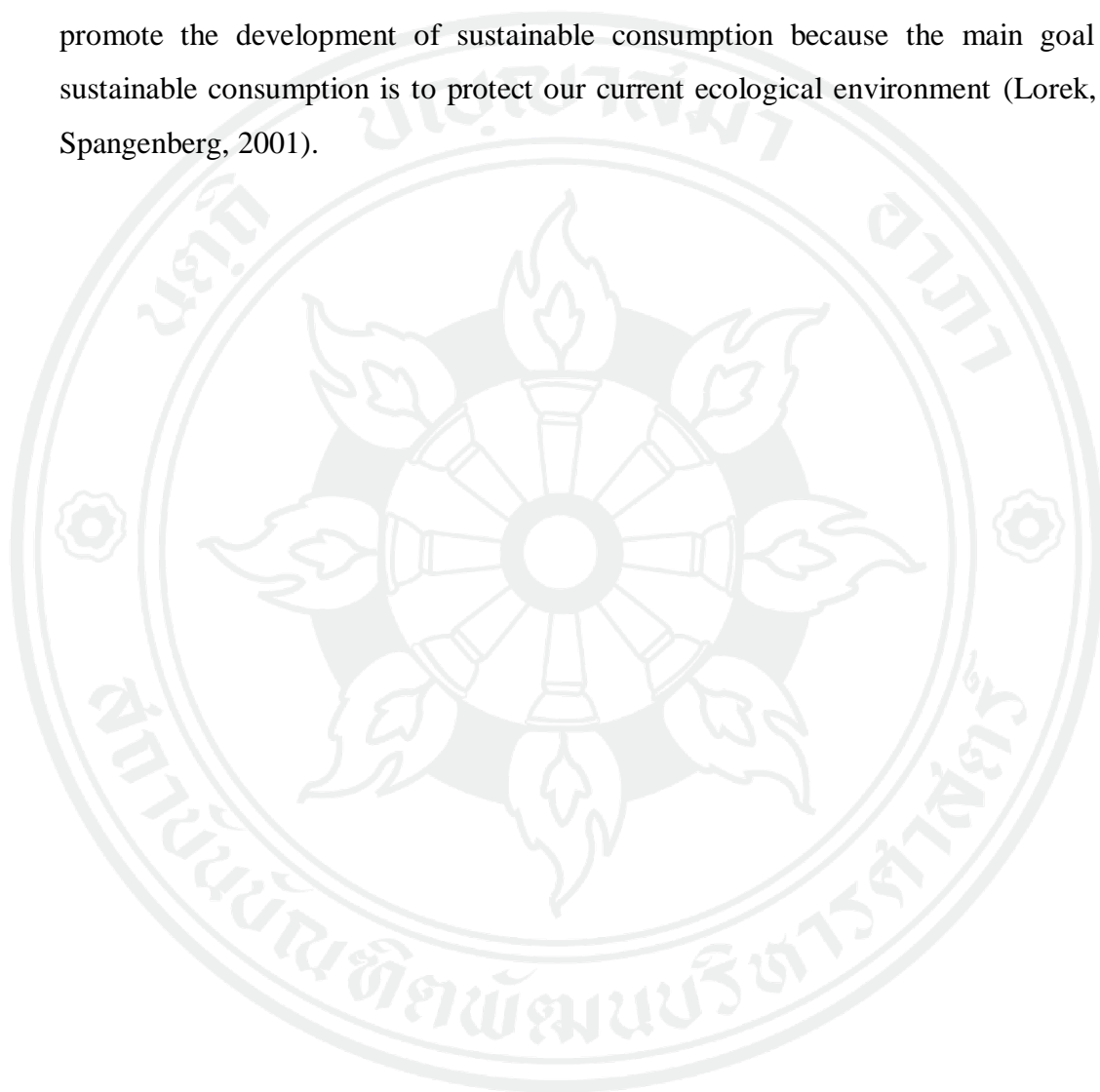


Table 2.5 Perspectives on Sustainable Consumption of SE

Scholars (Source)	Perspectives/ Statements
Stern (1997)	The meaning of consumption itself was diverse, because physicists, economists, ecologists and sociologists at that time had different interpretations of the concept.
Green Et Al. (1997)	The definition of the concept of sustainable consumption and its criticism are "vagueness" without vagueness.
Lorek, S., Spangenberg (2001)	The main goal of sustainable consumption is to protect our current ecological environment.
Yi (2016)	The purpose of continuous consumption behaviour is to meet current needs without impairing the ability of future generations to meet their own needs.
Flanigan (2018)	The concept of sustainable consumption is very broad, taking into account the scientific and technological environment as well as the economic and social aspects, mainly to reduce waste and energy use and improve the welfare of others in people's production and consumption process.
Richins (1994)	The motivation for consumption and possession comes from the meaning of the consumer and the value provided by the meaning.
Geiger, S., Fischer, D., Schrader (2017)	Voluntary behaviour about moral, green purchases and consumption also belongs to the scope of sustainable consumption behaviour.
Xie J, Wen D, Liang L, Jia Y, Gao L (2018)	Damaging bicycles and harming the interests of others are unsustainable practices (Jia et al., 2018), so this study also answers the vagueness of Ancelotti's ambiguous definition of sustainable consumption from year 1998.
Wu J, Li H, Cheng S (2016)	Customer sustainable consumption behaviour in this study includes less waste of resources and energy in order to maintain environmental sustainability.
C., (2016)	Where urban shared bicycles are concerned, the random parking of a large number of shared bicycles on the street also reflects the impact of people's personal behaviour on sustainable development to a large extent.
Prothero, A., Dobscha, S., Freund, J., Kilbourne, W. E., Luchs & Ozanne, L. K., & Thøgersen (2011)	Research generally emphasises the triggers of sustainable consumption behaviour in the traditional economy.

The purpose of continuous consumption behaviour is to meet current needs without impairing the ability of future generations to meet their own needs (Yi, 2016). Now, however, the concept of sustainable consumption is very broad, taking into account the scientific and technological environment as well as the economic and social aspects, mainly to reduce waste and energy use and improve the welfare of others in people's production and consumption process (Flanigan, 2018). Therefore, on the basis of understanding the meaning of consumption and the meaning that consumers perceive when they are consuming, it is very important to achieve the goal of sustainable consumption, and sustainable consumption is the fundamental goal of promoting sustainable development. Richins (1994) holds that the motivation for consumption and possession comes from the meaning of the consumer and the value provided by the meaning.

At present, voluntary behaviour about moral, green purchases and consumption also belongs to the scope of sustainable consumption behaviour (Geiger, S., Fischer, D., Schrader, 2017), which defines sustainable consumption as a kind of consumption behaviour. In addition, recent studies have found that uncivilised practices in the sharing economy (e.g., bicycle sharing), such as damaging bicycles and harming the interests of others, are unsustainable practices (Xie J, Wen D, Liang L, Jia Y, Gao L, 2018). This study, therefore, also attempts to address the vagueness of Ancelotti's ambiguous definition of sustainable consumption (1998).

Similarly, customers' sustainable consumption behaviour in this study includes not only less waste of resources and energy in order to maintain environmental sustainability (Wu J, Li H, Cheng S, 2016), but also the introduction of new behavioural patterns, such as additional work to maintain property in a good condition (e.g., voluntary cleanliness), which promotes social sustainability (C., 2016). As far as urban shared bicycles are concerned, the random parking of a large number of shared bicycles on the street also reflects the impact of people's personal behaviour on sustainable development to a large extent. In recent years, the concept of sustainable consumption has also developed. Concepts such as material strength per service unit (MIPS) (Heiskanen & Pantzar, 1997), carrying capacity (WBCSD, 1996) and environmental

space (Sustainable Europe, 1995) have been presented to policy makers and the public. The basic idea behind these different but related concepts is that the current utilisation rate of natural resources is unsustainable. Although material, energy and production processes do different harm to the environment, the use of all natural resources imposes a burden on the environment.

However, most of the existing studies focus on sustainable consumption practices in traditional economies (e.g., environmental or social aspects), or establish consumption systems rather than specific sustainable consumption practices in shared economies (Lamberton, CP & Rose, 2012). As a result, people's participation in sustainable development is particularly important.

In the current study of the sharing economy, besides qualitative discussions (Cross T., 2016), the relevant quantitative research has not covered specific sustainable consumption behaviour, which also provides a huge impetus for the research, especially in the preliminary stage of sustainable development of the sharing economy, because a large number of studies are still relatively preliminary. Research generally emphasises the triggers of sustainable consumption behaviour in the traditional economy (Prothero et al, 2011). Sustainable consumption behaviour includes various forms, such as energy-saving behaviour.

In view of the basic relationship between the supply and demand theory in the sharing economy, this study based on the basic theory of economics, explores the precursors (social and economic factors) of sustainable consumption behaviour, and explores the driving mechanism (legal and technological factors) of sustainable consumption behaviour in order to establish the mechanism of sustainable consumption behaviour. According to the basic structure of social exchange principle, the reputation of suppliers has a controlling effect on social and economic factors.

2.8 Drivers of the Sharing Economy

In the sharing economy, stakeholders typically offer services through online platforms. For example, the online platforms used to facilitate traffic sharing mobility services are supported by enterprises, some of which provide generous financial rewards for users and cities to make the operation of enterprises more flexible, creative and forward-looking. Organisations use online sharing platforms to promote the value of "supporting the regulators to cope with transport, environmental and employment challenges, reducing congestion and pollution, and building more mobile and dynamic cities for the Chinese people" (State Council, 2015).

Based on the observations of previous studies and explanations, the factors affecting to urban mobility services in the sharing economy that stated their business concepts as different drivers for participating in the sharing economy based on consumer attitudes (Böckmann, 2016; Kim et al., 2015; Hamari, Juho, Mimmi Sjöklint, Antti Ukkonen, 2016; Roland Berger, 2016) . as illustrated in Figure.

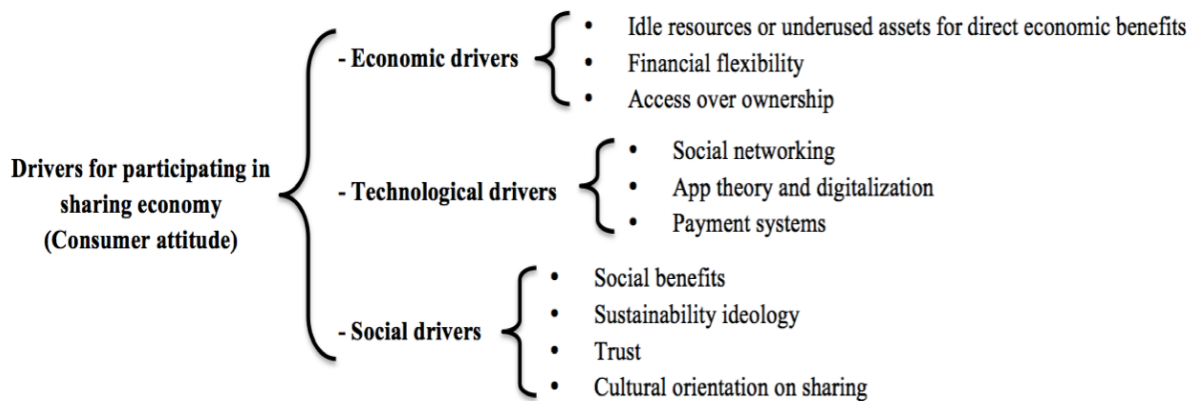


Figure 2.3 Factors for Users Participating in Sharing Economy

Source: (Böckmann, 2016; Kim et al. 2015; Hamari, Juho, Mimmi Sjöklint, Antti Ukkonen, 2016; Roland Berger, 2016)

2.8.1 Economic Factors

The main motivation of platform providers in the sharing economy is economic returns (i.e. profits, shareholder value) (Rochet, J.-C., & Tirole, 2006). However, from the perspective of financial flexibility, cooperative consumption enables owners and non-owners to obtain financial revenue more flexibly and work independently of authorisation (Levine, 2009). Especially in China, the sharing economy is basically a development model of a leasing economy, and not in accordance with the concept of the sharing economy proposed in 1978 of sharing idle resources. In the setting of the sharing economy, pricing will become more complex due to the two sides of the market (Benoit et al., 2017) and the high number of market participants. Because the new form of the sharing economy may be more competitive in the market, this will compel the sharing economy platform suppliers to increase the service quality of their platform and promote the development of the sharing economy. The answer to why the resource suppliers, platform suppliers, and all participants in basic sharing economy theory have to understand the motivation and value proposition of the platform suppliers is that the suppliers will pay more attention to the platform. In terms of efficiency, although users can interact directly with the platform, the reputation and trustworthiness of the platform will gradually increase in importance. More users will consider the economic benefits of the platform, whether the platform operators can respond quickly to improve the quality of the service and so on. As a result, if there is no common understanding and trust, the relationship network cannot be sustained (Benoit et al., 2017), which causes the emergence of second social factors and so on. Therefore, it is very important for platform providers to clarify their mission and value proposition; they become "brand managers" (Fryberg & Ju riado, 2008).

The main factor of economic development is macroeconomic development. Since the 2008 International Financial Crisis, the sharing economy has developed vigorously. After the financial crisis, the global economy has generally declined; people's disposable income has decreased; and cost-sharing has become people's way of life. In an effort to maintain their past lifestyles and level of living under higher living

expenses made people look to share and reuse their limited resources as a way of reducing their expenditure on goods or services. At the same time, looking for ways to increase or supplement their income has become another choice for people. The result of this was the sharing economy, demonstrated by part-time employment in the form of suppliers and services operators. Another factor contributing to economic development can be attributed to the prosperity of capital markets. In the past few decades, many small companies with innovative business models have grown rapidly with the help of venture capital and become mature business models and successful enterprises. Among them, successful enterprises such as Uber, Drop Drip and Airbnb share the economic field. If we want to try to change the traditional business operation mode and people's consumption habits, we need sufficient capital.

Levine (2009) stated that, "Sharing behavior is based on ownership, no matter whether it is an iPod, and solar panels for coal mines. Sharing is clean, neat, elegant and post-modern; Actually, the current mobility sharing service is an important attempt at "sustainable" development. Regarding any changes in ownership, idle resource utilisation constraints are reduced and matched with specific or personalised requirements in the operating society, reflecting access to ownership (Belk, 2014).

The most prominent feature of people's participation in the sharing economy is the reuse and monetisation of resources under good conditions. As Botsman, R., & Rogers (2012) explained, the idle property of individuals or groups is dedicated to the interests regarded as idle resources, so economic interests largely determine whether people want to consume or not to use the shared economic platform. For stakeholders, income can be earned from low-utilisation resources with flexible working hours. Secondly, for users, it can save costs, promote and allow them access to previously unavailable products and services.

2.8.2 Technological Factors

Technological factors are mainly due to technological progress. Because of the wide use of GPS, mobile interconnection technology, and big data (storage and analysis) technology, people can access network-based shared services anytime and anywhere. As a result, the matching cost between buyers and sellers is reducing all the time. Because of the significant reduction of transaction costs, users are able to make more purchases. Selling or donating smaller goods, services or experiences forms a "shared business platform". The function of "digital reputation ratings" formed by platform information often replaces personal credit, and does not even need the classical mark of traditional credibility, such as a business license.

Therefore, the third driving force of sharing economy development is the continuous improvement of modern technologies, such as media, mobile devices and the Internet, which form a platform for information sharing. The growth of technology, particularly the upgrading of mobility Internet technology, demonstrates a decisive attribute in the development of the sharing economy. Firstly, it promotes the popularisation of smart devices. Taking smartphones as an example, the Research Report on the Operational Situation and Development Trends reports that global smartphone sales in 2016 totalled 147.6 million units, an increase of 2% year on year. From 2013 to 2015, the three-year growth rates were as high as 40.5%, 27.6% and 10.1%, respectively. The popularity of smartphones extends the range of people's actions.

In addition to devices, mobile applications have also been greatly improved. According to the Ministry of Industry and Information Technology, by the end of June 2017, the number of mobile applications in China's local third-party application stores exceeded 2.32 million, while the number in Apple Store (China) exceeded 1.17 million. Among these, the number of third-party app stores distributed more than 627.7 billion apps. In addition, mobile payment technologies such as Alipay and WeChat make the payment process more efficient and secure, bringing greater convenience to our lives.

Electronic payment, social networking and digitalisation have all contributed significantly to the sustainable development of the sharing economy. In addition, the

development of big data also provides a guarantee for the development of the sharing economy. Through accurate algorithms, the supply and demand information and resources of the sharing economy, which is based on P2P as the main mode, can be integrated and matched to provide more targeted goods and services based on the analysis of mass information.

The modern sharing economy can develop rapidly, mainly depending on modern information technology such as the Internet. Before the emergence of Internet technology, it was difficult to share information with groups of people across geographical locations. The emergence of Internet technology has broken the limitations of time and space, connecting individuals from different countries and regions, and making the redistribution of resources possible. It can be said that Internet technology is the main supporting force for the development of the sharing economy.

2.8.3 Social Factors

Social and cultural factors mainly come from the change of people's concept of consumption. For today's young people, what they like to share has shifted from the tangible to the intangible, preferring a meaningful experience over a possession. As such cultural factors mean that more people have a clear preference for "right to use" than "ownership", conditional access to something has become more important than the actual possession of it. Another social psychological factor is due to the "Internet +" trust between people. In today's sharing mode, more transactions take place among strangers who do not know each other. Identifying suppliers and consumers involves a bridge of trust. The overall score of dripping drivers and customers, Alipay's personal sesame credit, and word of mouth in the US group are all links built on the "Internet plus" and used big data to build a strange transaction for both sides.

On the basis of the above information, we can further discuss the status and social factors of the operation and development of sharing economy enterprises. In order to explore the key factors affecting the development of the sharing economy, this discussion can be carried out from three aspects: the role of the operators/service

providers (sellers), the role of the users/consumers (buyers), and the role of the regulators (third parties) involved in the operation of sharing economy platforms.

For operators or service providers, the participation and construction of an "interest community" by different interest groups has become the starting point of the "sharing" process. All parties involved in this platform need to share common goals and interests. Therefore, to realise the operation of an interest community by organising and coordinating the interests of all parties involved becomes the basis of sharing economy development. On this basis, sharing economy companies stimulate the desire of all parties to cooperate by sharing the fruits of economic development, and ensure that all parties involved can achieve the fruits of benefit sharing. Taking Drop Company as an example, besides providing platform operation services and supervising service quality, the company also fully mobilises the enthusiasm of all parties to enable the platform to integrate the resources of all parties for operation and sharing.

In the process of building a platform for the participation of all parties, the operation of sharing economy enterprises should be institutionalised to form the rules of platform operation. In the two sharing economy cases mentioned above, it is an important part of the construction of the enterprise system to strengthen the quasi-auditing of participants and to standardise and supervise the behaviour of drivers and passengers. The operation of this sharing platform also depends on the active participation of consumers, requiring sharing economy enterprises to stimulate the desire of customer participation in various ways.

2.8.4 Legal Factors

The changes that have taken place in the social organisation structure and government governance concept over recent years have been brought about by the ongoing evolution of science and technology. Some of the most notable new changes

have taken place in the theory of public choice, especially the popularisation of the idea of sharing/sharing and the subsequent change in the related economic behaviour, which presents certain challenges for the three basic research methods of the decision-making process of the theory of public choice. Firstly, in the aspect of the economic man hypothesis based on rationality, the irrational behaviour analysis method is introduced into the policy decision-making process. Secondly, it impacts on the public choice theory and policy decision-making process of the original economic man hypothesis based on economic rationality.

The “irrational behaviour” formed by a sharing community based on an Internet platform often has a greater impact on public decision-making. This model was confirmed by the introduction of experimental analysis methods in Kahneman's research (2010). By analysing the game problem of the dictator, they found that even in the case of anonymity without concern for reputation, the dictator still considers fairness rather than maximising his own benefits. This idea of balancing personal interests and social equity is a way of thinking of "sharing". As the article on “The connotation and connection of the five concepts” in the People's Daily puts forward, “Adhering to shared development is to focus on improving people's well-being, enhancing the sense of access, and solving the problem of social equity and justice.”

Similarly, studies such as Thaler's (1985) also show that people have social preferences in their decision-making, which take equity into account and subsequently affect their behaviour. Andreoni (1999) also further proved through experiments that, in reality, people also take the issue of fairness into account when considering personal interests. Therefore, charitable donations, bone marrow donations, and other such philanthropic behaviours that are difficult to explain with individualism can exist in large numbers. In addition, Okun, Fehr, Tyran and Thaleri (2005) all made conclusions in this regard. In terms of the exchange paradigm, with the gradual popularisation of the concept of sharing, the “Collaborative Consumption” brought about by the sharing economy deserves attention.

At present, domestic researchers have begun paying greater attention to the role of shared ideas and the sharing economy in public choice theory and public policy

formulation. For example, Tang Qingli (2017) studied the phenomenon of “special cars” in China, believing that although these “special cars” involve irregularities and compliance issues, they also require that public management departments adapt to market demands and respond to innovations. Therefore, the “special cars” model of the sharing economy should not be prohibited, but should be developed through the establishment of a mixed regulatory model to enhance its strengths and avoid any potential weaknesses. On the topic of promoting the redistribution of social wealth and the marketisation of public services, Qiao Hongwu and Zhang Jiangcheng (2015) put forward some policy suggestions on the legislation, technology investment, and concept change of “sharing” based on the changes to the economic ethics brought about by the sharing economy (moderate consumption, cooperation and mutual benefit, and mutual trust).

Wei Huang and others (2017) analysed the relevant rules of China's car-calling service, believing that although the regulation of the sharing economy is bound to face various challenges, reasonable regulation cannot give up the protection of competition. Therefore, when the government regulates and controls the sharing economy, it must balance the interests of all parties and abide by Antimonopoly Law. Jing-Li Fan and others (2018) studied the impact of Beijing's energy demand and greenhouse gas emissions on passenger transport due to the development of traffic sharing and the traditional development of the Internet era. They also found that Beijing's development of its public transport and transport sharing scenario would lead to a 25-30% reduction in energy consumption and emission reduction by 2030.

On the basis of the study on the related policies of Hangzhou's sharing economy, Li Yong and others (2011) proposed the building of a governance system conducive to the development of the sharing economy. Additionally, it was deemed necessary to deal appropriately with the problems of the “rule vacuum, contract absence and information security” in the process of its operation. Liu Genrong (2015) put forward the corresponding policy suggestions for the border, legal and government regulation problems faced by the development of the sharing economy. Jiang Daxing (2017) suggested that because the rules under the traditional economy cannot fully meet the regulatory needs of the sharing economy, regulation innovation should be carried out,

including legal regulation of the sharing economy.

Although the above achievements provide a solid perspective and ideas for the study of the domestic sharing economy, most of these principles are still based on the existing economic operation framework and theoretical analysis framework; that is, integrating the sharing economy into the theoretical framework of traditional public decision-making, while ignoring the sharing concept, the sharing economy and the public. The integration and innovation of collective choice and collective decision-making. In fact, as a ‘network community’ sharing platform, the aim is not only to be active in influencing public policy and break through the constraints of the existing economic model, but also to use the ‘public goods’ characteristics brought by its own agglomeration economy to integrate with the government's public policy, and even to provide necessary public services for local governments. For example, sharing companies are used for urban management, as contractors to provide urban services to “achieve delicate urban development goals” and “pursue more complex policy outcomes”.

Faced with this new trend, it is necessary to analyse the sharing concept and the possible economic effects of the sharing economy systematically from the perspective of the general welfare of the society. The impact on the traditional economy, public policy choice and collective decision-making may be manipulated to support the economic policy system of the healthy and stable development of the sharing economy. This would certainly find the theoretical basis, while also meeting the inherent requirements of establishing an innovative and service-oriented modern government system under the new situation.

2.8.5 Trust and Reputation

In the past, most researchers have built a trust and reputation model for analysing the sharing economy from two perspectives (such as users and stakeholders). However, as an essential concept of social science and psychology, many scholars have

conducted in-depth research on the theory of trust and reputation, but have not yet achieved a unified definition of these important terms, especially in the field of contributing to the economy. Trust and reputation are significant attributes in our social and commercial activities, along with uncertainty and dependence as identified in previous research processes. Mittendorf (2017) studied the formation of trust in the sharing economy from the perspective of stakeholders. Al (2017) also used the stakeholders' perspective to identify host attributes that are considered trustworthy and affect the purchase decisions of users on a short-lease sharing platform.

However, few researchers have built a conceptual model of trust and reputation in relation to sustainable development by integrating all relevant elements. Later, for example, Xie Yipeng (2017) proposed that the formation of trust in the sharing mobility platform must include all of the following conditions: consumer demand and acceptance, platform security policy, participant attributes, and product and feedback. Chen (2016) studied the factors that influence people's willingness to trust and sustain participation in shared mobility. Hawlitschek, F.; Teubner, T.; Adam, M.T.P.; Borchers, N.S.; Möhlmann, M.; Weinhardt (2016) also explored how different trust goals and intentions change the behaviour of participants' sustainable consumption, and outlined an inclusive conceptual model to describe how trust affects the intent of consumers and suppliers to participate in the sharing economy.

The sharing economy is based on the consumers' trust in the platform and the brand reputation of the stakeholders. In the sharing economy, trust is seen as an intangible currency, and participants need to believe that strangers will share goods or property through the sharing platform. Buyers' trust in the sellers and the reputation of the sellers are more critical than in traditional online businesses. The sharing platform plays an intermediary role, eliminating information asymmetry and security concerns between users, providing a suitable environment for both parties, thus establishing consumer trust. In this process of consumer behaviour, we believe that specific technical factors, the social environment, and the economic environment are also important factors affecting the development of the sharing economy.

Conceptually, the sharing economy refers to the sum of economic activities that utilise modern information technology. Taking right-to-use sharing as the main feature, massive and decentralised resources are integrated to meet diversified needs. The sharing economy is a new economic form emerging after the information revolution developed to a particular stage. It is an optimum resource allocation mode that integrates all kinds of dispersed resources, accurately finds diversified demands, and realises quick matching between supply and demand. It is also place the emphasis on being people-oriented and on sustainable development, while also advocating the best experience and resources under the development trend of the information society.

The sharing economy makes the best use of the new concept of consumption and growth. Therefore, the sustainable model formulated for the sharing economy promotes society's trust in mobility sharing mobility as presented in Figure 8 below.

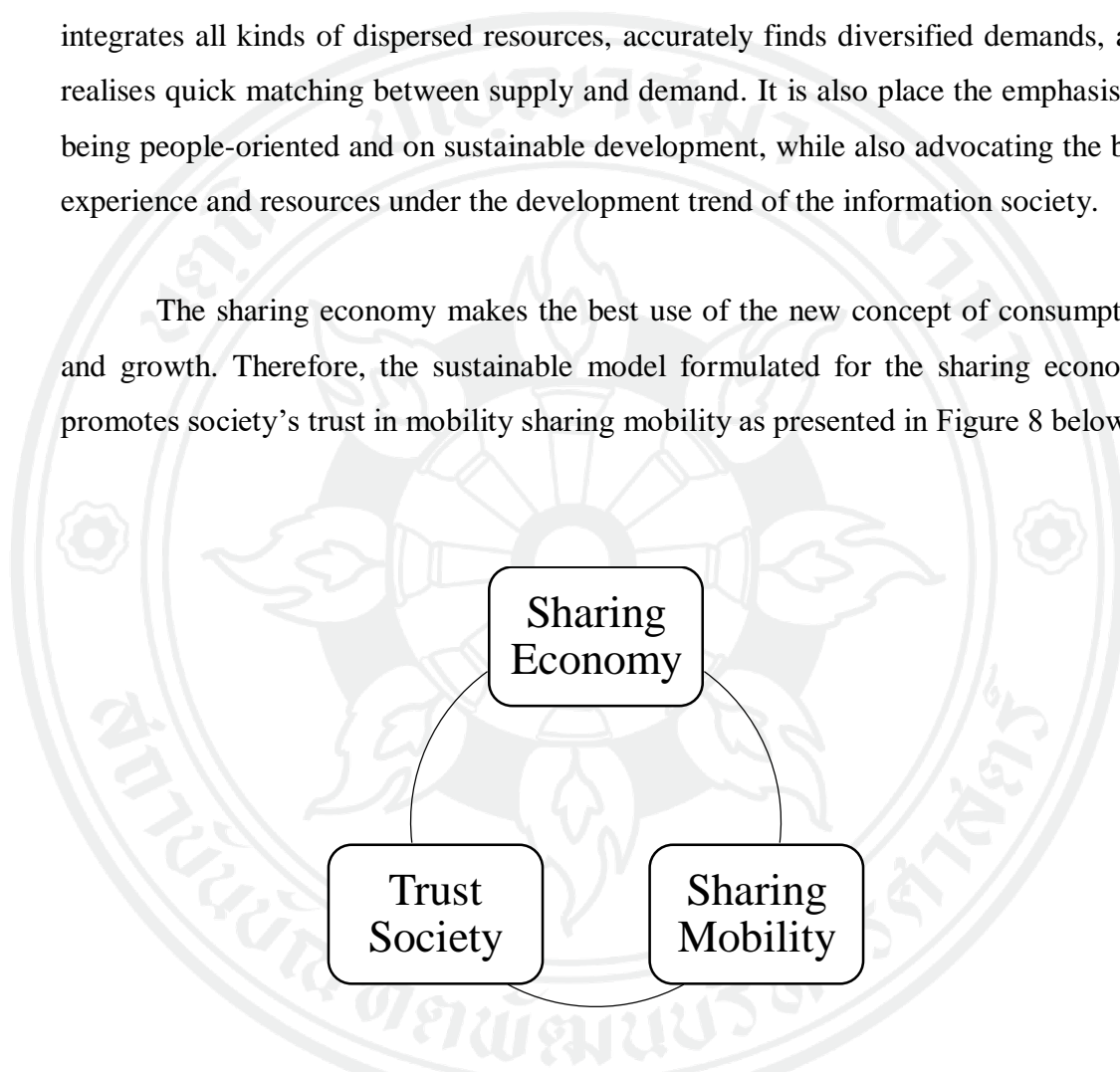


Figure 2.4 The Sharing Economy and the Trust of Society

Reputation is considered to be a core factor affecting trust, and the relationship between reputation and trust can be described in the context of the sharing economy as “a good reputation that increases consumer trust in the platform.” However, reputation here is not a necessary condition for trust; even without information about another party's reputation, people sometimes trust strangers. In this study, therefore, trust and

reputation are discussed in an attempt to explain how people trust the platform and the reputation of the platform itself to influence the sustainable development of the sharing economy. For example, Wang, Y. and Vassileva (2007) argued that trust and reputation in e-commerce are strictly related to the concept, but not identical, and the two influence each other. Reputation is a public opinion that represents a collective evaluation of the characteristics of an entity or a person by a consumer group and thus can affect the public's willingness to sustain consumption through the platform to some extent.

