

A COMPARATIVE ANALYSIS OF THE BUSINESS MODELS OF UBER AND DIDI UNDER SHARING ECONOMY BACKGROUND

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Abstract. *With the development of 'Internet +', a new business model the Sharing Economy is booming which as a revolutionary power to overthrow the business modes of traditional industries. The development of sharing economy has unique advantages and urgent reality in China. Therefore, based on the current situation of sharing economy, this paper analyzes and contrasts the business models of Uber and the Didi by using Johnson and Christensen's 'Four Elements' business model, concludes business model of sharing economy should have certain characteristics, such as advocated sharing concept, setting up the Internet platform, providing personalized service, establishing the trust mechanism, the supply and demand matching reshaped. Finally, this paper provides comprehensive suggestions for the better development of Chinese enterprises under the sharing economy: enterprises should know their own advantages, not blindly copying the world's leading enterprises, and make effort to build a new model with Chinese characteristics to sharingeconomy; create "Internet platform+ cooperation partner+ customers" model and seek cross-border collaboration; In-depth understanding and analysis the macro and micro-environment of international market, seeking cooperation with foreign domestic enterprise, to speed up enterprises to "go out"*

Keywords: Sharing Economy, Business Model, Value Proposition

Introduction

In recent years, with the rapid development and spread of the mobile Internet technology, an increasing number of online consumers have begun to understand and accept the phenomenon of "Sharing Economy". People have started using sharing resources to solve their practical needs in the work,

routine life and also in other aspects. Sharing economy is changing people's lifestyle and consumption patterns, and the business model of sharing economy has gradually developed into a new business model that will affect the global economic development under the era of "Internet+". Moreover, first time the sharing economy has been announced to upgrade as a national strategy in Chinese "13th Five-Year Plan". Meanwhile, in China, it has rapidly emerged into a group of sharing economy models of service enterprises such as Didi Taxi (short for "Didi"), Xiaozhu etc.

Uber, born at Silicon Valley of the United States in 2009, is the ancestor of O2O global taxi service application and the representative enterprise that enlightens and leads the global sharing economy. Didi was born in Beijing Zhongguancun in 2012, which act as a representative enterprise of China's "Internet+ convenient transportation". The valuation of Didi enterprise has reached up to 25 billion dollars in 2016, which has become the fastest-growing and world's leading platform for sharing economy in the transportation sector. Therefore, it is necessary to analyze and compare the business models of the global representative enterprise Uber and the local one Didi, under the background of accelerating development of sharing economy in China. Understanding their various macro-environments and reasons, in order to help sharing economy enterprises, both locally and globally, develop healthy and rapidly.

Literature Review

Sharing Economy

"Sharing economy" earliest appeared with the word "Collaborative Consumption" in *American Behavioral Scientist* in 1978, referring to the process by which individuals or individuals join with others together in common activities and consume economic products or services. In 2010, Botsman and Rogers found that people began to pay more attention to the use value rather than the private value of a product, the sharing rather than the exclusiveness characteristic. And following the publication of "What's Mine is Yours: How collaborative consumption is changing the world", points out "Collaborative Consumption" would revolutionize personal consumption patterns (Botsman & Rogers, 2010). The dominant idea is that the smart choice is to "share rather than own", leading to a sustainable decrease in personal consumption, ownership and waste (Sheth, Sethia, & Srinivas, 2011). However, Belk considered it too broad, and limited "Collaborative Consumption" to only if people pay certain returns to get the corresponding resources (Belk, 2014). When traditional concept is embedded into the social networking, "collaborative consumption" under the Web 2.0 era is defined as through social networking, peers to peers use the way of renting or exchanging

to obtain, give or share the right of using goods and services (Hamari, Sjöklint, & Ukkonen, 2016). The Web 2.0 has transformed how people can connect with communities and share information online (Belk, 2009). However, references to collaborative consumption have been subsequently surpassed by references to the sharing economy, emphasizing that the sharing economy has become the predominant concept.

Rifkin (2014), an economist who wrote *The Zero Marginal Cost Society* points out that sharing economy is a new type of economy that gradually moves towards the world stage. However, the term of sharing economy still now has not been proposed a great number of definitions in academic literature. Stephany (2015) defines sharing economy as the process of weakening ownership by providing access to underutilized products over the Internet to other users. It refers to economic issues and goes beyond renting goods at lower costs, or with lower transactional overhead, than buying or renting through a traditional provider (Zervas, Proserpio, & Byers, 2015). Coehn argued that "sharing economy" refers to a system of direct exchange of goods and services between individuals that covers all aspects of life, including car sharing, housing sharing, the exchange of unused goods, etc., which all carried out via the Internet (Richardson & Lizzie, 2015). At present, there are also two representative definitions of sharing economy in China. One has been from "*China's Sharing Economic Development Report 2016*" published by the State Information Center is defined "Sharing Economy" as the sum of economic activities that utilizes the modern information technologies such as the Internet to integrate and share the vast amount of decentralized spare resources, in order to meet diversified needs. The other one, Tencent Institute defines it as an economic phenomenon in which the public share their spare resources with others via social platforms to earn income (Ma huateng, Zhang xiaolong, Sun yi, & xiongshan, 2016).

