Case Study of the Uber Failure in China: A Technoethical Analysis

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Table of Content

Abstract

Technology and digitalization today have greatly accelerated the process of globalization and introduced new business approaches and concepts. Drawing on the notion of a sharing economy, the ride sharing economy introduced by Uber has created social controversy and debate. When Uber expanded to the market in China from 2013 to 2017 with the venture ending in failure, it marked the first time to introduce the concept of a 'sharing economy' to China. The ride sharing economy brought by Uber created economic, political, cultural, and social upheaval within society. Guided by the technoethical approach, a case study on the failure of Uber in China was conducted using a systematic literature review of essential research articles and news coverage from 2013 to 2017. Case study findings uncover the following main themes connected to Uber's localization in China: safety, privacy, morals and ethics, environments, regulation and legislation, urban plan, labor identity, and labor fairness. The technoethical analysis reveals a gap between technology and ethical awareness, a need to pay more attention to ethical consequences, and a need for government laws and regulations to keep pace with new e-business technologies. This case study contributes new insight into Uber in China and the ride sharing economy from an ethical perspective.

Keywords: Uber, China, sharing economy, e-business, Technoethics

Chapter 1: Introduction

1.1 Background

I still remember the very hot summer when Uber entered the Beijing market back in July 2014. That was the fifth month of Uber conquering the market in China. At that time, people in Beijing had been used to the taxi hailing services built by Didi Chuxing and Kuaidi and they greatly changed people's lives. I was not worried about taking a taxi on a dark, raining night or at a place far from the city anymore. Taxis were a common transport vehicle in Beijing, which was different from many other countries, especially the western world. Honestly, it was not very expensive. The initial fee was 13 CNY (around 2.50 Canadian dollars) within 1.86 miles and there was an addition fee of 2.3 CNY (around 45 cents) for every 0.62 miles added to the initial riding fee. More importantly, there was no private car hailing services, namely, and the genuine sharing economy had not really started in China.

Uber firstly introduced the concept of ride sharing to the public in China. It was quite new but very exciting. As product designers working at an Internet company, my colleagues and I were quick at catching on to this revolutionary idea. I was very excited to download the app but when I needed a ride, I hesitated for a second. Finally, I successfully tried it for the first time but I was careful and sent the car's information and my location to my family. Actually, my first Uber experience was quite fancy and the driver and I had a nice conversation about Uber, ride sharing, and new ways to make money. Both of us were extremely excited about this new riding choice. Uber provided a very attractive price and bonus for each ride. However, I still used taxi hailing services more than Uber. The price was one consideration and safety was another. Each time I had an experience with Uber, I observed the driver, sent the information to my family, and kindly

reminded the driver to drive safely. I felt the taxi driver was safer and the Uber driver was like a stranger.

In 2014, Didi Chuxing and Kuaidi were competing to dominate the market. The customers were the biggest winner in this battle and they frequently enjoyed the large number of subsidies (Hook, 2016). Most of my friends and family, and I, did not really want to change our riding habits. Still, I gradually heard taxi drivers complaining about Uber. The reason for this was quite simple. They were talking about workplace fairness because Uber took away some of their passengers and salaries. In China, taxi drivers that belonged to local taxi companies need to pay the mandatory operation fee and safety insurance monthly. Uber drivers apparently only paid for a certain percentage of the service fee after each ride. Some taxi drivers even started thinking of joining Uber company instead. Yet, we all had a feeling that Uber China was operating in the grey zone at that time and the government would finally react to legal issues. After one year, unlike Chengdu, Uber in Beijing was still finding ways to compete with local ride-sharing firms. It was not surprising that Didi Chuxing started private car hailing services. Thanks to Uber, it was much easier for the public to adopt the new sharing economy at this time using the familiar app while Uber China was in a more competitive environment. It was not only about fighting for the market share, but it was also about the legal rights. However, Uber did not wait for legalization in China. The government of China published the legalization in July 2017 but after a few days, Uber officially announced that they were exiting the market in China and merging with Didi Chuxing (Kirby, 2016). Uber China ended that day but the sharing economy had arrived in China. Although regulation and policy are stilling under process today, ride sharing in China became more popular after Uber's leave.

