

# Research on the Profit Model of Shared Bicycle

## - Take Mobike as an Example

Liu Lu, Zhang Xingwen

Guangxi University Business College  
1206295879@qq.com

**Abstract**—At present, China's bicycle sharing industry is booming and it has become a hot spot in capital investment. At the same time, the profitability of bicycle sharing companies has increasingly become the focus of public attention. In this paper, the McKinsey 5Cs Profit Model is used to study the profitability model of the bicycle sharing company from five aspects: "Compete, Concentrate, Capture, Create, and Cooperate".

**Keywords**—shared bicycle, profit model, McKinsey 5Cs Profit Model, Michael Porter five forces model

### I. INTRODUCTION

Shared bicycles, mainly refers to the bicycle sharing services provided by government and enterprises in campus, subway stations, bus stations, residential areas, commercial areas, and public service areas [1]. It is with great social and economic benefits, and to some extent fit the current "supply side reform" requirements, not only helping to solve the public travel problem of "last mile", but also creating new economic growth point. At present, there are more than 20 domestic bicycle sharing companies, including internet companies, bicycle manufacturers, public bicycle operators and so on. With the start of a new round of price war, bicycle sharing industry has shown a white-hot competition situation. For a new business model, the profit model is the key to success besides stable capital support and user traffic. After the competition of pre-users number and market share, bicycle sharing companies should be calm to think about long-term profit model. In this paper, we take mobike as an example and use McKinsey 5Cs profit model to extract the surplus value of the enterprise from the five aspects of "Compete, Concentrate, Capture, Create, and Cooperate" by comparing the domestic and foreign shared bicycle profit model, so as to inspire market potential of enterprises to find a viable profit model.

### II. ENVIRONMENT ANALYSIS

#### A. Macro-environment analysis - based on PEST analysis

After experiencing the pursuit of the speed of transport, people in 21st century are more inclined to transportation environmental-friendly. Today, there are 35 countries and more than 500 cities to establish a public bicycle rental system. With the promotion of domestic and international green, low-carbon travel concept and the rise of the Internet economy, cycling once again is given a new life as a green and healthy way of travel, becoming synonymous of fashion and environmental protection. In addition, the government also pay

more attention to green development and ecological civilization construction. In the 2017 Report on the Work of the Government, Premier Li Keqiang stressed that the government in 2017 will "support and guide the development of a sharing economy, improving the efficiency of social resources to facilitate the people's lives" [2]. This report will release the new direction of economic development this year: the government will take "sharing economy" as an important factor in economic development and build a complete economy ecosystem through online advantage of the Internet and active real economy and integrating online and offline resources.

#### B. Micro-environment analysis - based on Michael Porter five forces model

##### 1) Industry environment analysis

Michael Porter draws upon industrial organization to derive five forces that determine the competitive intensity and therefore the attractiveness of an industry, that is threat of new entrants, threat of substitutes, bargaining power of customers, bargaining power of suppliers, and industry rivalry [3]. In recent years, foreign companies have created a number of different modes of operation of the public bicycle rental project, but except the success of French Velib, the other projects are invariably caught in predicament to profit. China's urban public bicycle system was building led by the government as early as in 2008, but the economic efficiency is always not high. In 2016, China's shared bicycle, as a bicycle rental industry with the main "last mile", spread quickly under the capital injection, along with the increasingly intense of industry competition. At the end of 2016, the number of users sharing the bicycle market in China has increased to 18.86 million, and in 2017 is expected to reach 50 million [1]. Before the advent of a shared bike, the network car is a popular way to solve people's short trips. However, since domestic rise of shared bicycles, it rapidly occupied the market by virtue of low prices, convenient accessibility and other advantages and become replacement of network short-distance vehicle. On the current situation, the shared bicycle is so popular that there is no threat of being replaced. However, due to that mobile barriers of bicycle sharing industry are low, in a short time it quickly attracted a lot of capital and business to join, showing a blowout growth. But in the future, the limited share of market share determines the inevitability of its integration, and mobike will face the challenge of more potential entrants and industry competitors. In addition, customers are also important

to bicycle sharing business, whose satisfaction directly affects the increase or decrease in user number and is the key factor in determining market size. The competition of shared bicycle market is actual the competition of the user. Whichever company can get more customer loyalty in limited time and market share can master the industry's initiative.

