

# From “Made in China” to “Copy from China”: Can Chinese Bicycle-sharing Lead the World Trend?

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**Abstract**—The development of “Internet plus” economy has given rise to a new era of “Chinese style sharing and all-win”, and people all the world think it’s breathtaking. Especially bicycle-sharing enlarges sharply in China and sweeps the world rapidly. Based on the research of predecessors, this paper analyzed the business model of bicycle-sharing in China and current development abroad. By this study, we can analyze the experience and deficiencies in the international development of shared bicycles and explore whether Chinese bicycle-sharing can lead the world trend. And this paper makes three suggestions for the Chinese bicycle-sharing to get out of the country and two more for the bicycle enterprises abroad to develop rapidly. In addition, it can provide a reference for the future development of the sharing economy.

**Keywords**—Chinese bicycle-sharing; Sharing economy; Business model; Created in China; Copy from China

## I. INTRODUCTION

The “Internet plus” era has spawned a series of Internet economic and financial enterprises and platforms. The popularization of smart phone, the convenience of payment by the third party, the development of big data, cloud computing and other technologies, plentiful resource fragmentation and burgeoning individual demand provide the conditions for the emergence of sharing economy [1]. With the push of “Internet plus”, the sharing economy generated by capital is developing rapidly in China, for example, “DiDi Chuxing”, “bicycle-sharing”, “basketball sharing”, “shared sleeping” and so on. Diversiform models of sharing economy emerge one after another.

In sharing economy field, it is no doubt that China is the top runner of sharing economy. The most typical products and services in sharing economy field should be bicycle-sharing. It is not only praised by the Chinese but also listed to one of Chinese new four great inventions by foreign friends. The Under-Secretary-General of the United Nations Joan Clos also marveled at the Chinese bicycle-sharing.

From “made in China” to “copy to China”, then to “copy from China”, the Chinese sharing economy has shocked the world. Until June 2017, the number of bicycle-sharing users has reached 106 million. It not only solved the problem of “the last mile” of people’s travel but also created a healthy and green way to travel. And it has led to the imitation of the world. But when Chinese bicycle-sharing went overseas, it seemed

endemic during its progress. So what’s the superiority of Chinese bicycle-sharing? What did happen to Chinese bicycle-sharing when they went overseas? Why did it suffer from unacclimatized? How will the imitators do to improve their operating efficiency? Can Chinese bicycle-sharing lead the world trend? Thinking and solving these problems can not only provide guidance for the Chinese bicycle-sharing’s strategy of going out to the world but also provide a reference for the future development of the sharing economy.

## II. THEORETICAL BASIS

### A. Sharing economy

The word “sharing economy” was first put forward by Marcus Felson, a sociology professors at the Texas State University, and Joe L. Spaeth, a sociology professors at the University of Illinois in 1978. They paid attention to the events that one or more persons consume economic product or service in the activities with one or more persons [2]. In this paper, author didn’t use the word “sharing economy”, but there is a sharing ideology between the lines.

In fact, the definition for “sharing economy” is widespread and lacks a common definition. And it is often referred as “cooperative economy” or “on demand economy” [3]. Generally speaking, sharing economy is defined as a pattern that those institutions and the individuals who own idle resources alienate the right to use of these spare resources. In this pattern, the resources can be made full use of, the owner can get rewards, and the users can create value by utilizing those spare resources.

### B. Business model

The word “business model” appeared a little bit late. There are more than 100 definitions of business model up to now, but there is no uniform definition till now [4]. The definitions of business model were combed by many domestic and international scholars. And they summarized predecessors’ understanding of business model. The definition summarized by Osterwalder, Pingeur and Tucci was widely cited. They summarized the definition of business model after consulting a large amount of literature. Business model is a tool which contains a series of elements and their relations of conceptual, and it is used to clarify the business logic of a particular entity [5].

Osterwalder put forward nine elements of business model after summarizing various concepts. The nine elements contain value proposition, consumer target group, distribution channel, customer relationship, value allocation, core competency, partner network, cost structure and revenue model [6].

