

Standardized Management of Bicycle Sharing and Its Financial Significance

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Keywords: Short Trip; Technological Innovation; New Business; Financial Innovation

Abstract: The rapid increase in the number of urban fuel vehicles has caused many problems such as traffic congestion, vehicle exhaust pollution, noise pollution, etc. Some cities have adopted various approaches, but with little effect. By 2014, the emergence of "shared bicycles" has made people look ahead Liang seems to have found an effective way to solve these problems to a certain extent. The "bicycle sharing" system combines several of the most widely used high-tech technologies, which not only solves the problem of people's short-distance travel to a certain extent, but also creates new social and economic outputs. The financial technology innovations contained in it the application of new technology has given new inspiration to future technological innovation and financial innovation. While analyzing the new business model of bicycle sharing, this article makes a preliminary discussion on the implications of economics and finance.[1]

Bicycles were once the most common transportation tool used by Chinese people. According to statistics from the Ministry of Transport, in the 1990s, the number of bicycles in China was more than 670 million, 197 bicycles per 100 households (1993). Bicycles in major cities the proportion of trips is generally more than 50%, so China is called the "biking kingdom". In the 21st century, China's automobile industry has developed rapidly, and per capita income has increased rapidly. Fuel-fueled vehicles have rapidly spread in China. [2]Many cities have begun to experience problems such as traffic congestion, exhaust pollution, and noise pollution due to the rapid increase in the number of vehicles. Automobiles occupy a considerable proportion of urban space. Although various solutions have been tried, such as restricting the number of gasoline vehicles sold, restricting travel, promoting new energy vehicles, establishing public bicycle systems, etc., they have had little effect. In 2014, "shared bicycles" appeared, and after several years of operation, its advantages in solving problems such as the above gradually became apparent. According to the "White Paper", the total distance of cycling in China reached more than 2.5 billion kilometers in 2017, reducing 540,000 tons of carbon emissions and reducing 4.5 billion micrograms of PM2.5, which is equivalent to reducing 170,000 cars a year. Carbon emissions from travel saved 460 million liters of gasoline, and the city space saved across the country was equivalent to more than 600,000 school districts.

The "shared bicycle" and high-speed rail, Taobao, and Alipay are known as China's new "four great inventions" abroad. They are all the products of high technology or a combination of several high technologies.

1. Economic Definition of Bike Sharing

At present, the economic definition of bicycle sharing in China mainly has two viewpoints: one is that sharing bicycle belongs to the broad field of sharing economy; the second is to characterize bicycle sharing as a transitional sharing economy, not a pure platform sharing economy, but The tailwind of a concept with the typical nature of the sharing economy should be met. This article considers that bicycle sharing is neither a quasi-public product nor a public product. It is a leasing service, which is a kind of goods to be rented that belongs to private property with private property rights.[3]

Public bicycles that have appeared in major cities have been operated by some governments and enterprises as public products. In order to ensure the equality of services to social groups, not only

the price of use cannot change with the market, but the boundaries of services are also expanding. The expansion of scale has pushed up the supply cost, leading to the bankruptcy of public bicycle projects in many cities due to too high operating costs. Otherwise, it is because the scale cannot meet the requirements of users, and there are many inconveniences in receiving and returning. Public self-esteem is scarce. "Shared bicycle" is exclusive in the process of being used, and essentially does not have the conditions to operate as a public or quasi-public product.

2. The Origin of the Development of Public Bicycles

The predecessor of "shared bicycles" was "Public Bicycles", which first appeared in Amsterdam, Europe, and the Netherlands in the 1960s, and later appeared in France, Britain, the United States, Canada, and many other cities with higher levels of industrialized urbanization. An improved version of the software, but all failed due to the inability to resolve damage and loss and huge management costs.[4] In 2010, Americans designed the concept of a pileless bicycle, which is also considered to be the prototype of the current "shared bicycle", which has some similarities with the current "shared bicycle", but due to the immaturity and commercialization of many technologies. The application is not deep and greatly limits its development. Until 2014, the commercial operation of the shared bicycle system supported by "share + intelligent hardware" represented by "Mobike" and "ofo" completely transformed the concept system of pileless bicycles into reality.

3. Analysis of the Reasons for the Success of Bicycle Sharing

(1) From the Demand Side

Large cities like Beijing and Shanghai do not only suffer from traffic congestion, smog, noise, car exhaust pollution, etc., but many people also have difficulty traveling short distances but "Bike sharing" provides an effective solution. After several years of operation, the system has indeed achieved some results. Not only does it meet the short-distance travel needs of many people, it also saves urban space, it also eases traffic congestion, reduces car exhaust emissions and noise pollution, and fills some huge short-distance travel outside public transportation and private cars. Blank market. Due to cost, technology, and safety issues, it is difficult for large-scale commercialization and application of electric vehicle technology, which gives bicycles more room to play.

