Success or Not? – Bicycle Sharing in London

Houpengcheng Li[12]

1.BSc in Urban Planning-University College London, UK

2. Research Student-Kyushu University, Japan

Abstract: Since the birth of shared bicycles, it has become the main means of transportation for residents to make green trips. However, many problems have also arisen, such as the limitation of stop points, excessive occupation of public land, frequent damage and theft, etc., which restrict the contribution of bicycles and development. Based on this, this article mainly takes Santander Bicycle Company as an example to conduct a case study and explore the constraints from the perspective of stakeholders to find the optimal solution path.

1. Introduction

It is not new for most people to know the term 'a bike-sharing system' as it has become popular during the last several decades. In most of the cases, this program is always promoted by local governments as a non-polluting form of transport. Usually, many bike share systems allow people to borrow a bike from a "dock" and return it at another dock belonging to the same system. People can use it to unlock a bicycle on a short term basis for a price or free. In this type of system, the user has to return the bike by placing it back to the dock which is inconvenient and has been criticized for many years. More recently, a new form of dockless bike-sharing programs (DBSPs) has emerged typically in China as a more convenient form of renting a bike with smartphone mapping apps show nearby available bikes. In this system, returning to specific location is not needed since you can just lock the bike by yourself when you have reached your destination and then place it anywhere you want. Although the traditional bike-sharing system like Santander Cycles in London could be a bit out-of-date with several criticisms, the newcomer still triggered a series of controversies since the launch of Ofo program in 2015. Unlike many other literature had discussed over the decades, this essay will attempt to compare both two cases from a point of stakeholders' role, influences and management in different stages and then analyze to what extent the stakeholders could have influence to urban projects like these connecting to a larger transportation context. Actually, to some extent, the emergence of Ofo and other dockless bike-sharing company greatly solves the problem of dock-based bike-sharing system in most European countries. Nevertheless, unexpected urban issues gradually emerged together with the disadvantages of dockless bikes. To be more specific, the hardest task needs to be solved is the problem of management. Unlike public bicycles, each bike exists much more individually in this mode, so it is really difficult to manage each bike for regular maintenance or repair as the number is really large. Also, as this system has an advantage of parking anywhere, it leads to park disorderly. Near bus stops, metro station or office buildings, bicycles can

be seen everywhere. Sometimes, some people even occupy sharing bikes as private ones so that bikes are even harder to be found. Moreover, unlike Uber, the use of sharing bikes is affected by weather. Especially in some coastal cities, the arrival of monsoon or typhoon may greatly influence the use of these bikes. As another demographic factor, the target market of sharing bikes is mainly youngsters as they are more likely to attempt new things.

2. The Problem

Although there was great development in car industry in the 20th century, the rising focus on protecting our environment and low-carbon transportation lead to another boost in bicycle development in recent years; so, as one important part of involving bikes into public transport network proposal, bicycle-sharing system firstly began in Europe in 1965 ("Runde Sache", 2011)[1]. However, the low use ratio of public-sharing bicycles troubles many governments; although China and many other Asian countries came up with the idea of 'dockless bike-sharing system' which had a great success, it still remains problems like difficult management and maintenance.

2.1 Very Limited Docking Points

The original intention of bike-sharing scheme is to provide people with a new transportation method which allows them to borrow a bike from point A and return it at point B. Usually the charge will be really inexpensive for the first 30-45 minutes of use in order to encourage usage. For most short distance travel within the city, this system greatly increases the efficiency and brings convenience for those people who always use bikes as transportation.