Still now, there is not a unified standard for the classification of the application of "sharing economy". The recognition and application by many scholars are the division of economic categories by Botsman and Rogers (2011): The first category is product service, which is based on a brand new "Use" concept that only pay for the value of the product, without regard to ownership of the product, such as Uber, Didi and Airbnb; and the second category is based on the circulation of second-hand items such as Swaptree; The third category is based on assets, skills, time sharing of economic lifestyles, such as P2P lending.

Business Models

Business Model & Innovation

Business model is a conceptual tool built on a variety of components and relationships, which illustrates the particular business logic of an enterprise. Zott and Amit (2010) defined that business model is a series of interdependent activities that consist of customer value proposition, value creation, and value acquisition. The purpose of the business model is to jointly create value and share value, which covers the enterprise to meet the customer value proposition and value creation, finally obtain the value of conceptual model. Under the Big Data era of "Internet +," the success of an enterprise depends not only on new technologies but also on new thinking about how the Big Data era has evolved.

At present, scholars from various countries demonstrate the importance of business model innovation in strategic, technical, marketing and business model perspectives. From the business strategy point of view, Markides (2006) emphasized the disruptiveness of business model innovation: business model innovation is, to some extent, is the subversion of the existing assumptions and conventions to the industry. Technically, Chesbrough (2006) proposed an open innovation theory and pointed out that companies must create business models that match their core technologies. (Xie, 2012) argued that business model innovation does not originate from the invention of technology itself, but from insight into customer needs and a redefinition of value propositions. From the aspect of marketing, marketing scholars mainly define the concept of business model innovation from the perspective of orientation. Aspara, Hietanen, and Tikkanen (2010) pointed out that business model innovation is driven by the proactive market rather than the reactive market. From a business model perspective, Casadesus-Masanell and Ricart (2010) saw the business model as "the behavioral logic of business," arguing that business model innovation is the business that creates and delivers value to stakeholders based on new behavioral logic, focusing primarily on exploring new revenue models and redefining the value propositions of customers, suppliers, and partners.

'Four Elements' Business Model

The four elements model is a representative model of business model proposed by Johnson and Christensen (see Figure 1), which is composed of and interacts with four elements: customer value proposition, profit model, key resources and key processes (Johnson, et al, 2008). Specifically, the element of customer value proposition aims at explaining and analyzing how enterprises help customers achieve important goals from three aspects: the target customer, the task to be fulfilled and the offering. The profit model element discusses how enterprises create value for themselves including income model, cost structure, profit model, etc. The key resource element is an indispensable link