In the global ecommerce era, the capacity for expansion with global consciousness is growing. If globalization and localization are the weapons for commercial giants to win the markets, technology and digitalization are catalyst in this war (Lule, 2012; Campling, 2001, Frankova & Johanisova, 2012; Hines, 2013). However, the processes are not easy. They conflict with or compromise other processes and they might bring a penalty and pain even if there is no outcome or final state (Lule, 2011). Today, China is a land of opportunities with the largest number of Internet users (Internet World Stats, 2017). Its huge consumption ability greatly attracts global ecommerce firms to enter there but there are a number of challenges regarding social impact, human concern, the Internet environment and local competitors that need to be overcome (Salomon, 2016). In fact, in recent years, even tech firms that have already succeeded in the Western world like Airbnb are still looking for strategies to tap into the Chinese market. Some have failed after trying for a couple of years, like eBay (Salomon, 2016).

Uber expanded to China in February 2014, and exited by merging with Didi Chuxing, its biggest competitor in China, in August 2016 (Golliher, 2016). People believe that Uber, the most popular ride-sharing giant, will never give up on trying to establish new, flexible access to transportation with the concept of sharing (Rao & Isaac, 2017). The technological firm never stopped fighting for globalization by beating other rivals and seeking publicity. Uber has had educational experiences that successfully solved local taxi drivers' protests and made advanced progress with governments identifying Uber's legitimacy (Cramer & Krueger, 2016). Uber had a 30-month history in China, but this does not mean it was a complete failure. Uber China once conquered more than 60 cities and the weekly volume once reached one third of global transactions (Hook, 2016). Since China is quite different from other global markets, a number of unique ethical

and social questions should be asked about technology as well as the advent of the sharing economy.

Uber was the first company in China to introduce and practice a genuine model of the sharing economy. Didi Chuxing, Kuaidi, and other local ride-hailing competitors were merely operating taxi hailing services at the beginning instead of private car hailing services under the coat of sharing like Uber China. Specifically, Didi Chuxing launched in September 2012, and until May 2015, it pushed into private car hailing in Hangzhou China (Hook, 2016). On the other side, Uber China launched in February 2014 and this shows that Uber was more than a year ahead of local rivals in introducing the sharing economy, a completely new ecommerce model for the public in China.

After Uber failed in China, a surge of studies focused on the marketing strategies, intensive local competition, and government censorship and limitations (Kirby et al.; 2016; Salomon 2016; Huet & Chen, 2015). Research also analyzed the parallel comparison with local ride-hailing services, such as Didi Chuxing and Kuaidi, and considered these ride sharing tech firms as a part of the sharing economy (Hook, 2016; Stone & Chen, 2016; Punit, 2015).

What remains missing in the research literature are comprehensive research studies that examine social and ethical issues that plagued Uber and contributed to its failure in China. Luppicini (2010) explains that new emerging technologies can have a disruptive force that dramatically impacts human life and creates new (techno)ethical challenges to overcome. Therefore, for Uber's globalization in China, the social impacts, human concerns, and moral and ethical issues should be deeply re-examined. In addition, there should be consideration for whether the process has influenced new reforms, guidelines, and communication.

A case study using a technoethical approach is well suited to explore complex social and ethical issues emerging from the integration of controversial new technologies in society. To be more specific, this case study is guided by a systematic literature review of relevant scholarly and non-scholarly documentation from 2013 to 2017 with the aim of providing a comprehensive account of how Uber worked in China from an ethical perspective. Secondly, based on the findings of this case study, the researcher deeply explored a multilayered knowledge of Uber China and its failure in the areas of safety, privacy, morals and ethics, environments, regulation and legislation, urban plan, labor identity, and labor fairness. By providing a detailed ethical perspective, the author mapped out the transformation of the sharing economy China, which shows the need to raise awareness of the ethical consequences of the sharing economy and the necessity to keep advanced with new technology.