However, the drawbacks of this system are also obvious. The first thing is that people have to go to a specific docking station to pick up and hire a bike and find a docking station as well when they finish their travel. This is very inconvenient for most people, especially the commuters. In some even worse cases, if people cannot find a bike in a docking station or there are no empty spaces near their destination, the experience of using bicycle-sharing system would be really bad. Taking London as an example, Santander Cycles (also known as 'Boris Bikes') have really complicated process of hiring a bike which people need to insert bank card and adjust each part of the bike before using. Although the government had tried to improve the experience by using people's smartphone mapping apps to show nearby stations with available bikes and open docks, fees of hiring a bike are still costly. So, till today, the government only built docking stations in relatively central areas in London which would probably have higher turnover rate than suburban areas. So, as a conclusion, in most cities, bike-sharing exists in a form like public transit, but it does not have all good features which other transportations may have like convenient and fast. Therefore for most of the time, it had been criticized as less convenient than a privately owned bicycle used door-to-door.

2.2 Common Land Will Be Occupied

In addition, what I also would like to mention is the special case in China in recent years. The Chinese company, Ofo, firstly introduced the dockless mode for urban bicycle-sharing system. It was launched in June 2015 in Beijing, gaining 20,000 users and 2,000 bicycles by October (Peking University, 2015)[2]. Generally, customers can use the company's mobile app on their phones to locate nearby bicycles. Each bike has a code on the frame, which the customer scans to unlock the bike. When they are finished, they can leave it on a public bike rack or anywhere else suitable for parking and lock it (HUAWEI, 2017)[3]. So, obviously, the biggest feature of this system is people can find Ofo bikes anywhere in the city and leave it where appropriate when finish the use. So, Sharing bikes will always need to occupy COMMON LAND (67) to park. Also, SHIELDED

PARKING (97) and SMALL PARKING LOTS (103) are necessary in some crowded public places. In some countries, they are used for LOCAL SPORTS (72) by holding campaigns. To keep the bikes out of quiet walks--QUIET BACKS (59) and PEDESTRIAN STREET.

3. Case Study and Problem Solving

To begin with, the most familiar bike-share scheme always come with a dock in our daily life. Surprisingly, it also upgraded its form during since this concept had been firstly introduced in Amsterdam in 1965 (Furness, 2010)[4]. After three generations, more recently, an automated system has been widely used all over the world. To be more precise, the docking stations are special bike racks that lock the bike, and only release it by computer control. (Wikipedia). Since this dock-based system had been developed, it rapidly spread out over around the world, including countries like Spain (132), Italy (104), and China (79) (Shaheen & Guzman, 2011)[5]. Interestingly, China had the largest bike-share system with up to 90,000 bicycles in 2011. The reason of using a bike-share system varies within different countries, and so that certain stakeholders can be various as well, so I take Santander Cycles as an example to analyze how stakeholders may influence this program.

3.1 Case Study

In the early period, London saw the success of Vélib' in Paris, as of 2014, Vélib' was the world's12th-largest bike sharing program by the number of bicycles in circulation; the rest of the top 18are in Chinese cities (Wikipedia). Ken Livingstone, the Mayor of London at that time, said 'Cycling is a clean, fast and cheap way to get around London. I have asked transport officials in London to study the Parisian and similar schemes in order to draw up proposals for a scheme which would meet the needs of London. I am sure that we can learn from the success of the Parisian and similar schemes to expand access to cycling in London.' (Cycling Weekly, 2007) in a bigger context. In 2007, London was suffering from major traffic congestion and its consequences, such as high levels of pollution and slow journey times[6]. In 2010 it followed Paris and Brussels in introducing a cycle hire scheme, which enabled cyclists to hire a bike from one of London's hundreds of docking stations (761 as of January 2016). The take-up was immediate and encouraging, with a million journeys in the first 10 weeks (Centre for Public Impact, 2016)[7]. This scheme mainly requires several interactions with stakeholders like:1)Mayor of London and the Greater London Authority (GLA).2)Local councils and the City of London authority.3)TfL, which is responsible for all public transport in the capital and was involved in funding and oversight of the scheme from the commissioning of the feasibility study onwards.4)Serco, which is responsible for the running of the scheme, e.g. the regular movement of bikes between docking stations.5)The major sponsor, Santander (was Barclays from 2010-2015). 6) The cyclists who use the scheme.