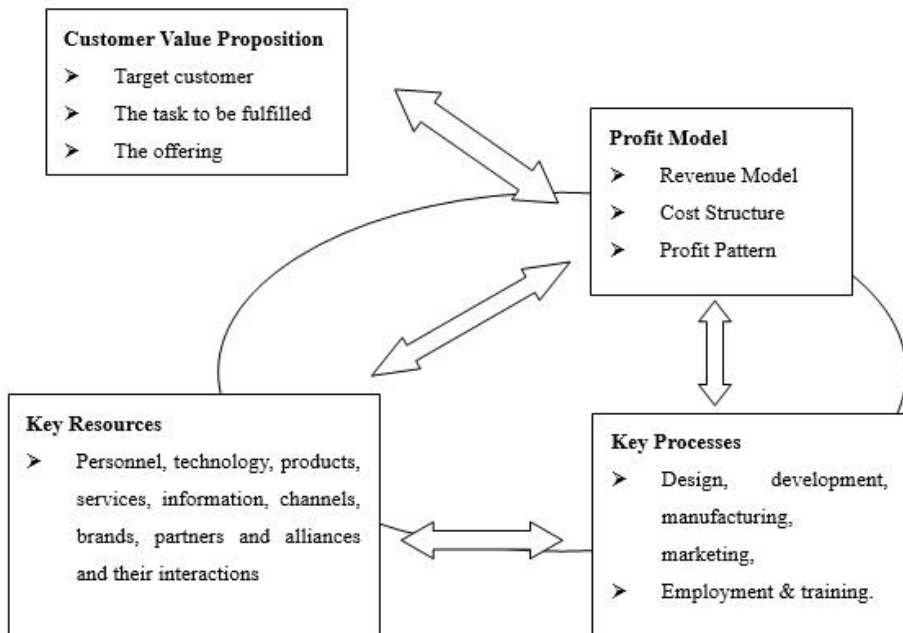


Figure 1 Johnson & Christensen's 'Four Elements' Business Model

in the process of delivering value propositions to the target market segments. It involves the utilization of resources by personnel, technology, products, services, information, channels, brands, partners and alliances and their interactions; Key process elements are tied to successful business operations and management, which are the key to an organization's ability to repeat operations and manage activities and increase sales revenue, including processes such as design, development, manufacturing, marketing, employment and training. The four-factor model of Johnson and Christensen regains Hamel's values (Hamel, 2000) and takes customer value propositions as the primary and starting point for business models. In their view, the operation of isolated elements does not lead to business model innovation, while the successful business model cannot do without the coordination, interaction and development of the four elements.

The distinct features of four-element model are technical tendencies, practice-oriented, systematic and structured (XD Wang, 2013), which similarities with the sharing economic business models developed in the context of "Internet +" with the development of Didi and Uber. Therefore, this research adopts the four elements model of business model of Johnson and Christensen to elaborate and contrast the business model innovation of Didi

and Uber under the background of sharing economy from four aspects: customer value proposition, profit model, key resources and key processes.

Comparative Analysis of The Business Models of Uber and Didi

This paper analyzes and contrasts the business model of Uber and the Didi by using Johnson and Christensen's 'Four Elements' business model in order to comparative analysis of the differences from Customer value proposition, profit model, key resources and key processes four aspects. And on this basis, concludes certain common characteristics of business model of sharing economy.

Differential analysis of business model

Customer Value Proposition

The research compare Uber's and Didi's customer value proposition from the following three aspects: the target customers, the task to be complete and the offering.

"Uber for Everything" is the strategic goal of Uber, who wants to tell consumers that Uber can not only provide them with taxi services, but also can enter other area to provide a full range of life services. Meanwhile, Uber designs a series of cross-brand marketing approach to appeal customers. Therefore, Uber's target customers are not only consumers who need taxi services, but also industries in all fields that require daily transportation. Uber takes full advantages of technologies such as big data analytics, emphasizing the availability of car service anywhere and anytime, and will distribute the nearest vehicles to customers.

Compared with Uber, the version of Didi is simple "To Redefine the Future of Mobility", in order to provide more convenient car travel services for consumers. Clearly, the target customers of Didi is the one based on transport-demand. Therefore, in order to meet diversified travel demands of consumers under different scenarios, Didi has launched a series of new products, such as Didi Express, Didi Premier and Didi Bus, which gradually extend services from providing personal travel to public travel. Thus, although the offerings of Uber and Didi are slightly different in detail, they have similar customer value proposition that is providing consumers with more convenient daily travel services.

Profit Model

Profit model is the core competitiveness of a business model. Therefore, this section mainly from two aspects of revenue streams and cost structures to analyze and compare the profit model of Uber and Didi (see Table 1).

Uber (U.S) has clear and definite profit model, taking full advantages of “high time sensitivity”, the characteristic of taxi services, and implement pricing. Specifically, Uber makes a good combination with "premium pricing" and "automatic matching positioning" to improve the taxi pricing when meet in rush hour or high-demand required. It is more than solving the problem of transport tension, but also increasing the profit margin of Uber. On the other hand, Uber gains certain commission fee from drivers as platform service and maintenance supported. Meanwhile, at least a week of "stable cash pool", which comes from fare clearing, the taxi fee directly from the consumer's credit card to the Uber platform, maintained at least one week, then the driver can receive operating revenue from the platform account. In addition, cross-border life services have also brought considerable benefits to Uber.

Cultivating the customers’ habit with subsidy strategy and developing customer’s data in car market are at the top agenda of Didi to occupy the market share at the early stage. Therefore, Didi had no profit at first and the latter part of the profit model comes mainly from the following aspects: APP interface advertising revenue; information mining and processing services; charge platform service fee; to seize the payment market, as well as enter into the Internet finance.

Cost structure refers to various elements of the business model produce cost during the process of operation, which runs through the whole part of the product, such as guarantee of resource accessibility, the development of the business activities, as well as the establishment of the partnership and other activities (Liou, Tang & Huang, 2008). Except for less Uber Black, the numbers of car services of Uber have come from owners’ car-sharing, while Didi, on this basis, and has additionally invested several products such as Didi Bus, Didi Bus station, in order to solve the public travel problems at rush hours. Therefore, in terms of cost structure, the fixed cost of Uber is relatively lower than Didi.