However, in practising P2P e-commerce, reputation information is typically communicated to consumers through the digital comment scores of experienced customers interacting with the seller. Trust is a subjective feeling, and the trustee will act in some way based on his or her implicit or explicit commitments. It is an essential part of online P2P market transactions because two strangers cannot trust each other when engaging in currency trading so here we can clearly know that people must have full trust in a sharing platform if they are to continue their consumption behaviour.

As mentioned above, the primary method used to promote trust in the P2P market is a reputation mechanism based on online commenting and scoring systems. Therefore, although reputation is only one element of trust building, most empirical studies focus on reputation mechanisms for some platforms. For example, Beverley & Sparks (2011) specifically addressed the impact of particular features of online scoring systems (e.g., their potency and framework) on user intent and consumer trust. Resnick (2002) studied a platform with a good reputation and found that, compared with a lesser-known competitor, the amount of consumption may increase, but the price will not increase. The study of Yacouel, N., Fleischer, (2012) revealed that online reviews affect the price of a platform because comments affect whether people participate in the platform, which will cause the platform to float to some extent.

2.8.6 Sustainable Consumption Behaviour and Sustainable Development

Stern, D. I., Common, M. S., and Barbier (1996) initially noted that the meaning of consumption itself was diverse in that physicists, economists, ecologists, and

sociologists had different interpretations of the concept at the time of their research. Depending on Mack (1998), there are for two definitions of sustainable consumption in literature. The definition of the concept of sustainable consumption and its criticism is "vagueness" without vagueness Ancelotti's LED label (1998). The time horizon of the reference point of sustainable consumption remains unclear because of problems such as scale and scope. Because consumption is a main focus of this research, it is important to answer some defining questions. How do people consume? Why do people consume? Can people not continue to be used? What are the benefits of consumption? However, the point of view of consumption itself is to emphasise the function of consumption or people's utilitarianism, which is necessarily an economist's point of view. The traditional consumption concept states that consumption could not further promote the development of sustainable consumption because the primary goal of sustainable development is to protect our current ecological environment (Lorek, S., Spangenberg, 2001)

The purpose of sustainable consumption behaviour is to meet current needs without impairing the ability of future generations to meet their own needs (Q. Liu, Li, Zuo, Zhang, & Wang, 2009). Recently, however the concept of sustainable consumption behaviour has become very broad, taking into account the scientific and technological environment, as well as economic and social aspects, mainly with the aim of reducing waste and energy use and improving the welfare of others in people's production and consumption process (Ban., 2005; Hawn et al., 2018). Therefore, understanding the meaning of consumption and the perception consumers have of their own consumption are essential for achieving the goal of sustainable consumption, which is the fundamental goal of promoting sustainable development. Connolly & Prothero (2003) opined that the motivation for consumption and possession comes from the meaning of the consumer and the value provided by the meaning.

Voluntary behaviour for safe, green purchases and consumption also belongs to the scope of sustainable consumption behaviour. Whitmarsh & O'Neill (2010) defined sustainable consumption as a kind of consumer behaviour. Also, recent studies have found that uncivilised practices in the sharing economy, such as the damaging of

bicycles in bicycle sharing systems, which harm the interests of others, are unsustainable practices. Jia, et al(1998) also studied the answer vagueness of Ancelotti's ambiguous definition of sustainable consumption from the year 1998.

Similarly, customers' sustainable consumption behaviour in this study includes not only less waste of resources and energy in order to maintain environmental sustainability (Hong, J., Wang, C. & Kafouros, 2015), but also the introduction of new behavioural patterns, such as additional work to maintain property in good condition (e.g., voluntary cleanliness), which promotes social sustainability Allison.,et al (2016). As far as the public sharing bicycles is concerned, the random packing of a large number of communal bicycles on the street also reflects the impact of people's behaviour on sustainable development to a large extent. In recent years, the concept of sustainable consumption has moved forward. Concepts such as material strength per service unit (MIPS) (Heiskanen, E., & Pantzar, 1997) and ecological space (Heiskanen & Pantzar, 1997) have been submitted to policymakers and the public. The basic idea behind these separate but related concepts is that the current utilisation rate of natural resources is unsustainable. Although material, energy and production processes do distinct harm to the environment, the use of all natural resources creates a burden on the environment.

However, most of the existing studies focus on sustainable consumption practices in traditional economies (e.g., environmental or social aspects) or establish consumption systems rather than specific sustainable consumption practices in sharing economies (Lamberton, C. P., 2012). Nevertheless, people's participation in sustainable development is particularly important.

In the current study of the sharing economy, besides qualitative discussions Allison., et al.,(2016), the relevant quantitative research has not covered specific sustainable consumption behaviour, which also provides a tremendous impetus for the research, especially in the preliminary stage of the sustainable development of the sharing economy, because a large number of studies are still relatively preliminary. Research generally emphasises the triggers of sustainable consumption behaviour in

the traditional economy (McDonagh, P., & Prothero, 2014). Sustainable consumption behaviour includes various forms, such as energy-saving (Zhang et al., 2018), food consumption (Sahakian, Marlyne, Wilhite, 2014), green product purchases (Antonetti, P., 2016) and product disposal (Zhang et al., 2018).

In view of the fundamental relationship between supply and demand theory in the sharing economy based on the basic theory of economics, the precursors (social and economic factors) of sustainable consumption behaviour need to be investigated. Figure 2 explores the different domains of sustainable development. However, the sharing domain addresses sharing as a driving mechanism (legal and technological factors) of sustainable consumption behaviour in order to establish the mechanism of sustainable consumption behaviour. Being dependent on the basic structure of the social exchange principle, the reputation of suppliers has a controlling effect on social and economic factors. Moreover, finally the sustainable model of the sharing economy, sustainable consumption behaviour and sustainable development.

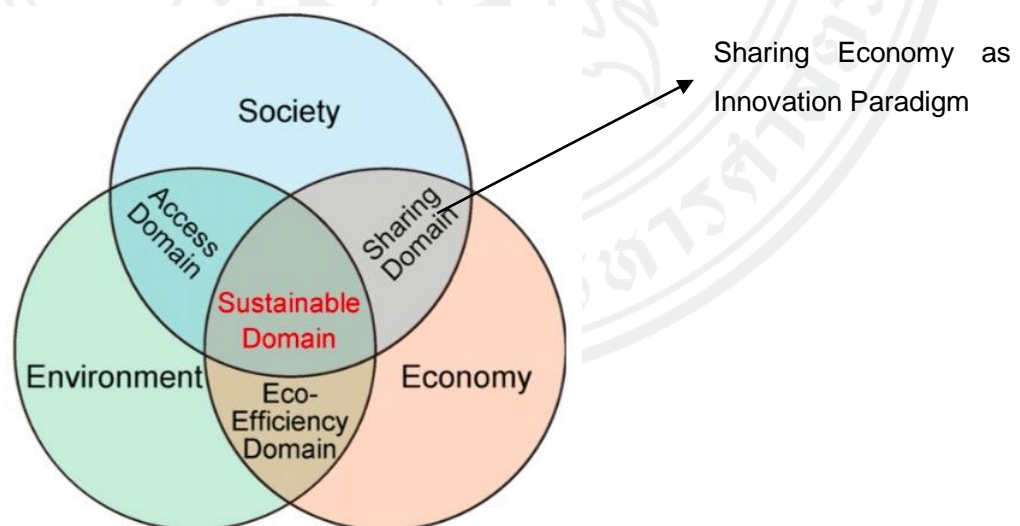


Figure 2.5 Fundamentals of sustainable development

Source: (Zervas,G 2007).

Zervas, G (2007) said that the goal of sustainable development is to improve people's living standards, at the same time as improving the availability of natural resources and ecosystems for the coming generations. The progress of the sharing economy reduces the number of people buying private cars, decreases urban pollution, and promotes sustainable consumption in cities. The basic picture of sustainable development describes a wide range of concepts, including the interaction between economic, social and environmental fields; people's understanding of the environment; collective promotion of the economy; and also universal urban concepts.

Recently, sustainable progress has been discussed in the context of the sharing economy. Experts and scholars in many countries have also used different cases to explain the impact of the sharing economy on community life. This research, therefore, mainly summarises the impact of the sharing economy on people's sustainable consumption under the framework of universal influence. People's sustainable consumption behaviour ultimately achieves the sustainable development of society. This benchmark coincides with the sustainable development of the current improvement of human living standards, which is largely dependent on people's ability to fulfil their needs of consumption.

2.9 The Cases of Sharing Mobility in China

Based on previous studies, the sharing economy is often defined as a new economic form based on sharing (including investment, resources, market and other aspects of sharing (Qiang, 2016). Especially since 2015, local governments have been encouraged to promote the development of this new economic form actively and sup relevant management mechanism. This economic form gains by sharing and integrating the resources owned by the social entities participating in the sharing platform (Yi, 2016). It utilises idle resources through collaborative consumption (Felson, M. Spaeth, J. L., 1978) or links supply and demand sides through trading platforms to achieve consumption. This is an early definition of the use of the sharing economy. At present, this field, especially in China, has developed into a mode of leasing economic development. The sharing economy has also appeared in Europe and the United States,

although the development of China is more obvious. In terms of the development engine, China's shared economic development pattern has the characteristics of China's social situation. However in the connotative definition, Robin Chase (2015) believes that the sharing economy includes three basic elements: idle resources, a sharing platform and people's participation. According to this scholar's theory, the sharing economy is based on the sharing of idle resources. However, Schor (2014) believes that the development of the sharing economy can take different forms and follow different ways. It can include companies that promote commodity recycling (e.g. eBay, which auctions commodities online), companies that increase the utilisation of durable assets (e.g. Airbnb, which engages in vacancy rental business, to a large extent stimulating the development of the hotel industry in Europe and the United States), especially the integration of human resources; companies that provide taxi services (e.g. Uber, Didi Chuxing platform in China); and time bank projects for sharing productive assets (e.g. customer space, collaborative workspace, education platform) and exchanging service time.

However, sharing bicycles is another typical case of urban transportation in the sharing economy. At present, OFO is the first among many companies in China engaged in the provision of bicycle sharing services. Founded in 2014, the company initially aimed to solve the travel problems of teachers and students on the campus of Peking University. It is marked by Xiaohuang Car, which can be unlocked through a mobile App and parked at any time on campus (Minlian, 2017). At present, the OFO market has expanded from the campus to more than 20 cities, receiving more than 200 million orders (Chenggong, 2016), at a rate of more than 50,000 usage times per day from more than 2 million users. At the same time, many enterprises, such as Mobai, Helobike, Xiaoming, Youbai, Bike Riding, Xiaolan and so on, have also introduced a bicycle-sharing service, which have an examples of the study of sharing economy enterprises. Due to promotion by local governments, especially in some western cities, such as Chengdu in Sichuan, the sharing of bicycles on China's campuses is gradually increasing. This has been very effective in changing the way people travel to a healthy option, as people of all social strata choose to share bicycles as a means of transportation.

According to the relevant research, the operation characteristics of these enterprises can be summarised from the following aspects. Firstly, benefit synergy is the basic premise for the operation of these shared economic enterprises (Cheng, 2013). The coordinator of the company platform plays an important role in the company operation, but the cooperation and collaboration among other participants are also crucial. For example, the DIDI Chuxing company does not have ownership of the vehicle itself, but provides labour by coordinating the organisation of idle private vehicles, which reduces operating costs. At the same time, owners (resource providers) also get service information and customers get convenient services through the company's platform, so as to achieve win-win results.

Secondly, sharing economy enterprises also operate with higher efficiency. Many scholars say that the main motivation for global car-sharing is cost-saving (Shahen, S.A.Cohen, 2008). Some emphasise other advantages of the sharing economy, including the convenience of sharing consumption and the pleasure of sharing activities (Hamari, J., Sj, klint, M., Ukkonen, 2016). It is also considered a failure case. At the same time, the benefits of sharing are solid. In China, researchers also emphasise that sharing platforms (such as drip-drip taxis) are facilitators of information exchange between suppliers and consumers, providing convenient services for people, and thus improving the efficiency of resource utilisation (Guangju, 2016). Moreover, when people are in areas where public and private transport cannot be accessed, sharing bicycles can solve the 'last kilometre' problem for people to complete their journey conveniently (Zhou Juan, 2017). In addition, the sharing economy also reflects the characteristics of the widespread use of high technology.

In this regard, Yang (2016) mentioned that drip platforms make the most reasonable allocation of resources by automatically matching the latest vehicles through premium algorithms. Haifeng (2017) emphasised how the rapid development of shared bicycles also benefits from the use of GPS, which means that the location information of bicycles can be displayed on a mobile phone. For example, Mobai Bicycle uses AI artificial intelligence in the operation and maintenance of its 'magic

cube' platform to collect cycling data for analysing the urban traffic dynamics, and then precisely enters the appropriate number of bicycles. The adoption of these technologies means that benefits from the development of modern network technology and cloud data computing can be utilised to achieve information symmetry between supply and demand, and to maximise the utilisation of idle resources to meet people's needs.

Obviously, the enterprises of the sharing economy are also facing some difficulties in the process of development. In the current discussion, these enterprises have been criticised mostly for their excessive supply and chaotic delivery of resources under the pressure of market competition. Others have criticised their management problems, citing a negative impact on urban management and safety (Lanlan, 2017). For example, there are management loopholes in the implementation of quasi-human standards and business norms for drip-drip taxis. There have been complaints from customers that some drivers are reluctant to accept short-distance requests, while others criticise the drivers for charging higher prices in snowy and rainy weather (Weifei, 2016). In the case of bicycle-sharing, many bicycles are detained and forfeited for parking violations. There are regularly reports of the collection and seizure of tens of thousands of shared bicycles by industrial and commercial departments everywhere.

In addition, due to the different configurations of industrial competitiveness, infrastructure, institutions and customs, the ecosystems of different countries also vary significantly. An important advantage of using the ecosystem view is its dynamism rather than being static in nature. According to Moore (1993), ecosystems evolve in the lifecycle, and the interactions among stakeholders also change. In the early stages, with the implementation of new regulations, companies and stakeholders take time to adjust and identify the best ways to create and acquire value. In the latter stage, due to technological leadership and widespread market adoption, industry and the surrounding regulations have been established, and participants have created barriers to entry. From the perspective of business ecosystems (see Figure 3), industry is not isolated. Business dynamics involve multiple supply chains, which are widely affected by cross-industry effects, usually related to technological progress and innovation (Gulati et al., 2012; Moore, 1993). Then, the ecosystem approach to the internationalisation of sharing

economy enterprises should include different perspectives, such as location advantages, network and institutional effects, and stakeholder dynamics, all of which are embedded in the context of industrial evolution.

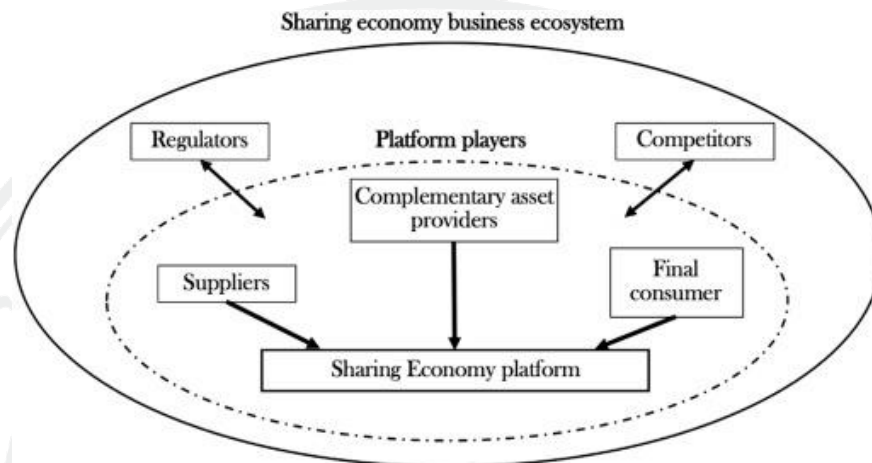


Figure 2.6 The Ecosystem of the Sharing Economy

Source: (Ronaldo C. Parente, 2017)

The development of the sharing economy in the field of transportation started at the beginning of the 21st century. In a short period of just over ten years, shared travel has become the most successful paradigm in the development of the sharing economy. Various travel sharing platforms have sprung up, from Zipcar, the earliest ancestor of shared travel, to giants like Uber. In the past two years alone, Mobike, ofo and other green shared travel platforms have gathered momentum to join the race, which has once again set off a new updraft in the sharing economy.

Zhang Xiaorong (2018) stated that as long as there is a surplus of something, it can be shared. The sharing economy comes out of a surplus in the economy, which is typically one of three types of resources left idle: property, money, and time. For enterprises, this can mean products in stock or unused production capacity. The emergence of the sharing economy conforms to the general direction of China's supply side reform, showing the potential in reconstructing a more efficient, more sustainable

demand and supply relationship. In this case, the sharing economy is becoming an important driving force behind economic growth by generating profit for manufacturers but also benefiting consumers, thus stimulating more people to participate in the sharing economy. The sharing economy is an economy based on the demand side, and the economic base of future society will probably be based on sharing.

The rapid development of the sharing economy, a new economic operation mode, has brought direct changes to people's daily lives, and is also one of the important trends in the development of the information society. The operation mode of the sharing economy involves market transactions facilitated by new Internet-based technology. In the analysis of human economic activities, there are two basic assumptions in economic theory, namely, the scarcity of resources and rational economic man. The scarcity of resources is a relative concept, that is, the resources to satisfy the desire are limited compared with the endless human desire. The hypothesis of the rational economic man is that all social and economic activities are aimed at satisfying the maximum utility of human beings. Driven by the limited restriction of resources and the pursuit of maximum self-interest, the social and economic activities of human beings have emerged, resulting in the trading behaviour of supply and demand. On the basis of social and technological progress, new demands, new desires, and new trading behaviours have been constantly generated, thus increasing the scope of transactions. The content is expanding and the trading mode is evolving.

Under the background of the continuous development of Internet information technology, the essence of the sharing economy model is still that both supply and demand sides promote the realisation of mutual benefits through market transactions. From the supply side, individuals or enterprises as suppliers have sufficient means of production or consumption, appear idle, and have strong willingness to transfer the right to use products temporarily. Therefore, the extension expansion potential of the supply side is significant, forming a huge market supply capacity. From the demand side, there is a certain consumption demand for the products or resources provided by the supplier. The demand of the demander is realised by leasing and borrowing. It does not require the ownership of the resources or products directly. The demander only enjoys the right to use the goods. Compared with traditional market transactions, the demand of the

demanders share the economy. The market transaction mode produces enormous performance-price advantages, which generate huge market demand capacity on the demand side.

The fine differentiation of property rights is the basic prerequisite for the realisation of the sharing economy model. The market is not only a place of exchange, but also the sum of all kinds of exchange relations. The so-called market economy is an economy linked by exchange. The smooth operation of the market economy system lies in the market mechanism being a system with property rights as its core, property rights as the basis and core of the market economy, and the definition, structure and institutional arrangement of property rights are the basic prerequisites for market transactions and orderly operation.

Under the traditional market economy conditions, exchange must be based on the premise that both the supplier and the demander have the ownership of the goods they want to exchange. The essence of exchange is the exchange of ownership. In the Internet era, the convenience of information exchange and sharing has had an inevitable impact on market rules. The sharing economy is the product of the Internet, which challenges and deepens the existing concept of property rights, but does not negate property rights. The sharing economy is still a system of voluntary transactions based on the premise that both suppliers and demanders have the ownership of the goods they want to exchange.

Unlike the traditional market economy, which determines the ownership of goods through transactions, the sharing economy relies on technology to further and define property rights. In its trading mode, the ownership and use of rights of goods are separated. The supplier who retains the ownership of the goods transfers the usage rights of those goods by charging a certain fee to realise private ownership. The socialisation of people's production factors has brought about a significant increase in their value. The demander pays a certain fee by renting and borrowing, and obtains the right to use the goods to meet his own needs.

The delimitation of property rights in the model of the sharing economy

promotes the emergence of a new two-tier structure of property rights, in which the ownership of property is dominant: the right of possession, domination and income are at a lower level; and the right of use of property is at the upper level. The supplier of the resources retains the ownership, but the right of use becomes common. In essence, the sharing process involves the sharing of information, data and services.

The evolution of Internet technology has provided a carrier for the emergence and operation of the sharing economy model. With the rapid development of Internet technology, the transaction mode and space of both suppliers and demanders have undergone tremendous changes. Through intelligent information terminals, market trading places have been virtualised into Internet platforms. This rapid development of information technology has promoted the realisation of the informatisation and fragmentation of idle resources in economic society. On this basis, the Internet platform enables these resources to be organised efficiently and flexibly to meet the needs of both supply and demand, and to achieve sustainable social and economic development. In the traditional market economy, the 'exchange economy' based on the power of the market supply-demand relationship gradually turns into the sharing economy based on sharing and general means of production and living. The emergence of the sharing economy model is a new stage of deepening and expanding the market economy. In the Internet era, the emergence of the sharing economy model is inevitable.

2.9.1 DIDI Chuxing in China

According to the findings from a survey by the China Market Survey Network, the rhythm of urban life, community travel, regional development and residents' lives in Chengdu from the perspective of travel, based on the full data of drip-drip travel platform, which provides a new perspective for the study of urban development in the region. The report shows that in the third quarter and the total number of intelligent trips in Chengdu reached 130 million, which makes Chengdu the city with the highest penetration rate of intelligent trips in the western region. As of September 2018, the drip travel platform had provided travel services for 8.5 million users in Chengdu, which equates to 6 out of 10 people in Chengdu having used drip travel services. Chengdu has also reached 415,000 intelligent trips in the morning and evening, which

is equivalent to 138 Metro train, 3,715 bus or 11,307 taxi trips. Currently, the daily taxi service in Chengdu is 1,177,000, while the intelligent travel platform serves 1,416,000 trips per day, which is equivalent to an additional 1.2 times the capacity of Chengdu.

At present, the main force of choosing intelligent travel in Chengdu is the post-80s and post-90s groups, which account for 75% of the total number of intelligent travel users in Chengdu. The total number of intelligent trips contributed by these age groups is close to 90%. According to the criteria of industry division, intelligent travel is most popular in the service industry, followed by Internet and communications, real estate and the construction industry, with the cumulative number of users being 37%. In Chengdu, there are more than 240,000 trips per day by express carpooling and downwind, placing the city second only to Beijing, and reducing the number of car trips by 57,000 per day for Chengdu. Intelligent travel in the third quarter of the year 2018 has reduced carbon dioxide emissions in Chengdu by 61,000 tons, equivalent to 1.49 million trees absorbing carbon dioxide a year.

The airport is the window of the city. According to the report by the China Market Survey Network, Chengdu Shuangliu Airport has surpassed the northbound airport and become the largest airport with the largest amount of intelligent travel in China. The average number of intelligent trips to and from Shuangliu Airport has reached 70,000 per month. During the National Day Holiday in 2016 alone, more than 3,000 passengers went to and from Shuangliu Airport and Chengdu metropolitan area by intelligent taxi every day. For residential communities, business trips are more frequent and travel time is uncertain. The proportion of office and hotel trips is 34%. The middle class and well-off people have fewer business needs and pay more attention to catering and entertainment. At the same time, however, the middle class usually has more business rewards, and the proportion of intelligent travel to and from hotels has reached 15%.

When the New Front City Research Institute, a data news project, released the 2016 China's Business Charm List in Shanghai, Chengdu ranked first in the new front city list. By the end of 2015, there were 60,274 enterprises in Chengdu High-tech Zone, including 26 listed enterprises (next only to Zhongguancun), 680 identified high-tech

enterprises, 6,730 incubating high-tech enterprises, and 99 from among the top 500 enterprises in the world. The emphasis of the southern and western districts of Chengdu is still quite different. The western districts mainly focus on electronic production, with a large number of universities and colleges attached to them. Therefore, there is no small number of students, and their commercial purchasing power is relatively strong. The southern region is dominated by IT, with white-collar workers in the majority, and the economic effect is more obvious. Comparing the two, it is not difficult to see that in terms of overall purchasing power, the southern region is still significantly higher than the western region. The work intensity of the southwestern district is larger as a whole. Approximately 60% of people in the southern district choose to travel home intelligently after work, compared to only 39% in the western district. The working intensity of the western district is relatively small, and the main mode of travel is bus and subway, accounting for 13% of trips, which is close to double that of the southern district.

Table 2.6 Facts of DIDI Chuxing in China December 2018

ITEMS OF STATEMENT	STATISTICS OF DIDI
People involved	550 million
Number of riders per day	30 millions
Estimated annual run rate	\$20 billion
Number of Chinese cities involved with DIDI	400 cities
Partnered services platform	7500
Annualised gross volume	\$13 billion
Reported valuation	\$56 billion
Registered drivers	21 million

Source: DMR, DIDI Chuxing facts and statistics, December 2018.

As one of the four major municipalities directly under the Central Government of China, Chongqing is also a super-large city in the southwest of China, and known as

the ‘mountain city’. On November 22, 2018, CBNDData, together with the Dripping Media Research Institute, released the Shared Travel Big Data Report - Chongqing Chapter, which analysed the urban traffic and life of residents from the perspective of travel, interpreted the rhythm of urban life in Chongqing as well as the travel characteristics of typical communities and regional development, and provided a new perspective for the study of urban development in the region. Based on the total data on drip travel platform, it was revealed that in the third quarter of this year 2018 alone, the total number of intelligent trips in Chongqing reached 85 million. Chongqing's shared travel penetration rate ranked first in the western region, and the carbon dioxide emission reduction as a result of shared trips was 8,000 tons. Compared with the first-tier cities, Chongqing's citizens worked 22 minutes later and spent less time on the road, averaging only 43 minutes.

As of September 2018, the DIDI Chuxing platform had provided travel services for 5 million users in Chongqing, with an average of 1 out of 3 people using drip-drip cars. Among these, the post-80s and post-90s demographics are very active, accounting for 75% of Chongqing's smart travel users, among which those working in the service industry, real estate, construction, and financial industry prefer to use smart travel, accounting for 36% of the total number of users.

There are 247,000 trips in the morning and evening rush hours in Chongqing, equivalent to 2,210 buses. Chongqing has a peak congestion delay index of 1.81 in the morning and evening, which is higher than the average of the first and second-tier cities, so the congestion is totally unexpected. This makes the number of direct home orders after work of only 48% lower than the national average of 60%. Taking DIDI Chuxing as an example, this mode of travel has also undergone great development in Chongqing, which is also one of the cities studied in this study.

Changsha is a city in the central province of China. The people of Changsha rank sixth nationwide in terms of levels of shared travel. At present, through the mobile travel platform, citizens can choose from a taxi, express, downwind, bus, minibus, surrogate driving, test driving, car rental, enterprise-level and other travel services.

According to the report, more than 20 million daily orders were placed through the drip travel platforms in Changsha City in 2017.

In 2017, Changsha ranked 8th for user penetration, compared to 17th in 2016. Correspondingly, the average number of monthly trips per capita in Changsha is stronger, ranking 7th nationwide. According to the comprehensive Index Of Intelligent Mobility Development, such as intelligent penetration, travel activity and convenience, the TOP20 cities with the highest levels of intelligent travel development were selected. Changsha ranked sixth, behind Hangzhou, Beijing, Guangzhou, Shenzhen and Chengdu.

According to the Hunan Xiangjiang New District Development Plan (2016-2025), the Hunan Xiangjiang New Area is in the 'two horizontal, three vertical' strategic layout of national urbanisation, the integration point of the Yangtze River cross axis and the Jing Guang Jing ha axis, as well as the joint development of China's 'one belt and one road' strategy and the Yangtze River Economic Belt. Big data show that Hunan Xiangjiang New Area, with 19.14% of the cross-city travel volume, has moved to the top of the 15 national-level new areas based on the analysis of cross-city travel volume. The cross-city OD map shows that the new district has the closest contact with Xiangtan, Zhuzhou and Yiyang around Changsha City. Changsha is also one of the main research cities in this study, because it is located in the central part of China, with a relatively small population, but the use of shared travel data is very large. Therefore, the user attitudes of the city are particularly important for the sustainable development of shared transportation.