## 2) Internal environment analysis of the company

According to "2017 China bicycle sharing industry research report" [4] released by market research firm Erel Consulting, as of the end of February, the travel service of Mobike has reached 13.9% penetration rate, ranking the industry leading position, 2.1 times of the second OFO. In design and research and development, Mobike's all-set aluminum body, explosion-proof tires, shaft drive and other high-tech means combined have a higher degree of recognition and fashion. Although the operating mode is still public bike rental, Mobike further improves added value of urban public bicycle intellectualization with the Internet of Things technology and intelligent hardware as the basis, its intelligent and exclusive IP will become a powerful competitive point of competition in the field of cycling. In terms of supply, the manufacturer of the upstream chain Foxconn has strong international resources in the field of industrial design and manufacturing. It can help Mobike to further optimize the vehicle delivery process and speed up the delivery speed through industrial Internet intelligent manufacturing technology, and reduce the trans-regional transportation cost of new vehicle and shorten the response time of the city operations team as much as possible, as well as enhance the efficiency of adding bicycles, providing guarantee for the expansion of Mobike. In addition, "credit system" and platform complaints report window are also two highlights of Mobike. Through the mobilization of massive users to actively integrate into the operation and maintenance system, a low-cost way is used to achieve the dynamic adjustment of cycling, stimulating the enthusiasm of all users to participate and reducing the pressure of internal management.

## III. BICYCLE SHARING BUSINESS PROFIT MODEL ANALYSIS BASED ON THE MCKINSEY 5Cs PROFIT MODEL

The status quo and characteristics of the bicycle sharing industry determine the acquisition of surplus value is the key to corporate profits. McKinsey in the 5Cs profit model fully illustrates all possible factors to enhance profits, with suppliers, customers of existing profits and consumers enjoy the "excess" value as the goal and from five aspects=Compete, Concentrate, Capture, Create, and Cooperate [5].

Compete-Company can obtain surplus value through competition from the opponent. The competition of enterprises is mainly manifested in three aspects: commodity competition, price competition and non-price competition. Therefore, in the strategic choice, enterprises should widely build competitive barriers and continue to enlarge the competitive advantage. The competitive advantage of Mobike is its unique body design and parts that gather scientific and technological elements. It should continue to play its technical advantage, creating more new technologies, new services and new models, which is the foundation of its competitiveness.

Concentrate- in the industry chain, the remaining value of the supplier should be gathered in the hands of customers. On the one hand, the company lists the industry surplus value chain, showing the minimum cost of producers in each production chain and the economic surplus value of low-cost production, analyzing the ability to bargain with suppliers and the possibility of failures in obtaining information or vertical market. On the other hand, the company looks for ways to jump or replace value chains during analysis, or changes the product and process itself by vertically integrating. The current bicycle sharing industry is divided into "heavy asset " and "light asset " two business model [6], but because the lack of better control over unit cost in production aspects, the industry as a whole shows the trend of transforming from "heavy asset " to "light asset". More and more bicycle sharing companies choose to outsource the production process to the upstream suppliers.

Capture-Company can capture surplus value from consumers through effective consumer segmentation and pricing strategies. First, through the market segmentation, new unsaturated market segments can be found and we can organize production according to their needs, quickly putting new products into this new market to seize business opportunities. Second, take a price reduction strategy at the right time to stimulate those who are more sensitive to the price, creating buy motives to take purchase action [7]. Bicycle sharing companies can determine pricing strategy on the basis of target market, achieving the competitive advantage. At this stage, many bicycle sharing companies launched free riding or red envelopes. Although this can be achieved in the short term significant results, it cannot fundamentally win customers by the demand for elastic factors. Once the offer ends, the user may not be as sticky as expected. So the bicycle sharing companies cannot effectively grab the consumer surplus value from the price, but the enterprise can win the consumer surplus by raising the products and services.

