Opportunities and Challenges Faced by Share Economy:
Taking Sharing Bicycle as an Example

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Abstract. Share economy is, in essence, an “Internet” economic model, and nowadays the boom of bike sharing is coming. Bike sharing combines online resources allocation and off-line idle social resources, which greatly improves the efficiency of bicycle distribution. This essay analyzes the advantages of bike sharing from the perspectives of policy support, low carbon, easing traffic congestion and enormous potential customers, and its disadvantages from the points of random parking, malicious sabotaging, excessive input of bikes and trust crisis. It also puts forward corresponding suggestions from the stances of the government, enterprises and users.

1. Background

The rise of scale production has led to the accumulation of goods, a large part of which are idle resources. As early as in 1984, Martin Weitzman put forward the concept of share economy in his book The Share Economy: Conquering Stagflation [1]. Share economy mainly targets at idle resources redistribution, only which can produce lasting values. The core of share economy lies in enhancing the efficiency of resource utilization, saving energy and realizing the sustainability of circular economy. Data released by China E-commerce Research Center in June 2017 shows that China’s share economy scaled up to 3.945 trillion RMB in 2016, increased by 76.4%, serving roughly 60 million people and creating 5.85 million jobs, and the whole size is still expanding [2]. Undoubtedly, share economy enjoys great capacity and potential in promoting employment, saving resources and stimulating domestic demand.

2. Emerging and Development of Shared Cycling

2.1 Emerging of bicycle sharing

Bicycle sharing is not a new thing, as Amsterdam government launched free-riding bicycles back in 1965. The mode was introduced into China during 2007-2010. It was initially dominated by the government, and then in 2010, with the founding of the company youon (永安), the ownership was delegated downward. In the early stage, bicycles were docking ones, and they’ve gradually been replaced by smart ones with the emerging of ofo-led companies since 2014. Internet-supported smart bicycle sharing mode is warmly applauded by the public and sought after by capitals, which leads to a flourishing of enterprises in this sector.

2.2 Development of bicycle sharing

There are over 30 bicycle sharing companies in China, such as ofo, Mobike, Hello Bike and U-bicycle, among which ofo and Mobike are most competitive. The 2016 China Bicycle Sharing Market Research Report conducted by a third-party research institute showed that the overall number of shared-bicycle users in China had reached 18.86 million, and the number would climb up higher to 50 million by end of 2017.
Table 1. Development of 8 Bicycle-Sharing Companies.

<table>
<thead>
<tr>
<th>Year</th>
<th>Company</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-2010</td>
<td>youon</td>
<td>Government-led docking sharing bikes</td>
</tr>
<tr>
<td>2015.8</td>
<td>Ofo</td>
<td>Launched smart bicycle sharing; obtained a 51.2% market share in 2016 with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>an input of 800,000 bikes; settled down in 100 cities by May 2017;</td>
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<td></td>
<td></td>
<td>completed E round financing worth of over $700 million in July 2017</td>
</tr>
<tr>
<td>2015.1</td>
<td>Mobike</td>
<td>Obtained a 40.1% market share in 2016 with an input of 500,000 bikes;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>completed E round financing worth of over $600 million in June 2017;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>settled down in 170 cities by September 2017</td>
</tr>
<tr>
<td>2016.3</td>
<td>Hellobike</td>
<td>Completed A+ round financing worth of 150 million RMB in January</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2017; acquired by youon in October 2017</td>
</tr>
<tr>
<td>2016.6</td>
<td>U-bicycle</td>
<td>Completed A+ round of financing worth of 100 million RMB in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>December 2016</td>
</tr>
<tr>
<td>2015.7</td>
<td>QIBEI</td>
<td>Completed A round of financing worth of 100 million RMB in January</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>2016.9</td>
<td>bluegogo</td>
<td>Failed at the B round financing in September 2017; finding it difficult to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pay users’ deposits back</td>
</tr>
<tr>
<td></td>
<td>COOLQI</td>
<td>Capital chain ruptured in September 2017 due to ill-management;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>finding it difficult to pay users’ deposits back</td>
</tr>
</tbody>
</table>

Figure 1. Shared Bike Users Forecast.