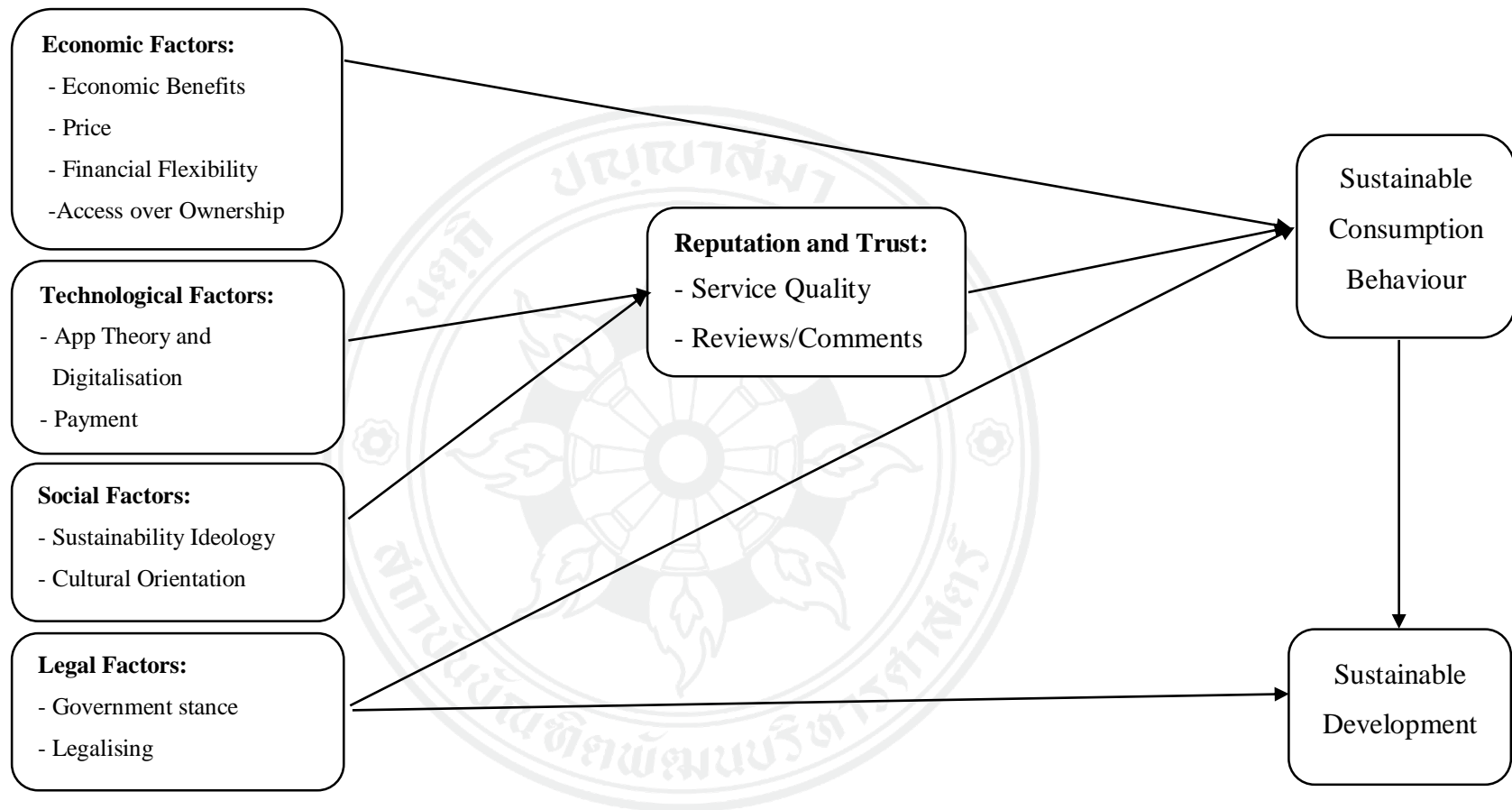


Figure 2.7 The Conceptual Framework

2.10 Hypotheses

- H1: Economic factors (economic benefits/gains, price, financial flexibility, access over ownership) have a positive influence on sustainable consumption behaviour.
- H2: Technological factors (app theory and digitalisation, payment) have a significant effect on trust and reputation (service quality, reviews/comments)
- H3: Social factor (sustainability ideology, cultural orientation on SE) have a positive influence on trust and reputation (service quality, reviews/comments)
- H4: Trust and reputation (service quality, reviews/comments) have a positive influence on sustainable consumption behaviour.
- H5: Legal factors (government stance and attitudes, legalising) have a positive influence on sustainable consumption behaviour.
- H6: Legal factors (government stance and attitudes, legalising) have a positive influence on sustainable consumption behaviour.
- H7: Sustainable consumption behaviour has a positive influence on the sustainable development of mobility services in the sharing economy.
- H8: Trust and reputation and sustainable consumption behaviour have a positive series of mediation effects on technology factors and sustainable development.
- H9: Trust and reputation and sustainable consumption behaviour have a positive series of mediation effects on social factors and sustainable development.
- H10: Sustainable consumption behaviour has a positive mediation effect on legal factors and sustainable development.
- H11: Sustainable consumption behaviour has a positive mediation effect on economic factors and sustainable development.

2.11 Chapter Summary

This chapter reviewed the previous literature related to the sharing economy in the area of mobility services, sustainable consumption and related theories. The research framework and research hypotheses were then formulated based on consideration of the associated methods of sustainable consumption and development and the concept of mobility services in the sharing economy combined with the previous research outputs. The research framework for this study served two research objectives. It first reviewed the government stance and attitudes and then formulated the relationships between the economic factors, technological factors, social factors, and hereditary factors and the sustainable consumption and sustainable development of the sharing economy. This study will explore and analyse the topic in relation to three sectors: stakeholder (operators), consumers (users), and the government.

However, this chapter mainly served as the quantitative part of this study by formulating the hypotheses based on the review of previous literature. Nevertheless, when interpreting and exploring the authentic perspectives on the sustainable development of the sharing economy from the three sectors—stakeholders (operators), consumers (users), and the government—a qualitative study is employed in this empirical research. The next chapter will describe the research methods applied when the research problem is raised. Data collection and analysis are required to conduct this research. Achieving these objectives requires a research design, sampling methods, and methods of gathering data.

CHAPTER 3

RESEARCH METHODOLOGY

Firstly, the researcher identified the relevant research gap by reviewing the issues raised in previous literature. In this study, data taken from a review of previous literature and subsequent discussions were mainly used to discover new research problems and areas. In the first chapter, the researcher introduced the current general situation in the fact-sharing economy, followed by the importance of the sharing economy, and the current research limitations in relation to the hypothetical research results. Then chapter 2 explored the evidence-based approach applied in a large number of studies related to the sustainable development of the sharing economy.

In this chapter, the author will mainly describe the research methodology applied in the implementation of the current research in an attempt to explain the research problems. Accordingly, it is first necessary to establish a research design, identify a suitable sample, develop the research methods to be applied, describe the research problems, and define how the research will be implemented. This study mainly utilises quantitative analysis but also draws on qualitative interview analysis to explain the results of the survey. Finally, relevant policies are put forward through the summary based on the research results and findings.

3.1 Research Design

This study applied a mixed research design consisting of qualitative and quantitative methods. The necessary data were gathered through surveys and interviews as part of a field research process. The mixed research method involves the development of the research questions generated from the contextual interpretations, which assisted the researcher in evaluating the magnitude and the randomness of various constructs (Borrego, Douglas, & Amelink, 2009). Various instruments and

tools were applied to analyse both the quantitative and qualitative data and summarise the findings to generate the constructs to be surveyed in this study.

Applying a mixed method design assisted the author in investigating and comprehending the research gap from various approaches. The mixture of methods helped the researcher to frame the research questions with constructs theoretically and philosophically. As Commander & Ward (2009) mentioned, mixed research methods allow for a more explorative type of investigation that enables the researcher to collect detailed relevant information that identifies the research gap. The creditability of the data collected from answering the research questions is ultimately enhanced by the mixed research method (Leech, & Onwuegbuzie, 2011)

Technically, this combined method is known as triangulation. It enables the research questions to be approached through various layers, which is regarded as the major merit of the mixed research method. Also, the generated data facilitate explorative understanding of the research questions through the semi-structured interviews (Creswell and Plano Clark 2007; Johnson and Christensen 2004; Johnson and Onwuegbuzie 2004). Specifically, the data collected and analysed from the qualitative part contributed to the formulation of the constructs of the questionnaire in the quantitative part of this study. The combined and interpreted results from triangulation then strengthen the research results and findings to achieve a conclusive outcome.

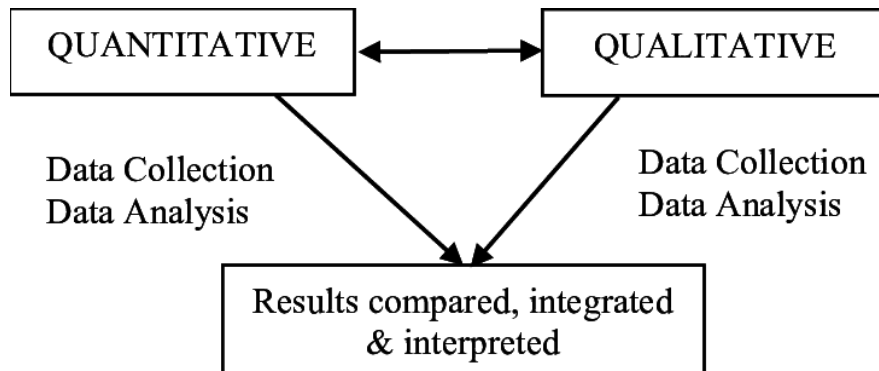


Figure 3.1 Triangulation

Source: Adaptation from Creswell and Plano Clark 2007; Johnson and Christensen 2004; Johnson and Onwuegbuzie 2004

Concerning this study of urban mobility sharing services and the stimulation of the sustainability stance of consumers in selected cities of China, the research applies a mixed methodology in which both qualitative research and quantitative research methods will be employed by combining focus group-interviews, case studies, and semi-structured interviews with consumers from different sectors. The survey method will also be applied to further explore consumers' stances and attitudes towards mobility sharing services, to enable those consumers to describe specific effects on their stances and attitudes towards the sustainability of the sharing economy. Quantitative research methods will provide the statistical analysis to test the relationships between those factors as identified from previous literature and the qualitative part of the study on the sustainable consumption of the sharing economy as a supplementary approach contributing to the sustainable development of the sharing economy in China. Lastly, policy guidelines will be provided regarding the sustainable development of the sharing economy in China.

Regarding the research design of this study, primary data will include both qualitative and quantitative data collected through semi-structured interviews and online questionnaires, respectively. Applying such an approach capacitates the researcher to gather quintessential data from a large pool of the target population in a

shorter time and at a relatively low cost. In pursuance of answering the research questions, the questionnaires will be designed to ascertain the respondents' perception towards sustainable perspectives of the sharing economy, as well as contributing policy recommendations.

3.2 Population and Sampling

The size of the population of users or consumers using urban mobility services through the sharing economy from the 6 selected cities in China is too large to be researched to answer this research question. Therefore, this part mainly discusses the population and sampling in relation to the research problems, with particular consideration paid to the widespread use of shared mobility platforms in China, especially in the fast-growing regions of Sichuan Province and Chongqing city, which are significant to this study of the sustainability of the sharing economy.

The use of mobility platforms in China has reached 20 million per day, with the number of shared cars and bicycles reaching 10 million (Li Xiaopeng, 2018). Overall, an average 60% of the urban population has been using urban shared mobility platform services since the year 2015 in places such as Sichuan Province and Chongqing city, which has contributed significantly to the total growth of urban mobility services in the sharing economy. Thus, sampling is required to identify a representative sample of the target population of this study due to the large, uncertain and undefined population.

Table 3.1 4-Year Average Population Numbers of 6 Selected Cities

City	2015 (60%)	2016 (60%)	2017 (60%)	2018 (60%)	4-year average(60%)
Chengdu	18,794,500	18,393,580	19,626,820	19,798,000	19,153,225
Chongqing	18,099,330	18,290,580	18,450,960	18,450,000	18,322,718
Panzhihua	737,500	661,680	657,780	654,600	677,890
Meishan	180,780	698,679	890,000	1770,000	884,695
Kunming	97,699,00	98,000,00	10,224,000	13,798,000	77,934,25
Guiyang	2,773,080	2,730,000	2,880,000	2,540,760	2,730,960
Total	50,355,090	50,574,519	52,729,560	57,001,360	49,562,913

Source: National Bureau of Statistics of China, 2018

Nonprobability sampling is adopted in this research due to the size of the target population being too large to study. As the number of users of the shared mobility services has also been changing yearly across the period 2015-2018, applying the nonprobability sampling is required to identify and calculate the sample sizes.

3.2.1 Sampling

For the qualitative sampling, the research conducts two rounds of focus-groups and semi-structured interviews with 30 individuals from the 6 different selected cities. The participants in this part of the study consist of university students, professors, government representatives, aged users, and service providers for answering the research question no.1. The stances and attitudes of the interviewees towards the sustainable consumption of the sharing economy will be deeply explored in order to understand and generate the constructs from the dimensions of economic, social, technological, and legal perspectives.

The semi-structured interviews will seek to answer the questions of why people consume the shared mobility services, which shared mobility service people consume

the most, whether people can consume the shared mobility services sustainably, and what the public stance and attitude is towards the sharing economy. To make sure the selected samples of interviewees is representative of the whole population, quantitative research is also required and will be conducted with the sample respondents from the six selected cities.

Therefore, given the uncertain and infinite size and nature of the population, the sample size is calculated by applying the following formula generated from Cochran (1977) and Kotrlik et al. (2001):

$$n = \frac{p(1-p)z^2}{e^2}$$

where

n = the sample size

z = the selected critical value of desired confidence level

p = the estimated proportion of and attribute that is presented in the population

e = the desired level of precision

In this research, the researcher assumes the maximum variability is equal to 50% (p=0.5); the confidence level is 95%; and the precision is $\pm 5\%$. Thus, the least required sample size for this research is calculated as follows:

$$n = \frac{0.5(1-0.5)1.96^2}{(0.05)^2} = 384.16 = 384$$

As a result, at least 384 respondents are required to participate in the questionnaire survey of this research. However, 500 surveys were distributed via the

internet and physically to users of the shared urban mobility services. It is expected that the 393 respondents the researcher collected as a valid enough size to continue this research in terms of meeting the conditions of active participating users of the shared mobility service platforms. The expected sample size distribution is as follows:

Table 3.2 Sample Size in the 6 Selected Cities

City	Target Samples(%)	Sample Size	Adjusted Sample Size
Chengdu	39%	150	130
Chongqing	37%	142	130
Panzhihua	1%	3.84	24
Meishan	1%	3.84	25
Kunming	16%	61	61
Guiyang	6%	23	23
Total	100%	384	393

The sharing economy is a type of fast-growing economy which has spread across the entire country. The people living in developed urban areas like the eastern, southern, and northern parts of China consider shared mobility services to be part of their normal consumption behaviour due to the cost or environmental concerns. However, the attitudes of people living in the less developed cities may vary from those in the high income cities. For this reason, the researcher will sample and analyse the perspectives and concerns of the people living in the western or southwestern region of China with regard to the sustainable consumption of shared mobility services. All the cities from the west or southwestern regions of China selected for this study are major capital cities such as Chengdu, Chongqing, Guiyang, Kunming, Meishan, and Panzhihua.

3.3 Defining Variables and Measurements

A review of the previous literature was conducted in chapter 2 in order to identify the variables to be applied in the current study. The related measurements and definitions are also adapted from past studies. Having reviewed the previous studies in this field, the 4 independent variables are financial factors (economic benefits, price, financial flexibility), technological factors (app theory and digitalisation), social factors (sustainability ideology and cultural orientation) and legal factors (government stance and legalising), while the dependent variables are sustainable consumption behaviour and sustainable development mediated by reputation and trust.

Table 3.3 Defining Variables and Measurements

Variable	Definition	Measurement
Customers' Sustainable Consumption Behaviours	Customers' voluntary behaviours in making efforts to support sustainability, with the recognition of environmental and societal influences during the consumption process, which include wasting less and voluntary cleaning behaviours (Camilleri, J., Neuhofer, 2017)	Perception of Customers' Sustainable Consumption Behaviours rating score from questionnaire survey
	It refers to the huge contributions to the sustainable development of SE	
Social Influence	The impact of one's action on the behaviours of others and in some SE contexts, social motives drive participation (Habibi, M. R., Kim, A., & Laroche, 2016)	Perception of Social Influence rating score from questionnaire survey
	It refers to the social influences on sustainable consumption of SE.	
Price	The price of the property (Liang et al., 2017). The price refers to the extent to which the pricing level affects the sustainable consumption behaviour of the users.	Perception of Price rating score from questionnaire survey
Economic	The platform provider's primary motive is economic gain (i.e., profits, shareholder value (Rochet, J.-C. & Tirole, 2006). The benefits/gains refer to the users' actual values of	Perception of Economic Benefits/Gains rating

Variable	Definition	Measurement
Benefits/Gains	consuming the shared mobility services	score from questionnaire survey
Financial Flexibility	Financial flexibility (Levine, 2009). Cooperative consumption enables owners and non-owners to obtain financial income more flexibly and work independently of authorisation. It refers to owners and non-owners having no boundaries and it will lead towards the sustainable consumption of SE due to the huge number of users becoming services providers to some extent.	Perception of Financial Flexibility rating score from questionnaire survey
Access over Ownership	SE has become an efficient mechanism for making use of under-utilised assets (Lamberton, CP & Rose, 2012). Peer service providers offer access to their assets for a variety of reasons. However, recent research suggests that economic benefits are especially important to both customers and peer service providers (Hamari et al., 2015). It refers to users valuing access to the shared mobility service over ownership.	Perception of Access over Ownership rating score from questionnaire survey
App Theory and Digitalisation	Apps with digitalisation consist of easy accessibility and usage, simple functions focusing on individual demands, and free and frequent information updates (Hsu, CL & Lin, 2016). Its refers to the sharing service being up-to-date and meeting the needs of users to some extent.	Perception of App Theory and Digitalisation rating score from questionnaire survey
Payment	Payment systems are an important category of mobile apps that are indispensable tools in the process of completing consumers' transactions (Black & Lynch 2004; Nakamoto 2008). Payment refers to users' access to the services through mobile app transactions.	Perception of Payment rating score from questionnaire survey
Sustainability Ideology	Sustainability refers to users' sustainable consumption of shared mobility services.	Perception of Sustainable Ideology rating score from questionnaire survey
Trust	It refers to determining peer trust as the central driver on the platforms of the sharing economy which plays a vital role in the sustainability of consumption	Perception of Trust rating score from questionnaire survey

Variable	Definition	Measurement
	sharing services.	
Cultural Orientation on SE	Focuses on the relationships between consumption and cultural meanings (Arnould, EJ & Thompson, 2005)	Perception of Cultural Orientation on SE rating score from questionnaire survey
Government Stance and Attitude	Governmental stance refers to policies and promotions towards SE	Perception of Government Stance and Attitude rating score from questionnaire survey
Legal & Regulatory	It refers to legalised platform stakeholders and promoting regulations covering platform providers	Perception of Legal & Regulatory rating score from questionnaire survey
Service Quality	Refers to perceived values to users when consuming the shared mobility service	Perception of Service Quality rating score from questionnaire survey
Reviews & Comments	Refers to ranking and rating the scores of the users' comments and reviews on mobility sharing platforms	Perception of Reviews & Comments rating score from questionnaire survey

3.4 Data Collection

The research design applied a mixed method approach consisting of both qualitative and quantitative research. The qualitative part of the research employs semi-structured interviews as the method of data collection. However, the researcher also employed correlation analysis in the form of a question list posted on online mobility sharing platforms (for instance, apps and forums) to collect additional data for further

comparison and supplementary quantitative research analysis.

3.4.1 Qualitative Data

The researcher identified the target groups of consumers, operators (providers) and government organisations in selected cities of China for conducting semi-structured interviews via two methods: income-based focus groups for the consumers and in-depth interviews for the stakeholder and government representatives. Operators such DIDI Chuxing and Hitching Taxi Services, as top provider in China, were selected as the cases to be studied for acquiring the qualitative data and identifying the target group directly and accurately.

3.4.1.1 For consumers

The researcher consulted other passengers to determine whether they belong to the target group of those actively utilising mobility sharing services and, if so, whether they were willing to take part in an interview. Sharing mobility services with other passengers enabled the researcher to gain a first-hand understanding of their perceptions towards the mobility sharing service, how they use the service, and how they comment on the experience (both positive and negative sides).

Therefore, the total sample size of targeted interviewees will be 30 individuals including the in-depth interviews and focus group discussions conducted for consumers and one each for service operators and government representatives. A purposive sampling technique was applied to the targeted groups since the data collection was conducted only through the research. Thus, the purposive statements were initially intended to apply the required characteristics of participation and willingness. Individual in-depth and focus group interviews were applied to this research for consumer (user) groups within the selected cities. The research collected data using semi-structured interviews because this method produces particularised information on attitudes and stances towards the elicited topics. It will also not generate a stressful

context when further raising follow-up or sub questions because the interviewer is able to ask for further details and clarification (Jennings, 2001)

Thus, the semi-structured interview is used in this study to ascertain the qualitative data for this research. The interviews used with the consumers were formulated using 7 main questions and 15 sub-questions for cases where clarification or detail could be needed. The questions are as follows:

Question 1: Do you actively consume the shared mobility services in the city?

Sub Q1. Which type of public transportation do you mostly prefer to consume on a daily basis?

Sub Q2. Do you have a private car/cars or do you prefer public transportation?

Supplementary: Do you ever make online payments?

Question 2: Why do you consume the shared mobility services such as DIDI Chuxing, OFO, Mobike, etc?

Sub Q1. How do you like to consume shared mobility services?

Sub Q2. Why do you turn to use shared mobility services?

Question 3: Would you like to share any good/bad experiences about your daily consumption of shared mobility services in the city?

Sub Q1. Do you agree that trust is a vital aspect for consuming shared mobility services?

Sub Q2. Is security an important factor to influence you to continue consuming the shared mobility services such as Didi, OFO, Mobike, etc? Do you have any suggestions to stakeholders or the government?

Sub Q3. Who do you think can benefit by consuming shared mobility services? For example?

Question4: How do you rate and comment on shared mobility service?

Sub Q1. How accessible to you are shared mobility services such as Didi apps?

Sub Q2. How do you feel about the functions of mobility service apps?

Sub Q3. How satisfied are you with the shared mobility services? Is your consumption of these services sustainable? Why/Why not?

Question5: Do you have any reflection on the changes and influences that shared mobility brings to the city?

Sub Q1. How helpful do you feel the shared mobility services can be in promoting social innovation?

Sub Q2. How influential do you feel the shared mobility services can be in promoting the construction of green/shared city transportation initiative?

Question 5: Do you have any suggestions and expectations for improvements to the shared mobility digital platform? Or regarding technological or legal aspects?

Question6: What will influence you not to continue using shared mobility services?

Sub Q1: How do you think the shared mobility service can promote further regulation or legalisation of the sharing platform?

Question 7: What are the key factors you think can promote the sustainable consumption behaviour of shared mobility services in the city?

Sub Q1: To what extent do you believe that shared urban mobility services or the sharing economy overall will be sustainable in the future? Why?

Sub Q2: What do you think about the relationship between the development of shared mobility services and the sustainable development of the sharing economy? Any suggestions or comments?

3.4.1.2 Stakeholders (Business Operators)

There are 7 major shared mobility service providers in China. As some consumers mentioned during the primary interviews that they considered the DIDI Chuxing service as the best shared mobility platform to use, this research chose the vice president of the DIDI Chuxing Group, Ms. Li, as the representative of one of the top mobility service providers in China to participate in an in-depth interview so as to further explore the group's stances and attitudes towards sustainable consumption of shared urban mobility services in the sharing economy. A semi-structured interview was conducted to obtain the data for the first two research objectives. The interview contained 10 questions as follows:

Question 1: Why do you think people consume the shared mobility services, such as DIDI?

Question 2: Why have shared mobility services been introduced into society? What factors?

Question 3: What are the key factors affecting the growth of shared mobility services for the period 2015-2019?

Question 4: How much do you think trust is a key issue for a sharing platform? Why do people trust and use the DIDI platform?

Question 5: Do you have any reflections on the changes and benefits that shared mobility brings to society?

Question 6: What improvements do you think can be made to the shared mobility digital platform? Technological or legal?

Question 7: To what extent do you believe the urban shared mobility services or the sharing economy overall will be sustainable in the future? Why?

Question 8: How do you think the shared mobility services can be further

promoted by regulating or legalising the sharing platform? Or what legal factors will affect the sustainable development of shared mobility services?

Question 9: What do you think about the relationship between the development of shared mobility services and the sustainable development of the sharing economy? Any suggestions or comments?

Question 10: Nowadays, some social issues such as security and the quality of drivers have caused some concern. How will shared mobility service providers such as DIDI address these issues?

3.4.1.3 Government Sector

The government sector is a crucial aspect of the sustainable development of urban mobility services in the sharing economy. The central government has taken a positive stance by introducing a series of laws and regulations aimed at managing the shared mobility platforms. Therefore, the government sector is hereby defined as the organisation directing and controlling the shared mobility platform.

Purposive sampling was employed to explore and reach the department of the government which deals directly with the shared mobility platform. The researcher chose to conduct an interview with the Chief Director General of Chongqing Transportation, Mr Fan Zhiyu, as the representative of the government sector to seek his opinions on the government's stance towards the sustainable development of mobility services in the sharing economy. The 8 questions asked in the semi-structured interview are listed as follows:

Question 1 Why will government legalise the shared mobility platform?

Question 2 For the period 2015-2018, what was the government's stance and attitudes towards the development of shared mobility services in the sharing economy, especially in the city? What about in the current conditions?

Question 3 How will the government cope with the issue of social security to address the concerns of the people? What about trust and reputation?

Question 4 Does policy implementation differ from city to city? What aspects of shared mobility platforms does the transportation bureau control?

Question 5 Based on the government's stance, what do you think are the key factors for promoting sustainable consumption behaviour towards shared mobility services in the city?

Question 6 Based on the government's stance, do you believe that shared urban mobility services or the sharing economy overall will be sustainable in the future? Why/Why not?

Question 7 We are building up the trust of society. Do you think that trust and reputation are the key factors affecting people's usage of shared mobility services?

Question 8 How does the government, such as the Transportation Bureau, decide whether to restrict the growing number of shared mobility platforms and drivers or not?

To summarise, this research applies a mixed methodology approach (qualitative and quantitative methods). The targeted groups for this research include 3 sectors: consumers or users, stakeholders or operators, and government executives. Since gathering data from the entire the population is not possible, purposive sampling techniques were employed in this research and non-probability sampling methods were applied to obtain the qualitative data. Then, the data collected from the qualitative results was used as the research tool to inform the questions in the semi-structured interviews which contributed to the research framework and generated the quantitative survey constructs.

3.4.2 Quantitative Data

Quantitative data will be collected via a questionnaire survey developed from the results of the quantitative part of the study. However, since the constructs for this study may be modified in correspondence once the qualitative data has been generated and analysed, the questionnaire will be in the process of constructing cope with the theory or literatures particularly whereby the qualitative data has been collected will be supplemented the quantitate construct and descriptions.

Therefore, in order to generate the quantitative data, the research process including 5 major steps was designed. First, a literature review was conducted to understand the major concepts and theories of the sustainable development of sharing economy. From the findings of this step, four major factors were identified: social, technological, economic and legal, with trust as the mediating variable. This process is the initial towards identifying the research gap that has not yet been studied. Secondly, interviews were carried out to gather people's opinions and stances. Thirdly, the pilot testing was undertaken before the revised questionnaires were distributed to a sample of 393 participants from the 3 target groups in the fourth stage. When the surveys were completed, the quantitative data were collected from the surveyed respondents (see appendix B). Lastly, the qualitative data were analysed and supplemented with the quantitative data.

3.5 Data Analysis

The quantitative methodology applied in this study involved statistical and mathematical analysis implemented by using SPSS version 15.0 and AMOS version 24.0 to analyse data in order to confirm the findings of the qualitative analysis. For the hypothesis testing, the linear structural equation model (LISREL) was selected to test the hypotheses empirically due to the potential for unobserved variables to occur in the form of a significant relationship among the constructs and factor analysis. At the same

time, the proposed determinant factors and the results of the quantitative analysis could be clarified and supplemented by a qualitative approach to achieve a more credible conclusion for better providing the policy recommendations.

After the quantitative data are collected, the qualitative data will be interpreted with interview coding. Each interviewer read the individual interview transcripts to identify consumer motivations and relationships to the mobility sharing service and platforms.