Although this scheme is managed by TfL, who invested a large amount of resources in the scheme as part of a wider initiative to improve cycling in London. Serco, which is responsible for running the whole program as the program was outsourced to this company, so it would have to contact other stakeholders to arrange more detailed businesses. For example, the manufacturer of bikes and the maintenance of bikes. Besides, it has to analyze the roles, influence of this scheme would have to those stakeholders and a stakeholder mapping is needed for that. Since the launch of this program, within the first 10 weeks of operation, 90,000 users registered and one million cycle rides were taken. The impact was enormous, 95 percent of journeys were previously made by another mode or not at all. Seven out of ten users said the scheme had prompted them to start cycling in the city or to cycle more often. One out of eight said using the scheme had encouraged them to use their own bike more. Scheme users said they were benefiting from it and agreed the scheme provided a quick and convenient mode of travel. The majority of users were enjoying the

cycle hire experience and seeing benefits to their health and fitness. (Centre for Public Impact, 2016) as one of the most important stakeholders, the customers feedback is crucial to TfL and then they tried to do something more about social engagement. In order to encourage the number of bicycle uses, Santander Cycles started to cooperate with Prudential Ride London which is an annual festival of cycling held in London. (Wikipedia) Also, it started a program with universities called The Santander Cycles University Challenge and offers two universities the chance to win the upfront costs for a cycle hire scheme for their campus worth over £100,000 (Crowdfunder). More recently, TfL said 500 new bicycles will be introduced to replace older versions from 2018. The new model will be lighter, with smaller wheels and a lower frame. The £79.7m contract has been awarded to Serco, which will continue to manufacture, distribute and maintain the bikes from 2017 until 2022. Stratford-upon-Avon bike manufacturer Pashley Cycles will build the equipment from 2018 (BBC, 2016)[8]. Although the installation, maintenance and logistics of a huge number of bicycles, coupled with the education of the public and marketing initiatives is a huge task. There is strong alignment between all the required stakeholders to make the initiative happen: TfL, the Mayor of London's office, London's local authorities, the contractor (Serco), the sponsor (Santander), and the major card providers that support the rapid payment systems. These stakeholders really make things happen and customers are satisfied about this.