### III. THE PREPONDERANCE OF BICYCLE-SHARING: ANALYSIS BASED ON BUSINESS MODEL

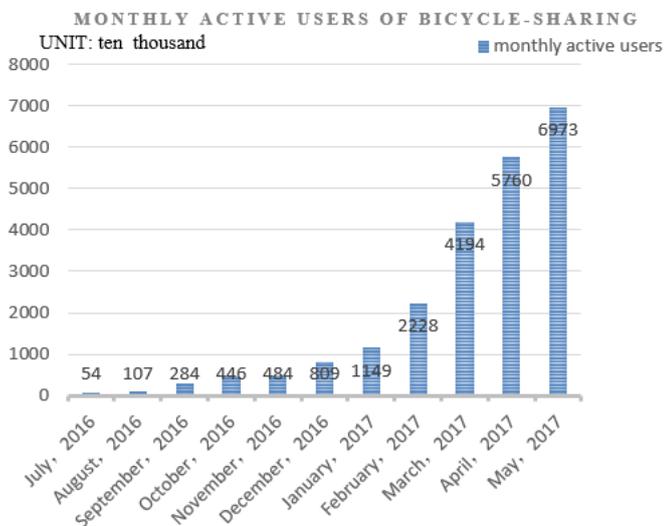
Peter Drucker once said: “Nowadays, the competition between enterprises is not products competition but business model.” Thus, it can be seen that business model plays a vital role in modern enterprises’ development. Therefore, it is necessary to start from the business model of sharing-bicycle to analyze the advantages of sharing bicycle. Based on the Osterwalder nine-factor model framework, this paper analyzes the advantages of Chinese bicycle-sharing.

#### A. Value proposition

The emergence of bicycle-sharing is a good solution to “the last mile” problem. And it provides bike rides for short-haul users. Sharing-bicycle companies input a large number of bikes, users can rent bicycles nearby and pay a certain amount of deposit and a certain rent for the trip by service platform. The companies can charge a certain amount of rental income by providing users with a bike.

#### B. Consumer target group

The bicycle companies are aimed at a wide range of consumers who need to ride for short distances (except for minors who are under 12 years old). Nowadays, because of the convenience of transportation, people tend to ignore short trips. And it becomes the target market for the bicycle-sharing companies. By right of its convenient payment methods and popular prices, bicycle-sharing enterprises occupy the market quickly. Till May 2017, the number of bicycle-sharing users has been growing (as shown in figure 1).



Data source: Quest Mobile TRUTH

Fig. 1 User scale of bicycle industry

#### C. Distribution channel

The target market for sharing bike is large and spreads all over the country. It requires the enterprises to allocate the bicycle resources reasonably to maximize the utilization of the bicycles to gain more benefits. Most companies choose to put their bikes in the crowded places like subway stations. The capital-driven sharing bicycle is growing rapidly, but the competition in this industry is fierce. There is an “urban war” between the operators at first. And then it transforms to “price war” which caused a series of “cash burn” concessions, for instance, “bonus bike”, “bonus rain” and others. Mobike has officially launched operations in Singapore on March 21th, 2017. It marks that the bicycle-sharing starts to operate overseas. Then, several companies started to operate overseas in succession. And it lays the foundation for establishing an overseas market.

#### D. Customer relationship

The sharing bicycle enterprises are connected with customers through service platforms. There are several ways for sharing bicycle enterprises to connect with customers.

1) *The bicycle-sharing enterprise designs its own APP, and the customer registers as user of the enterprise and pays a certain amount of deposit. Then, when the user rides the bicycle, he or she must pay corresponding amount of rent to the enterprise through the APP.*

2) *Enterprise registers its own WeChat public number and the users can unlock the bike through “WeChat scan” and pay rent by the platform.*

3) *Associate with users through other APPs. Many bicycle companies choose to associate with alipay through which can unlock the bicycle. Besides, When credit reaches a certain amount, it can be free of deposit riding. In addition to the above methods, the enterprises can also use other platforms to connect with customers.*

#### E. Value allocation

The value allocation of business model is to match the consumer interest points and identify the resources required for the benefit. The resources of the enterprises are generally used in the following areas: the operation of bicycle platform, production and delivery of bicycle, the daily management, advertising and so on.

#### F. Core competency

Sharing bikes must be maintained during use, so the design of the bike will have a vital impact on maintenance costs. Each enterprise is much similar in operation, marketing, cooperation, strategy and so on. And they lack the core competitiveness of their own. That is why they competed on price and caused disorderly competition.