3.6 Chapter Summary

This second chapter primarily involved reviewing previous literature to identify the relevant studies and concepts of scholars and experts in the past. The most fundamental observation in this respect is that the theory and practice of the sharing economy were put forward in 1978, and the content of the rise of the sharing economy, especially in relation to shared mobility, was elaborated after 2015. A large number of the theories based on the scientific research achievements of predecessors involved in the fields of the sharing economy and sustainable development were listed.

Another key objective of this paper is to discuss the concept of sustainable development and the sharing economy, with the aim of continuing the development of this field by providing a new knowledge framework and theoretical model for this field, as well as research assumptions. Following the construction of the theoretical knowledge and research framework in the previous chapter, this chapter mainly discussed how further empirical research could be conducted through this research framework. In this chapter, therefore, we discuss the research design, sampling, and methodology, including a quantitative questionnaire survey and analysis, combined with qualitative interview method to collect data and summarise the way to explore further.

This chapter also outlined the implementation steps of how to carry out the research, such as how to analyse the data after the completion of the data collection process, including for example, the use of SPSS and Amos. Looking ahead, since this study is based on a mixture of qualitative and quantitative research, in Chapter 4, the results of the data analysis will be presented



CHAPTER 4

RESEARCH RESULTS

4.1 Qualitative Results

Theoretically, the qualitative research method is regarded as an interpretive analysis for obtaining subjective results through designating the purposive questions to the targeted interviewees. In this study, the purposive sampling method is applied to the qualitative research since the sharing mobility platform has gradually become a popular means of commuting among a majority of urban residents. However, reliable qualitative data on opinions and views are required and obtained from the designated semi-structured interviews with stakeholders, consumers, users and government actors via in-depth interviews and focus group approaches in order to answer the research objectives.

Firstly, the primary purpose of the research is to explore and identify the correlations between the mobility platform services in the sustainable development of the sharing economy. In this study, the social factors, economic factors, legal factors, and technological factors were finally obtained through the semi-structured interviews and the results show that trust and reputation had mediating effects in relation to sustainable consumption and development from the results of qualitative data. Thus, the qualitative research process proved that the research framework of this study was initially framed from the literature reviews.

Secondly, the data collected from the focus group discussions and in-depth interviews with representatives from the three sectors—stakeholders, consumers and the government—were coded by the researcher in order for the results to be further analysed. The results demonstrated that the data obtained from the interviewees proved the consistency of the results from previous literature on the concepts and theories of

urban mobility services in the sharing economy that the researcher applied to this study. The qualitative results aimed to answer the research's first objective of exploring the public stances and attitudes.

Thirdly, all the interview information was recorded by the researcher to ensure the validation of the collection processes, and the recording process helped the author to find relevant information accurately for further comparison and coding analysis. Even through the researcher initially designated and investigated the purposive questions on the sustainable development of urban mobility services in the sharing economy, the actual situations of urban mobility services in different selected cities were considered and piloted to ensure semi-structured interviews were successfully conducted to collect the relevant data information.

Finally, the income, social status, education level and occupations of the participants were categorised and considered when designing the purposive questions. Therefore, the researcher conducted two focus-group interviews that were classified by the different income groups to ensure that accurate consumption ability could be considered. At the same time, the researcher conducted in-depth interviews with five target consumer groups of different ages, backgrounds and occupations. Also, the in-depth interview approach was applied to stakeholders and government representatives to seek their stances and attitudes towards the sustainable consumption of urban mobility services in the sharing economy.

Table 4.1 Results of In-depth Interviews with Users

Interviewees	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8
Economic Factors								
Economic Benefits								
Price	√	√	√		√	√	√	√
Financial flexibility				√	√	√	√	√
Access over ownership								
Technological Factors								
App Theory and								
Digitalisation	√		√	√	√	√	√	√
Payment								
Social Factors								
Sustainability Ideology			√		√	√	√	√
Cultural Orientation								
Legal Factors								
Government stance	√	√	√	√	√	√	√	√
Legalising								
Trust and Reputation	√	√	√	√	√	√	√	√
Sustainable Consumption	√	√	√	√	√	√	√	√
Sustainable Development	√	√	√	√	√	√	√	√

Therefore, for the results we obtained from in-depth interviews with respondents from 1 to 8, the economic factors were found to be the major factors for people in the city to use mobility services in the sharing economy. For example, direct or indirect economic benefits, financial flexibility, and other ways were the major factors influencing users' participation in urban mobility services in the sharing economy, which allows people to have temporary access to and use of idle resources without owning them. Shared mobility services in the sharing economy are much more cost-effective for urban residents compared with the traditional transportation options in the city.

“I think the urban mobility services in the sharing economy will help me to better reuse my idle resource like my private car because after working hours, I can make extra income via providing mobility services and that should be the reason for my participating in the sharing mobility platform.”

Answer from interviewee no 1

Furthermore, the interviewed respondents from no 1 to no 8 also believed that technology factors (such as app theory and digitalisation and payment) would also be important factors for people to participate in the urban mobility services in the sharing economy.

“I really do believe that the urban mobility services will save me money and time spent on my public commute because I mostly use the mobility services every day, such as the DIDI platform to order a sharing ervice which will be much cheaper than taking a normal taxi service because the taxi will sometimes refuse to pick me up if they feel the traffic situation is bad in some places or for other unknown reasons they don't want to go and so I have to spend a longer time on waiting for another taxi. However, DIDI will never reject me once the driver has accepted the location I booked from the platform, and the DIDI platform

will always provide me with reasonable information because I can see others' comments on the DIDI driver I have chosen."

Answer from respondent No 3

However, although the interviews revealed that the technological factors were main factors contributing to participation in the consumption of urban mobility services in the sharing economy, interviewee no.2 did not agree. He believed that while the technology will make the transactions easier, urban mobility services should be legalised first. Also, the legalisation of the shared mobility platform is required and a consideration for consumers because people in the city are highly concerned with the security issues from using urban mobility services in the sharing economy. The rest of the respondents expressed that legal factors (such as government attitudes and regulations) are also determining factors for people using urban mobility services in the sharing economy. However, trust and the reputation of the the shared mobility platforms were main factors affecting the continued use of these urban mobility services by people in the city.

"The technology has developed rapidly and innovated in the city over the last 10 years, but it has actually brought a lot of social security issues such as the case of a female passenger being murdered by a DIDI driver, so I think the legalising process needs to be implemented for those online urban mobility platforms that are active in the market, and then people in the city will choose the legalised online mobility platforms to use because it will be more secure and guaranteed with safety awareness. And it does mean simply the convenient payment system will make me use the online mobility platform, especially for women passengers in the city.

Answering from interviewee no.2

Finally, the first to the last respondents agreed that legal factors, trust, and the reputation of the platform are the main factors affecting people's continued

consumption and sharing of economic city travel. Thus, these factors promote the sustainable development of shared urban mobility services.

Table 4.2 Results of Focus-group Interviews

Items	Focus Group Interview 1	Focus Interview Group 2
Economic Factors		
Economic Benefits	√	√
Price		
Financial flexibility		
Access over ownership	√	√
Technological Factors		
App Theory and Digitalisation		
Payment		
Social Factors	√	√
Sustainability Ideology		
Cultural Orientation		
Legal Factors	√	√
Government stance		
Legalising		
Trust		
Sustainable Consumption	√	√
Sustainable Development	√	√

For the collection and processing of data from the focus group interviews with users (consumers), the focus-group interviews were both applied and carried out from the point of view of the users (consumers). To collect more accurate information, the 20 respondents from the 6 selected cities were purposively targeted to carry out the two rounds of focus-group interviews. The selected respondents included professors and students as well as workers from the white-collar, e-commerce, finance, and public sectors. In particular, the researcher conducted two rounds of focus-group interviews with 10 respondents selected by their income level in each section from each of the 6 selected cities.

In designing the interview process, the researcher prepared a total of 10 purposive questions. It took a total of 45 minutes to complete each round of focus group interviews. First of all, the researcher made a brief introduction to the research background and objectives of this study. Then the researcher offered the interviewees a certain amount of time to understand the designated purposive questions before conducting the focus group sections.

In order to process with the purposive sampling method, the pre-condition of the section interviewees in this research was that the participants must be actively consuming the online urban mobility services in the sharing economy in their city. To ensure the participants offered and provided objective opinions and views, both positive and negative, on their sustainable consumption behaviour in relation to the mobility service platform in the sharing economy, the researcher made a further conclusion that both groups of participants discussed economic factors as the major contribution to the use the online urban mobility platform in the sharing economy. Also, the continuous updating of technology and the constant optimisation of the network platform via the continuous innovativeness of payment methods on the online mobility services in the sharing economy offers people in the city a better quality of services.

However, both groups of participants mentioned that apart from technical innovativeness along with the online mobility services, people are still highly concerned with the technological trust and the reputation of the individual online

platforms, which people can access with their comments and reviews. Also, people will continue to use the online mobility services if they trust the platform.

Furthermore, the researcher concluded from the input of the 2 focus-group interviews that the economic and social development factors demonstrated that people in the city actually pursue economic effectiveness and consumption with the cost of construction when using the online mobility services. Also, the trust and reputation are major considerations when consuming those online platforms. Therefore, the participants mainly said that their satisfaction with or intention to use the sharing mobility services in the sharing economy was always positively related to the legalising of the online platforms or the government stances.

Table 4.3 Results from In-depth Interviews (stakeholder)

Items	In-depth Interviews (Stakeholders)
Economic Factors	The consumption mode of shared urban mobility services has two aspects of economic significance: on the one hand,
(Economic Benefits, Price, Financial flexibility, Access over ownership)	it helps people to save consumption costs and lets people do the most things with the lowest cost; on the other hand, it creates a new mode of making money for the stakeholders, the owners of goods can get certain benefits by sharing their own goods.

Items	In-depth Interviews (Stakeholders)
Technological Factors (App Theory and Digitalisation Payment)	<p>Nowadays, with the continuous improvement of modern information technology such as computers and the Internet, network platforms of shared urban mobility services have been formed, such as the popular DIDI Chuxing mobility sharing platform. As long as users in need use the relevant car rental software on their mobile phones to send car rental requests, owners will contact those users after receiving their offers and complete the transaction. The continuous development of tools, payment methods and identification systems provides essential support for the sustainable development of shared urban mobility.</p>
Social Factors (Sustainability Ideology Cultural Orientation)	<p>With the improvement of network acceptance among the new generation, especially young consumers, people's overall consumer values are also beginning to change. The leasing and sharing mobility mode, which emerged with the help of network advantages, has gradually been recognised by more consumers.</p> <p>The new generation of 80s and 90s consumers is more inclined to use social tools to understand and disseminate news information, use streaming platforms to watch videos, and listen to their favourite voices through online music and other services. In the short run, it will have some impact on economic development. However, in the long term, the shared urban mobility platform can not only improve the efficiency of resource utilisation, but will also have important significance for environmental protection, which will produce a long-term social benefit.</p>
Legal Factors Government stance Legalising	<p>Firstly, the government should provide a fair competition environment, and at the same time, it should speed up the improvement of the management system for shared mobility platforms. Secondly, the rapid development of the Internet economy has put forward higher requirements for government functions.</p> <p>The government needs to improve various systems to serve the people and enterprises more effectively. For example, if passengers feel in danger, the alarm platform can send an alarm at the fastest speed. The driver's information can be found as soon as possible to ensure the legitimate rights and interests of passengers.</p>

Items	In-depth Interviews (Stakeholders)
Sustainable Consumption	People's continued consumption of online platform services will depend on the quality of the services, their technical convenience, the economic benefits of participating in the platform, and the legality of the platform.
Sustainable Development	People's continuous consumption of shared urban travel platform will promote the sustainable development of the sharing economy.

When interviewing the stakeholders or operator, the researcher conducted an interview with the Ms Li, the Vice President from Didi's Chuxing Sichuan region, on 12 March 2019. Since DIDI has been listed as the major online mobility platform in this country, it was considered a suitable representative organisation to serve as a sample case for conducting the study. In order to get further opinions and views from the operator side, a 45-minute in-depth interview featuring a total of 10 purposively prepared questions was conducted with Ms Li.

The in-depth interviews intentionally aimed to seek answers to the questions from several levels, such as social, economic, technological, legal, and so on. However, Ms Li firstly gave an introduction on the nature of online mobility sharing companies. She revealed that the mobility sharing enterprises initially started by seizing the market and accelerating financing in order to gain a high volume of orders and expand the market coverage, such as by investing a lot of money in the market to build brand awareness. As stakeholders, the main target of such companies is knowing how to motivate people to consume their services by exploring their various intentions.

Each new platform needs to begin by developing its popularity so that people will be aware of its existing services. Socially, people tend to consume when other people are using the services. Therefore, Ms Li revealed that Didi intended to develop its platform by focusing on the conveniences that consumers could enjoy from using its services, especially with relation to its easy payment system and time-saving benefits.

To some extent, normal taxi services in some cities of China neglect the comfortable environment of the car. In contrast the improvement and optimisation of the online platform itself will be up-to-date and the platform operator will track each performance of each driver from the reviews and comments. As well as the safety perspective of customers, now some active online mobility platforms are not connected to the government inspection system at present, so the related accidents cannot be reported to the government departments in a timely manner. This is a problem that enterprises should focus on working with the government to solve.

Many of the existing taxi services also provide relatively poor quality, which not only causes a loss of users, but also results in a massive waste of resources. The growing number of cars has also had a lot of negative impact on the environment, which runs counter to the advocacy of green travel and resource conservation. Taking the shared bicycle as an example, it is necessary to control the appropriate number of shared bicycles in the city because most bikes take up space on the sidewalks. Ms. Li mentioned that the government should put forward quality requirements for newly launched bike sharing service providers in the city.

Lastly, Ms Li mentioned that the online mobility sharing services in the city needed to be up-to-date and to meet the changing needs of the consumers or users. Since new technologies and new products are coming out year by year, no single company

can survive without innovativeness and adaptation to the environmental changes. However, the attitudes and stance of the government are highly important for all online mobility platforms or companies.



Table 4.4 Results of In-depth Interviews with Government Sector

Items	In-depth Interview on Government Sector
Economic	
Factors	
Economic	
Benefits	
Price	
Financial	
flexibility Access	
over ownership	
Technological	
Factors	
App Theory and	
Digitalisation	
Payment	
Social Factors	
Sustainability	
Ideology	
Cultural	
Orientation	
Legal Factors	✓
Government	
stance	
Legalising	
Trust	✓
Sustainable	✓
Consumption	
Sustainable	✓
Development	

To get the government perspective, the researcher interviewed Mr Fan Zhiyu, Director General of China Transportation (Chongqing). The attitude and stance of the government sector in relation to the use of shared urban mobility services in the sharing economy are of significant importance to both stakeholders and consumers. Mr. Fan said that at present, China is actually moving towards a free competitive market within the Internet era. The government will intervene in the market under certain circumstances, such as for security issues, but this government is committed to supporting any new consumption pattern or business. Also, the sharing economy will make the country's economic model more pluralistic and open.

The government understands that people's current way of travelling will be profoundly transformed by sharing. The idea of sharing all kinds of resources also brings great convenience to residents' lives and a new impetus to social development. However, the sharing economy has two sides. On the one hand, it provides convenient and efficient resource sharing; on the other hand, there are security risks such as information leakage and privacy violation.

Therefore, the effective governance to these online mobility platforms by the relevant departments of the government is indispensable. At present, the rapid development of the sharing economy, especially with regard to shared urban mobility services, poses a new challenge to government governance. Ms. Fan claims that the sharing economy in this country is quite different from traditional types of economics. It is regarded as a new business model platform based on Internet technology transactions. The sharing economy has the characteristics of being virtual, open, instructive and changeable.

In essence, it requires the sharing of all the idle resources that can be shared via various online platforms. Unfortunately, however, consumption of services in the sharing economy is slightly different in China compared to the Western countries in the nature of sharing idle resources because there are types of rental economy growth in this country rather than sharing. The sharing economy has the trend of industrialised resource development, but its primary definition is that most of the funds are idle and have the attributes of the sharing economy.

Secondly, there are issues for sharing mobility enterprises in terms of the payment of taxes and fees, salaries and welfare, training and insurance, as well as the protection of consumers' rights and interests in the shared economy not having yet been clearly stipulated in the existing laws, which can easily lead to tax evasion, unfair competition, platform qualification inconsistency, consumer rights and interest damage among other issues.

Based on supervision, the Chinese government is used to solving new problems in the sharing economy by implementing laws. However, the relatively fixed management mode has not adapted to the variability, openness and complexity of the Internet, resulting in an unfortunate regulation effect. For example, for the development of self-media, the government has forcibly closed a large number of new media channels, such as public numbers, websites and micro-blogs. The government lacks a perfect hierarchical management system, and adopts a one-size-fits-all approach to the problems arising from various new media, which seriously affects the innovative development of new media and is criticised by netizens.

In terms of the method of supervision, the current government's surveillance of the sharing economy is supervised beforehand. This is mainly achieved through

sophisticated administrative licensing measures, setting up industry barriers, and raising the threshold for new enterprises to enter. However, Mr Fan believes these strict qualification reviews are conducive to maintaining market order and protecting the legitimate rights and interests of consumers, although he admits it is difficult to solve the problems of the rapid development of the sharing economy fundamentally with a single set of conditions. At present, however, the government is actively supporting the sharing of the economy in general, opening up idle government resources, building a shared infrastructure, and engaging actively not only in the field of travel but also in the areas of accommodation, catering and other fields to share economic platform cooperation.

Mr Fan believes that the government should vigorously promote collaboration between the government and enterprises, develop data sharing, open up data resources, and increase the purchasing power of government departments to share economic products and services. These government issuing these polices and regulations can secure the online mobility platforms in the sustainable development of the sharing economy in China.

Table 4.5 Integrated Interview Results

Item	Consumers	Stakeholders	Government	Issues
Economic Factors Economic Benefits Price Financial flexibility Access over ownership	√	√		Under the influence of economic interests, some enterprises have produced and processed new products, and obtained corresponding benefits through leasing, such as sharing bicycles, sharing charging treasures, and sharing cars, completely misunderstanding the nature and connotation of the sharing economy, and further creating more idle resources for society.
Technological Factors App Theory and Digitalisation Payment	√	√		The lack of restricted sharing of shared bicycles has caused a backlog of space for various public transportation modes, resulting in waste of public transportation resources.
Social Factors Sustainability Ideology Cultural Orientation	√	√		The realisation of the sharing economy is mostly completed by "scanning code". In the process, there is a security risk of personal information privacy leakage. Secondly, the sharing economy is seen as a gimmick, wasting social resources and violating the original intention of the sharing economy to integrate social resources.
Legal Factors Government stance Legalising	√	√	√	Many existing regulations have been unable to adapt to the practical development of the information age because these regulations cannot solve many problems such as: industry entry barriers, social security for employees, tax supervision, information security, and credit system construction.
Trust	√	√	√	Credit system, deposit and Comments and Rates
Sustainable Consumption and Development	√	√	√	

4.2 Results of Quantitative Research

The quantitative research will supplement and further develop the qualitative analysis. Since the purposive sampling shall be interpreted with the limited given samples to discuss the sustainable consumption of urban mobility services in the sharing economy of the 6 selected cities of China, the questionnaire survey was further constructed based on the previous literature in terms of concepts and theories combined with the results from the qualitative study. Ultimately, 393 sets of data were collected according to the calculated sample size, and further analyses were conducted to generate the quantitative results. The process of analysis included the sample distribution, reliability, validity, current situation analysis and lastly hypotheses testing to identify the correlations among the variables.

4.2.1 Sample Distribution

The 500 questionnaire surveys were initially distributed to the target respondents from 6 different cities of China via both mobility platforms and physically. From these 500 original questionnaires, only 393 sets met the condition of being active users of online mobility platforms in the city. Therefore, based on the collected data, the sample distribution of the study is as shown follows

Table 4.6 Sample Distribution

		Category	Sample (N=393)	Percent		Category	Sample (N=393)	Percent
Gender		Male	78	19.80%	Advantages	Opens up extra income opportunities	42	10.70%
		Female	310	78.90%		Greater choice for consumers	150	38.20%
		Others	5	1.30%		More efficient use of resources	178	45.30%
Age		18 and under	38	9.70%	Drawbacks	None	14	3.60%
		19-25	189	48.1%		Other	9	2.30%
		26-30	96	24.4%		Lack of worker protection	45	11.50%
		31-40	63	16.00%		Lack of customer insurance (DIDI Chuxing)	200	50.90%
		41 and older	7	1.80%		Casual and part-time work with no benefits	10	2.50%
		Unemployed	13	3.30%		Lack of government regulation	115	29.30%
		Self-Employed	76	19.30%		None	1	0.30%
Occupation		Student	188	47.80%	Sustain For Our Economic Future	Other (please specify)	22	5.60%
		Full-time employment	66	16.80%			366	93.10%
		Part-time employment	40	10.20%			24	6.10%
		Retired	3	2.50%		Others	3	0.80%
		DIDI Chuxing	266	67.70%		Renting out your private	21	5.30%
Sharing					Involved	Incar		
Mobility		Shenzhou Car	1	0.30%	The Sharing	Involving in sharing	144	36.60%
Platforms		Rent			Mobility	mobility platform		
		Uber	1	0.30%		Being sharing car drivers	17	4.30%

Category	Sample (N=393)	Percent	Category	Sample (N=393)	Percent
OFO bike sharing	27	6.90%	I'm not considering becoming involved in the sharing economy	128	32.60%
Shouqi	4	1.00%	Others	83	21.10%
Caocao	5	1.30%			
Others	89	22.60%			

A total of 393 completed copies of the questionnaires were considered valid out of the 500. The remainder were considered invalid because the person who filled out the survey did not actively participate in the sharing mobility platform.

Statistically, in terms of gender, the majority of respondents (78.90%) of the respondents were women, with just 78 men accounting for 19.80% of the total. In terms of age, the majority of the respondents were between 19-25 years old, due to a large student population, which also had a high level of education. Secondly, the proportion aged 31-40 years was 16%, while the lowest group was 1.80% for those aged over 40 years old. In terms of occupation types, the student group accounted for 47.80%, followed by freelancers (19.30%), and early retirees (2.50%). From the perspective of participating in the shared mobile service platforms, most people chose the DIDI sharing platform, accounting for 67.70% of all the trips among the participants in this survey. Most people in China know about Didi and continue to use this platform. In terms of bicycles, 6.90% of the people choose ofo bike.

From the advantages of choosing a shared mobile platform, 45.30% of the respondents thought that it would make their life more efficient and save time, while 38.20% of the respondents believed that this shared mobile travel mode was better than

the traditional travel mode. Another 10.70% believed that such a network platform could bring them additional income. In terms of shortcomings, 50.90% commented that the shared mobile platform lacked an underlying life insurance mechanism. Another 29.30% believed that the lack of government control of the shared mobile platform created worry about the safety of individuals.

From the way of participating in the shared mobile travel platform, 36.60% of the respondents were using the travel platform in the market, while 32.60% commented that they were on the platform, and another 5.30% chose to become a network car driver to participate in the sharing of industrial city mobility. Finally, when asked whether this new economic model of shared mobile services would affect their choice of platform for their sustained consumption to promote sustainable socio-economic development, 93.10% agreed.

4.2.2 Reliability analysis

Before using the data collected from the questionnaires for hypothesis testing, it is first necessary to examine the credibility of the survey, because only surveys with reliability can truly reflect the true perception of the data and survey to accurately understand the economic, social, trust, and other aspects. Based on such accurate data, the accuracy of the hypothesis testing can then be ensured, and the relationship between the variables can be accurately mined.

The statistic applied for measuring the reliability of the questionnaire is Cronbach's α coefficient. The criterion is that the Cronbach's α coefficient is greater than 0.7, which means that the questionnaire has good credibility. When the Cronbach's α coefficient is higher than 0.8, the reliability of the questionnaire is considered to be

very high; When the Cronbach's alpha coefficient is below 0.7, the questionnaire needs to be revised. For this questionnaire, the results of the reliability test are as follows:

Table 4.7 Table reliability Test

Dimension	Cronbach's Alpha	N of Items
Economic	0.863	7
Technological	0.916	8
Social	0.908	7
Legal	0.914	7
Trust	0.872	6
susconsum	0.914	8
SDE	0.924	7
Overall scale	0.98	50

From the above reliability test results, it can be seen that the seven dimensions of the questionnaire and the overall reliability of the survey are all higher than 0.7. At the same time, the overall reliability for economic, social, technologic, legal, trust and reputation, sustainable consumption and development of the questionnaire is as high as 0.980, which is higher than 0.9, and means that the reliability of the questionnaire is excellent. Therefore, this survey is allowed to conduct further regression analysis.

4.2.3 Validity Analysis

Statistically, a questionnaire with reliability is not necessarily valid. The reliability of the questionnaire was tested in detail in the previous section. This section further examines the validity of the questionnaire. There are two methods for questionnaire validity testing: one is Exploratory Factor Analysis (EFA), and the other is

Confirmatory Factor Analysis (CFA). When the dimension of the questionnaire is unknown, the exploratory factor analysis method should be selected.

When the questionnaire dimension is known, the confirmatory factor analysis method should be chosen. For this survey, based on theoretical and predecessor research results, this questionnaire has been divided into seven dimensions, namely Economic, Social and Trust. Therefore, the Confirmatory Factor Analysis (CFA) test must be selected to check the validity of the questionnaire.

According to the seven known dimensions, the verification factor analysis graph is drawn in AMOS 24.0 software, and the survey data is entered into the calculation to obtain the following results: According to the seven known dimensions, the validation factor analysis diagram is drawn in AMOS 24.0 software, and the results are as follows:

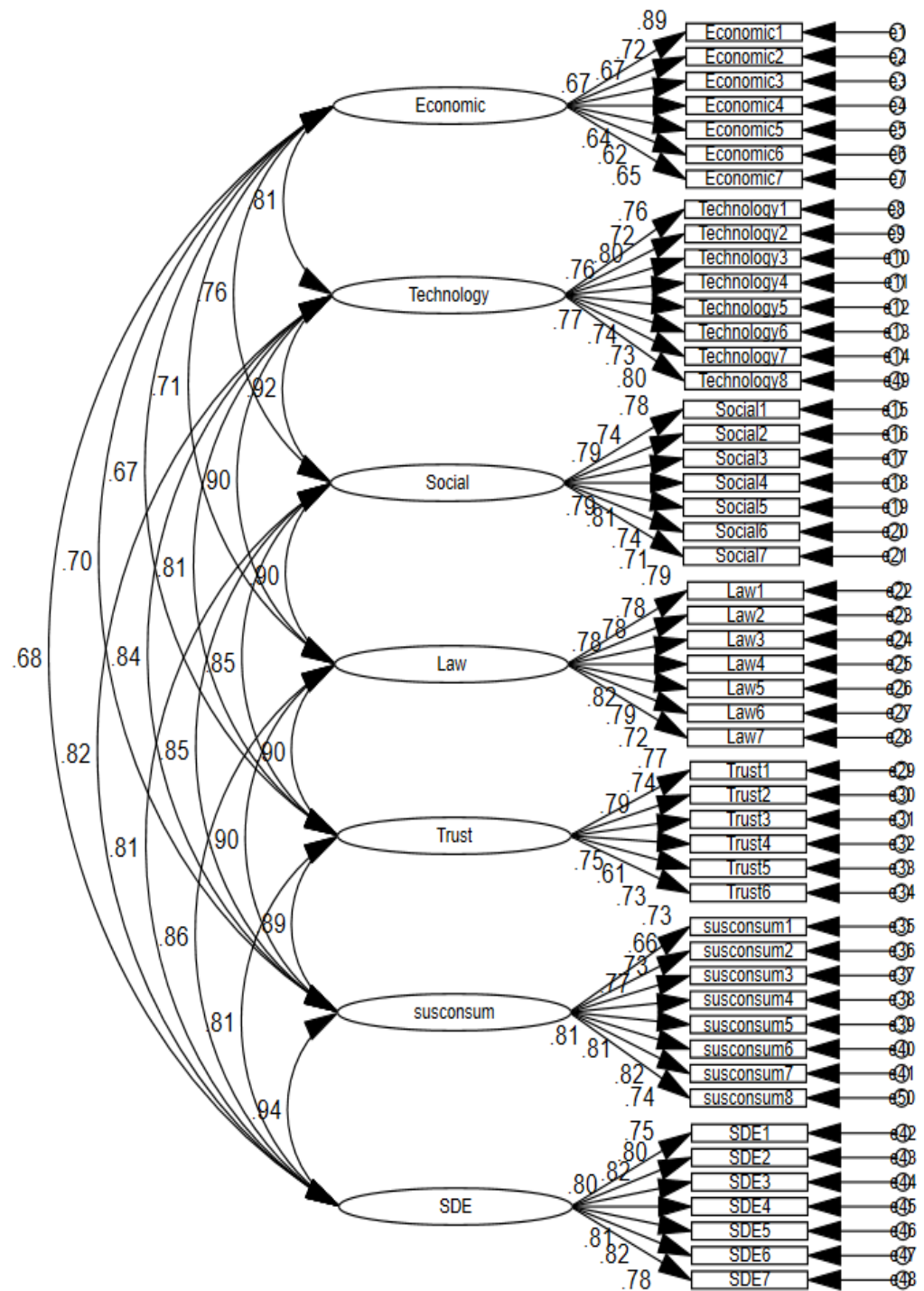


Figure 4.1 Validation Factor Analysis

According to the validation factor analysis diagram of the known theoretical dimension, the data of this survey are entered. After operation and analysis, it is found that the graph and data fit well, which means that it is correct to construct the division of these seven dimensions according to the theory. The fitting index values between the survey data and the model fix are as follows:

Table 4.8 Survey data and the model fit

Fit Index	CMIN/DF	RMR	RMSEA	GFI	AGFI	NFI	TLI	CFI
Fit Criteria	<5	<0.05	<0.08 (If <0.05 Excellent; <0.08 Good)	>0.90	>0.90	>0.90	>0.90	>0.90
Results	2.569	0.027	0.063	0.853	0.815	0.900	0.900	0.901

- From the data in the table above, it can be seen that most of the fitting indicators meet the standard; only GFI and AGFI are slightly below the standard. It can be inferred that the questionnaire is divided into seven dimensions, namely, Economic, Social and Trust, all of which are excellent. It satisfies both theory and practice.
- Based on the calculation results given in the figure above, the values for each arrow in the figure represent the load of each question, which is higher than 0.5, which means that each item has good validity. Based on this study, it is necessary to continue

to calculate and analyse the combination of reliability (C.R.), aggregation validity (AVE), C.R. and AVE of each dimension.