1.2 Structure of the Research

The research is organized in six parts: the introduction, the literature review, the research methodology, the findings, and the interpretation and discussion. In the first chapter, the researcher's experiences of Uber in China, the background, the research problem and the research purpose are presented.

The second chapter presents relevant literature on theory and case. It is developed from the background on globalization and localization. The chapter then focuses on Uber's case in terms of technology, communication, and relevant debates. The ethical concerns about the sharing economy are also discussed. Additionally, Technoethical Inquiry (TEI) is introduced as a grounding framework by the guidance of Luppicini (2008; 2010) to help explore the social and ethical complexity merging from Uber China's socio-technical system relations.

In the third chapter, the research methodology is followed by an introduction of the research design guided by Creswell and Poth (2018) and Yin (2003). There is an explanation of the data collection and data analysis procedures, and the trustworthiness of this research.

Chapter four and five present the research findings, further interpretations, and a discussion according to the Technoethical Inquiry (TEI). The last chapter briefly summarizes the research and provides future recommendations for the ridesharing economy in China.

Chapter 2: Literature Review

2.1 Background: Globalization and Localization

The process of globalization appears unstoppable. Mcluhan's (1994) prophecy on how "the new electronic interdependence recreates the world in the image of a global village" has come true (p. 20). Beck (2005) discusses globalization by how "the social sciences must be grounded anew as a reality-based science of the transnational – conceptually, theoretically, methodologically, and organizationally as well. This includes the fact that there is a need for the basic concepts of 'modern society' – household, family, class, democracy, domination, state, economy, the public sphere, politics and so on – to be released from the fixations of methodological nationalism and redefined and reconceptualized in the context of methodological cosmopolitanism" (p. 50). Castells (2013) explains that globalization has redefined the "territorial boundaries of the exercise of power" (p. 17). More specifically, in the economic field, globalization is identified as an increasing internationalization of economic exchanges and production, and the abandonment of regulation on financial flows and trade (Campling, 2001). In other words, economic markets, trade, and consumers are becoming more fluid and integrated. Especially in the technology and Internet era, it is widely believed that technology today is central to the process of globalization, which has accelerated and reformed the global economy (Castells, 2011; Schirato & Webb, 2003).

On the globalization trend, Castells (2013) indicates that everyone is included in the global network, but it does not mean that everybody is affected by the process of globalization. One argument about globalization is whether it benefits all groups, or if it adversely brings about social inequalities. A few studies propose the concept of anti-corporate globalization, and refer to the outcomes of inequality, growing poverty, ecological destruction, and social dislocation (Juris, 2008). On the other side, Schirato and Webb (2003) critically point out that, on the one hand, we

can consider globalization as doing it my way and others can catch up. This might stimulate the locals and affect the national policy. On the other hand, the existence of state as well as the barrier between nations cannot give rise to a fully integrated global economy. Stiglitz (2007) argues that to engage in the world, everyone and every nation needs access to resources, technology, information, and a high level of education, which can be learned through globalization. Similarly, Castells (2011) states that "the process of worldwide market expansion feeds back into productivity growth, since firms must improve their performance when faced with stronger competition from around the world, or when they vie to win market shares internationally" (p. 99). It appears that as long as local governments consider only their own interest of citizens and their own firms, achieving a fully open global market may not be realized.

Today, with the developments of technology and information dissemination, the issues are more complicated and there are more conditions. The competition is also intensifying and getting fiercer. The emergence of more powerful, advanced technology, more expandable information, and more flexible communication make it possible to involve everyone in collaborative activities, transforming social power, and establishing a no-boundary digital network (Lule, 2012). The power defending happens between local, national, and global, with the difficulty that "power is global, while the resistance of counter power is usually local" (Castells, 2013, p. 52). This raises the question of how to realize the strategy of globalization from a targeted local?