### G. Partner network

It is well known that the financing of bicycle enterprises is very smooth, but the competition is fierce. It requires enterprises to pay more attention to the relationship with their partners and strengthen cooperation with upstream and downstream enterprises. Table 1 lists several business partners briefly:

TABLE I      *Bicycling business partners*

<b>Enterprise</b>	<b>Partners</b>
Mobike	China Unicom, China mobile, China merchants bank, Ericsson and so on
ofo	700 bike, China telecom, United Nations development programme, etc
Hello bike	GGV, Ping An Insurance, alipay, etc
U-bicycle	Shanghai forever, lighting fund, alipay, etc

Data source: Organize according to network data

Strengthening the construction of partner networks is good for taking advantage of various resources to help all enterprises come true their goal in order to realize a multi-win situation. Of course, the cooperation do not only exist in an industry but also multi-industry. October 24, 2017, youon announced that they have signed agreement to acquire hello bike. This is the first Merger and Acquisition case in the history of Chinese bicycle-sharing. It shows that the period of shuffle is speeding up. Besides, it provides a new solution to exist in fierce competition.

### H. Cost structure

The cost of sharing bicycle enterprise mainly includes the cost of bicycle, the cost of sharing bicycle service platform, management expenses and so on. The cost of bicycle includes manufacturing overhead, maintenance cost, administration expense cost and so on. The cost of sharing bicycle service platform includes: platform development cost, system operation cost, system maintenance cost, system optimization cost and so on. Period charge mainly includes marketing expenses, administration expense cost, financial cost and so on.

### I. Revenue model

The bicycle-sharing enterprise is still in the start-up period of lifecycle of enterprise. The income of enterprises mainly comes from the rent of customers. As for deposit, because there is no provision for the use of the deposit, its ownership is not clear yet. Thus far, the profit model of the bicycle-sharing enterprises is indeterminate, so it is the focus of all circles of society what the bicycle-sharing enterprises should do to gain profit. Every enterprise has its own distinctive business model which may not mature. The competition between bicycle-sharing enterprises driven by capital is really fierce. In June this year, Wukong bike failed first in bicycle-sharing industry, then 3Vbike exited markets. Subsequently, several bicycle enterprises exited market in succession. And it marks that the bicycle-sharing market starts to enter "shuffle period". October 24, 2017, youon bicycle purchased Hello bike, and it marks the acceleration of the shuffling period. After the "shuffle period", most enterprises will be eliminated, and there will be one or more enterprises in the bicycle-sharing market at last.

Although China is not the first country to implement bicycle-sharing, China is the first country to realize bicycle sharing around the country. Chinese enterprises relying on the convenience on-line payment, a substantial amount of people, strong financial backing and so on in China carried out bicycle sharing through a unique way. It not only influences the progress of development of bicycle-sharing but also marks that Chinese enterprises are beginning to turn from a "manufacture era" to a "creation era".

## IV. CAN CHINESE BICYCLE-SHARING LEAD THE WORLD TREND?

### A. *The status quo of bicycle-sharing overseas*

"Take the bike by scanning code, return the bike by locking the bike." The simple and convenient operation deserves much of resolving the problem of the last mail of journeys. The bicycle sharing is flourishing in China. Some bicycle-sharing enterprises represented by Mobike and OFO have started sailing abroad. From America to Singapore, from the UK to Japan, one of Chinese new four inventions is trying to build a card "made with Wisdom". At the same time, China is transforming from "made in China" to "copy from China". When the Chinese bicycle-sharing enterprises went overseas, they found that it was more successful in some countries while it suffered in others. It is mingled with both joy and sadness.

Up to now, OFO has entered 16 countries after it started to carry out globalization strategy. And Mobike has entered 9 countries. They received a warm welcome in Singapore, Manchester, London, Milan and Washington, more than a dozen cities. And relying on its environmental protection, green, convenient and other image, they are favored by the local citizens in general. Expect Chinese enterprises, some foreign countries are trying to learn the model of Chinese bicycle-sharing enterprises, and they all want to borrowed experience from Chinese enterprises. In 1965, a group of young people in the Netherlands designed the first round of sharing bicycle named citibike, but they ended in failure. But now, Chinese bicycle-sharing is running well in several European countries. Why is that? This paper thinks that success mainly benefits from the development of "Internet plus" and a prime time.