- It indicates that the higher the commonality of measurement indicators, the more reflective the same. For a class of problems, the higher the validity is. The results of this operation are as follows: Factor- AVE 50

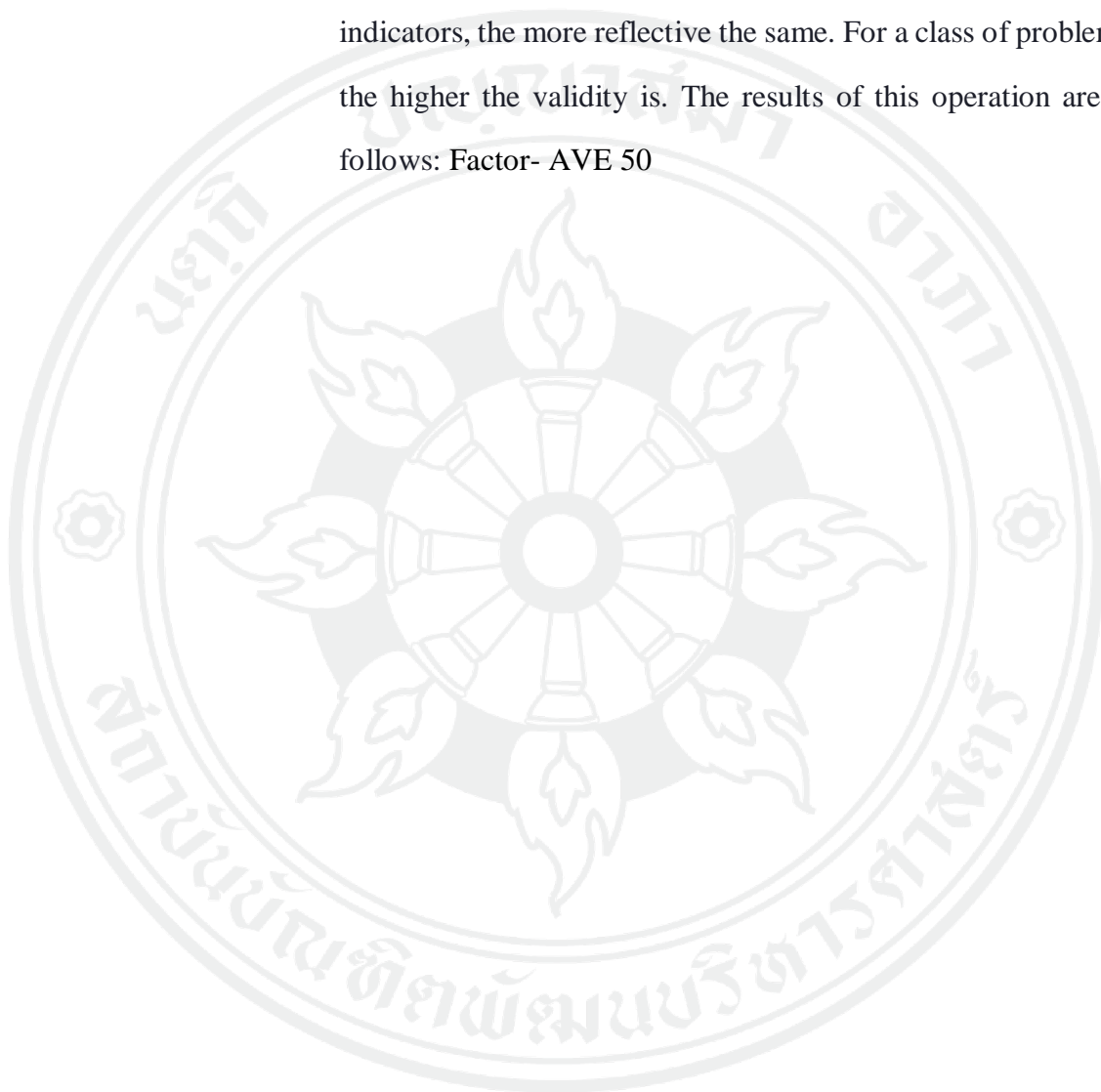


Table 4.9 The Factor Loading of Data

Dimension	Item	Factor Loading	Reliability Coefficient	Estimation Errors	Composite Reliability (C.R)	Average Variance Extracted (AVE)
Economic	Economic1	0.89	0.79	0.21	0.87	0.50
	Economic2	0.72	0.52	0.48		
	Economic3	0.67	0.44	0.56		
	Economic4	0.67	0.45	0.55		
	Economic5	0.64	0.41	0.59		
	Economic6	0.62	0.39	0.61		
	Economic7	0.65	0.42	0.58		
Technology	Technology1	0.76	0.58	0.42	0.92	0.58
	Technology2	0.72	0.52	0.48		
	Technology3	0.80	0.64	0.36		
	Technology4	0.76	0.58	0.42		
	Technology5	0.77	0.60	0.40		
	Technology6	0.74	0.55	0.45		
	Technology7	0.73	0.53	0.47		
	Technology8	0.80	0.63	0.37		
Social	Social1	0.78	0.61	0.39	0.91	0.59
	Social2	0.74	0.54	0.46		
	Social3	0.80	0.63	0.37		
	Social4	0.79	0.62	0.38		
	Social5	0.81	0.65	0.35		
	Social6	0.74	0.55	0.45		
	Social7	0.71	0.50	0.50		
Legal	Law1	0.79	0.62	0.38	0.92	0.61
	Law2	0.78	0.61	0.39		
	Law3	0.78	0.60	0.40		
	Law4	0.78	0.60	0.40		
	Law5	0.82	0.67	0.33		
	Law6	0.79	0.62	0.38		
	Law7	0.72	0.51	0.49		
Trust	Trust1	0.77	0.59	0.41	0.87	0.54
	Trust2	0.74	0.54	0.46		
	Trust3	0.79	0.62	0.38		
	Trust4	0.75	0.56	0.44		

Dimension	Item	Factor Loading	Reliability Coefficient	Estimation Errors	Composite Reliability (C.R)	Average Variance Extracted (AVE)
Sus consum	Trust5	0.61	0.38	0.62	0.92	0.58
	Trust6	0.73	0.53	0.47		
	susconsum1	0.73	0.53	0.47		
	susconsum2	0.66	0.43	0.57		
	susconsum3	0.73	0.53	0.47		
	susconsum4	0.77	0.60	0.40		
	susconsum5	0.81	0.66	0.34		
	susconsum6	0.81	0.66	0.34		
SDE	susconsum7	0.82	0.67	0.33	0.92	0.64
	susconsum8	0.74	0.55	0.45		
	SDE1	0.75	0.56	0.44		
	SDE2	0.80	0.64	0.36		
	SDE3	0.82	0.68	0.32		
	SDE4	0.81	0.65	0.35		
	SDE5	0.81	0.65	0.35		
	SDE6	0.82	0.68	0.32		
	SDE7	0.78	0.61	0.39		

As can be seen from the table above:

- The factor load of all 50 items in the questionnaire reached 0.5, which showed that each item in the scale had good validity, and all loads met the standard.

- The combination reliability (C.R.) of the seven dimensions in the questionnaire are all higher than 0.6, which means that the combination reliability of the six dimensions in the survey is excellent.
- The aggregation validity (AVE) of the seven dimensions in the questionnaire are all higher than 0.5, which means that the six dimensions of the scale have excellent aggregation validity.
- In conclusion, it can be judged that the questionnaire has excellent reliability and validity. Questionnaire data that pass the reliability and validity test can participate in the subsequent hypothesis testing.

4.2.4 Current Situation Analysis

The seven dimensions of the questionnaire, including dimensions: Economic, Social and Trust, sustainable consumption and development are as follows:

Table 4.10 Current Situation Analysis

	No.	Mean±SD	Test value	T	P
Economic	393	3.63±0.58	3.00	21.535	<0.001
Technological	393	3.63±0.61	3.00	20.404	<0.001
Social	393	3.61±0.61	3.00	19.7	<0.001
Legal	393	3.72±0.66	3.00	21.635	<0.001
Trust	393	3.56±0.63	3.00	17.724	<0.001
susconsum	393	3.6±0.6	3.00	19.875	<0.001
SDE	393	3.68±0.62	3.00	21.766	<0.001

Three points represent the neutral state, and the average scores of each dimension are all compared with 3 points. The P values obtained are all less than 0.05,

which means that people's perceptions of the seven dimensions are all significantly higher than three points; that is, the status of these dimensions is functional.

4.2.5 Hypothesis testing

Based on the theory and previous research results, the path relationship between the following variables is established in AMOS 24.0 software: when the research data are brought into the above path model, and the maximum likelihood estimation is selected to estimate the parameters. The model has been slightly modified according to the modification hints given by the model to improve the overall fitting situation of the model. Therefore, the final results are as follows:

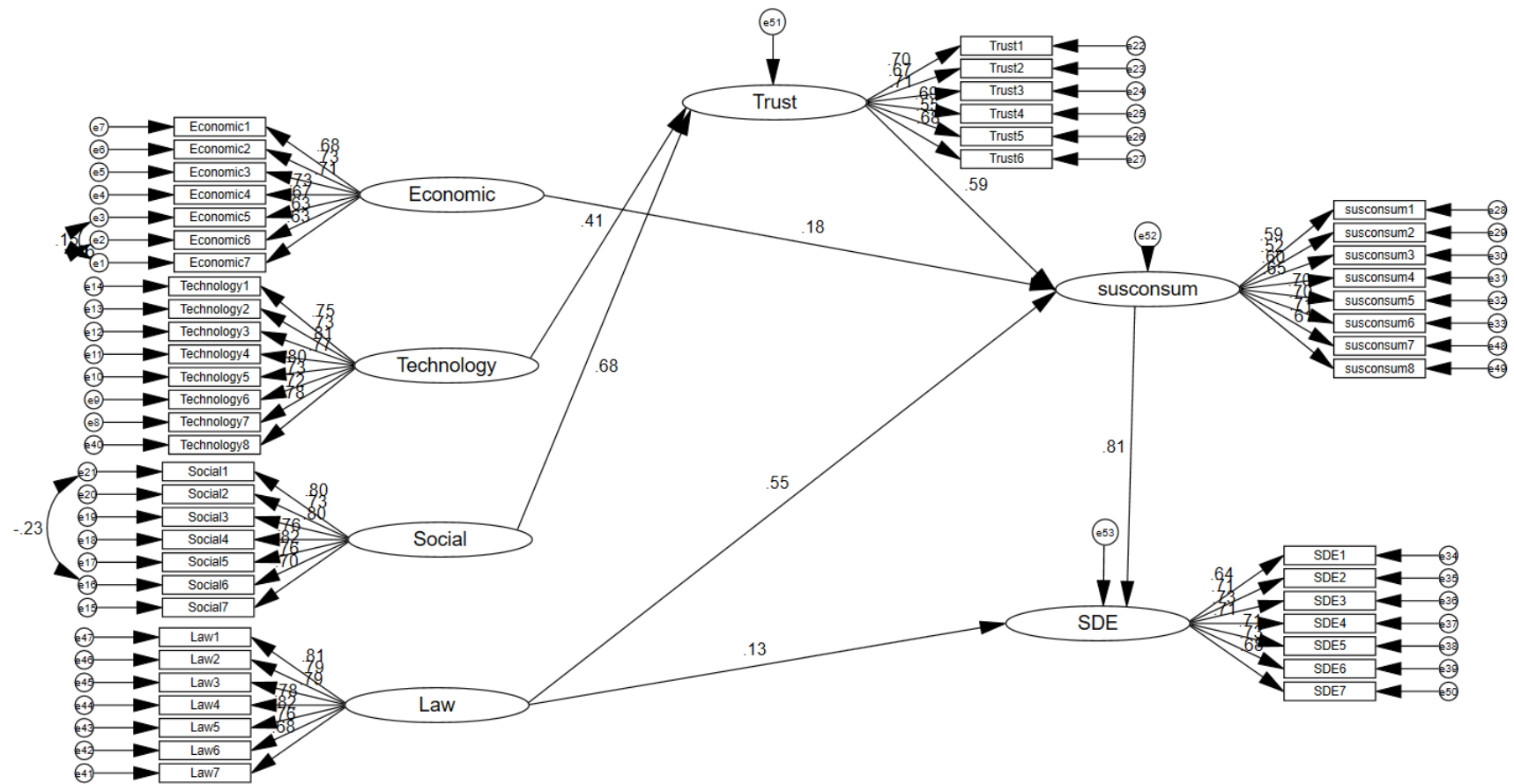


Figure 4.2 Path Model and Hypothesis Testing

These are the results of parameter estimation, and the overall equating of the model is as follows:

Table 4.11 The Model fit scales

Fit Index	CMIN/DF	RMR	RMSEA	GFI	AGFI	NFI	TLI	CFI
Fit Criteria	<5	<0.05	<0.08 (If<0.05Excelent; <0.08 Good)	>0.90	>0.90	>0.90	>0.90	>0.90
Results	3.59	0.048	0.071	0.813	0.832	0.902	0.901	0.901

From the above table, it can be seen that the model fits the status scale, so the parameters estimated by the model can reflect the relationship between the variables more truthfully and reliably, and all the results meet the standard

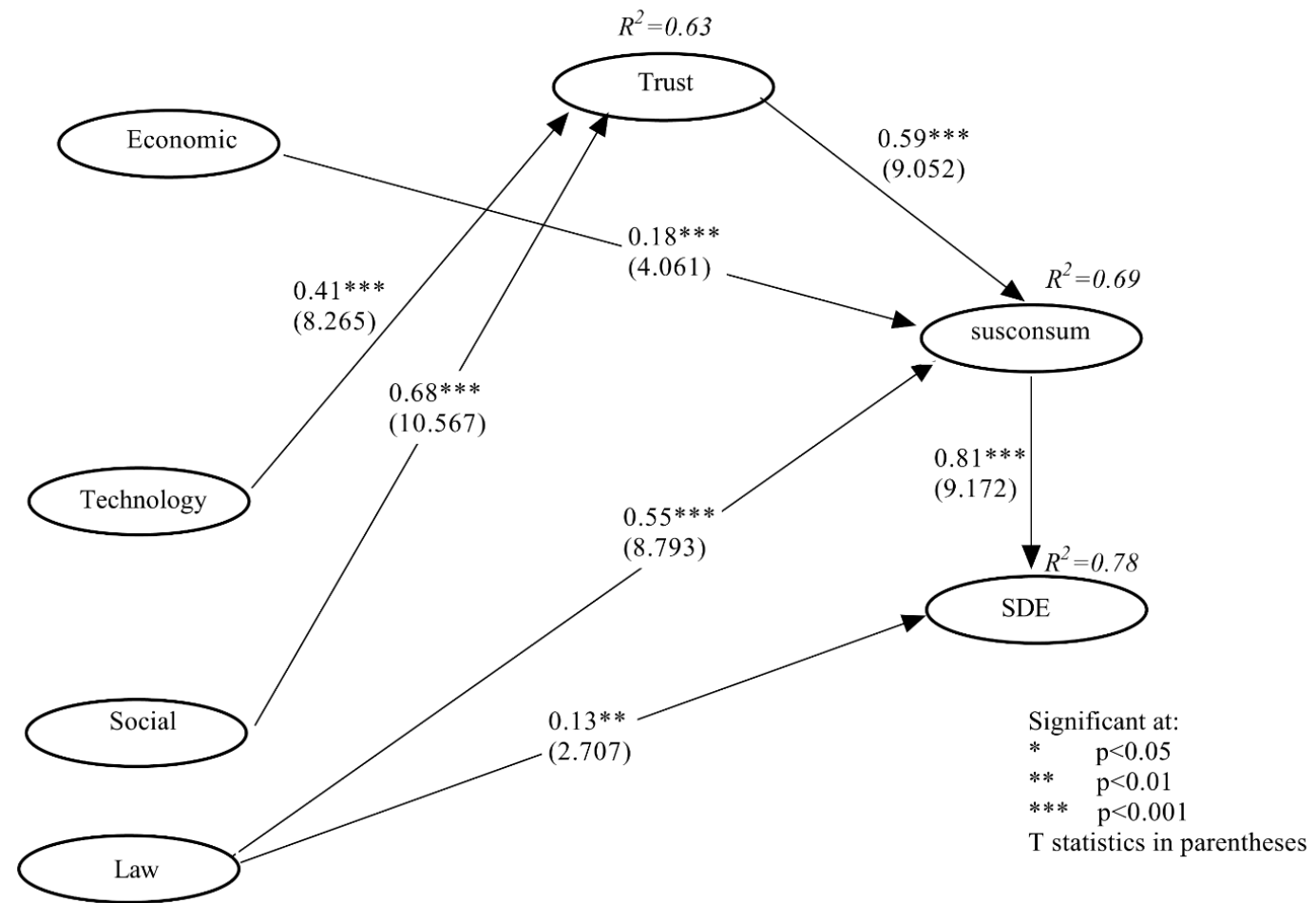


Figure 4.3 Path Model and Hypothesis Testing Results

The results of hypothesis testing are summarised from figure above as follows:

Table 4.12 Hypothesis Testing

	Hypothesis		Estimate	C.R.	P-value	Result
Susconsum	<---	Economic	0.18	4.061	<0.001	H1(Supported)
Trust	<---	Technology	0.41	8.265	<0.001	H2(Supported)
Trust	<---	Social	0.68	10.567	<0.001	H3(Supported)
Susconsum	<---	Trust	0.59	9.052	<0.001	H4(Supported)
Susconsum	<---	Law	0.55	8.793	<0.001	H5(Supported)
SDE	<---	Sus Consum	0.81	9.172	<0.001	H7(Supported)
SDE	<---	Legal	0.13	2.707	0.007	H6(Supported)

The results for hypothesis 1 reveal that the economic factors (economic benefits/gains, price, financial flexibility, access over ownership) have a positive influence on sustainable consumption with the estimate at 18% and p-value being less than 0.001, therefore the hypothesis 1 is supported to this study.

The results for hypothesis 2 reveal that the technologic factors (app theory and digitalisation, payment) have a positive influence on trust and reputation with the estimate at 41% and p-value being less than 0.001, therefore the hypothesis 2 is supported to this study

The results for hypothesis 3 reveal that the social factors (sustainability ideology, cultural orientation on sharing economy) have a positive influence on trust and reputation (service quality, reviews/comments) with the estimate being 68% and the p-value being less than 0.001, therefore the hypothesis 3 is supported to this study.

The results for hypothesis 4 show that the trust and reputation (service quality, reviews/comments) have a significant positive influence on the sustainable

consumption since the estimate is 59% and the p-value is less than 0.001% therefore the hypothesis 4 is supported to this study

For the results for H5, the Legal Factors (Government Stance and Attitudes, Legalising) are seen to have a positive significant influence on sustainable consumption because the estimate is 55% and the P-value is less than 0.001, which is significant, therefore the hypothesis 5 is supported to this study

For H6, the results show that the Legal Factors (Government Stance and Attitudes, Legalising) have a positive significant influence on sustainable consumption, with the estimate being 81% and the P-value being less than 0.001, which is significant, therefore the hypothesis 6 is supported to this study

The results for H7 indicate that sustainable consumption has a significant positive influence on the sustainable development of mobility services in the sharing economy since the estimate is 13% and the P-value is 0.007, which is significant, therefore the hypothesis 7 is supported to this study

Next, we need to continue to test the mediation effects on the relationship between the variables. The results are as follows:

Table 4.13 Hypothesis Testing Results for Mediation Effects

Hypothesis	Mediation Effects	P-value	Result
Technology→Trust→Susconsum→SDE	0.196	0.006	H8 (Supported)
Social→Trust→ Susconsum→SDE	0.325	0.006	H9 (Supported)
Legal→ Susconsum→SDE	0.446	0.006	H10 (Supported)
Economic→Susconsum→SDE	0.146	0.01	H11 (Supported)

Based on the above analysis, it is clear that all the above four mediation paths are significant, and the mediation effects are all positively significant. As a result, we can assume that all hypotheses from H8 to H11 are valid. The results for H8 show that for trust and reputation, sustainable consumption plays a positively significant series of mediation effects between the technology factors and sustainable development since the mediation effect is 20% and the P-value is 0.006, which is significant. therefore, the hypothesis 8 is supported to this study

For H9, the results reveal that for trust and reputation, sustainable consumption plays a positively significant series of mediation effects between the social factors and sustainable development as the mediation effect is 36% and the P-value is 0.006, which is significant. Therefore, the null hypothesis is rejected.

For H10, the results show that sustainable consumption has a positively significant mediation effect between the legal factors and sustainable development since the mediation effect is 45% and the P-value is 0.006, which is significant. therefore, the hypothesis 10 is supported to this study

The results for H11 indicate that sustainable consumption has a positively significant mediation effect between the economic factors and sustainable development due to the mediation effects being 15% and the P-value being 0.01, which is significant. therefore, the hypothesis 11 is supported to this study

CHAPTER 5

CONCLUSION, DISCUSSIONS AND RECOMMENDATIONS

5.1 Conclusion

Previous research on the sharing economy has been focused on attempts to identify and explain the emerging influences and economic benefits of different sectors. However, a there remained a prominent research gap on the sustainability of the fast-growing of urban mobility services in the sharing economy. This present study, therefore, tries to fill this gap by addressing three major research objectives.

The first objective is “To explore the attitudes and public stance on urban mobility services in the sharing economy (Objective 1).” The rationale behind this objective is to identify the government’s attitudes and stances towards various sectors in city are actively involved in the sharing economy. To answer this question, the researcher firstly started by reviewing the relevant official documents of the Chinese government from the period 2015 to 2018. In addition, the yearly public policies related to the sharing economy in promotion of standardisation and legalisation for developing shared mobility services.

According to the transaction cost theory (R. H. Coase, 1937), the value of the sharing economy is reflected in the matching between the owner of the resources (assets or skills) and the consumer who needs those resources, creating a match at an acceptable transaction cost at a certain time. With such transactions increasing in many cities, it contributes to the overall economic growth in those cities, resulting in the government taking a positive stance towards urban mobility services in the sharing economy. Moreover, the growth in the number of urban mobility users raises the question of whether the consumption of urban mobility services in the sharing economy is

sustainable. The continuous participation of consumers is one of the key factors in determining the sustainability of urban mobility services in the sharing economy. In order to find the necessary answer to achieve this research objective, the researcher firstly began by studying the government stance by reviewing recent policies from the years 2017 and 2018, the findings from which are summarised as follows:

In 2017, China's national development and reform began supporting and encouraging qualified industries and regions to try first by giving full play to the leading role of demonstration and promoting the healthy and sound development of the sharing economy and promoting the event of several shared economy platforms to legally admit the important role of the sharing economy from the government stance. However, guiding and regulating the sharing of resources related to the sustainability and benign development of the economy was proposed by the National Development and Reform Commission of the People's Republic of China in May 2018. These related documents also explain the important role of the government in the free market competition of the sharing economy in China. Thus, the government supports the sharing economy, which is a new type of economy with Chinese characteristics, in combination with promoting the sustainable development of the sharing economy.

Secondly, both the "Report on the Work of the Government" of the "Two Sessions of China" and the "13 Five-Year Plans" of the state have emphasised the development of the sharing economy. We can also see the attitude of the government department towards the economic form is positive over the year of 2017 to 2018. Also, what the researcher investigated with the government representative shows that regulating and legislating are matters of urgency among many urban mobility platforms. Consequently, we first saw the data earlier related to the growth of the sharing economy and we interviewed a representative of the government sector, which demonstrated how the legal factor is

contributing to the sustainable development of the sharing economy. Statistically, the results of good governance on urban mobility platforms will contribute positively to the sustainable development of the sharing economy.

In this study, semi-structured interviews were applied to three sectors—consumers, stakeholders and the government representatives—to explore their attitudes and stances towards urban mobility services in the sharing economy. The research objectives were studied through the integration of qualitative and quantitative methods. The research design accordingly applied the triangulation approach to integrate the results.

As the qualitative results revealed, consumer and stakeholder representatives highlighted the economic benefits of the system. Therefore, people emphasise the importance of the technological and cultural influences of the payment system because people will use the services when seeing others actively using them. From the government side, we also found that the current government attitude is also one of inclusivity, growth, and an open perspective on urban mobility services in the sharing economy. Legally, however, the government is highly concerned about the number of market-sharing platforms that still need to apply for legal licenses from the government authorities, so that consumers will then be able to use these platforms rationally and safely. As suggested by the stakeholders during the interviews, the security issues faced by urban mobility service users need to be officially settled with a way of interconnecting with the relevant government department. Then, consumers will contact the government immediately in the event of any accident and the urban mobility driver responsible will be detected right away.

Ultimately, the second research objective was about proposing a way “To analyse the sustainable consumption of urban mobility services in the sharing economy”. After the key factors were identified from the literature reviews and semi-interview, the conceptual model was formulated. The constructs of the quantitative survey were operated and proposed from the qualitative data as well. The author mainly

applied quantitative analysis to construct the research models and conduct statistical analysis of the questionnaires, the dependent variables generated from the three drivers of the sharing economy, as well as the legal concerns along with the sharing economy.

Based on the 500 respondents of the survey, there were 393 valid respondents from whom completed questionnaires were collected. The majority of the respondents were female aged 19-25. Most of the respondents were currently students actively using the DIDI Chuxing services, which they believed offered them a greater choice compared to the traditional public transportation options. However, people in the city aged 41 and above had a lower usage rate for the urban mobility services because they believed that the urban mobility services in the sharing economy lacked government control and regulations and were therefore not safe way for commuting. People aged 26 to 30 were the second largest group of urban mobility users, with most in this age group currently being full-time employees who believed that urban mobility services in the city will represented a more efficient use of resources that would lower pollution in the environment. Some people in this age group also applied to be a shared car driver in order to get extra income on their day off.

Statistically, sample distribution, reliability, validity analysis, current satiation analysis, and hypothesis testing were applied to answer research question 2. However, the integrated results from the quantitative and qualitative methods obtained from the 11 hypotheses are the direct or indirect relationship between variables as follows:

The researcher proposed the economic factors (Economic Benefits/Gains, Price, Financial Flexibility, Access over Ownership) that affects the sustainable consumption for hypothesis 1. The constructs of the economic factors had high factor loading levels of greater than 0.5 with p-values of less than 0.01. It shows that the economic factors contributed positive effects towards the sustainable consumption of mobility services in the city. The earlier qualitative interviews showed that most of the respondents cared about their expected economic gains from the mobility sharing, with financial flexibility and access over the

ownership considered important motivators for them to use the urban mobility services in the sharing economy based on the comments from interviewees 1-8.

The Technological factors (App Theory and Digitalisation, Payment) were found to have a significant effect on Trust and Reputation (Service Quality, Reviews/Comments). The factor loading was greater than 0.6 on average, with p-values of less than 0.01 and aggregation validity of over than 0.5, This indicates that for people to use the urban mobility services in the sharing economy, they need to have trust in the platform and the reputation of the operators. Moreover, the technology factors positively affected the sustainable consumption through the mediation effects of trust and technology. However, during the semi-structured interviews, interviewee no 4 mentioned that trust in the technology needed to be directed to the platform under the condition of legalisation by government. Then people would be willing to consume those urban mobility services in the city.

The Social Factors (Sustainability Ideology, Cultural Orientation on SE) were found to have a positive influence on Trust and Reputation (Service Quality, Reviews/Comments) with high loading factors over 0.6 and p-values of less than 0.01. Also, the combination reliability of social factors in this survey was higher than 0.0, which is excellent. However, the Trust and Reputation (Service Quality, Reviews/Comments) have a significant positive influence on the sustainable consumption of urban mobility services in the sharing economy.

These results show that people in the city have a positive sense of sustainability ideology and a cultural orientation towards the sharing economy which is highly promising for the growth of the sharing economy. This was exemplified by interview no.1 who mentioned that

the reason why she uses urban mobility services is that she believes doing so will reduce waste and pollution in the city.

The results for Legal Factors (Government Stance and Attitudes, Legalising) reveal a positive influence on the sustainable consumption of urban mobility services in the sharing economy as well as on sustainable development for hypothesis 10, with high loading factors of over 0.6 and p-values of less than 0.01. Additionally, the semi-structured interview with the director of China Transportation in Chongqing revealed that legalising the sharing platforms affects the sustainability of the sharing economy. Legalising the active urban mobility organisations is highly required to sustain the market.