Create-Surplus value can be created by expanding the basic needs. Bicycle sharing industry is currently in the growth stage of the product life cycle. After the introduction of new products through market promoting, the consumer has been basically familiar with the product and consumer habits are gradually formed, at the same time the market share is in correspondingly rapid growth. So this is the best time to make a profit. For bicycle sharing industry, in addition to improving the original quality of products, creating added value is the key to profit. Mobike can find new unsaturated market segments through the market segmentation, and use supply to stimulate consumer demand through the creation and expansion of new consumer hot spots.

Cooperate-surplus value can be captured and created through multi-party cooperation, including cooperation with suppliers, with customers, with competitors and with the government. Although a city's shared market may contain multiple brands in the early stages of development, with the growing market saturation, users will focus on brands which provide better-experience. The sharing bike market in the future is likely to undergo a giant merger. At present, the main partners of the motorcycles are the investors and suppliers, the

overall way of cooperation is relatively simple, and so there is a certain degree of cooperation risk.

#### IV. SUGGESTIONS FOR RECONSTRUCTION OF MOTORCYCLE PROFIT MODEL

Based on the analysis of the external and internal environment of the shared bicycle, the author puts forward the following suggestions on the formulation of the profitability strategy of Mobike in combination of the McKinsey 5Cs profit model.

##### A. *Profiting through competition, maintaining and increasing market share*

In order to maintain its competitive advantage and industry leading position, Mobike needs to implement the market penetration strategy and development strategy, improving market share and achieving economy scale on the premise of continuously increasing bicycle quality. First of all, improve the competitiveness of products and win customer loyalty. The bicycle in current shared bicycle market is mainly traditional chain-based bicycle. The largest competitiveness of Mobike is its high-tech anti-explosive tires, shaft drive and other high-tech means, which has a high degree of identification. However, the cost of cycling is high, the user experience is still poor. Therefore, Mobike should focus on improving the quality of cycling, optimizing ride comfort, and therefore can win more customers of all ages. Second, expand product coverage and further increase market share, allowing users to find required vehicles anytime anywhere. As a blue ocean market, coverage of shared bicycles largely determines market position, right to speak, and whether to get the scale advantage in the future integration of the market. With the increasing saturation of the domestic market, competition of oversea share of shared bicycle market is increasing, especially in Europe and North America. Mobike can penetrate on the original operation of the market and reduce entry barriers through the acquisition and merge of foreign shared bicycle projects.

##### B. *Differentiating Management and Creating New Consumer Demand*

###### 1) *Creating New Customer Class*

The business model focusing on one class of consumer was beyond reproach, but with business model mature, more and more substitutes go into the bicycle sharing industry to seize limited market share. As of December 2016, China's "network appointment booking car" user reached 168 million, increased by 46.16 million compared with in the first half 2016, an increase of 37.9%. Therefore, Mobike cannot be limited to a class of consumer groups and market segments. It is imperative to expand market coverage and deepen the profit potential of various consumer groups. According to different demands of consumers and behavior characteristics, a market needs to be segmented into multiple consumer groups, and then different types are to design for different segments of the market and different characteristics of the consumer group, so that Mobike will become a service object for more potential consumer groups.

###### 2) *Creating New Service Types*

First, Mobike should rely on large data to achieve value stream increment. The key advantage of shared bicycle is to master the user's behavior data, which will be an important channel for profits of bicycle sharing companies. On the one hand, Mobike can provide relevant data resources for the government, so that the management department can realize the dynamic monitoring of the traffic. On the other hand, it can obtain more accurate audience through the data scale analysis, so as to enhance the target user conversion rate. The following two are specific practices: First, to obtain revenue through advertising, and second, to use APP as access to local O2O services. For example, personalizing short-distance travel, take-away distribution, local hotel accommodation, health care and other services advertisement in the bike APP according to different user spending habits can make motorbike cycle serve as data entry of bicycle and people, constituting the key nodes of internet of things.