Table 1 *Comparison of profit model in Uber & Didi*

Profit Model	Uber (US)	Didi (China)
Revenue Stream	Platform Service Fee	Platform Service Fee
	Daily Life Service	Interface Advertising Investment
	Premium Algorithm	Information Data Mining Services
	Flexible Pricing	Dynamic Pricing
	Stable Cash Pool	
Cost Structure	Less Uber Black	Certain Primium Car, Didi Bus, Didi Station etc.

Key Resources

This section will illustrate and comparative analysis the key resources of Uber and Didi by technology, services, and cooperation partners (see Table 2).

According to technology aspect, both Uber and Didi considered itself as a technology company, rather than a simple transportation company. Under the “Internet+” environment, Sharing economy platform enterprises, connect two or more groups, providing an interactive mechanism between two or more parties to meet the needs of all groups and gain the profit from them. As typical business models for sharing economic platforms, Uber and Didi take profits by providing consumers and drivers with an effective interactive mechanism and meeting the needs of both parties. Therefore, both of them focus on the utilization of information technology and construction of enterprise platforms. Initially, the information technology level of Uber’s enterprise platform is far ahead of Didi, which take full advantages of big data analytics to schedule vehicles, enabling the availability of car-using for customers as quickly as possible, even in rush hours and tension areas. The principle behind Uber's processing of data is to rely on the economics, which is a more extensive manual operation, that is to say, based on price changes to draw the area. However, Didi, at first, was a smart phone APP based on LBS, GIS and other positioning technology. By learning from Uber’s platform construction and operating machine learning methods, Didi acquires hidden, effective, understandable knowledge from accumulated huge amount of travel Data and put it into practice, such as using ETA system to reduce reply time. Therefore, today’s Didi has analyzed and predicted data by using a series of technologies such as artificial intelligence and machine learning, so as to uniformly dispatch all the drivers in the entire city. Gradually, the technology development trend of Didi has shown a process of catching up with Uber.

In terms of services, in order to meet the needs of different groups in Ride-sharing services, Uber provides them with differentiated services based on the income levels. Uber X, for example, is "cheaper, faster and better" for lower- and middle-income people who are price-sensitive and do not have too much demand for services; By contrast, Uber Black serves high-income people who emphasize comfort and identity. Meanwhile, Uber also provides consumers with a full range of life services, such as Uber Eats, Uber Essential and Uber Rush services in the United States, which refer to delivery of daily necessities and meals. Similarly, Didi provides various products and services based on market segments, including Didi Taxi, Didi Express, Didi Premier, Didi Bus services etc. Until now, Didi focus on improving the travel products straightly to solve travel problems, and not to refer too much in other aspects of life services.

In terms of partners and alliances, although Uber reached strategic cooperation with certain Chinese enterprises such as Baidu and Hainan Airlines, and supported by Internet finance (Alipay payment services), when it entered into the Chinese market, its main partner is still focused on technology, that is, working with Carnegie Mellon University to develop driverless technology. Similarly, Didi has made a good cooperation with Wechat platform, supporting Wechat payment services. According to development of international business, compared with Uber "Fight alone, hands-on" Didi has chosen the way of cooperation and investment when it enter the overseas market, that is, respect the local entrepreneurs and share Didi's technology, experience and capital. For instance, cooperation with Lyft in U.S, Grab Taxi in Southeast Asia and India's OLA to open up products for the four countries and regions to provide seamless travel services for international passenger groups. At present, the bike-sharing platform of also officially accesses to Didi. Customers can directly open the Didi's App to use of, which contributes to promote the seamless connection.

Table 2 *Comparison of Key Resources in Uber & Didi*

Key Resources	Uber (US)	Didi (China)
Technology	<ul style="list-style-type: none"> • Big Data • Economic Principle • Manual Operation • Flexible Pricing • Stable Cash Pool 	<ul style="list-style-type: none"> • Positioning Technology • Cloud Computing • Big Data • Machine Learning
Services	<ul style="list-style-type: none"> • A Series of Car-Sharing Services i.e., UberX, UberBlack • Cross-brand Dailylife Services: UberRush; UberEats 	<ul style="list-style-type: none"> • Multiple business of Car-Sharing, includeing Didi Taxi, Didi Express, Didi Premier, Didi Bus, etc.
Partners and Alliances	<ul style="list-style-type: none"> • Payment: Alipay • Technology: Carnegie Mellon University • Strategic Cooperation with Chinese Enterprises, such as Baidu, Hainan Airlines, etc. 	<ul style="list-style-type: none"> • Payment: Wechat • International Business: Cooperation with Lyft, GrabTaxi and OLA • OfO Seamless Travel Services.