Lastly, the conclusive results revealed that sustainable consumption has a significant favourable impact on the sustainable development of urban mobility services in the sharing economy with p-values of less than 0.05. Moreover, the mediation effects are all positively substantial, indicating that trust and reputation have a positively significant series of mediation effects between the technology factors and sustainable development.

Additionally, the sustainable consumption of urban mobility services has a positively significant mediation effect between the legal factors and sustainable development. Finally, sustainable consumption has a positively significant mediation effect between the economic factors and sustainable development. From these integrated qualitative and quantitative result, we can answer research objectives no 2 and 3.

5.2 Discussion

From the integrated qualitative and quantitative results obtained from reviewing the literature and combining the research conclusions of relevant scholars, interviews

with the 3 target groups, and quantitative analysis, this paper mainly expounds the influence of the sharing economy on the sustainable development of society. Theoretically, the sustainable development model is an economic product of the social environment, economic development, social demand, and technological development, as indicated by the findings of this study. To a large extent, however, the sharing economy explored in this paper can be seen as a specialised shared-mode economy model in China, because the consumption structure of the sharing economy in China is different from the sharing economy that is generally explored. Besides, China's sharing economy is called the economic leasing structure, as mentioned by interviewee No.8. The core issue of sharing economy development in Western countries lies in the shared form of individual or collective idle resources. However, the sharing economy is a business platform based on the suppliers.

In this study, the decrees issued by the government on the shared economic form from 2005 to 2019 were compiled. At the same time, the author also gathered relevant data from China and other countries from 1987 to 2019. This relevant literature explains explicitly the development of China's sharing economy and its main economic structure. However, whether it is related to China-related research or other past studies by previous scholars, it addresses the issue of the establishment of mutually beneficial partnerships (social factors) in this kind of economic activity and the formation of interest coordination mechanisms, which has become a vital issue in the development of a sharing economy.

For coordination between the demand side and the supplier, economic benefits (economic factors), coordination between the digital platform and government agencies (technical and legal factors), coordination between consumption and demand, and so on, these main problems are also explained in the research question 2 through the answers from the questionnaires.

Earlier, we mentioned the prospects of the sharing economy, especially the future outlook. The government plays a vital role even when competing for the market economy itself as stressed by Mr Fan. However, the government still needs to formulate

reasonable policy instruments and administrative policies to promote the construction and operation of these interest coordination mechanisms and shared platforms. Social and public welfare like the sharing economy regarded as the sustainability of social development in the sharing society. For the matching of the sharing economy and public service systems, it was mentioned in the interviews conducted with the representative from Chongqing Transportation that the relationship and coordination between the sharing economy and the civil service system are interconnected and complicated.

At the same time, the development and operation of the sharing economy requires a digital shared platform, with app theory and digitalization stated as the technological concepts, which are often profitable, especially in China, which is a conceptual nature of the platform. It does not belong to people sharing their idle resources, such as charging for treasure sharing, sharing bicycles and other mobile services, as stated from interviewee no 8. Therefore, the healthy development of the sharing economy depends on the continuous construction and improvement of the sharing platform, especially the safety of users. Only in this way can scarce resources be used for service goods and other consumption according to economic principles.

Therefore, the role of the sharing platform in the matching of information resources between the supply and demand sides is particularly essential, especially in China, which is a special kind of lease, such as sharing. At present, some of the emerging sharing economy platforms, which have gained greater market awareness and occupy a considerable market share, still have some practical problems in terms of industry norms, credit maintenance and business ethics. They are further increased; for example, online car bookings need to improve the user's safety and driver factors. In terms of quality, the platform plays an important supervisory role. At the same time, the government can promote self-improvement of the industry, regulate market behaviour, encourage the establishment of a credit system, and regulate the market through standardised platform construction.

The core mechanism of the sharing economy's operation based on the shared platform is to use the Internet information resources to achieve a cogent allocation of

fixed resources. From the research results of related scholars in the past, we can also see that the Internet allows consumers to communicate directly with stakeholders and reduce the participation of intermediaries. Why maintain this mechanism of operation? Besides, the results of the technological factors affecting the sustainable consumption of urban mobility services in the sharing economy illustrated the circulation of shareholders' rights to use idle resources and the use of shared resources by shareholders which are easily accessed. It is necessary to create a new set of enterprises that use information flow models and matching based on shared platforms to promote the operation and practice of the sharing economy in social life. Additionally, the development needs of the sharing economy are in line with the requirements of social development and innovation and regarded as the innovation paradigm. With the assistance of Internet technology, the sharing economy significantly improves innovation efficiency and reduces costs by stimulating the vitality of real estate resources, organising and integrating shared resources through ground tables and maps to enter innovative activities.

In this regard, we can propose the sharing economy as an innovative paradigm towards sustainable development with the drivers of technological progress. The sharing economy needs to be related to the field of sustainable development in an active investigation and theoretical analysis. However, the sharing economy has rich social effects. For example, when we conduct factor analysis, we mainly enumerate the ideology of sustainable development and the impression of social culture. This consumption pattern of the sharing economy is in line with the primary goal of sustainable development and promotes sustainable economic development by promoting sustainable development. The social, technological, commercial and government entities are a sustainable development model for demanders and suppliers. It is also a necessary core aspect of sustainable development. The government actively promotes the event of a shared and stable effective sharing mechanism that requires a combination of primary interests and collective identity, as the sharing economy is a product of interest. Social development may also be inherent in the contradictions of sustainable development. However, there is also a need to provide appropriate government policies to promote the damage to core interests and market order in its

operations. For example, in the in-depth interview section of this study, the second most important issue is security. Because consumers' trust in a new consumer platform comes from social security issues, digital platform stakeholders need to cooperate actively with the government to promote the development of the sharing economy.

In this sense, the question of how to adapt to the development trend of the sharing economy, innovate and share governance functions, and achieve the applicable matching of government governance must be addressed to promote the sustainable development of the future sharing economy. This study explains the role of the pioneering paradigm of the commons economy in promoting sustainable development from a theoretical and practical perspective. However, this study provides an essential reference for stakeholders (operators), consumers (users) and administration (Chinese government) about the direction of sustainable economic development. Also, it is possible to manage shared platforms and remaining research by allied governments.

Effective governance of policy relating to economic city mobility is that the government should correctly understand the meaning of the sharing economy. Primarily, it is necessary to deal with different types of sharing economy, because the definition of the sharing economy is the use of resources, China's sharing. The economy has gradually become a new economic leasing model. The regulatory methods of different countries and regions should also be changed. The version-related governance policies should be implemented under actual local conditions. The spirit of mutual assistance and non-profit sharing economies that currently exist on a small scale, such as office resource sharing and the sharing of home platforms, are not the focus of government regulation. The focus is on people's participation. In this process, the actual economic benefits and personal safety are guaranteed.

During the personal interviews in this study, the respondents also mainly mentioned that the security issue is aimed at a new model of a sharing economy with Chinese characteristics. I believe that the government should have a "tolerance", openness and support mentality to build a sharing economy, especially the economic platform of the people. The sharing of resources brought about by the sharing of

economic trends, such as urban transportation, finance, accommodation, affairs, transportation, etc., has greatly promoted the production and life of the people and supported employment on the platform. Didi's process has brought a lot of jobs and shared knowledge that was previously unknown. For the various new formats of the current sharing economy and individual cities, the relevant departments must first adopt a tolerant and prudent attitude. Local and economic resistance must issue appropriate bills for each region to help companies actively explore multi-disciplinary collaborative governance and innovative governance, create a pleasant market atmosphere, promote the healthy development of emerging industries and new economies, and maintain market vitality and social creativity.

The government needs to support the sustainable development of the sharing economy. In this study, the author also analysed five levels of social, economic, scientific, legal, and social trust. By examining these five factors, it can be seen how people can be positively influenced whether they are willing to participate in the sharing of resources through mobile platforms. When the government manages the platform, it needs to have a concept of sustainable development. The government should actively support the sharing economy, especially the shared mobility services in cities, open the government's idle resources, and build a shared infrastructure. For example, Chongqing City issued a 2018 governance approach on shared mobile platforms to promote government-enterprise cooperation, data sharing, data resource liberalisation, and strengthening of government control over shared commercial products and social security.

At the management system level, the government first needs to improve economic sharing promptly, especially the relevant laws and regulations for urban transportation sharing, and establish and improve the supervision mechanism for sharing platform supervision, employee protection and protection of consumer rights and security. Passengers will encounter timely warnings while driving. Secondly, it is necessary to establish a supervision system based on government supervision, and gradually move from pre-supervision to post-regulatory guidance. For example, the drivers for each platform need to be proactively released by the relevant departments.

Such as Licensing in the sharing economy will qualify and other measures — the combination of governance and big data. Since the sharing economy is based on "Internet +" big data products, it is difficult for traditional offline monitoring methods to cover regulatory objectives widely in a short period. For the regulation of the sharing economy, it is also necessary to use Internet big data technology and adopt an online supervision method. To find essential information about each driver, the government needs to handle large amounts of information, which involves big network data, so this requires a government governance network.

Finally, the researcher believes that the governing approaches to urban mobility services in the sharing economy needs to be based on specific regional economic, social, technological, and legal considerations. Due to the purposive sampling that the researcher applied such as in Sichuan, it was observed that the Chongqing population is very active in using the sharing economy platform. This requires policymakers to develop regulations based on local needs and people's needs.

5.2.1 Sharing Economy and Future Roles in Digital Economy and Society

The sharing platform of the digital platform and society mainly advocates the concept of sharing consumption whereby “resources are not wasted” and are “sufficient”, as contributed by technological and social drivers of the sharing economy according to this study. Conceptually, it is in line with the requirements of supply-side structural adjustment and the reconstruction of more efficient and sustainable new supply and demand relationships based on the basic concept of the sharing economy.

The sharing economy is developing from various sub-sectors of personal consumption, such as accommodation, transportation, and catering, to the current financial and living services discussed by many scholars. From this, it can be foreseen that this digital economic (as technological factors) and social process (social factors) has affected hundreds of millions of people around the world to share economic trends. The sharing economy will help the industrial economy achieve power conversion, turning the service industry into the main engine of economic growth, and helping other

sectors achieve economic growth. The most important thing is to bring more employment into the cities of the southwestern regions in China.

With the expansion of the sharing economy model in other areas, it also promotes the sustainable development of the economic model. For example, in the field of tourism, shared bicycles and Internet rental cars (car sharing) have emerged. Obviously, in addition to the several existing models, they also come in many forms, such as a one-to-one service and one-to-many Internet bus services in the high-end commercial vehicle market. Additionally, the sharing economic model in the fields of space, logistics, second-hand items, education, medical care, and services is booming, which has greatly facilitated people's lives. However, the development of any economic model is also accompanied by the survival of the fittest in the market. This dissertation discusses the attitudes and positions of the government in China. For the sharing economy, especially in the case of shared mobility services, it is important to understand which factors will affect the development of people in the digital market. In the medium term, the sustainable consumption of the sharing economy has concluded that economic, technical, social, legal and other factors are the main influences.

China is generally open to the development of the sharing economy, and it also encourages relevant market platforms and government departments to obtain applicable legalisation procedures actively. From this, it can be seen that China's public attitude and position are about the new economic model of the sharing economy. Moreover, one way of sharing idle resources is equivalent to relying on short-term leases, and the other is to transfer the right to use so that goods enter circulation and recycling channels; that is, second-hand transactions. With the rapid growth of personal idle commodity inventories and the increased willingness of buyers and sellers to trade, the speed of online second-hand sales is also extremely prompt. With the increase in per capita purchasing power and the frequent replacement of goods, a large number of consumer surpluses have accumulated. Second, the development of online shopping has brought conditions for the realisation of convenient transactions. Third, the influence of sharing economy concepts such as “sustainable consumption” has gradually penetrated people's

minds, and the demand for online shopping has steadily increased. Goods transactions exist objectively.

This economic model also reflects the foundation of sustainable development and has achieved this important goal. Constantly expanding domestic demand and accelerating supply-side reform have become the two primary tasks of economic development in various countries. The sharing economy is on the same line as the “Internet,” showing great potential for creating more effective and sustainable new supply relationships. There is no doubt that it will also develop the economy and society into a late period of development. Zhang Xiaorong (2018) even talked about how the future development of the sharing economy will involve time-oriented indicators; the expansion model will also spread the sharing of idle resources on the platform. Enterprises are shared units, and unused funds are integrated for sharing, such as low rent, private kitchens, and second-hand products — for example, secondary transactions between companies, leases, etc.

In addition, China is a country in which government-led enterprises develop synergistically. This includes, leading government and public service resources, open inscriptions and sharing – for example, government procurement sharing services and the government’s idle resources shared for public transportation. In the next 10-20 years, the city, as a unit of the government, will incorporate the egrets and integrate the city's idle resources and shared subjects. In addition to the sharing of municipal services, layout sharing in different countries will be planned. In the past 50-100 years, Jeremy Rifkin defined the sharing economy, which brought a resource revolution that changed the way people live.

Finally, to a certain extent, users or consumers will increase their style of consumption of urban mobility services in the sharing economy, working together to develop, consume, and share goods and services. Given this, the prediction of the development of the sharing economy is mainly explained by the scale of the economy. In the future, how will the sharing economy develop? However, different countries have different legal policies. The most important basis is the critical relationship between the implementation of public social policies. The sharing economy has gradually played a

vital role in community life, and it has had a subversive impact on the traditional economy. However, in many countries, different policies and regulations can largely explain the upcoming economic changes due to the unique technological environment. The role of the government in the process of sharing economy development will determine the direction of the sharing economy. E-government will also play a decisive role in the future development of the sharing economy by strengthening the control of platform security.

Hence, based on the findings from this dissertation, the growth of urban mobility services in the sharing economy will lead to the transformation of the city, namely a transformation of social, technological, economic, and governance aspects.

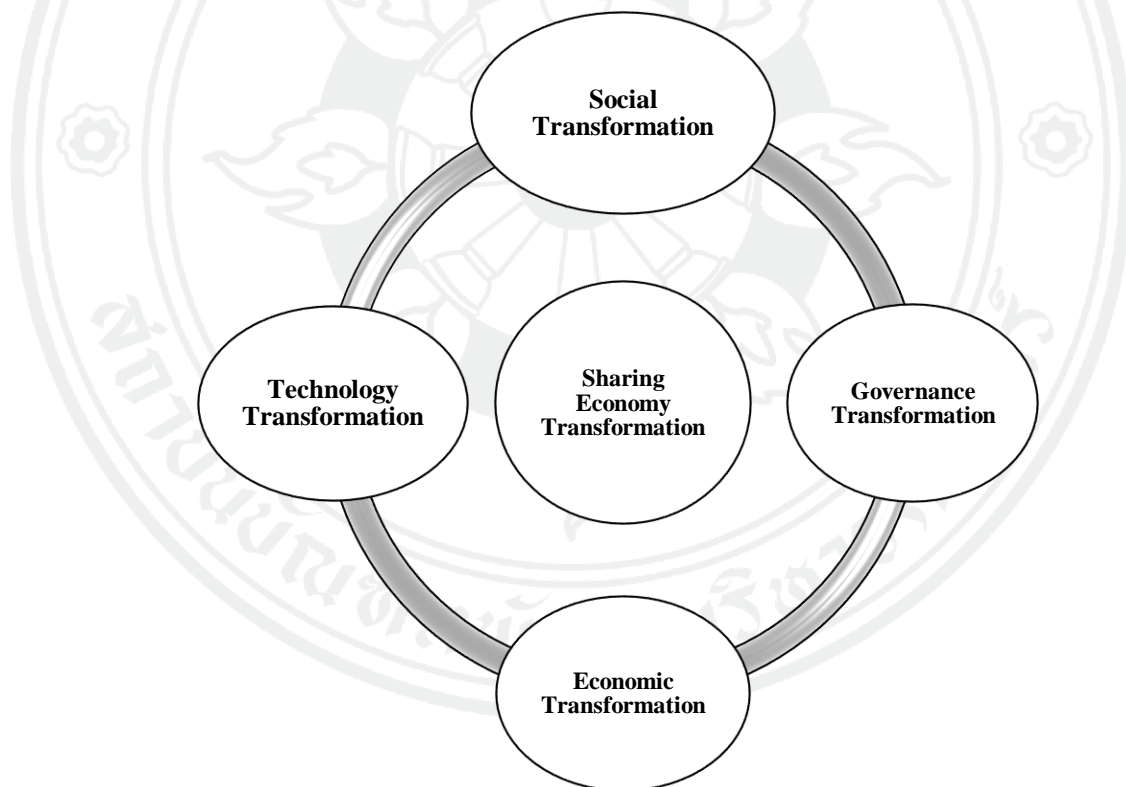


Figure 5.1 Digital Society and Sharing Economy Transformation

From the long-term trend of the future, the development of the sharing economy will bring more far-reaching influence to the urban consumption mode, social

organisation, urban governance, and disruptive technological innovation with its transformational development in this era of the digital economy and society.

Economic Transformation. For example, in the consumption model, the in-store sustainable consumption pattern of the past physical stores, the organisational model of the unit, and the cash payment model have now become the mainstay of online payment as technological factors. People's consumption patterns are basically determined in terms of the convenience of the suppliers. Therefore, the way of sharing mobility services in the sharing economy dramatically reduces the requirements of enterprise configuration and promotes the maximisation of the value of high-end talents. Also, the sharing economy is conducive to the vigorous development of entrepreneurial activities. In terms of necessities, such as housing and cars, it is possible to reduce the pressure on life through sharing, transform the consumption structure, reduce migration costs, and promote a more free flow of population.

Social Transformation. The development of the sharing economy is conducive to breaking down social problems such as trust and the reputation of the service suppliers based on indifferent human relationships under the rapid growth of urbanisation. Hence, a shared community concept similar to the popular residential programme in the cities has emerged in the country. Through community public welfare and sharing behaviour in daily life, it will help to create a harmonious living atmosphere in the city and rebuild the acquaintances in the city from the bottom-up sharing society.

Urban Governance Transformation. For example, the government aims to revitalise the urban sharing culture to solve social and economic problems via cultivating the sharing ideology of the citizens. Specific measures include sharing cars, sharing parking spaces, multi-generation shared residences, and public data opening. In China today, as the sampling from Chongqing transportation stated, "shared cities" have also been discussed as a new development model for both inside and outside the industry. The emergence of the sharing economy is likely to have a subversive impact on future urban development, just as the appearance of cars did.

Technological Transformation. The basis of sharing is the transmission of information by consumers in relation to trust and reputation. In this round of the sharing economy, the driving technological force for realising social development is the new organisational model brought about by communication. With the further development of information technology, traditional production and lifestyle models are likely to have new regulatory methods. Another advancement in the field of driverless technology will significantly promote the development of shared vehicles and significantly reduce vehicle ownership and total traffic. It may even change the current road design standards. The survival of the fittest in the market and the continuous innovation of technology can promote the constant development of the sharing economy.

5.3 Policy Recommendations

As pointed out by sharing economist Jeremy Rifkin: "The sharing economy caused a resource revolution, which has brought about tremendous changes in the way of life for human beings and it brought about a new organisational structure of economic life." It is a collaborative consumption method of private goods embedded in the community structure. Later, its boundaries gradually extended from products and services to intangible resources such as time and knowledge apart from the technological trust and app theory or digitalisation. Up to now, the sharing economy mainly refers to the integration of modern information technology and sharing the vast amount of decentralised idle resources, meeting the diversified needs of economic activities. In this research, the researcher analysed the relevant conclusions of the predecessors in the field of the sharing economy by examining a series of work policy documents issued by the government and pertinent data of the current sharing economy market. From the perspective of qualitative research, the sustainable development of the sharing economy was explored from different angles, taking urban mobility services as an example. In the previous qualitative analysis combined with the quantitative analysis process, our development plays a decisive role in the sustainable development of the sharing economy, whether from social, scientific, economic or legal governance aspects.

However, the researcher discovered that some Chinese legal systems with several levels which have been slow to update such information systems need to be strengthened, and people's willingness to participate in consumption depends on the trust of the platform. Therefore, the researcher will discuss the policy recommendations from several aspects, such as the consumer, stakeholder, and government, as well as the research limitations that existed in the current research. Also, suggestions will be made for an in-depth study of the field in the future. Because the study is only an integrated analysis for the period of 2015-2019, changes in each economic cycle and changes in government policies can determine a new round of changes in the economic cycle over the next ten years. Because, in fact, people's needs are changing in social, technological, economic, and legal aspects, so the online platform also needs to keep up-to-date with the times as the research shows that sustainable consumption is directed to the sustainable development of the sharing economy; hence policy to ensure sustainability is recommended.

5.3.1 Policy Recommendation for the Sharing Economy

This research mainly focused on the economic, social, technological, legal and trust and reputation levels to analyse the sustainable development of the sharing economy. Therefore, in this study, the researchers combine the characteristics of the sharing economy with the development of the entire sharing economy in several previous levels. The researcher believes that the sharing economy was jumping out of the limitations of traditional economic, legislative thinking and regulatory models to improve the relevant laws to create an open and inclusive Market Environment in China.

The government should improve relevant laws, regulations and innovate governing actions on the sharing economy (In accordance with the legal factors directed to the sustainable development of the sharing economy). However, from some of the government documents the researcher listed earlier, it can also be seen that the government is supportive of the sharing economy; the government continues to support the development of the sharing economy so that the sharing economy will have

a place in the economic cycle of the next ten years. Then the policy recommendations are mainly about explaining the state's position because China is a socialist country and its government has direct interference in the markets of southwestern regions, even if the current Chinese government is open to emerging economies.

According to the previous research results after visiting some consumers to gather their input on the need for the government to establish comprehensive legal regulation so that they can continue to participate using sharing economy services with confidence, there must be effective law and regulation on the sharing economy. For example, the government can conduct a centralised pilot in the six principal cities covered in this study, namely Chengdu, Chongqing, Panzhihua, Meishan, Guiyang and Kunming, in which there is a need for continuous improvement and adjustment of economic regulation and legislation in governing the development of the sharing economy within the local areas. The sharing economy should be promoted and governed nationwide so that people in other cities will have an adaptation process for coming regulations and laws. Second, the government can set up a hierarchical management system, government legislation, and industry associations. The regulatory authorities have established a precise regulatory mechanism and an accountability mechanism to punish the violations that occur in the sharing enterprises.

When visiting the stakeholders during the collection process of this research, Ms Li, the vice president of the DIDI group, talked about it many times. There is also high hopes that the government will introduce a complete system of accountability. For example, when people choose sharing mobility, people can blame specific driver-specific enterprises. At the same time, the industry has set up a self-discipline association, strictly controlling the industry access mechanism, because nowadays too many people are participating in the platform. In fact, it is not just idle resources that are used, but also large-scale intensive resources caused by the occupation, which results in urban congestion. Additionally, the researcher believes that the state can enforce an insurance system. The unclear responsibility mechanism is a common problem in the current sharing economy. To reduce transaction costs, some platforms do not provide insurance themselves during the operation process and do not require

the parties to purchase insurance, which leads to the lack of corresponding safeguard measures when problems occur in the transaction process.

In response to this legal problem, the regulatory authorities should force the platform to introduce a comprehensive insurance system to provide consumers with reliable protection. Finally, the government should increase tax control because if the state collects taxes, it can reduce the number of cars or bicycles that some companies put in, which will significantly alleviate traffic problems in the city.

The government should build a flexible value co-creation process (In accordance with the economic factors directed to the sustainable development of the sharing economy). In the current sharing economy, stakeholders break the pattern of producing resources for users, but the model of taking users as resources is based on the researcher's previous instructions. The purpose of the sharing economy is to transfer customer resources to another part of the demanding user at the right time to achieve mutual consumption. In simple terms, a sharing platform is a supply and demand process that creates value for each party. In this process, the user's identity changes; consumers and service providers together form a dynamic balanced value-creation structure, which is completely different from the traditional economic model because our initial trading model is a process of supply and demand. Before the service contact, the company should be committed to the supply and demand links, build a communication platform that eliminates information asymmetry, match the demand and supply to achieve the transaction, and bid farewell to the layer price increase model, because the traditional transaction is distributed by the manufacturer.

The co-creation model here can bring practical value to both parties. In the service contact phase, companies should evacuate in a timely manner, allowing users to create value on their own, because the intervention of the stakeholder will make the service provider unable to continue the platform transaction. This saves transaction costs and provides users with an efficient reciprocal trading environment, which promotes the sustainable development of the supply and demand economy. Finally, it is about trust and reputation. After the service is completed, the company should

provide users with a platform that is conducive to transparent transactions and positive feedback, attracting user interaction and mining more data values. These parts of the work can increase consumer trust in platform services and contribute to sustainable consumption.

The government should actively promote the construction of a credit system and establish a shared economic online credit platform (In accordance with the trust of the operators). From the conclusions of the previous research, it can be seen that social factors and sustainable consumption and development have a positive impact through the relationship between trust and reputation. In the interview survey process, consumers also indicated that their reliance on the trust of a certain platform leads to their participation in the use of the platform. It can be seen that the role of rating systems and mutual trust mechanisms in the sharing economy is crucial. On the one hand, the government should make provisions on the accumulation, sharing and use of credit data in sharing economy platforms; on the other hand, it should actively play the role of industry associations, build various public information platforms that support the sharing of economic development, and actively promote self-discipline in the industry.

In terms of technical factors and platform construction, the previous research also found that technological factors and sustainable consumption and development have a positive impact under the intermediary of trust and reputation. However, after years of development, major Internet companies have established a set of user credit systems to some extent. The government should urge existing enterprises to share big data, thereby reducing credit costs when implementing shared economic practices. Secondly, it should also increase the training of professional third-party credit service enterprises, and provide more powerful support for providing professional transaction credit rating services by collecting scattered user evaluations in the network.

In terms of industry self-discipline, in accordance with international practice, the sharing economy platforms should consciously monitor customer behaviours, such as transactions and payments, and rely on customer feedback to improve their services

and prevent and correct any unfavourable behaviours that may occur from the providers. Finally, China is currently building a credit society, and sharing the economy as part of a credit society requires a credit platform.

Finally, **the government should actively support the sustainable development of the sharing economy (In accordance with the legal factors directed to the sustainable development of the sharing economy)**. As mentioned earlier, Rifkin (2014) explained why the new business model quickly captures the market with a smaller market share (such as 10%) because the marginal cost of some service industries is very low and the loss of a few market shares leads to the entire market. The pattern has reversed. The government's support is particularly important here. In the course of this survey, government departments also hoped to discuss legalising the relevant platforms and increasing market share with the enterprises. Then once a relatively stable division of labour shakes an industry, the surrounding industries will also be affected. Of course, the new business model greatly expands the scope of supply and demand compared to the old model.

Both consumers and providers have found a broader trading platform and a larger number of target groups, which has contributed to the trading boundary being expanded. Therefore, the competent government departments should adopt an open mind to accepting and adapting to the emerging business models brought about by the sharing economy, conduct in-depth research on the business carried out by the practitioners, pay attention to legitimate market demands and rights appeals, and actively study the various types that come with it.

The problem is to incorporate it into the existing regulatory framework. It is inevitable that the sharing economy platforms will have problems in the early stages of development, but policy formulation cannot be a resistance to its development. We should do our utmost to create a fair and open development environment, and try to avoid the phenomenon whereby the relevant departments are arbitrarily stopped and blocked.

5.3.2 Recommendation for Action

Users should pay attention to participating laws and regulations when participating in sharing platforms. From the previous two focus groups and in-depth interviews, it can be seen that for many consumers, the difference between sharing economy services and traditional alternatives may not be clear. This is because many people only participated in the consumption, but did not understand its basic definition and characteristics. Although it may be more obvious for users, it might not be so apparent for ordinary consumers to engage in Didi Chuxing professionally and take taxis outdoors, because taxi drivers also accept orders from many parts of the Didi platform in many cases. Likewise, it may be difficult to understand how taxis operate under different legal terms and conditions when operating passenger services. A strong focus on participation between sharing economy platforms and the encouragement of adoption in a different way from other traditional alternatives may further obscure how sharing economy services are managed by different mechanisms. For example, in this study, we used the most intermediary benefit for platforms, namely trust and reputation to accept social, economic, technological, and technological benefits. Furthermore, the impact of the law on people's continuous participation in the sharing economy has a lot of influence on the conclusion at present. It shows that these levels also mainly affect people's participation in the platform, but as a trust and reputation mechanism, personal assets and liabilities and independent contracting. Consequently, consumers may be in an unsafe position if they do not know the difference between using other people's assets and using conventional services. In this study, therefore, the researcher would suggest that consumers try to understand the broader context of the sharing economy as mentioned by interviewee no.5, such as whether the platform is the real operating mechanism of the sharing economy. Especially when users use a new shared service platform, consumers should be particularly encouraged to check the legitimacy of the platform service, and suppliers should avoid asking consumers to hide their use purpose from neighbours or government officials, so as to protect our own interests. There are a lot of platforms in the market at present, although sometimes the benefits of access to services may be very high, but at the same time, the empowered sharing economy requires consumers to be legally empowered, rather than putting themselves in danger.