3. Advantages of Bicycle Sharing

3.1 Policy support

The year 2017 has witnessed the boom of share economy. Chinese central and local governments have actively advocated public entrepreneurship and innovation in recent years and offered policy support and preferential treatments to innovative industries. Bicycle sharing, as a creative product of online big-data and offline bicycle sharing, naturally gains great attention from the government, for instance, it was written into Chengdu Local Government Work Report in 2017. It is manifest that the growth of bicycle sharing will be escorted by government support.

3.2 Low carbon and environmental friendliness

Frequent appearance of smog weathers in many parts of China rings an alarm belt on air pollution. Bicycle sharing, as an environmental-friendly industry, comes somewhat at the right time. Holding high the banner of “the last mile”, bicycle sharing has, to a large extent, helped to reduce the use of private cars on short-distance tours. Take Mobike as an example, in 2016, the total riding distance
of its users reached 2.5 billion kilometers, equivalent to 3,300 times of double-way tours to the moon; it has helped to save 460 million liters of gasoline and cut 540,000 tons of carbon emissions and 4.5 billion microgram of PM2.5 [3]. We should advocate green tourism, promote urban civilization, low carbon and healthy development.

3.3 Easing traffic congestion

The surging of car ownership in China brings, among many things, traffic jams, especially during peak hours, against which the advantages of shared bicycles easily stand out. To be more specific, (1) bikes are small in size and flexible; (2) shared bikes are cheap, usually one RMB for one trip; (3) smart sharing bikes can be easily opened, closed and parked. According to an authoritative report released in Sept. 2017, bicycle trips grew from 5.5% to 11.6%, while traffic congestion rates in Shenzhen and Guangdong dropped by 6.8% and 4.1% respectively, and that in some parts of Beijing dropped by 7.4% [4]. These data show that riding a bicycle can not only meet the needs of people's travel, but also solve the problem of urban traffic congestion safely and efficiently.

3.4 Enormous potential customers

Shared bikes are popular partly due to their low cost and high convenience.

(1) Low cost. To establish a user account usually takes three steps: real-name registration, cellphone bonding and paying a deposit. For instance, to establish a Mobike account through Wechat, all one needs to do is to pay a 299 RMB deposit and then buy a month card with 2 RMB. The account can be canceled at any time and the deposit will be returned to you within a few working days. This kind of business model works for practically most enterprises. Besides, companies are in charge of maintaining and repairing their bikes, and users don’t need to have any worries over the bikes getting broken or stolen or cases like that.

(2) Easy operation. Shared bicycling companies highly rely on the Internet, and all processes, from opening to closing to paying, can be done on one’s phone. Take ofo who collaborates with Alipay as an example, the locations of all the bikes in the user’s surroundings are shown on the app, and to open a bike, all that needs to be done is to scan the two-dimensional code through the app or through Alipay.

4. Challenges Faced by Bicycle Sharing

Opportunities are often accompanied by challenges, and so is bicycle sharing.

4.1 Random parking

Smart sharing bicycle brings great convenience and big troubles at the same time. Due to the lack of fixed parking spots, users feel free to park whenever and wherever they like. It is not uncommon to see bikes randomly parked, occupying motor lanes, pavements or hustling streets, which turns “public resources” into “public tragedy”.

4.2 Malicious sabotaging

Sharing bicycle is a test to human morality, and the test results are not necessarily satisfactory. It’s not rare to see bikes chained with private locks for private use or bikes with its seat, pedals or wheels missing. Statistics show that as many as 10% of Mobikes in Guangzhou are sabotaged in one way or another, and in a repairing location in Chaoyang District, Beijing, roughly 600 ofos are sent there for repairing per day. Such high rates of destruction greatly increase the costs of shared bikes.

4.3 Excessive bikes

With the popularity of shared bikes, floods have spread over a large number of capital sources. To date, there are over 30 shared bikes companies operating in China, and they input bikes at an alarming rate to occupy market shares [5]. Reliable data show that up to July 2017, a total of 16 million bikes were put onto the market, an overwhelming majority of which are in first-tier and
second-tier cities. Such excessive input is a waste of resources and can cause lots of issues. Therefore, 12 cities, including Beijing, Shanghai, Wuhan and Nanjing have halted further input of bikes.