3.2 Solution

As it means, the dockless bike hire systems (DBSPs) consists of a bicycle with a lock that is usually integrated onto the frame and does not require a docking station. Different from a dock-based system, this system really solved the 'last mile' problem as customers can leave the bicycles anywhere they want. By March, 2017, the scale of the study of dockless bikes for sharing in Chinese cities had reached over 4 million, and Shanghai alone had reached about 450,000. (Shi, Si, Wu, Su & Lan, 2018) Mobike and Ofo became the biggest and the second biggest dockless bicycle-sharing system operators over the only 3 years. However, although each bike has installed global positioning system (GPS) helps to find their location; with the large scale deployment of shared bicycles in Chinese cities, issues such as theft and vandalism, uncontrolled parking and waste accumulation are gradually surfacing. According to statistics, the loss of bicycles has reached to 20% (Sina, 2017)[9]. The operational cost for just one Ofo bike is over 1,000 RMB. (about £115) In this case, a more sustainable approach is needed and then a more closely coordinated stakeholder group will be essential. Similar to a dock-based system, the stakeholders includes users, governments, operators, manufacturers, and members of the general public. Certain affecting factors are also listed like urban transport layout, parking places, cost of each unit, built environment, anti-social behavior, government's approach (grants & subsidies) and corporate infrastructure provided to monitor those bikes and think of more computers' preference like they can put more bikes to the entrance of metro stations and other places with big people flow rate. The overall planned deployment is shown in Figure 1.
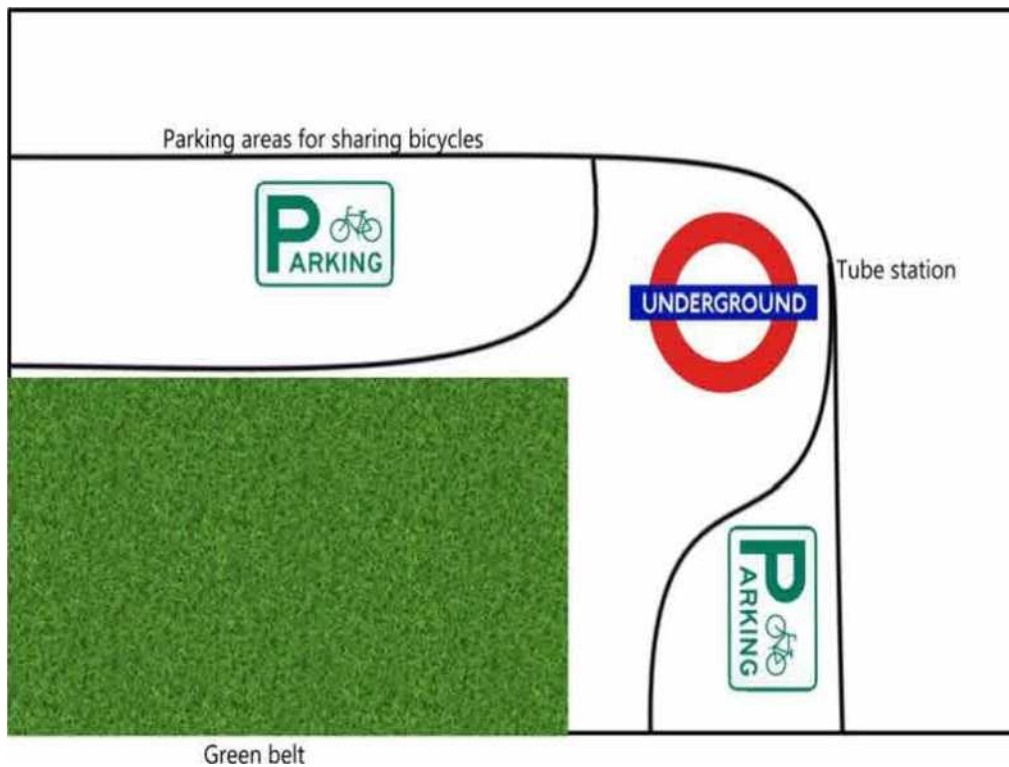
Fig.1 Deployment of Parking Areas for Sharing Bicycles

4. Discussion

The governance of DBSPs sustainability is complex, as this requires that various stakeholders, as well as multiple influencing factors, be associated with each other. As such, an increasing number of challenges caused by these complexities need to be addressed as a matter of urgency. But with certain approaches things can be better with sustainable approaches. Compared to Paris and London Santander bike-sharing scheme, we can found both approach needs big efforts from social forces and government in different stages.

References

[1] June (2011). "Runde Sache". Readers Digest Deutschland (in German). 06,pp: 74-75.
[2] "ofo bicycle": riding bicycles anytime and anywhere". Peking University. October 29,2015. Retrieved February 16,2018,pp: 66-69.
[3] http://www.huawei.com/en/about-huawei/cases/ofo,no.2, pp: 203-205.
[4] LFurness, Zack (2010). One Less Car: Bicycling and the Politics of Automobility. Philadelphia:Temple University Press. ISBN 978-1-59213-613-1,pp. 55–59.
[5] Susan Shaheen & Stacey Guzman (Fall 2011). "Worldwide Bikesharing". Access Magazine No,pp:214-216.
[6] Retrieved 1 July 2012 Cycling Weekly, (2007) ,pp:48-50.
[7] Centre for Public Impact, (2016) ,pp:87-88.
[8] https://www.crowdfunder.co.uk/santander-cycles/about BBC, (2016) ,pp:151-152.
[9] https://www.bbc.co.uk/news/uk-england-london-37543307 Sina, (2017) ,pp:129-130.