Emphasising this point, if the background of a shared mobility service platform is illegal, the potential damage or problems encountered during the sharing economy experience may be more difficult to solve, and of course, will not be guaranteed by law, meaning that security issues will be very difficult to solve. As a further recommendation, we encourage users to respect local government rules when working with suppliers. By understanding at least the basic terms of use, users will have the right to know their liability limits and avoid any economic losses resulting from the suspension of accounts with negative consequences such as fines. Finally, for users, especially those who often use sharing economy platforms, they may want to recognise the subversive innovative technologies and related legal developments in the sharing economy through traditional channels, social media and conversations with friends in the community. This can prevent unpleasant surprises, such as when a sharing economy platform stops running in a region or changes its business model dramatically. It can also lead to more responsible use of shared mobility services and raise awareness of possible alternatives to mainstream platforms. Therefore, users need to pay more attention to the relevant laws to protect their personal safety and economic losses.

Users responsibly rate the sharing online platforms (Trust and Reputation). In this study, it mainly applies user ratings and service quality to explain the impact of trust and reputation on the sustainable consumption and development of the economy. However, in the sharing economy, the rating and review mechanisms of mobility platforms are very important for winning people's trust, because many platforms are related to government departments. However, with regard to the empowered sharing economy, consumers should assess online platforms responsibly because responsible rating practices enable consumers to express their own voices, and at the same time, empower the entire user group to understand the rating process accurately and provide a strong reference role. In this study, when the researcher conducted focus group interviews, some respondents shared their suggestions that consumers should provide responsible ratings on the business operators.

This includes giving platforms a well-deserved negative evaluation. Especially for objective evaluations, we also recommend that consumers score according to appropriate and reasonable criteria. In this sense, consumers should first familiarise themselves with the specifications of a particular platform before providing initial ratings or audits, or objectively evaluate services after participating in consumption. Taking DIDI Chuxing as an example, this may mean that when we turn on the taxi software, it can present various comments on different lists. We can familiarise ourselves with the tone and style of the ratings, especially in areas where consumers want to book, so as to get objective reference information, such as which one we can know.

The driver's information is next to the driver's previous ratings. It also involves reading answers to common questions about scoring and commenting systems, and we can even comment directly on the platform. At the same time, consumers should not just copy or reproduce previous consumer comments, but should try to find their own style, taking into account the rating and review standards platform. In this study, the author takes DIDI Chuxing as an example. In many cases, it is normal for everyone to give a very positive rating. Providers need to maintain an average level in the long run, with a high rating, in order to avoid the risk of suspension from the platform. Therefore, especially in China, people are in a hurry because of the busy society, so in this respect, there may be a lack of ratings literacy, people unfamiliar with platform-specific ratings standards, and others not taking seriously the damage they can do to the reputation of drivers. Therefore, in some cases, even challenging their livelihoods has not increased or improved the platform. For quality of service, therefore, we particularly encourage users to leave text comments on some platforms as much as possible to clarify and extend digital ratings or to leave additional tags that they appreciate. Comments should be personal and tailored to individual experience without having to examine potential problems in transactions. However, ratings should not be too extreme. In this regard, an important consideration is not to include the potential abuse of providers, the unwillingness to share personal details that reveal their personal information, or to allow them to identify themselves against their will. The reason for this is that it can improve services and security to a great extent.

For operators, it is essential to understand changing national laws and government regulations. China is generally supportive of the new economic model, but if problems arise, the government will regulate as necessary. Any significant changes in new restrictions, tax or platform requirements for certification will have a direct and profound impact on the capabilities they provide. In addition, in terms of legitimacy or fines for platform violations, the cost actions may only be borne by providers, especially when some drivers cause potential safety hazards to passengers. As a representative of DIDI Chuxing, Vice President Ms Li, China's largest sharing mobility platform, expressed her belief during her interview that operators should actively participate in introducing the legal and regulatory parameters. Since most providers operate in a single regulatory environment and on a few platforms, and as some platforms are even fundamentally illegal, this is easier to achieve than all the sharing economy platforms being expected to keep stakeholders up-to-date in all locations.

In particular, we encourage providers to keep themselves informed through a variety of channels and multiple sources of information (e.g. local organisations, networks, social media platforms, the communities they live in, national documents) and not just rely on the platforms to inform them directly of any local changes that may affect them. By ensuring self-awareness and legal compliance, operators can protect themselves from disputes with consumers, because it is difficult to resolve damages or legal issues if the activity itself is prohibited. In addition, it prevents providers from encouraging or involving consumers in any prohibited activity.

Our proposal also refers to the legal terms and conditions under which stakeholders are actively involved in services providers. Although terms and conditions change frequently and can be very difficult to understand, we recommend that operators at least read these terms and also answer common questions provided by any platform. In particular, we encourage stakeholders to keep personal copies of the terms and conditions of use for users and to identify changes to government regulation where necessary.

Operators need to be aware of disruptive innovation and technology.

Technological innovation requires people's trust in the platform. In this era of mobile internet, Didi Chuxing is the most successful case in the sharing economy. As an operator, it is more important to understand that travel is a standard product. The value of the platform is not a simple link, but its mastery and application of subversive innovation and big data of science and technology. We all say that innovation must be a valuable innovation, which requires people to combine big data. However, if we just lie there and cannot maximise the use of the data according to the needs of the enterprise, then the data cannot deliver its value. For example, if our platform can collect a lot of background data every day, including consumer feedback, but we do not make relevant adjustments in time, we have not used it in time. Innovation provides better services to consumers. Understanding how to use data, how to use reasonable technology platform rules to control data supply and demand, and how to manage the user experience are all ways of making data produce value.

The real value of sharing economy platforms (bilateral or multilateral markets) is data, as well as a series of algorithms and barriers to data generation. Data is the ultimate goal of the sharing economy. Barriers can be applied. A sharing economy platform, if driven by pure operation, will not have high barriers; but if it can accumulate a lot of data and apply that data well, it can create barriers in the long run.

The car sharing represented by DIDI Chuxing is different from other types of sharing. The car is a standard resource and easy to operate by means of data. Uber's most important application is its surge pricing, which uses the supply and demand curve in the economic principle. In each cell, according to the supply and demand situation at that time, it simulates the supply and demand curve in real time, finds the equilibrium price suitable for the cell at that time, and adjusts the supply through price levers. This is the embodiment of DIDI's powerful data ability. On the one hand, DIDI has the ability to collect data; on the other hand, it has the ability to build models and successfully apply economic principles to reality, and its system can handle such a high concurrent

amount of data, which is also very important. Therefore, this tells us that the development of a platform needs the investment of technology.

In this era of subversive innovation, people need to invest in human resources, science and technology in order to make a platform able to survive for a long time. However, any platform needs people's consumption, and the use of innovative technology needs to be combined with people's actual consumption preferences.

Operators should have a wide range of social responsibilities. Because the current sharing platform has a point-to-point nature, sharing is regarded as a social experience in some online media discourse, and providers are usually regarded as a way of feeding back to society and opening up a new economic form for local cooperation, providing convenience in people's lives, and also allocating and reusing idle resources. To many unemployed people, there are a lot of opportunities to access the page, which has been explained a lot in the front. However, although this may be true in some cases, there are also many negative external factors in some cities of China. Urban sidewalks are littered with dilapidated shared bicycles, and many people worry about personal safety when riding shared cars.

Therefore, stakeholders are encouraged to consider broader social responsibility in their sharing as Ms Li mentioned during the in-depth interview. A general consideration is that suppliers should avoid the mass production and purchase of vehicles, especially in crowded cities where urban pollution is a problem. In fact, a more achievable solution will also be for suppliers and their local interactive neighbours to provide information about idle unused vehicles for community sharing. Suppliers can also provide off-platform vehicles, rather than from local car companies or rental businesses. By working more with local communities, providers can reduce potential tensions and negative consequences.

To reduce the power imbalance between providers and their users, especially in the case of private sharing, we further encourage providers to take measures to reduce local interference with consumers. Providers should limit arrival times, especially in

residential areas, to reduce noise complaints. In addition, an important step that can be taken by suppliers is to ensure that this has a certain degree of supervision over consumer behaviour and whether the vehicle is damaged. In many areas, urban sharing platforms are limited or wasted because of strong local opposition to feeling overcrowded.

The government should try its best to improve the current formulation of economic policies and regulations on sharing. At present, China is under a one-party dictatorship, so many problems belong to the perspective of policymakers, good in different places and at larger local stages. Current relevant bills are valuable because they can provide a comprehensive assessment of sharing economy themes and are supportive of positive attitudes. Therefore, we suggest that policymakers persevere in trying to find support policies in the direction of sharing economy problems, hoping that social problems arising from the current sharing economy can also be solved in a timely manner, such as driver homicide cases, sharing bicycles parked in disorder, and wanton destruction of sharing bicycles, resulting in urban environmental burdens. At present, not all areas of the sharing economy should be regulated by the government, but at the same time, not all aspects should continue to be unchecked.

The findings of this study show that the sharing economy is a complex environment. It mainly applies shared mobility services as an example to explain the problems of the sharing economy and sustainable development. However, the various stakeholders and complex regulatory issues of the sharing economy have not yet been specifically addressed. At present, policymakers can easily bury themselves in hard work and let the market play its role freely. At the same time, we have seen that from 2015 to 2019, the rapid growth of the sharing economy in China has been accompanied by positive and negative side effects, whether at the economic, social, scientific and technological, or legal level. The latter will aggravate and become more and more unsustainable in severe areas affected by shared services, so it is suggested that this topic should not be regarded as part of a small social problem and its importance underestimated. Policymakers need longer-term perspectives and visions to balance the interests of all stakeholders.

Therefore, the government should think outside the box and actively understand the inherent cultural and technological changes in China's sharing economy in line with China's actual development and people's demands. Sticking to the current regulatory struggle also involves taking a variety of perspectives, such as talking to suppliers and consumers, and trying out major sharing platforms as much as possible.

5.3.3 Recommendation for Future Research

Theoretically, this study has contributed a great deal to the existing literature on the sharing economy with sustainable perspectives. It provides a clear representation of the literature of the sharing economy by understanding the basic theoretical and conceptual basis with the importance of the sharing economy and the relevance of sustainable consumption of sharing mobility services in the city. Hence, it is helpful for researchers to identify potential new directions by positioning themselves clearly in the literature and findings on the sharing economy in the field of sustainable development, and to identify and explore their later work in this field.

Practically, it provides useful reference for operators, users and governments on the road towards the sustainable development of the sharing economy in the future by analysing in a comprehensive, objective and systematic way. This study only aims at understanding public stances and factor analysis via literature discussion and data analysis, using qualitative and quantitative analysis methods to propose the policy recommendations for operators, consumers and the government. In future studies, the researcher suggests that the sustainable development of the sharing economy be analysed in other areas, such as accommodation, finance, education, etc. Secondly, contributions made to the field of literature research theory through consultation with experts, practitioners and regulators will add another layer of insight into the complexity of the sharing economy.

Methodologically, this conceptual model was applied and consisted of social, technological, economic, and legal factors as independent variables in the sustainable consumption of mobility service in the sharing economy and the sustainable

development of the sharing economy as a dependent variable, with the mediation effects of trust and reputation generated and comprehended from past studies combined with purposive samples that included some limitations to express the total population of sharing economy. Hence, the controlling variables such as income level, gender, education, etc will be highly suggested for future research in this field because the future changing conditions in the environment of the sharing economy in the city might be influenced by such demographic information



BIBLIOGRAPHY

- Abdar, M., & Yen, N. Y. (2017). A survey on sharing economy and its effect on human behavior changes. *Proceedings - 31st IEEE International Conference on Advanced Information Networking and Applications Workshops, WAINA 2017*, 99–103. <https://doi.org/10.1109/WAINA.2017.128>
- Al, W. et. (2017). Sequential prediction of social media popularity with deep temporal context networks. *InJCAI*, 3062–3068.
- Alexandrescu, F., Martin á, S., Klusáček, P., & Barke, S. (2014). The path from passivity toward entrepreneurship: Public sector actors in brownfield regeneration processes in Central and Eastern Europe. *Organization & Environment*, 27, 181–241.
- Ancona, D., & Reavis, C. (2014). Robin Chase, Zipcar, and an Inconvenient Discovery. *MIT Sloan Management*, 14(143). Retrieved from [https://mitsloan.mit.edu/LearningEdge/CaseDocs/14-153.Robin Chase and Zipcar.FINAL.pdf](https://mitsloan.mit.edu/LearningEdge/CaseDocs/14-153.Robin%20Chase%20and%20Zipcar.FINAL.pdf)
- Antonetti, P., M. (2016). Hippies, greenies, and tree huggers: how the “warmth” stereotype hinders the adoption of responsible brands. *Psychology and Marketing*, Vol. 33, Iss. 10, Pp. 796 - 813.
- Arnould, EJ & Thompson, C. (2005). ‘Consumer culture theory (CCT): Twenty years of research.’ *Journal of Consumer Research*, Vol. 31, No. 4, Pp. 868-882.
- Banister, D. (2008). The sustainability mobility paradigm. *Transport Policy*, 15, 73-80.
- Bank, W. (2008). Growth Report: Strategies for Sustainable Growth and Inclusive Development. *China Financial Publishing House*, 2008, PP. 15-150.
- Bank, W. (2015). growth Re. *Htp://News.Xinhuanet.Corn/*, 2015-10—29.

- Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8), 1595–1600.
<https://doi.org/10.1016/j.jbusres.2013.10.001>
- Benoit, S., Baker, T. L., Bolton, R. N., Gruber, T., & Kandampully, J. (2017). A triadic framework for collaborative consumption (CC): Motives, activities and resources & capabilities of actors. *Journal of Business Research*, 79(May), 219–227.
<https://doi.org/10.1016/j.jbusres.2017.05.004>
- Beverley A. Sparks a, V. B. The impact of online reviews on hotel booking intentions and perception of trust. , 32 *Tourism Management* 1310–1323 (2011).
- Böckmann, M. 2013. (2016). *The Shared Economy: It is time to start caring about sharing; value creating factors in the shared economy*. (Vol. 9).
- Bonciu, F., & Bâlgăr, A. C. (2016). Sharing economy as a contributor to sustainable growth. An EU perspective. *Romanian Journal of European Affairs*, 16(2), 36–45.
<https://doi.org/10.1525/sp.2007.54.1.23>.
- Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. *Journal of Cleaner Production*, 45, 9–19.
- Botsman, R., & Rogers, R. (2012). *What's Mine Is Yours: The Rise of Collaborative Consumption*. New York, NY: HarperBusiness.
- Botsman, R., & Rogers, R. (2010). What's Mine Is Yours - How Collaborative Consumption is Changing the Way we live(德语). *Business*, (September), 274.
[https://doi.org/10.1016/S0168-9525\(00\)00086-X](https://doi.org/10.1016/S0168-9525(00)00086-X)
- C., Y. (2016). Congruency and responsiveness of patient- and clinician-reported outcome

- measures of fitness following reconstructive knee surgery. *Research Quarterly for Exercise and Sport*.
- Camilleri, J., Neuhofer, B. (2017). Value cocreation and codestruction in the Airbnb sharing economy. *Int. J. Contemp. Hosp. Manag.* 29 (9), 2322–2340.
- Cannon, S. and Summers, L. H. (2014). How Uber and the Sharing Economy Can Win Over Regulators - HBR. *Harvard Business Review*.
- Cannon, S., & Summers, L. H. (2014). How Uber and the Sharing Economy Can Win Over Regulators. *Harvard Business Review*, 27(5), 544–558.
- Chang, zhang wu. (1966). *The Theory of Share Tenancy*.
- Chen., P. K. and J. Q. (2016). Trust in Sharing Economy. *PACIS 2016 Proceedings*.
[Http://Aisel.Aisnet.Org/Pacis2016/109](http://aisel.aisnet.org/Pacis2016/109).
- Cheng, L. (2013). A rising shared economy. (*Economist*) Z1, 2013, PP. 23-24.
- Chengong, Z. (2016). OFO founder Dai Wei: Our product will be Google It affects the world as well. *Hexun Network* (<http://Bschol.hexun.cn/>), 2016-11-01.
- Cohen, B., & Kietzmann, J. (2014). Ride On! Mobility Business Models for the Sharing Economy. *Organization and Environment*, 27(3), 279–296.
<https://doi.org/10.1177/1086026614546199>
- Connolly, J., & Prothero, A. (2003). Sustainable consumption: Consumption, consumers and the commodity discourse. *Consumption Markets and Culture*, 6(4), 275–291.
<https://doi.org/10.1080/1025386032000168311>
- Cravens, D. W., & Piercy, N. F. (1994). Relationship Marketing and Service Organizations. *International Journal of Service Industry Management*, 5(5), 39–53.
- Dahuai, Y. (2016). The Way of Thinking, Objectives and Practical Path of Sharing

- Economic Development. *Nanjing Social Science*, No. 5, 2016.
- Daunorienė, A., Drakšaitė, A., Snieška, V., & Valodkienė, G. (2015). Evaluating Sustainability of Sharing Economy Business Models. *Procedia - Social and Behavioral Sciences*, 213, 836–841. <https://doi.org/10.1016/j.sbspro.2015.11.486>
- Durgee, J. F., & Connor, G. C. O. (1995). An Exploration into Renting as Consumption Behavior.: IIM INDORE Learning Centre. *Psychology & Marketing*, 12(March 1995), 89–104. https://doi.org/10.1007/978-0-85729-615-3_10
- Ert, E., Fleischer, A., & Magen, N. (2016). Trust and reputation in the sharing economy: The role of personal photos in Airbnb. *Tourism Management*, 55, 62–73. <https://doi.org/10.1016/j.tourman.2016.01.013>
- F, J. (2007). How to Maintain Competitiveness on the Way Towards Sustainable Manufacturing? *Tampere Manufacturing Summit* ;(June)6–7.
- Fang, B., Ye, Q., & Law, R. (2016). Effect of sharing economy on tourism industry employment. *Annals of Tourism Research*, 57(January 2013), 264–267. <https://doi.org/10.1016/j.annals.2015.11.018>
- Felson, M., & Spaeth, J. L. (1978). Community Structure and Collaborative Consumption: A Routine Activity Approach. *American Behavioral Scientist*, 21(4), 614–624. <https://doi.org/10.1177/000276427802100411>
- Firnkorn, J., & Muller, M. (2011). What will be the environmental effects of new free-floating car-sharing systems? The case of Car2Go in Ulm. *Ecological Economics*, 70, 1519-1528.
- Flanigan, S. (2018). Advantages of Syrian Diaspora Aid to Refugees in Middle Eastern States of the Global South. *Journal of Muslim Philanthropy and Civil Society*, 2(2),

35–66.

- Fleeson, W., Jayawickreme, E., Jones, A. B. A. P., Brown, N. A., Serfass, D. G., Sherman, R. A., ... Matyjek-, M. (2017). No {Title}. *Journal of Personality and Social Psychology*, 1(1), 1188–1197. <https://doi.org/10.1111/j.1469-7610.2010.02280.x>
- G, S. (2007). Sustainability in Manufacturing, Recovery of Resources in Product and Material Cycles. *Springer, Berlin/Heidelberg, New York, NY*.
- GANSKY, L. (2010). The mesh: why the future of business is sharing[M]. *Penguin, 2010*.
- Geiger, S., Fischer, D., Schrader, U. (2017). Measuring what matters in sustainable consumption research: an integrative framework for the selection of relevant behaviors. *Sustainable Development (Online First)*, Doi: 10.1002/Sd.1688.
- Geissinger, A., Laurell, C., Öberg, C., & Sandström, C. (2018). How sustainable is the sharing economy? On the sustainability connotations of sharing economy platforms. *Journal of Cleaner Production*, 206. <https://doi.org/10.1016/j.jclepro.2018.09.196>
- Green, M., Ryder, B., Monaghan, A., & Levett, R. (n.d.). *Sdc-2006-I-Will-If-You-Will.Pdf*. <https://doi.org/10.1016/j.jclepro.2018.09.196>
- Guangju, W. (2016). Overview of Airbnb and Uber Models Based on Shared Economy and Social Networks. *Industrial Economic Review No. 2, 2016*.
- Habibi, M. R., Kim, A., & Laroche, M. (2016). From sharing to exchange: An extended framework of dual modes of collaborative nonownership consumption. *The Journal of the Association for Customer Research*, 1(2), 277–294.
- Haifeng, C. (2017). “Moby Bicycle Launches”Rubik’s Cube”Big Data Artificial Intelligence Platform to Lead Industry Development”. *China News Network (Http://Www.Chi-Nanews.Corn/)*, 2017-04-13.

- Hamari, J., Sj, klint, M., & Ukkonen, A. (2016). The Sharing Economy : Why People Participate in Collaborative Consumption. *Journal of the Association for Information Science and Technology* 2016, 09. PP: 2047—2059.
- Hansen, E., Grosse-Dunker, F., & Reichwald, R. (2009). Sustainability innovation cube. A framework to evaluate sustainability-oriented innovations. *International Journal of Innovation Management*, 13, 683-713.
- Hart, S. (1997). Beyond greening: Strategies for a sustainable world. *Harvard Business Review*, 75(1), 66–76.
- Hasan, R., & Birgach, M. (2016). Critical success factors behind the sustainability of the Sharing Economy. *2016 IEEE/ACIS 14th International Conference on Software Engineering Research, Management and Applications, SERA 2016*, 287–293. <https://doi.org/10.1109/SERA.2016.7516158>
- Hawlichschek, F.; Teubner, T.; Adam, M.T.P.; Borchers, N.S.; Möhlmann, M.; Weinhardt, C. (2016). Trust in the sharing economy: An experimental framework. *In Proceedings of the Thirty Seventh International Conference on Information Systems (ICIS 2016), Dublin, Ireland, 11–14 December 2016*.
- Heiskanen, E., & Pantzar, M. (1997). *Toward Sustainable Consumption: Two New Perspectives*. *Journal of Consumer Policy*, 20(4), 409–442.
- Heiskanen, E., & Pantzar, M. (1997). Eva Heiskanen and Mika Pantzar *Toward Sustainable Consumption: Two New Perspectives*. *Journal of Consumer Policy*, 20(4), 409–442.
- Hennig-Thurau, T., Henning, V., & Sattler, H. (2007). (2007). Consumer File Sharing of Motion Pictures. *Journal of Marketing*, 71(4), 1-18.

- Hennig-Thurau, T., Henning, V., & Sattler, H. (2007). Consumer File Sharing of Motion Pictures. *Journal of Marketing*, 71(4), 1–18. <https://doi.org/10.1509/jmkg.71.4.1>
- Hong, J., Wang, C. & Kafouros, M. (2015). *The role of the state in explaining the internationalization of emerging market enterprises. British Journal of Management*, 26(1): 45-62.
- Hsu, CL & Lin, J. (2016). ‘Effect of perceived value and social influences on mobile app stickiness and in-app purchase intention.’ *Technological Forecasting & Social Change*, Vol. 108, Pp. 42-53.
- Huateng, M., Xiaorong, Z., & Sun Yi, et al. (2016). Sharing Economy: A New Economic Plan for Supply-side Reform. *Beijing: CITIC Press*, 2016.
- Jia, R., Tai, F., An, S., and Zhang, X. (2011). *Neonatal paternal deprivation or early deprivation reduces adult parental behavior and central estrogen receptor α expression in mandarin voles (Microtus mandarinus)*. *Behav. Brain Res.* 224, 279–289.
- JOHNSTON. (n.d.). America unlimited. *New York: Doran Doubleday Pres.*
- KELSO L O, A. M. J. (1961). The new capitalists:a proposal to free conomic growth from the slavery of savings[M]. In *NewYork: Random House Pres.*
- KELSOLO, A. J. (1958). The capitalist manifestation. *New York:Random House Pres s*, 1958.
- Kemp, R., B. T. & S. H. (2000). Strategic Niche Management for Sustainable Mobility. In: K. Rennings, O. Hohmeyer, R.L. Ottinger: Social Costs and Sustainable Mobility - Strategies and Experiences in Europe and the United States. *ZEW Economic Studies, Vol. 7, Physica (Springer), New York, 167-187.*

- Lamberton, C. P., and R. L. R. (2012). “*When Is Ours Better Than Mine? A Framework for Understanding and Altering Participation in Commercial Sharing Systems.*” *Journal of Marketing* 76 (4): 109–25.
- Lamberton, CP & Rose, R. (2012). ‘When is ours better than mine? A Framework for Understanding and Altering Participation in Commercial Sharing Systems’,. *Journal of Marketing*, Vol. 76, Pp. 109-125.
- Lanlan, S. (2017). Innovation is the key to the development of shared economy. *China Economic Network* ([Htp://Distirct.Ce.CrY](http://Distirct.Ce.CrY)), 2017-05-15.
- LAURA P, COOPER T, F. T. (2015). The role of values in colaborative consumption: insights from a product service system for lending and bor rowing in the UK. *Journal of Cleaner Production*, 2015(97):21.
- Levine, M. (2009). ‘Share My Ride,’ New York Times Magazine, viewed 30 April 2017.
- Liu, Q., Li, H. ming, Zuo, X. li, Zhang, F. fei, & Wang, L. (2009). A survey and analysis on public awareness and performance for promoting circular economy in China: A case study from Tianjin. *Journal of Cleaner Production*, 17(2), 265–270. <https://doi.org/10.1016/j.jclepro.2008.06.003>
- Liu, Y., & Yang, Y. (2018). Empirical examination of users’ adoption of the sharing economy in China using an expanded technology acceptance model. *Sustainability (Switzerland)*, 10(4). <https://doi.org/10.3390/su10041262>
- Lorek, S., Spangenberg, J. H. (2001). Indicators for environmentally sustainable household consumption. *Int. J.Sustainable Development*, 4(1), 101–120.
- Martin, E., Shaheen, S., & Lidicker, J. (2010). Carsharing’s impact on household vehicle holdings: Results from a North American shared-use vehicle survey. *Journal of the*

Transportation Research Board, 2143, 150-.

- Martin, C. J. (2016). The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism? *Ecological Economics*, 121, 149–159.
<https://doi.org/10.1016/j.ecolecon.2015.11.027>
- McDonagh, P., & Prothero, A. (2014). *Sustainability marketing research: past, present and future*. *Journal of Marketing Management*, 30(11-12), 1186–1219.
- Minlian, L. (2017). Research and Analysis of Shared Bicycle Market. *Finance and Economics (Academic Edition)* 20 17 No. 5.
- Mittendorf, C. (2017). The Implications of Trust in the Sharing Economy –An Empirical Analysis of Uber. *Proceedings of the 50th Hawaii International Conference on System Sciences*, 5837–5846.
- Nica, E., & Potcovaru, A. (2015). The social sustainability of the sharing economy. *Economics, Management and Financial Markets*, 10(4), 69–75.
<https://doi.org/10.1111/j.1600-0765.2007.01016.x>
- Noland, R., & Polak, J. (2002). Travel time variability: A review of theoretical and empirical issues. *Transport Reviews*, 22, 39-54.
- Orsatto, R., & Clegg, S. (1999). The political ecology of organizations: Toward a framework for analyzing business-environment relationships. *Organization & Environment*, 12, 263-279.
- Orsi, J. (2013). The Sharing Economy Just Got Real. *Shareable*. Retrieved from <http://www.shareable.net/blog/the-sharing-economy-just-got-real>
- Owyang, J., Samuel, A., & Grenville, A. (2014). Sharing is the new buying: How to win in the collaborative economy (Report). *Vision CriticalBlog*. San Francisco, CA:

Crowd Companies.

- Penz, E., Hartl, B., & Hofmann, E. (2018). Collectively building a sustainable sharing economy based on trust and regulation. *Sustainability (Switzerland)*, 10(10), 1–6. <https://doi.org/10.3390/su10103754>
- Porter, M. E., & Kramer, M. R. (2011). The Big Idea : Creating Shared Value Rethinking Capitalism. *Harvard Business Review*, (February), 1–13.
- Posen, H. A. (2015). Ridesharing in the sharing economy. *Iowa Law Review*, 101(1), 405–433. Retrieved from <http://0-search.proquest.com.fama.us.es/abicomplete/docview/1770930427/fulltextPDF/D A01BC4383B2476BPQ/1?accountid=14744>
- Prothero, A., Dobscha, S., Freund, J., Kilbourne, W. E., Luchs, M. G., & Ozanne, L. K., & Thøgersen, J. (2011). Sustainable consumption: opportunities for consumer research and public policy. *Journal of Public Policy & Marketing*, 30(1), 31–38.
- Qiang, M. (2016). The Development Status, Bottlenecks and Countermeasures of Shared Economy in China. *Reviews on Modern Economy Issue 10*, 2016.
- R. H. Coase. (1937). The Nature of the Firm. *Economica, New Series*, 4(16), 386405.
- Ranjbari, M., Morales-Alonso, G., & Carrasco-Gallego, R. (2018). Conceptualizing the sharing economy through presenting a comprehensive framework. *Sustainability (Switzerland)*, 10(7). <https://doi.org/10.3390/su10072336>
- Resnick, P. and R. Z. (2002). “Trust Among Strangers in Internet Transactions: Empirical Analysis of eBay’s Reputation System.” *The Economics of the Internet and E-Commerce, Volume 11 of Advances in Applied Microeconomics*, Amsterdam, Elsevier Science.