Key Processes

This section will be mainly from four aspects of key processes, including car-sharing services, payment method, promotion mode and future planning and development, to analyze and compare Uber and Didi (see Table 3).

Firstly, according to the car-sharing services, the reasons why Uber is quickly welcomed by customers when it entered into the global market, is because it can provide customers with higher quality service experience based on technology. In this regard, it is far more than Didi and other domestic taxi APP. For customers, they do not have to enter the destination, waiting for the system to automatically match the surrounding vehicles, which can be reached destination in very narrow time. What's more, Uber APP is available in most countries and regions in the world when they are in business trip. For drivers, they cannot pick up customers who they want to carry, which can provide thoughtful and high-quality car-sharing experience for customers. Meanwhile, Uber can not only track and select high-level drivers, but also records consumer behavior, which creating a mutual rating system between the company, drivers and customers. Inversely, regardless of services and technology aspects, Didi was far behind Uber at first. It was quite common that Didi drivers selected or grabbed orders even refused customers, which provided worst travel experiences. Subsequently, Didi learned from Uber, changing the operating way from drivers grab orders to system sent orders, and now to by automatic. Then, with the maturity of big data forecasting technology, Didi's cloud scheduling provides a "round-carpooling" service, which not only enables drivers to seamlessly receive orders but also expands the service capacity.

Secondly, In terms of payment method, Uber relies on digital technology to provide customers with a transparent quality and price of service through a credit card cashless system. When customers get off, the cash will be automatic deductions from credit card or Alipay, which they already bond before, the bill will be sent directly via email to the customers. However, Didi can payment by cash or online Wechat platform. It is worthy to mention that Wechat payment needs to be confirmed by the customers before they pay the bill. For pricing, although both of them have similar basic price, Uber still has certain advantages in flexible pricing by "premium algorithm" at rush hour or on crowded road, and high frequency discount activities.

According to the promotion mode, cultivating customers' habit is at the top agenda of companies to occupy the market share at the early stage. Therefore, both of them develop the number of drivers through subsidies, in order to gain bigger market shares in a short period of time. In addition, Uber has used the cross-border marketing to develop lifestyle businesses, which can be applied to all aspects of transportation, to promote its market. While, it is seem more popularization that Didi pushed local teams to taxi companies to introduce its APP. However, the propaganda of its television and online media not only passed the effective information to the target population intuitively, but also strengthened the brand relevance, which created a new way of "online +

offline" in-depth cooperation. It is can be seen that, Uber focus more on the development of marginal life business to attract and serve customers, while Didi relied on social media.

In the future planning and development of enterprises, Uber (U.S) has paid more attention to the development of technology, more exactly, that is driverless. And Didi has sequentially devoted to solve the problem of travel for Customers, so that it gradually shift focus from personal to public transportation, such as Didi Bus. At the same time, with the development of Didi, it has started to expand international business when it entered in global market. What’s more, the scope of its services tend to be covered more commercial products and services derived from travel, which cooperation with other industries.

Table 3 *Comparison of Key Processes in Uber & Didi*

Key Processes		Uber (US)	Didi (China)
Design & Explore	Payment Method	A credit card cashless system Automatic deduction	Cash or Wechat Need to be confirmed
	Car-sharing Services	<ul style="list-style-type: none"> • Automatically match the surrounding vehicles • Thoughtful and high quality services • Available if go abroad travel • Mutual rating system 	<ul style="list-style-type: none"> • Automatic orders • Round carpooling service • Expand international business
Promotion Model		<ul style="list-style-type: none"> • Cultivating customers’ habits (by subsidies) • Focus on daily life services (Cross-border marketing) 	<ul style="list-style-type: none"> • Cultivating customers’ habits (by subsidies) • Local teams to taxi companies • Created new way of “online + offline” in-depth cooperation
Future Planning & Development		Driverless Technology	<ul style="list-style-type: none"> • Public travel (Didi Bus) • Cooperation with other industries

Common characteristics of sharing economy

There are certain common characteristics of sharing economy business model innovation between Uber and Didi including advocated sharing concept, setting up the Internet platform, providing personalized service, establishing the trust mechanism, the supply and demand matching reshaped, which form the rudimentary framework of a new business model under a sharing economy.

Advocated Sharing Concept

To promote the concept of sharing, that is, both the community and individuals are willing to share their spare resources (including idle items, spare space, fragment time, etc.) with others in need. The surplus of resources or production capacity is the premise of sharing. Therefore, the essence of sharing economy is to share spare goods and excess productivity. For instance, Uber's drivers share their vehicles to give convenience for those who need to travel.