According to a 2017 forecast by an authoritative securities institution in China, the rigid demand for short-distance travel nationwide is supported by a market size of more than 40 billion yuan, and the annual rental income of the domestic bicycle sharing market is about 42 billion yuan.

(2) From the Supply Side

First is that, China has large bicycle production and sales country, firmly occupies the world's low-end market. The existing bicycle production capacity and related supporting technology research and development application capabilities can fully meet the various needs of the international and domestic markets.

Taking Mobike as an example, Mobike has achieved more than 50 "micro-innovations" in tires, achieving the perfect combination of riding comfort and 20,000 kilometers of surface maintenance; smart locks for bicycles have been introduced in succession to 8 generations and 200. The rest are iterations (2018);

The second is the system integration of mobile payment technology, Internet technology, code scanning technology, and smart phone technology. It is currently undergoing large-scale commercial operations, low cost of promotion and use, and a large number of consumers with rigid demand, which has huge market potential;

The third is the realization of the pileless design concept. Due to the application of mobile payment technology, Internet technology, code scanning technology, and smart phone technology, the pile-free design concept of bike sharing has been realized. Users borrow and return cars are all aspects, and also save the construction cost and management cost of the pile design.

At the same time, suppliers can flexibly grasp and optimize vehicle demand in specific areas based on big data analysis, share bikes at any time according to actual needs, conduct scientific launches, further tap potential users, and reduce operating margins through low cost and scale effects Cost and improve resource utilization[5].

4. The Problems Facing Bicycle Sharing

At present, there are some problems in the domestic "shared bicycle" industry, which are mainly divided into three categories:

The first category is the problems existing in the development process of bicycle sharing companies. At present, there are serious problems in the daily operations of some enterprises, mainly due to arrears of deposits and arrears of partners. The main reason is that these new companies have not been operating in the market for a long time. They are focusing on rapid expansion and seize market share, driven by capital. The lack of refined management and necessary industry supervision, the lack of long-term planning and layout of the enterprise, and the low disposal costs have led to the waste of resources and social management costs caused by the discretionary disposal of shared bicycles.

The second category is ethical issues that arise during the use of shared bicycles. As a property of private goods, shared orders need to be punished jointly by the government and the government for malicious damage in the process of use. The company cannot simply be required to take excessive cost increases to avoid losses. To some extent, this belongs to the market. Problems in the event of failure require the government to take necessary administrative or legal means to manage malicious acts of destruction.

The third category is the more sensitive infringement issues; At the beginning of the article, we discussed the product attributes of shared bicycles. Since shared bicycles are private products, there will be a kind of infringement whether the vehicles are parked in public or private areas during use. Because of its typical pileless design characteristics, the problems that deserve to be opposed by everyone or stakeholders have not been pursued by the stakeholders in practice, but have become very popular. This is mainly due to the concept of pileless design It meets the current consumer demand and solves people's actual problems. The pileless design theoretically reduces the bicycle's halt time. The rapid transfer of use rights makes everyone not pay too much attention to the problem of infringement. After all, sharing bicycles is Everyone's travel provides convenience. However, to a certain extent, this has also become one of the important reasons for the unrestricted and disorderly volume of various bicycle-sharing companies. Some of the costs that should have been borne by the enterprises were passed on to the society and some of them by the venture capital. Private and private businesses. Such market failures must be resolved by the government through administrative means, such as limiting the number of vehicles they place within a specified range, or by authorizing relevant stakeholders to adopt economic means through legal means, such as the sharing of temporary parking Bicycle charges and more.[6]

As a new thing, bicycle sharing has various problems, including infringement, which need to be further discussed. With the progress of society and the deepening of standardized management of the industry, I believe that the current problems facing bicycle sharing companies will be properly resolved.

5. Financial Significance Behind Bike Sharing

(I) New Social Output Created by the Fintech Innovation

"Bicycle sharing" is an application innovation based on several new things and new combinations. Except for bicycles, other integrated software and hardware technologies and physical products are high-tech products, mobile code scanning technology and Internet financial technology are widely used. , The "shared bicycle" pileless design has become a reality, and has contributed to a brand new consumer format. This consumer format is different from what we are

familiar with online shopping, because online shopping is essentially the Internet of traditional shopping and cannot be separated from the nature of traditional business models. Second, online shopping is fungible for both commodity transactions and payment activities. It is the replacement of traditional sales and payment activities through the Internet and Internet financial technologies, but "shared bicycles" have no substitutes. In terms of current technical conditions and production conditions, there are no equivalent alternatives and methods, because if there is no mobile scanning Code payment and Internet finance, then the "shared bicycle" consumption form will no longer exist.

For example, people will not increase the consumption of a car because the car dealer has adopted scan payment and Internet finance. The application of these two technologies in car sales has neither changed the car consumption nor created new car consumption because The use of these technologies has not touched the margin of consumption of cars; the same reason, we usually do not increase the consumption of vegetables because the restaurant owner has adopted WeChat or Alipay, because neither the restaurant owner nor the customer will Adopting mobile scan payment and Internet finance to change or create a new vegetable sales method, customers will not increase the motive of new vegetable consumption, because the adoption of new technologies does not touch or lead to the creation of new consumption boundaries, these The application of technology at the most is to save the inconvenience of change.