In the forceful wake of globalization, localization has become a strategic approach for acceptance. The main reason is that although the social structure is open to the global economy, most of human activities and experiences are local, "both in territorial and cultural terms" (Castells, 2013, p. 25). Likewise, global firms have to operate based on local labor, local governmental support, and local target market. Shuman (2013) indicates that going locally is meant to use the

local resources sustainably, and serve the local customers with less dependence on the distant global company. In order to maximize trade and profit, it is wise to understand local economy, social structure, and regulation. In other words, profit is the primary objective. Mander (2014) argues that by discriminating in favor of the local, the localization strategy increases the control of local economy, creates greater social identity, and meets local economic expectations. Therefore, by strategic globalization and localization, the global and local coming together has become one important expanding strategy for ecommerce and technology companies (Halseth, 2016). Specifically, according to Frankova and Johanisova (2012), localization includes emphasis on local support, relationship building, sustainability of consumption, and development of local communities. To smoothly process localization, local factors including morality, politics and social practice should also be carefully considered.

Furthermore, localization strategy is not easy to go extremely local, and the combination of globalization and localization is called glocalization. It leads to an increasing mobility of global capital, services, and labor defined as dislocation and relocation (Campling, 2001). Hines (2013) considers localization as a process that can reverse the trend of globalization by changing the rules of international trade and transforming the rules and services. This is different from what other researchers think. Although globalization is the process, localization is both the effective way and the result of economy expansion. Under the historical and evolutionary context, research reveals how specific regions are shaped by interdependent global-local dynamics (Halseth, 2016). Resources and values change accompanied with increasing conflicts and opportunities, transitioning cultures and communities. The influence of localization can be positive when there is no passive acceptance, not considering globalization as a self-reinforcing interest (Mander, 2014).

Challenges of localization are being broadly addressed (O'Hagan, 2002; Hines, 2013; Gefen, 2000). Global companies inevitably face the inadaptation of the local communication, culture, and social value (O'Hagan, 2002). Therefore, localization must be reintroduced publicly to domestic environments. Companies are willing to adopt local policies and rules, research existing competition, and increase democratic involvement politically and economically (Hines, 2013).

One concern is how to gain a user's trust, as a trust-based relationship is one of the prerequisites to achieve global ecommerce success (Gefen,2000; Rust & Kannan, 2002). Especially, virtual communication must build trust to communicate and engage in business activities in the virtual world. Gefen (2000) argues that familiarity with an ecommerce corporation and sense of trust can increase the desire of consumption. For the localized strategy, it must be decided how much transition should be imposed, how trust should be built with new partners and consumers, how long-term trust should be maintained, and to what degree the global company should monitor or control branch offices (Malmberg & Maskell 2006). Therefore, sufficient funds are very necessary for rebuilding the localized economy. Furthermore, considering the influence of localization, Lule (2012) indicates that people are encouraged to think of products not politics and keep up with the pace of new local economies with new social changes.

2.2 Uber Globally

Uber was founded in San Francisco in 2009. Travis Kalanick and Garrett Camp came up with the idea because they were having trouble hailing a taxi on a terrible, snowy night. As a global ride-sharing company, Uber is growing extremely fast. According to Uber's official website, Uber is currently expanding to 633 cities worldwide which includes ride hailing services and a number of delivery services, like Uber Eats (Uber, 2018). With various fares, Uber provides multiple levels

of ride services that include economy (UberX, UberXL, UberSELECT), premium (UberBLACK, UberSUV), accessibility, and carpool (Schneider, 2017). Fares depend on the time and distance, and some cities started an upfront price with locked-in rates (Hawkins, 2017; Chin, 2017). After the trip, the Uber rider and driver can evaluate each other based on their experiences which help Uber monitor and protect users' values. The business model of ride sharing has proved to be a powerful win-win strategy, as Uber, passengers, and drivers all get benefits. Uber drivers can use their own well-maintained cars and be treated as Uber partners (Leighton, 2016). Uber makes it quite easy for riders to access services and pay relatively cheaper costs compared to taxi companies. Now, some other ride sharing rivals are teaming up with a similar technology-based model, such as Lyft, Didi Chuxing, and Gett.