Setting up the internet platform

In the "Internet +" context, the new business model should take full advantages of internet platform to optimal allocation of social resources for better supporting and serving sharing economy. The platform strengthens the ability of arrangement for the business models under the information and communication technologies, eliminates the asymmetry of information, breaks the trade barriers caused by it in traditional business models and creates the conditions for cross-border business, such as Uber, Didi as representatives of car-sharing platforms and Airbnb, Xiaozhu as representatives of housing-sharing platforms. Internet technology makes the business model of sharing economy platform have the characteristics of breaking through the physical space-time constraints, and making it subvert the traditional business model in terms of value creation and value realization. However, the technology here refers to not only based on information-based and data-driven technology, such as cloud computing and big data, but also refers to with higher prediction and intelligence. Compared with the traditional business model, enterprises in the sharing economy are more inclined to light assets by providing technical support and services to gain revenue. Furthermore, no-intermediaries is another characteristics of business model under the sharing economy, which can complete the delivery of products and services through a platform without any restrictions.

Providing personalized service

The service come from the business model of sharing economy tend to be reflected in a higher quality and all-round personalized service. Traditional business models have struggled to meet the increasing demand for personalized service from customers, while it is more likely to providing them with flexible matching under the sharing economy platforms. As a kind of experience economy, sharing economy focus more on customers' experience and value, thus providing higher quality service for customers is the fundamental ability of sharing economy's business model.

Establishment of Trust Mechanism

Trust is a very lacking in today's society. Sharing economy as a new business model encouraged to establishing an effective trust mechanism to solve the problem of information asymmetry. Several sharing economic enterprises such as Uber, Didi, and Airbnb all support the contents of mutual evaluation are visible to other users. It is not only effectively restrains the behavior of service providers and users, but also enhances the brand perception of service providers, which is easily acquired from WOM in traditional business model. Meanwhile, the payment security of the network platform is also the key point of establishing a trust mechanism. For example, Didi through the cooperation with Ping An Insurance, has provided the safeguard for both drivers and passengers. It can be seen that a good trust mechanism has brought people closer together, made consumers develop good credit habits and provided data support for establishing a credit social system in China.

Reshape the supply and Demand Matching

The platform of enterprises under the sharing economy has made a large number of people who master the technology get together, and utilizes the existing technologies to integrate the scattered and massive excess resources. Then, match the supply and demand effectively, and set standards and simplify the participation processes, in order to reduce the cost of people obtaining excess resources. Under the Internet era, the role of value creation and resource coordination distribution channels in the traditional business model is gradually weakened, while sharing economy business model makes it easier to utilize the platform to realize the optimal matching supply and demand, so as to achieve effective integration of resources. Uber and Didi platform are the applications of sharing economy in the field of transportation and as an important part of supply-side structural reform.

The Causal Analysis of Differential Business Model

The differences in business models between Uber and Didi, to some extent, attribute to the cross-cultural background conditions and the macroeconomic environments behind the operations and production of enterprises. As a framework-based analysis method, PEST analysis can analyze the differences of business model under the cross-cultural background from the aspects of political, economic, social and technical environment. Therefore, the research uses PEST analysis to understand the different macro-environmental backgrounds of Uber and Didi, to analyze the environmental factors that generate new business models of sharing economy and the reasons why the differences in business models.

Policy environment

The development of new business model of sharing economy cannot be separated from the support of national policies. In the implementation of federalism in the United States, the attitudes of state governments towards sharing economy are diversification, or even lukewarm, that is also the reason why Uber in some states well developed (such as California), some were boycotted (such as Kansas). Until August 2015, there were 54 cities and states in the United States that the car-sharing services had legalized. Some of them have begun to work out policies and regulatory plans that will gradually reduce Uber's resistance development in the United States.

Initially, the development of Didi was in poor condition in China. It was quite common that drivers protest strike and strict restrictions on government control. These two years, Didi develop rapidly with relying on good policy environment. In 2015, the Fifth Plenary Session of the 18th CPC Central Committee stressed: "During the 13th Five-Year Plan period, we must firmly establish and effectively implement the development concept of innovation, openness and sharing, implement the strategy of strengthening the nation by network and sharing economy." That is the first time promotes sharing economy as national strategy. On July 28, 2016, the General Office of the State Council issued the "*Guiding Opinions on Deepening Reform and Promoting the Healthy Development of Taxi Industry*", and the ministry of transport and other seven departments jointly issued "*Interim measures for Internet booking taxi service management*" formally introduced, which as the symbol of the legalization of car-sharing online..

The reasons why the differences development between Uber and Didi in domestic country, it is rooted in different policy environment of the United States and China. Due to various attitudes and management styles of the states in U.S, it is necessary for Uber to deal with the problems that occur in each state according to the local conditions. On the contrary, China has promulgated a series of policy supported and encouraged to develop sharing economy, to some extent, which help the rapid development of Didi in China.