The root of that why Chinese bicycle suffered "unacclimatized" in some countries includes several aspect as follow.

1) Design aspects: The body shape of European and American is bigger than Chinese, so the design of bicycle is not suitable for them; The design of the bicycle doesn't meet the local stipulation, for example, it is specify that the bicycles must install bicycle light which can generate electricity automatically in Britain.

2) Operation aspects:

a) *The operation cost is higher overseas than in China. Because there is less volume in overseas, the enterprises cannot make large-scale production. Therefore, the enterprises must pay some transportation expenses.*

b) *There may be local protectionism in some countries which own their own bicycle-sharing companies.*

c) *In some countries, the transportation system is perfect and the demand for bicycles is sluggish.*

3) Policy aspects: When the bicycle-sharing enterprises go overseas, they may be influenced by local policies. For example, some countries require that cyclists must wear helmets, and that may reduce the level of experience for users, and then, it may influence the bicycle-sharing's usage quantity.

#### *B. Can bicycle-sharing lead world trend?*

It is undeniable that Chinese bicycle-sharing has indeed led to a boom in the sharing economy. And it causes many countries soon follow. So it is for sure that Chinese bicycle-sharing can lead the world trend. We cannot deny its leading role, although it suffered "unacclimatized" abroad. The "unacclimatized" of bicycle-sharing is caused by the context of different countries. Then, how will the countries do to "copy" the model of Chinese bicycle-sharing?

1) Learn experience and lessons from Chinese bicycle enterprises. The bicycle-sharing has been relatively successful in China. So, other countries can draw experience and lessons from Chinese bicycle enterprises, for instance, the choice of location, daily maintain and management and so on. At the same time, they should try to avoid the problems that ever arose in Chinese bicycle enterprises.

2) Adapt local reality. In view of different countries has different geographies, cultures, contexts and so on, they cannot copy Chinese model or operation completely. They must seek truth from facts and oppose copying blindly. They should take into full account their national conditions, case by case, and make the bicycle enterprises adapt the indigenous stipulation. Only by taking into full account the local legislations, traffic, urban planning and other factors does the bicycle-sharing company gain a firm foothold in the changing technology wave.

3) Optimum design of sharing-bicycle. When the enterprises design bicycle, the enterprises should pay attention to the different habits of people in different countries and design the bicycle according to specific circumstance. Meanwhile, the enterprises must optimize the design of bicycle on the basis of local policy. For example, if they want to operate in Britain, they must design and research bicycle with bicycle light which can utilize solar energy or movement energy to generate electricity.

But for Chinese bicycle-sharing which wants to develop overseas, expect the above points, they must notice the following two points:

1) Decrease operating costs. There may be some extra costs for Chinese bicycle-sharing enterprises, for example, long-distance transport costs and so on. They can partner with a local company, on the one hand, it can decrease the transport costs. On the other hand, it is good for coping with local protectionism.

2) Pay attention to the select target market. They can choose not to enter these countries where traffic system is mature or has low demand. The enterprises should enter a country according to its actual demand.

#### V. CONCLUSIONS AND RESEARCH LIMITATIONS

The emergence of bicycle-sharing resolved the problem of short journey, and it's also a green way to travel. Bicycle-sharing developed well in China, and it is complimented by foreign friends. Then, many countries followed suit. It means that the Chinese bicycle-sharing does lead world trend. But because of the different contexts in different countries, whether Chinese bicycle-sharing enterprises or local bicycle-sharing enterprises cannot copy the model of bicycle-sharing in China blindly. The model must adapt to the local context, and it must proceed from reality and seek truth from facts.

This paper also has some limitations. At first, because of resource constraints, we didn't get primary data. And analyzing secondary data must generate a certain limitation. Secondly, as an emerging thing, the business model of bicycle-sharing has not finished yet. The new problems emerging constantly need to be studied in depth. I hope my paper can educe more research and creation relating to bicycle-sharing and eventually generate more and better research.

#### VI. ACKNOWLEDGMENT

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