With no doubt, the increasing popularity of Uber greatly is prompting sharing economy globally and it exerts an enormous social impact not only on the traditional taxi industry but also on the architecture of local labor force (Sundararajan, 2016; Rugaber, 2015; Figueiredo & Scaraboto 2016). The company believes that it provides multiple riding choices, competitive prices and flexible use for Uber consumers and it is profitable for Uber drivers to make money. In addition, Uber emphasizes that ride sharing will benefit cities by improving local transportation as well as strengthening the economy (Gortz et al., 2017). However, some research argues that, even if Uber increases job opportunities, the low eligibility requirements potentially lead to a problematic economic system. Leighton (2016) points out "the likely increased competition faced by individual Uber drivers, as there is no limit on the number of drivers, no requirement for registration and qualifications, will almost inevitably reduce incomes" (p. 871). Likewise, Blevins (2017) explains the issue of income that no licensing barrier "imposes excessive and anticompetitive barriers to entry to certain professions" (p. 855).

In recent years, at the same time of increasing market valuations, Uber is also fighting for the legalization of operating licenses. Gortz et al. (2017) encourage Uber and other app-based ride-sharing companies to cooperate with legislators and policymakers to form a new regulatory framework for operations. but the process of legalization is not easy, unless Uber makes revolutionary changes. Motala (2016) appeals to enforce norms and game rules in terms of fare calculations, vehicle safety management, driver professionalism, licensing and insurance requirements in the ride sharing economy. It is true that Uber has challenged the established line of workforce regulations and taxi hiring standards. For instance, the largest European market, London banned Uber's operation in September last year which made Uber lose 40,000 drivers and 3.5 million customers (Butler & Topham, 2017). This is not the first time Uber has been banned. Uber is fully banned in Bulgaria and partially banned in Canada, France, Germany, the US, and other regions (Rhodes, 2017).

Furthermore, Uber has been facing continuous challenges and rebellions (Motala, 2016; Gortz et al., 2017). Controversial debates about the lack of public security happen quite often. Compared to taxi drivers, Uber drivers have less training, management and license tests. In other words, Uber's globalization strategy presents a lack of corporate responsibility. To ensure the safety, on the official website, Uber claims that it is transparent to check the driver's information and find real-time location on the map at any time (Uber, 2018). Yet, Uber's fast growth has given rise to a number of serious accusations involving murders and sexual assaults.

The second issue is data privacy. This concern has been raised due to Uber's easy access to all drivers' and passengers' information and real-time locations. In addition, there were several data breaches occurred in the past few years. Uber announced in February 2015 that nearly 50,000 drivers' names and license numbers were hacked from the Uber database (Geuss, 2015). There

was another breach happened in October 2016 and Uber lost about 57 million customers' and drivers' data due to a systematic flaw (Newcomer, 2017). According to Uber's official announcement, 815,000 Canadian riders and drivers were affected last year by the exposure of account information including names, email addresses, and phone numbers (The Canadian Press, 2017).

Thirdly, the ongoing battles on fairness between traditional transportation and new technological modes will not stop. Local institutes and governments put great pressure on such innovative tech companies. One concern is whether Uber should follow the local workplace regulations. It is inevitable that ride-sharing innovation, allowing self-employed drivers to provide rides to users, has resulted in the imbalance of local workplace. With the emergence of sharing economy, research appeals local and state governments to adopt mixed strategies and regulations instead of preventing Uber and other tech firms (Rauch & Schleicher, 2015). Since Uber and other sharing-economy firms are expanding to transportation, food, hotels and other industries, the unstoppable trend has pressured a number of locals to update laws for both consumers and workers.

2.3 Uber China

As the first company practicing the sharing economy in China, Uber went through the periods of introduction, inspiration, development, questioning, pending, and permission. Uber's arrival broke the rules established by the traditional taxi industry at a time that local competitors were still developing taxi-hailing services. Uber's leave was accompanied by the legislation of the ride sharing economy in China for the first time.