Economic environment

The economic environment consists of various factors that affect customer purchasing power and spending patterns so that managers should pay close attention to the major economic trends and changes of customers spending patterns in global markets. The economic recession of United States during 2008-2009 made U.S. consumers had to accept simple, low-key lifestyle and ways of spending. The rise of the sharing economy business model, represented by Uber, was primarily due to the desperation of a deep economic crisis, where

people had to find other ways to make money (sharing their spare cars) to raise household income.

For China, one of the biggest problems for economic and social development of China should be faced that is the structural imbalance, which manifests in different fields and levels. For instance, the imbalance between the quantity and quality of growth, the imbalance between powerful manufacturing capabilities and innovative capabilities, the structural imbalance between supply and demand and industrial structure imbalances etc. A great deal of spare social resource urgently needs a new type of business model to promote supply-side structural reforms. Sharing economic platform now is trying to use low-cost way to maximize the utility of social resources, driven by technology to optimize the urban transport

Social environment

According to the statistics released by Didi, at the end of 2015, China had an average of 31 private cars per 100 households, of which over 60 in big cities such as Beijing and Guangzhou, while over 200 cars per 100 households owned by the United States. By contrast, there far exceeds three times as the number of private cars in every hundred households in China. However, it is still in urgent need to solve transportation problems in China, due to a huge bottleneck of car market occurred, such as Beijing, Shanghai and other big cities are beginning to limit the quantity of private cars. Therefore, the products exploration of Didi is more focus on the diversity of travel, that is, from personal car-sharing services to public ones, in order to meet the mass. Conversely, the relatively abundant private car market makes Uber cannot only to do the transportation business, but also refers to other areas of traffic, such as express delivery, food delivery, to provide better quality of life for American customers. Meanwhile, innovative thinking and respect for high technology have prompted Uber to focus its products on new driverless technologies.

It is can be seen that the influence of different social environment for the enterprise under the international business extension. The independence personality of Americans makes Uber more dependent on the new business model and technical services of the enterprise when it expands globally. However, Didi shows the “win-win cooperation” characteristics of Chinese, promoting the business with other foreign travel companies such to promote the business as Lyft.

Technology environment

The rapid development of information and communication technology in recent years has brought a new reality that has continuously linked and interacted information, people, organizations, logistics and finance globally. The development of network platforms has significantly stimulated the economic growth of personal capital, asset and service exchange, enabling people to reasonably make full use of the resource and trade transaction cost sharing (Avital et al., 2014). Majority of new P2P-based service models undermines the economics paradigm of traditional business, on which Uber and Didi are based.

Different technical environment background makes the fundamental ideas of Uber and Didi are not same. Economic principles are utilized by Uber to solve traffic problems, while Didi use artificial intelligence and machine learning to solve problems such as dynamic pricing and scheduling adjustment. For instance, Uber has developed vehicle automated driving technology, in order to all idle self-driving cars can become Uber's integration of resources in the future. However, Didi will gradually shift the focus to public travel, such as Didi Bus.

Table 4 *PEST Analysis of Uber and Didi*

Key Processes	Uber (US)	Didi (China)
Policy Environment (P)	Various attitudes of states	Govt. issue policies to support sharing economy
Economic Environment (E)	Financial crisis Simple, low-key lifestyle Raise household income	Structural imbalance Supply-side structural reforms
Social Environment (S)	Better life quality Innovative thinking Independent personality	Urgent need to solve transportation problems Win-win cooperation
Technology Environment (T)	Economic principle Automated driving technology	Machine learning Pubic travel

Conclusions and Recommendations

Based on the Johnson and Christensen's four elements model of business model, this research analyzes and contrasts the business model innovation of Uber in the United States and Didi in China, and finds that:

In terms of customer value proposition, although both Uber and Didi offer different things, they are all aimed at providing customers with more convenient daily travel services. For profit model, in addition to charging platform service fees, Uber focuses on the benefits of its "stable cash pool" and

cross-border services, while Didi focuses on the benefits behind data mining; Technology development, service innovation and active cooperation are very essential for both of them in key resources. It is shows own characteristics when Uber offers "cross-border life services" and Didi makes cooperation to enter into overseas markets; and finally, in terms of key processes, it is worth mentioning the future planning—— Uber is committed to the technology innovation and development of driverless technology, while Didi is devoted to improving the overall travel services.

Based on this, the research summarizes the basic characteristics of sharing economic business models (advocating sharing concepts, setting up an internet platform, providing personalized service, establishing trust mechanism and reshaping supply and demand matching) and differences in business model innovation due to various cross-cultural macro backgrounds.