- Richins, M. L. (1994). Special Possessions and the Expression of Material Values. *Journal of Consumer Research*, 21(3), 522.
- Rifkin, J. (2000). *The Age of Access*. London: Penguin.
- Rochet, J.-C., & Tirole, J. (2006). Two-sided markets: A progress report. The RAND. *Journal of Economics*, 37(3), 645–667.
- Rongxin, C. (2019). Formation of the Concept of Inclusive Growth and Its Policy Connotation.
- Rugman, A., & Verbeeke, A. (2000). Six cases of corporate strategic responses to environmental regulation. *European Management Journal*, 18, 377-385.
- S., B. G. (1964). Human Capital: a theoretical and empirical analysis, with special reference to education[M]. *University of Chicago Press*, 1964.
- Sahakian, Marlyne, Wilhite, H. (2014). Making practice theory practicable: Towards more sustainable forms of consumption. *Journal of Consumer Culture*. 2014, Vol. 14, No. 1, p. 25-44.
- Santos, G. (2018). Sustainability and shared mobility models. *Sustainability (Switzerland)*, 10(9). <https://doi.org/10.3390/su10093194>
- Schor, J. (2014). Debating the Sharing Economy, Great Transition Initiative. [Htp://Greattransition.Org/Publication/Debatin g Th e Sharing Economy](http://Greattransition.Org/Publication/Debatin g Th e Sharing Economy), 20 14 /10.
- SCHULTZ T W. (1962). Investment in human beings[M]. *University of Chicago Press*, 1962.
- Shaheen, S., Guzman, S., & Zhang, H. (2010). Bikesharing in Europe, the Americas, and Asia: Past, present, and future. *Transportation Research Record*, 2143, 159-167.
- Shahen, S.A. Cohen, A. P. (2008). World wide Car sharing Growth: An International

- Comparison. *Institute of Transportation Studies Working Paper P.P 80-90, 2008.*
- Shuai, Y. (2016). Types, Elements and Impact of Sharing Economy: Perspective from Literature Research. *Industrial Economic Review*, 2016 (02): 35-45.
- Steininger, K., Vogl, C. & Zettl, R. (1996). Car-sharing organizations: The size of the market segment and revealed change in mobility behavior. *Transport Policy*, 3, 177-185.
- Stern, D. I., Common, M. S., and Barbier, E. B. (1996). Economic growth and environmental degradation: the environmental Kuznets curve and sustainable development. *World Development* 24, 1151–1160.
- Stern, P. C. (1997). Toward a working definition of consumption for environmental research and policy. In National Research Council (P. C. Stern, T. Dietz, V. W. Ruttan, R. H. Socolow, & J. L. Sweeney, Eds.), *Environmentally significant consumption: Research directions*. In Washington, DC: National Academy Press.
- T, C. (1925). The present economic revolution in the United States. *New York: Lit Tle Brown Pres, 1925.*
- ter Huurne, M., Ronteltap, A., Guo, C., Corten, R., & Buskens, V. (2018). Reputation effects in socially driven sharing economy transactions. *Sustainability (Switzerland)*, 10(8), 1–19. <https://doi.org/10.3390/su10082674>
- THUNENV. (1966). The isolated state [M]. *London: Pergamon Pres, 196.*
- Wang, Y. and Vassileva, J. (2007). A Review on Trust and Reputation for Web Service Selection. *In the 27th International Conference on Distributed Computing Systems, Toronto, Canada., 23–28.*
- Weifei, R. (2016). “Drip travel” problems and Countermeasures analysis. *Economic and*

Trade Practice No. 14, 2016.

Whitmarsh, L., and O'Neill, S. (2010). *Green identity, green living? The role of pro-environmental self-identity in determining consistency across diverse pro-environmental behaviours.* *J. Environ. Psychol.* 30, 305–314.

World Economic Forum. (2016). Understanding the Sharing Economy: System Initiative on Environment and Natural Resource Security. *World Economic Forum Industry Agenda*, (December). Retrieved from http://www3.weforum.org/docs/WEF_Understanding_the_Sharing_Economy_report_2016.pdf

Wu J, Li H, Cheng S, L. Z. (2016). The promising future of healthcare services: when big data analytics meets wearable technology. *Information & Management* 53(8):1020–1033 DOI 10.1016/j.Im.2016.07.003.

Wu, X., & Zhi, Q. (2016). Impact of Shared Economy on Urban Sustainability: From the Perspective of Social, Economic, and Environmental Sustainability. *Energy Procedia*, 104, 191–196. <https://doi.org/10.1108/09600039410055963>.

Xiaode, Z. (2015). Shared Economy: A Revolution of Human Lifestyle. *People's Forum, Academic Frontier*, 2015 (12): 6.

Xiaoxie, T. T. W. (2015). Sharing Economy: a disruptive economic model under the “Internet plus.” *Chinese Scientific Development Review* 2015 (12) : 78-84.

Xie J, Wen D, Liang L, Jia Y, Gao L, L. J. 2. (2018). Evaluating the validity of current mainstream wearable devices in fitness tracking under various physical activities: comparative study. *JMIR MHealth and UHealth* 6(4):E94 DOI 10.2196/Mhealth.9754.

- Xie Yipeng. (2017). Current Situation and Future Trend of Sharing Economy. *RenMin Luntan* ([Htp://Www.Rmh.Com.Cn/](http://www.Rmh.Com.Cn/)), 2017, 05, 09.
- Xin Huashe. (2016). Chinese 13th Five-Year Plan Outline (full text). ([HtTp://WWW.Sh.Xinhuanet.Corn/](http://WWW.Sh.Xinhuanet.Corn/)). 2016—03—18.
- Yacouel, N., Fleischer, A. (2012). The role of Cybermediaries in reputation building and price premiums in the online hotel market. *Journal of Travel Research*, 2(52), 219–226.
- Yang, Y. (2016). *Research on the Impact of “Taxi Software” on Taxi Drivers’ Behavioral Decision-making and Operational Performance - A Double Perspective of Technical Efficiency and Allocation Efficiency*. 2016.
- Yi, L. (2016). Trends in the Study of Shared Economic Theory and Policy". *Economic Dynamics*, No. 4, 2016.
- Zervas, G., Proserpio, D., & Byers, J. W. (2014). *U.M. Association Limited Registered Office: Hasilwood House, 60 Bishopsgate, London, EC2N 4AW Registered in England and Wales No. 2731799*. (2731799), 2731799. <https://doi.org/10.1186/gb-2001-2-10-research0042>
- Zhang, T. (Christina), Gu, H., & Jahromi, M. F. (2018). What Makes the Sharing Economy Successful? An Empirical Examination of Competitive Customer Value Propositions. *Computers in Human Behavior*, 1–9. <https://doi.org/10.1016/j.chb.2018.03.019>
- ZHANG Xing, C. J. (2018). Review and prospect of sharing economy research. *JOURNAL OF ZHENGZHOU UNIVERSITY OF LIGHT INDUSTRY(SOCIALSCIENCE EDITION)* Vol.19No.2 Apr.2018.

- Zhang Xinhong, Y. F., & Gao Tai Shan, et al. (2017). China Shares Current Situation, Problems and Trends of Economic Development. *E-Government*, 2017 (3): 2.
- Zhigang, X. (2015). Knowledge Economics Analysis of “Shared Economy”: An Innovative Cooperation Framework Based on Hayek’s Theory of Knowledge and Order. *Economic Dynamics*, 2015 (12): 78.
- Zhiqiang, C. (2016). Accurately grasp the scientific connotation of the concept of shared economic development. (*Htp:Theory.People.COB.Cn/*)2016,05,05.
- Zhiyong, L. (2017). Eight Sectors: Breaking Barriers and Promoting the Dvelopment of Sharing Economy. (*Htp:/Jckb.Xinhuanet.Com/*),2017,07,04.
- Zou, S., Fang, E., & Zhao, S. (2003). The Effect of Export Marketing Capabilities on Export Performance: An Investigation of Chinese Exporters. *Journal of International Marketing*, 11(4), 32–55. <https://doi.org/10.1509/jimk.11.4.32.20145>







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January 15, 2019

To Whom It May Concern,

This is to certify that Mr. Pu Ruihui, holding Student ID Number: 5920131002, the Ph.D. Candidate in Development Administration (international program), Graduate School of Public Administration, National Institute of Development Administration (NIDA) and he is now pursuing dissertation study with topic: *"An Analysis of the Sustainable Consumption of Sharing Economy on Urban Mobility Service in Selected Cities of People's Republic of China"*. This dissertation study is conducted under the supervision of Associate Professor Dr. Pairote Patharanarakul.

The dissertation will be beneficial to academic and professional areas by an understanding of how to embrace sustainable development from the viewpoint of theoretical concept to sustainable consumption and the important role of sharing economy in contributing to proper policy guidelines for good governance in terms promotion of sharing economy in China. The study will help us design the best-fitted model for sustainable development of the sharing economy for China. Furthermore, the study will provide recommendations on how the Chinese government can support with effective policy in order to lead the sharing mobility service to succeed in the application of sustainable consumption as a contributor of sustainable development for the people's republic of China.

The Graduate School of Public Administration, NIDA highly expected to be granted by your kindly support in information provision or otherwise for this dissertation study and the School would wish to thank you on this occasion. If you need further query, please contact Ms. Orapin Kumkaew at +(66)0-2727-3877.

Thank you very much for your cooperation.

Yours sincerely,

Associate Professor Dr. Boon-Anan Phinaitrup, Ed.D.
Dean, Graduate School of Public Administration
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Survey to analyse the key factors affecting the sustainable consumption of urban mobility services in the sharing economy in selected cities of China.

The primary purpose of the survey is to address research objective No.2 and 3 by examining the key factors affecting the sustainable consumption behaviours with regard to urban mobility services in the sharing economy in selected cities of China, to contribute to the sustainable development of the sharing economy, and to propose appropriate sustainable policies for the sharing economy to the government sector.

Any personal information and data collected through this survey remains confidential, and will only be utilised exclusively for academic research purposes. The researcher would highly appreciate it if you could kindly complete the following questionnaire:

Part one	Section 1. Demographic (General) Information
Part Two	Section 2. Economic Factors: <ul style="list-style-type: none"> - Economic benefits - Price - Financial flexibility - Access over ownership
	Section 3. Technological Factors: <ul style="list-style-type: none"> - App Theory and digitalisation - Payment
	Section 4. Social Factors: <ul style="list-style-type: none"> - Sustainability ideology - Cultural orientation
	Section 5. Legal Factors: <ul style="list-style-type: none"> - Government stance - Legalising
	Section 6. Reputation and Trust: <ul style="list-style-type: none"> - Service quality - Reviews/Comments
	Section 7. Sustainable Consumption of Shared Mobility Services
	Section 8. Sustainable Development of the Sharing Economy

Please kindly return the questionnaire by April 2019. The researcher would like to thank for your valuable time and cooperation.

Part 1. General Information (Please mark where appropriate)

1. Which gender do you identify with ?

Male

•

Female

•

Other

•

2. Please select your age ?

18 and under

•

19-25

•

26-30

•

31-40

•

41 and older

•

3. In which city of China do you currently reside?

4. Please select the category of your main occupation?

Unemployed

•

Self-Employed

•

Student

•

Full-time employment

•

Part-time employment

•

Retired

•

5. Which *shared mobility platforms* do you currently use:

DIDI Chuxing

•

Shenzhou Car Rent

•

- Uber •
- OFO bike sharing •
- Shouqi •
- Yidao •
- Caocao •

Other (please specify)

6. Are you considering becoming involved in the sharing of mobility services by:

- Renting out your private car •
- Becoming involved in a sharing mobility platform •
- Sharing car drivers •
- I'm not considering becoming involved in the sharing economy •
- Other (please specify)

7. What advantages do you see in the sharing economy or mobility services or platform?

- Opens up extra income opportunities •
- Greater choice for consumers •
- More efficient use of resources •
- None •
- Other (please specify)

8. What potential drawbacks, if any, do you see in the sharing economy or mobility platform?

- Lack of worker protection •
- Lack of customer insurance (DIDI Chuxing) •

Casual and part-time work with no benefits •

Lack of government regulation •

None •

Other (please specify)

9. Do you think the sharing economy (ie, services such as DIDI Chuxing and Uber) is sustainable for our economic future to some extent?

Yes •

No •

If no (please specify your reason)

Part 2: Please rate the following statements

Instructions: 1 refers to Strongly Disagree, 2 refers to Disagree, 3 refers to Neutral, 4 refers to Agree, 5 refers to Strongly Agree.

Section 2: Economic Factors	Low ← → High				
Economic Benefits: Adapted from Botsman & Rogers (2012), Hamara & Ukkonen (2013), Rochet, J.-C., & Tirole (2006), Bock et al. (2005)	1	2	3	4	5
1. My participation in urban sharing mobility services benefits me financially.					
2. My participation in urban sharing mobility services/platform can improve my transportation economic expenditure situation.					
3. The economic benefit is a unique factor of the sharing economy compared to the traditional economy.					
Price: Adapted from Chih-Chien, W.; Hsu, Y.; Fang, W. (2006)	1	2	3	4	5

4. I think for the sharing economy, the critical success factor is the availability of reasonable use of products and services at an affordable price.					
5. I think there will be more modalities of various prices through shared mobility platforms.					
Financial flexibility: adapted from Chui et al. (2012)	1	2	3	4	5
6. I think the owners and non-owners will be more flexible in gaining financial income via sharing mobility platforms.					
Access over ownership: adapted from Levine (2009), Belk (2014)	1	2	3	4	5
7. I think for access over ownership due to any change of ownership, the limitations of resource utilisation decrease in line with the specific or personalised needs present in the operating environment for consumption.					
Section 3: Technological Factors	1	2	3	4	5
App Theory and Digitalisation: adapted from Hsu & Lin (2016); Black & Lynch (2004); Nakamoto (2008)	1	2	3	4	5
1. I think the main functions of digital applications include ease of use, focus on simple functions based on personal needs, and free and frequent updates of information.					
2. I think the application is a kind of relationship experience with the user, making the user's life more convenient and intelligent, which reflects the theory of car sharing applications.					
3. I believe that digital technology applications enable consumers to meet the expectations of personalised services and products to adapt to different environments.					
4. I think the digital sharing economy has now formalised the sharing practice, giving this formal and digital sharing unprecedented scalability.					
5. Since sharing practice is based on deep-rooted social norms, I think it is related to the sustainability of how social norms change in the process of digitisation.					
Payment: adapted from Black & Lynch (2004); Nakamoto (2008)	1	2	3	4	5
6. I think users have saved a lot of travel time by utilising online payment through shared mobility platforms.					
7. I think payment through shared platforms is a sustainable consumption mode.					
8. I think consumers can acquire and use goods and services that they could not afford or desire through rent-based or Access-based payments.					
Section 4: Social Factors	1	2	3	4	5

Sustainability Ideology: adapted from Heinrichs, H. (2013)	1	2	3	4	5
1. I believe that the sharing economy, as a new way, has the potential to contribute to sustainable consumption and sustainable development.					
2. Sharing economy platforms are considered an environment-friendly method of consumption.					
Cultural Orientation: adapted from Arnould & Thompson (2007)	1	2	3	4	5
3. Cultural orientation of sustainability stipulated me to make the consumption behaviour of sharing economy.					
4. I think a person's attitude towards a concept is inferred from his behaviour.					
Section 5. Legal Factors:	1	2	3	4	5
1. I will consume the sharing mobility platform if it is legalised.					
2. I think the shared mobility platform should be legally qualified by the government to enter the market.					
3. I think the stance and attitude of the government will affect the sustainable development of shared mobility services.					
4. I will participate in sharing trips with good alarm equipment.					
5. I think the current government support clearly demonstrates the importance and potential of the sharing economy for the future.					
6. I think now some government agencies are showing a strong interest in shared mobility services.					
7. The government is considered to be between the lobbyists of group companies and those who want to take advantage of the advantages offered by the sharing economy, which will help improve the relevant laws.					
Section 6. Reputation and Trust: adapted from Wang & Vassileva (2007)	1	2	3	4	5
1. Trust is a subjective feeling that the trustee will behave in a certain way according to an implicit or explicit promise she makes.					
2. Trust is a reputation mechanism that works through online reviews.					
3. Trust can be described as 'positive reputation increases trust.'					
4. I think the strong demand for trust in shared economic platforms will lead consumers to use whatever information they can get.					
5. I am willing to share resources with other consumers on the basis of trust.					
6. Participation in shared mobility services helps to build trust with others.					
Section 7. Sustainable Consumption of Sharing Mobility Services adapted from Lorek and Spangenberg (2014)	1	2	3	4	5

1. I think sharing consumption means increasing the use of products already produced and interacting with them as a community, thereby reducing the ecological footprint and promoting sustainable development.					
2. Economic interventions can be quite effective in facilitating more sustainable behaviour in terms of impact.					
3. Sustainable consumption is not just a question of choosing the right platform but of causing the right impact through one's overall consumer behaviour.					
4. Green purchasing and consumption also fall within the scope of sustainable consumption behaviours					
5. Sustainable consumption behaviours are based on collaborative consumption and sharing					
6. Customers' sustainable consumption behaviours facilitate the efficient use of under-utilised resources					
7. I believe that promoting sustainable consumption in a sharing economy is critical to the sustainable development of platforms and societies.					
8. To facilitate customers' sustainable consumption behaviours, platform managers should encourage the hosts to apply a reputation system.					
Section 8. Sustainable Development of the Sharing Economy: adapted from Caruana and Crane (2008)	1	2	3	4	5
1. Mobility-sharing affects sustainable development in a city.					
2. The development of car sharing platforms and services is due to the rapid development of the Internet in China					
3. Mobility sharing is a way of formulating "sustainable" development.					
4. The sharing economy is a new paradigm towards sustainable development.					
5. Because many people participate in the consumption of the sharing economy, I think it will promote the sustainable development of society.					
6. The sustainable development of the sharing economy promotes the rational allocation of idle resources and reduces waste.					
7. Sustainable development of the sharing economy depends on the changing demands of the market and the stance and attitude of government sectors.					

Thank you



APPENDIX C QUESTIONNAIRE (CHINESE VERSION)

关于影响中国部分城市共享经济可持续消费的关键因素分析之问卷调查

本问卷调查的主要目的是为了解决该论文研究目标之 2 和 3。通过影响我国部分城市共享出行的可持续消费行为的关键因素分析。基于相关研究结论来构建城市共享经济可持续发展变革模型，从中探讨出如何促进城市中共享经济的可持续发展，为了给相关运营商，消费者以及政府部门提出共享经济可持续发展的政策建议。该问卷中我们获取的所有个人信息和数据均为严格保密信息，且仅用于学术研究目的。

如果您能完成以下问卷调查内容，研究人员将不胜感激！

第一部分	第一项：基本信息统计
第二部分	第二项：经济因素 <ul style="list-style-type: none">- 经济效益- 价格- 财务弹性- 获取所有权
	第三项：技术因素 <ul style="list-style-type: none">- 应用理论与数字化- 支付方式
	第四项：社会因素 <ul style="list-style-type: none">- 可持续性意识形态- 共享经济的文化导向
	第五项：法律因素 <ul style="list-style-type: none">- 政府的态度与立场- 平台的合法性
	第六项：声誉和信任 <ul style="list-style-type: none">- 服务质量- 用户评价
	第七项：共享移动出行服务的可持续消费行为
	第八项：共享经济的可持续发展

请于2019年4月内返还该问卷，感谢您宝贵的时间和积极的配合。

第一部分：基本信息统计（请在适当的地方标记）

1. 您的性别认同？

男性 ☐

女性 ☐

其他 ☐

2. 您是哪个年龄段？

18 and under 18 岁及其以下 ☐

19-25 ☐

26-30 ☐

31-40 ☐

41 and older 41 岁以其以上 ☐

3. 您目前居住在中国哪个城市？

4. 请选择您的主要职业类型？

失业 ☐

个体经营户 ☐

学生 ☐

全职工作 ☐

兼职工作 ☐

已退休 ☐

5. Which *sharing mobility platforms* do you currently *consume*:

您目前使用哪些共享移动出行平台？

- | | | |
|-------------------|------|--------------------------|
| DIDI Chuxing | 滴滴出行 | <input type="checkbox"/> |
| Shenzhou Car Rent | 神州 | <input type="checkbox"/> |
| Uber | 优步 | <input type="checkbox"/> |
| OFO bike sharing | 小黄车 | <input type="checkbox"/> |
| Shouqi | 首汽 | <input type="checkbox"/> |
| Yidao | 易道 | <input type="checkbox"/> |
| Caocao | 曹操 | <input type="checkbox"/> |

Other (please specify)如有，请列举出其他

6. Are you considering becoming involved in the sharing of mobility services by:

您是否考虑通过以下方式参与移动服务的共享：

- | | | |
|--|----------|--------------------------|
| Renting out your private car | 出租您的家用车 | <input type="checkbox"/> |
| Involving in sharing mobility platform | 参与移动出行平台 | <input type="checkbox"/> |
| Being sharing car drivers | 成为网约车司机 | <input type="checkbox"/> |
| I'm not considering becoming involved in the sharing economy | | <input type="checkbox"/> |
- 我不考虑参与任何共享经济形式

a. Other (please specify) 如有，请列举出其他

7. What advantages do you see in the sharing economy or mobility services or platform?

在使用共享移动出行服务平台中，您看到了哪些优势？

- | | | |
|-------------------------------------|------------|--------------------------|
| Opens up extra income opportunities | 打开了额外收入的机会 | <input type="checkbox"/> |
| Greater choice for consumers | 为消费者提供更多选择 | <input type="checkbox"/> |
| More efficient use of resources | 更有效地利用资源 | <input type="checkbox"/> |
| None | 没有任何优势 | <input type="checkbox"/> |

a. Other (please specify) 如有，请列举出其他

8. What potential drawbacks, if any, do you see in the sharing economy or mobility platform?

在共享经济或移动平台中，您看到了哪些潜在的缺点（如果有的话）？

- | | | |
|---|--------------|--------------------------|
| a. Lack of worker protection | 缺乏工人保护 | <input type="checkbox"/> |
| b. Lack of customer insurance (DIDI Chuxing) | 缺乏客户保险（滴滴出行） | <input type="checkbox"/> |
| c. Casual and part-time work with no benefits | 无效益的临时兼职工作 | <input type="checkbox"/> |
| d. Lack of government regulation | 缺乏政府监管 | <input type="checkbox"/> |
| e. None | 没有任何缺点 | <input type="checkbox"/> |

f. Other (please specify) 如有，请列举出其他

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9. Do you think the sharing economy (ie, services such as DIDI Chuxing and Uber) will sustain for our economic future to some extend?

你认为共享经济（如滴滴出行和优步等共享平台服务）将会在一定程度上可持续地促进我们未来的经济发展吗？

Yes ☐ 会 ☐

a. No ☐ 不会 ☐

If no (please specify your reason) 如不会，请列举出原因

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第2部分：请对以下陈述进行评分

说明：

以下数字1表示非常不同意，2表示不同意，3表示中立，4表示同意，5表示非常同意。

第二项：经济因素

低 ← 高

Economic Benefits 经济效益: Adapted from (Botsman & Rogers 2012), (Hamara & Ukkonen2013), (Rochet, J.-C., & Tirole, 2006), Bock et al. (2005)	1	2	3	4	5
1. 参与城市共享出行服务在经济效益上给我带来了好处。					
2. 我参与城市共享移动服务/平台可以改善我的交通出行支出状况。					
3. 我认为与传统经济相比, 经济效益是共享经济的一个独特因素。					
Price 价格: Adapted from (Chih-Chien, W.; Hsu, Y.; Fang, W. 2006)	1	2	3	4	5
4. 我认为共享经济; 成功的关键因素是以合理的价格来提供相关的产品和服务。					
5. 我认为通过共享移动平台会引起出行方式不同价格的变动。					
Financial flexibility财务弹性: adapted from (Chui et al. 2012)	1	2	3	4	5
6. 我认为运营商和非运营商将更灵活地通过共享移动出行平台获得更多的收入。					
Access over ownership获得所有权: adapted from (Levine, 2009), (Belk 2014)	1	2	3	4	5
7. 我认为, 由于所有权的任何变化, 对所有权的访问, 资源利用率下降的限制, 与运营环境中的具体或个性化消费需求相匹配。					
Section 3: Technological Factors 第三项:技术因素	1	2	3	4	5
App Theory and Digitalization应用理论与数字化 adapted from(Hsu & Lin 2016) (Black & Lynch 2004; Nakamoto 2008)	1	2	3	4	5
1. 我认为数字化应用程序的功能主要包括易用性和易用性、专注于根据个人需求的简单功能、免费和频繁的进行信息更新。					
2. 我认为应用程序是一种与用户建立的关系体验, 使得用户的生活更加方便和智能, 这反映了汽车共享应用程序的原则。					
3. 我认为, 数字技术应用程序使消费者能够满足个性化服务和产品的期望, 以适应不同的环境。					
4. 我认为数字共享经济目前已经正式化了共享实践, 使这种形式化、数字化使共享具有前所未有的可扩展性。					
5. 由于共享实践是基于根深蒂固的社会规范, 因此我认为它与数字化过程中社会规范如何变化的可持续性有关。					
Payment 支付方式(Black & Lynch 2004; Nakamoto 2008)	1	2	3	4	5
6. 我认为用户通过在线支付共享出行平台节省了大量的时间精力。					

7. 我认为通过共享平台支付方式是一种可持续性的消费模式					
8. 我认为，共享经济是消费者通过基于租金或访问的支付方式获得和使用他们负担不起或想要的商品和服务的能力。					
Section 4: Social Factors 第四项:社会因素	1	2	3	4	5
Sustainability Ideology 可持续性意识形态 adapted from (Heinrichs, H. 2013) ^{[1][2]}	1	2	3	4	5
1. 我认为共享经济作为一种新的方式，有潜力为可持续消费和可持续发展作出贡献。					
2. 从可持续发展的意识形态来看，我认为重要的是看数字共享参与者，特别是同龄人网络中的提供者和消费者。					
3. 我认为当消费者（用户）体验到可持续行为意识形态的时候，会使人们的行为向更普遍的可持续性意识转变。					
4. 我认为共享经济的消费方式有助于节约我们有限的资源。					
5. 共享经济平台被视为环境友好型消费。					
Cultural Orientation 共享经济的文化导向 adapted from (Arnould & Thompson 2007)	1	2	3	4	5
6. 共享经济的文化导向对我消费行为产生了另一种自然效应。					
7. 我认为一个人对事务的态度是我们从行为中推断出来的。					
Section 5. Legal Factors: 第五项: 法律因素	1	2	3	4	5
1. 我会使用合法的共享出行平台。					
2. 我觉得共享移动需要在政府取得合法的运营资质才能进入到市场里面。					
3. 我觉得政府的立场和态度会影响共享出行的可持续发展					
4. 在有良好的报警装置的情况下，我会参与共享出行平台。					
5. 我认为目前政府的支持举措清楚地表明了共享经济对未来社会发展的重要性和潜力。					
6. 我认为现在，一些政府机构对共享经济表现出浓厚的兴趣。					
7. 目前，政府被认为是经常处于集团公司的说客和想利用共享经济所能提供的优势的人之间，这将有利于相关法律法规的完善。					
Section 6. Reputation and Trust: 第六项: 声誉和信任 adapted from (Wang & Vassileva, 2007)	1	2	3	4	5
1. 信任是一种主观的感觉，即受托人将根据其作出的含蓄或明确的承					

诺以某种方式行事。					
2. 信任对我来说是一种通过在线评论形成声誉机制					
3. 信任可以被描述为“积极的声誉增加信任”。					
4. 我认为基于对共享经济平台信任的强烈需求会使消费者所能查看到所有他们所关注的信息。					
5. 我是基于对其他消费者的信任，才愿意与他们共享资源。					
6. 参与共享出行有助于建立与他人的相互信任关系。					
Section 7. Sustainable Consumption of Sharing Mobility 第七项：共享移动出行服务的可持续消费行为 adapted from (Lorek and Spangenberg, 2014)	1	2	3	4	5
1. 我认为共享消费意味着越来越多地使用已经生产的产品，将它们作为一个社区交互使用，从而降低生态足迹，从而促进可持续发展					
2. 经济干预可以非常有效地促进更可持续的行为方面的影响。					
3. 可持续消费不仅是一个选择正确共享平台的问题，而且是通过一个人的整体消费行为产生正确影响的问题。					
4. 绿色采购和消费也属于可持续消费行为的范畴。					
5. 可持续消费是一种基于协同消费与共享的行为。					
6. 客户可持续消费行为有助于有效利用未充分利用的资源					
7. 我认为促进共享经济中的可持续消费行为对平台和社会的可持续发展至关重要。					
8. 为了促进客户的可持续消费行为，平台经理应鼓励主机应用声誉系统。					
Section 8. Sustainable Development of Sharing Economy 第八项：共享经济的可持续发展 adapted from (Caruana and Crane 2008)	1	2	3	4	5
1. 共享经济服务的可持续发展需要通过服务消费者和提供者如何互动和发展服务。					
2. 共享出行促进了城市可持续发展。					
3. 汽车共享平台和服务的发展得益于中国互联网的快速发展。					
4. 共享出行是“可持续”发展的一种方式					

5. 共享经济是一种新的可持续发展范式					
6. 共享经济的可持续发展促进了人们对闲置资源对合理配置，减少了浪费。					
7. 共享经济的可持续发展取决于需求市场的不断变化，以及政府部门的立场与态度。					

谢谢您！



BIOGRAPHY

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ACADEMIC

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BACKGROUND

University of The Thai Chamber of Commerce, Thailand

Bachelor of Business Administration with Honours

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