Uber started its adventure in China in February 2014. Since Uber was not familiar with the social infrastructure, national Internet developments, and banking systems, the push was undoubtedly difficult (Salomon, 2016; Stone, B., & Chen, L. Y., 2016). Due to the unique

environment and culture in China compared to Western countries, Uber was slow in implementing its strategies in China. It first introduced the luxury car service in three big cities: Shanghai, Guangzhou, and Shenzhen (Hook, 2016). At that time, local taxi-hailing firms, such as Didi Chuxing and Kuaidi, were fighting hard for the taxi-services market share. Uber continuously launched People's Uber in Beijing after six months, "bringing promising innovations fit for a city with Beijing's scale", said the U.S. company (Vincent, 2017). For this new rebranding, Uber claimed that People's Uber was providing a nonprofit service and Uber would not take any service fare (Hook, 2016). In two years, Uber China had unimaginable achievements, expanding to more than 60 cities with various services that included Uber Black, People's Uber, UberX, etc. In October 2015, Uber's CEO Kalanick claimed that 30% of Uber's weekly transaction volume was happening in China and at least five cities took up the top ten busiest cities in the world (He, 2015). Especially, Chengdu beat New York for the top position in terms of everyday trips on the Uber app and the number of Uber drivers in the city had reached 42,000, which was almost the sum of London, Paris, and San Francisco (Kirby et al., 2016).

Since China is a huge target, Uber carefully operated its strategies during the process of localization. Specifically, a number of their actions in terms of payments, partnership cooperation, and mapping services were strategically carried out. Kalanick, who made numerous trips to China in one year, admitted that Uber China was very different than everywhere else, referring to Uber's global expansion (Mohan, 2015). Mohan (2015) argued that Uber could not copy its regular business patterns and had to make a change based on China's transportation and government bureaucracy. Firstly, instead of paying by credit card, Uber strategically switched to integrate with Alipay, the most popular mobile banking in China, as a primary method in 2014 and this change catered to the consuming habits of Chinese users (Hook, 2016). Secondly, Uber China chose Baidu

Map instead of Google Map because of the "great wall" policy (Millward, 2014). At the same time, being a partner with Uber, Baidu enabled users to book riding services on its own apps, which provided 240 million monthly active users from Baidu Map and 500 million monthly active users from Baidu Mobile (Millward, 2014). Thirdly, the large discount was extremely attractive to new customers and drivers. Drivers and riders could get impressive subsidies or riding bonuses which brought about a huge volume of registration (Wang, 2016).

However, the challenges of localization in China were unprecedented from institutions, rivals, and the public. One the one hand, Uber China had to deal with fierce competition with local ride-hailing companies, such as Didi Chuxing and Kuaidi. It is well known that Uber succeeds in receiving impressive investments from global giants. Yet, Didi Chuxing also raised more than 2 billion dollars from a number of well-known global investors including Tencent and Alibaba in 2015 and 4.5 billion dollars from investors including Apple (Hook, 2016). This gave it sufficient funds for market operations. According to Hook (2016), after Didi Chuxing and Kuaidi merged in 2015, Didi Chuxing could spend more funds on private car hailing instead of taxi hailing. It initially focused on taxi hailing services in more than 400 cities in China, which received more popularity and customers and it offered the option for passengers to pay by cash, which was at that time a great convenience for those consumers who were accustomed to using cash (Wang, 2016). To fight for the market share, Uber had to attend this bloody war with other ride hailing companies, and it showered drivers and riders with bonuses. According to Travis Kalanick, Uber was losing one billion dollars a year in China for market operations and driver subsidies (Hook & Clover, 2016). Moreover, Uber had to strive for both national and regional legal operations. As the first ride-sharing company in China, it was illegal for Uber to operate at first because the government of China technically banned private cars for commercial driving services. However, Uber was not

banned in China. “China has been one of the most welcoming places we do business,” according to Kalanick (Hook, 2016, p. 7). However, Uber was still facing regional conflicts and obstacles. In May 2015, the Guangzhou office was raided by local police because Uber failed to be considered as a qualified service provider by the use of private cars without commercial authorities (Price, 2015). The commission implied that they would continue stopping any illegal operators who were disrupting the taxi market (Price, 2015). Apparently, the international ecommerce company was in a more difficult situation for conquering the markets compared to other local ride-sharing firms.