4.4 Trust crisis

The risk is hidden behind the popularity, and the deposit involves the risk. The shutting down of 3Vbike, together with the tottering of bluegogo and COOLQI come from the doubts and suspicions of the public. Deposits of sharing bikes range from 99 to 299, which has accumulated huge cash pools, the money can hardly be returned to customers if mismanagement or other unexpectedly issues take place. The company’s bankruptcy and the subsequent difficulty of saving will consume customers’ confidence and optimism.

5. Advice to Bicycle Sharing Industry

Share economy, as a free economy, is extending into every field of our lives. Various types of shared items, such as bikes, electricity chargers and umbrellas have brought convenience to people lives, but at the same time, uncontrolled, disorder expansion of them have also brought troubles and thorny issues, which calls for external guidance and regulation. This essay puts forward advice in this respect from the stances of the government, enterprises and the public.

5.1 Government stepping up regulation and supervision

Bicycle sharing is a public service offered by enterprises, and the government needs to step out and guide such new forms of economies to develop in a benign and sound way.

(1) On traffic congestion issues, the government needs to: 1) bring in governmental management platform, and introduce policies on bikes management. It needs to communicate with enterprises promptly when policy violations happen and both sides work together to solve the problems; 2) reform or upgrade the driving and parking spaces for bicycles. Designated bicycle lanes and fixed areas for parking need to be laid out; 3) pay attention to publicity, and guide citizens to drive and park bikes in a civilized and orderly manner.

(2) On malicious bicycle sabotaging issues, the government needs to accelerate the building of a personal credit system, and constrain uncivilized behaviors with blacklists and the like.

(3) On excessive bikes, trust crisis and other similar issues, the government can formulate relevant laws and regulations to insure the interests of the public and promote sound growth of the industry. To be more specific, 1) on overcapacity issues, the government can introduce industry access rules and management policies, such as restricting the operation of ill-managed enterprises and regulating its management; 2) on trust crisis issues, the government needs to implement third-party supervision and regulation on the enormous pools of capital [6].

5.2 Enterprises paying more heed to self-improvement

The markets in many first-tier cities have come to saturation, and further input of bikes is no longer the No.1 factor for securing a niche in the market, instead, competence and quality of services have become the key. Enterprises need to:

(1) On the issue of excessive bikes, more emphasis shall go to second- and third-tier cities, which maybe small individually, but huge when combined. Before inputting bikes, companies can use big-data to conduct research on users’ routes, rational density of bikes, and enhance the scheduling capacity [7].

(2) On trust crisis, enterprises can set up multiple channels of communication with users, collect and solve their concerns and worries in a timely manner; they can also collect data on users’ experience and advice, and conduct more targeted marketing to retain the hearts of loyal customers.

(3) On random parking issues, enterprises can speed up research on virtual parking piles, reward civilized users and reinforce management on bikes offline.
5.3 Self-governance of users

The public is an essential component in the whole bicycle sharing chain. To build a safe and efficient riding environment calls for concerted efforts of the government, enterprises and the public. In many cases, such as random parking and malicious sabotaging, self-discipline of users is the fundamental key.

(1) In August 2017, the Chinese government issued guidance on building a personal credit system and on demanding enterprises to purchase personal accident insurances for users [8]. Regular or civilized use of bikes is a good way to win credits and obtain insurance when accidents take place; and irregular or uncivilized use can cost users’ credits and insurances. Such incentives and disincentives combined can serve to guide users to be more disciplined.

(2) Self-discipline. Even without the constraint system, from a moral point of view, most citizens observe it consciously, so as to improve the overall social atmosphere through civilized behavior.

Summary

As a typical representative of sharing economy, the value of sharing bicycles lies in the sharing of resources. Every new thing has dual influences, and there are always challenges when it is growing up rapidly. Over the past year, sharing bicycles have developed too fast for the authorities to regulate. It has generally been encouraged as it is seen as convenient and green. But as a grey area without a clear regulation, problems such as haphazard parking and obstruction of crowded areas prompted the government to ban new shared bikes. In face of this kind of impingement and impact, we should establish a reasonable system from the government, enterprises and citizens in order to protect the order and maintain social stability to maximize the sharing value.

Reference