Second, Mobike should build a bilateral trading model and point-to-point bicycle rental platform. Compared with OFO, Mobike emphasis mostly on the development of new resources in the past development process, while ignoring the use of idle resources, which in some ways is a waste of resources. In the future development, Mobike should return to the "shared economy" nature, making full use of idle resources to achieve the development and utilization of social surplus value, such as building a collection of idle bike information point-to-point bicycle rental platform. And the owner can introduce the main features of its bicycle, upload photos and set the price of the car, and specify the city and location where bike can be rented. So users only need to input the name of the area to get rental links of bikes around. When the platform transaction is reached, the bicycle sharing company will be able to get a certain share. This will not only provide the "light assets" development ideas for the motorbike, but also be able to better configure the idle bicycle resources.

Moreover, Mobike can create a riding circle and develop riding industry. With the rise of environmental protection and low-carbon fashion, the bike has once again become the most popular traffic and sports tool. Although the current bicycling penetration of our country is 90% of Netherlands, 78% of France, 20% of the United States, but there is a lot of potential for the development of riding market. Mobike can make full use of its bicycle and data resources to build a circle of cycling, develop riding industry, and extend the industrial chain from the general "vehicle-platform-leasing" to "vehicle-platform-leasing-derivative products development", cultivating users' habits to deepen the concept of riding in customer's life and minds. When an enterprise establishes the brand, a future profit growth point can rely on the brand cross-border, advertising and other new media. Its added value will exceed our imagination.

##### C. *Cooperating to achieve best profit and win-win situation*

###### 1) *Cooperating with the government*

In the development process, bicycle sharing enterprises are facing a grim moral dilemma. The lack of social credit has become an important constraint to the development of sharing economy. Although previously Mobike issued a series of credit rating regulations, the effect is not significant. Social

credit issue is difficult to solve only by the power of companies, it needs cooperation of both government and companies. On the one hand, government should speed up the construction of social credit system, establishing an integrated citizen credit file networking system. On the basis of this, once the user has committed dishonesty, Mobike will transfer the bad record to the citizen's credit file through the government-enterprise networking system, which will have an impact on the citizen's credit. On the other hand, Mobike can also try BOO operating mode to participate in the transformation of urban public bicycles. In the BOO model, the government, as a project sponsor, provides relevant policy and financial assistance to support the company on the basis of assessing project accessibility. In the meanwhile, Mobike has the ownership of the project and is responsible for the construction and operation of the city bicycle project, and it will subject to the public welfare clause of the contract and be under the supervision of the government.

## 2) Promoting cooperation within the industry

Competition often contains the possibility of cooperation and win-win situation. Nowadays, the price war in bicycle sharing industry is becoming more and more intense, and there are various discounts and favors for riding, which is a big challenge for bike sharing companies who have little profits. A large number of subsidies will cultivate disloyal users. Although the subsidy will greatly increase the enthusiasm of usage, it will also led to wrong consumption habits of ordinary users. Once the subsidy stops, a large number of price-sensitive users will leave and the active impact will not be sustained. Take network bus giant Didi and Uber's merger as an example, perhaps merger is the premise of the survival of bike sharing business. At present, Mobike and OFO are the industry leaders, and each side interests are compromised in the price war. In view of this, perhaps spontaneous integration

of shared cycling enterprise is easier to achieve a win-win situation for both sides of the competition.

## V. CONCLUSIONS AND PROSPECTS

Business profit model is local based and time based, seeking cooperation in the competition and creating profit growth point in the integration of resources. Based on the influence of factors in McKinsey 5Cs profit model on the surplus value, the bicycle sharing companies represented by Mobike should focus on the allocation of elements in the industrial chain and aim at the creation of the surplus value, finding a feasible profit model as soon as possible. Although the bicycle sharing companies are facing a lot of uncertainty in the development process, it contains reform potential of our future travel mode. The existence of new things is reasonable. Shared bicycles are not only the product of green development, but also the product of market demand. Only by better meeting the needs of the market, rationally exploring the development of corporate profit model can we stimulate the unlimited potential of the market.

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