Overall, the research summarizes the references of business model innovation of Uber and Didi, and puts forward the overall proposal for local enterprises to better develop under the sharing economy context.

References of Business Model Innovations from Didi & Uber

The business model innovation of Uber is mainly manifested in providing consumers with high quality service experience to the extreme, that are personal service and on-demand. Specifically, "personal service" is mainly reflected in the cross-brand marketing approach to provide users with a full range of life services, and "on-demand" performance at any time, any place can provide the car service. Uber's high-quality service should all businesses borrowed from under the sharing economic background. Compared with Didi, Uber prefers to cooperate with marginalized products and services to create a new mode of "cross-border marketing", which not only broadens the scope of business, but also provides enterprises with new profit-making points and lowers the operating costs of enterprises. Moreover, Uber's business model innovation is also reflected in technological innovation, that is, take full advantage of technologies such as big data analysis, the implementation of "automatic matching" and "premium algorithm" to improve efficiency to meet on-demand. This is also the first references to Didi to learn from when Uber entry into the Chinese market. Thus, Uber's innovation is reflected in the innovation of services and technologies provided, such as Omni-directional living services, promotion of "cross-border marketing" and research and development of driverless technologies.

Compared with the horizontal development of "cross-border" life services, Didi focused on solving the travel problems of customers, that is, integrating all

the off-line vehicles resources, rely on the Didi platform, to provide customers with more convenient travel services. In the meantime, Didi have steadily expanded their business - from personal travel to public travel. Except that, Didi carefully study a series of documents issued by the state, attach importance to communication with the government and assist in the introduction of relevant policies, which makes Didi faster and better develop under the government policy support. Just as Zhu Jingshi, vice president of Didi Travel, said: "There are two indispensable factors for developing a shared economy in the field of travel. One is the existence of a capable consumer group and the other is government support." It can be seen that if Chinese enterprises desire to develop business faster and foster, it cannot without government's support and guidance under the background of sharing economy. Although Uber's large-scale overseas expansion enables customers to use Uber's car service in many countries and regions, it has been impeded by local governments and enterprises in its development of international businesses. In this regard, the strategy of Didi's overseas expansion is more appropriate, that is, by cooperation and investment with local travel business in overseas markets to achieve win-win situation.

Management Recommendations

Not blindly copying the world's leading enterprises, and make effort to build a new model with Chinese characteristics to share economy

Based on the active cooperation with the state in planning for sharing economic development, Chinese sharing economic enterprises are requested to understand how to truly innovate business model. When Uber first entered the Chinese market, Didi learned its advanced technology and services during the competition with Uber, which enhanced the service experience of customers and the management of big data platform. However, Didi did not blindly follow the trend and extend the products to other life services. Instead, they focus on expanding travel services based on the background of China's urgent need to solve the travel problems. Therefore, Chinese enterprises should earnestly understand the concept of sharing the economy and the specific conditions in China, and strive to create a new model of sharing economy with Chinese characteristics so as to promote the economic restructuring and industrial upgrading of Chinese enterprises.

Create "Internet platform+ cooperation partner+ customers" model and seek cross-border collaboration

Not only the concept, logic and mode of sharing economy are applicable to the sharing economic enterprises, the traditional enterprise also can learn and draw lessons from. How to use the Internet platform to seek cooperation with related sharing economic industry, so as to accelerate the transformation and

upgrading of enterprises is an urgent need for traditional enterprises in the background of sharing economy. Additionally, "Internet +" era, breakthrough innovation often comes from cross-border development, Uber is a more successful example, which provides more than taxi service, also with car manufacturers, logistics companies, courier services to compete and cooperate to satisfy customers' diversified lifestyle services. At present, Didi also began to seek a good opportunity for cross-border cooperation, starting from the test drive. Didi has utilized its open platform for cooperation with the car manufacturers, and let drivers to share their own experience to the potential users to buy a car. In return, customers can gain lower price to buy the car through Didi platform. Thus, for an enterprise, a good entry point of cross-border is equally important.

In-depth understanding and analysis the macro and micro-environment of international markets, to speed up local enterprises to "go out"

Environment has a far-reaching influence on enterprise production and operation activities. Therefore, in order to "go out", enterprises should understand and analyze the macro-and micro-environment in the international market in depth. Except Didi in the field of travel, a number of sharing economy start-ups have emerged in other area, such as Xiaozhu rent (housing), leisure fish (used goods transactions), etc. China's sharing economic enterprises should learn from the world's leading companies such as Uber, Airbnb, and as references, when face overseas expansion in different market environment problems and obstacles how to deal with the solution. Meanwhile, how to promote products, except for technical data support, seeking cooperation with foreign domestic enterprise is also a good choice.

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