At present, Internet finance is mainly divided into: 1. Internet + payment; 2. Internet + borrowing; 3. Internet + wealth management; 4. Internet + fund raising. The first one is related to consumption, and the last three are related to the financing of funds. They are all derivatives of online financial services to achieve inclusive finance. They are a quantitative and scale expansion. According to the descriptions of some foreign research institutions, it is called network replacement; in the report of "China Internet Finance Development History and Future Trend Evolution Research Report (2016)", our experts call it "Internet + traditional finance business". Taking the words of foreign experts as "network replacement" can better explain the characteristics and nature of the vast majority of current Internet finance. Because the 4 financial forms summarized above also exist in the traditional field, compared with the existing forms of the Internet, they are completely a substitute and replaced relationship. Prior to "bicycle sharing", fintech innovation companies focused on digitizing, informatizing, and networking traditional businesses. However, these two high-tech technologies in the bike sharing system have been successfully used, not only without replaceability, but also creating with new economic value, this will open a new development path and direction for fintech companies. By clarifying property rights, directly serving and driving economic activities in the field of production, the gains from these economic activities are far greater than those from participation in capital financing and consumption payments. It also indicates that financial enterprises can rely on the application of financial innovation to create new social output, instead of being traditionally attached to manufacturing and manufacturing. Financial enterprises have achieved their own blood-making functions and self-salvation. The boundaries of traditional manufacturing, financial institutions have begun to shift to "practical finance."

(2) Created a Cashless Business Model

The "sharing bike" case also caused another new social phenomenon, that is, the complete disappearance of physical cash. In the process of the economic activity model of "sharing bike", due to the characteristics of its operation management and payment management, it must be Using electronic money or digital currency to pay, so that cash will completely withdraw from all aspects of transaction activities, which means that a real business form that does not require cash is born. This is the inevitable result of the development of scientific and technological innovation to a certain extent, and also the inevitable trend of the development of new economic activities.

Although the development of electronic currency and digital currencies has long been put on the work schedules of governments and central banks in many countries, many companies have endless digital currency projects, but those are based on the assumption of future economic and financial

forms. There are no realistic economic activities and financial formats to support and refer to, but the emergence of shared bicycle business forms has completely changed the market's supply and demand for digital currencies. If a country like India completely eliminates the emergence of physical currency through administrative means, it is a man-made economic concept. This time, "shared bicycles" rely entirely on market forces to force physical currency to exit the stage of historical transactions. This is a realistic economic form. Objective needs.

(3) Changes to the Existing Financial Industry

As the original boundary between the financial industry and manufacturing service companies is broken, the overall financial security of the financial industry and the financial security between the financial industry and enterprises will be redefined. If according to the analysis of the previous article of the article, financial enterprises have become an organic part of the entity manufacturing enterprises due to their financial innovation capabilities, then the financial enterprises have the function of self-blood-forming and become an organism that can realize internal self-circulation Its ability to resist external risks has been greatly enhanced, and the financial industry will gradually develop into a self-circulating production ecosystem with a relatively complete organization and interest chain, and at the same time, it will bring about a restructuring of the organizational structure within the production system.

At the same time, due to the increasing contribution of technology to the format, the traditional franchise model of the financial industry will be completely subverted, and the key to further development of financial companies will be transferred to the innovation of financial technology and the practical commercialization of technology. Instead of obtaining government financial licenses, the financial industry will move from the traditional GSP centralized structure to a more fair and flattened direction.

6. Conclusion

Regardless of economic scale or social influence, "shared bicycles" are not enough to represent the economic characteristics of the current society, but the business model of "shared bicycles" and the economic and financial significance behind them are worthy of our further study and discussion. "Bike sharing" represents a trend. Although some "shared bicycle" companies are still facing various development problems, it seems that the former prosperity was only a short-lived period driven by the hot capital, but we must see that the company itself has not developed for a long time, and the daily refined management is still It will take time, and some social problems facing the outside will require joint efforts of companies and governments to solve them.

The "bicycle sharing" system itself is not complicated, but behind it are huge technological innovations and precipitations, as well as the promotion and commercialization of various high and new technologies. The technical innovation of various software and hardware equipment that supports the "shared bicycle" system is not simple, including the pile-free technology, which was only summarized after decades of various attempts on public bicycles, among which the Internet technology , GPS technology, mobile scan code payment technology, smart phone technology, etc. are all indispensable technical support for the "common bicycle sharing" to be finally commercialized, and the resulting cashless model and new financial format also make us The "shared bicycle" format has more expectations for further development. At the same time, it also gives us more expectations for more changes brought about by fintech innovation.

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