Furthermore, although the government of China finally granted the legal status to ride-hailing services, Uber was facing more limitations. According to the Ministry of Industry and Information Technology in China (2016), all ride hailing companies are required to authorize the government and relevant ministries to access data for censorship and monitoring; drivers need to register with local authorities and meet standards to get qualified certification; vehicles can only be used after installing a GPS and security alarm system; companies are required to pay local taxes and buy the insurance for riders. Some policies were still under discussion. For example, the pricing strategies should be decided with local governments because in some cities, taxi companies are owned by the local government (Kirby et al., 2016). This was a dilemma for Uber. In August 2016, after 30 months of aggressive pushing into China, Uber decided to sell it operations in China to Didi Chuxing, its largest competitor in China, for 35 billion dollars (Golliher, 2016). By the day of merge, Uber was in 60 cities with 40 million rides a week, while Didi Chuxing was in 400 cities with 14 million rides per day and 11 million was from private car hailing (Salomon, 2016). This battle was costly but the result seemed far from what Uber expected.

2.4 Sharing Economy

The sharing economy refers to the collaborative consumption of products and services that are shared with others. As defined by Hamari et al. (2016), sharing economy is "the peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services" (p. 2047). Traditionally, it is seen where people live closely to each other, such as neighbors, friends, and families, but it currently develops from local to global and from offline to online (Yaraghi & Ravi, 2016). The concept of sharing has been increasingly used in cyber communication within communities, such as to share videos, photos, and knowledge, and today people are starting to apply sharing behaviors in everyday life in the physical world (Botsman & Rogers, 2010; Kaplan & Haenlein, 2010; Belk, 2014). There are generally two common rooted features that help people experience sharing activities: the temporary use by access to non-ownership and heavy reliance on the Internet and communicational technology (Belk, 2014; Rauch & Schleicher, 2015). The most important change is the revolution in technology. Botsman and Rogers (2010) explain that due to the increase of information, smartphones, and awareness of sharing, shared businesses develop at an extremely fast speed. Rauch and Schleicher (2015) emphasize on the improvement of data analytics, algorithms and metrics, and storage ability since technology makes it much more efficient to match buyers and sellers. Also, Rauch and Schleicher (2015) explain that the mass use of smartphones gives people the chance to enjoy the sharing economy anytime and anywhere, which gave birth to new forms of sharing ecommerce. Today one can easily see people living with a collaborative lifestyle, commuting to work in the morning by bike sharing or car sharing, and living in shared homes during vacation.

However, the desire of sharing does not mean the increase of business trade. Studies focus on what factors attract the public to engage in the sharing economy and how it works (Hamari et al., 2016; Belk, 2014; Matzler et al., 2015). Participants are usually driven by economic, social, environmental, and ethical factors. Schor (2016) remarks that sharing economy companies often provide a lower cost of products and services, which apparently obtain more attention from consumers. Meanwhile, for those who are unable to afford the buying fees, it is an alternative way to get access to products (Heinrichs, 2013). Social motivation is another important factor. For instance, Botsman and Capelin (2016) analyze how Airbnb is branded as the community of love and peer-to-peer hospitality since it provides not only welcoming travel experiences but also genuine human connections at locals' homes. Such a powerful concept has helped Airbnb gain consumers as well as change people's lifestyles. Moreover, ethical factors are also involved. In Hamari et al.'s (2016) study, the participants' motivation also comes from enjoyment and altruism and, for purchasers, communication, convenience, and safety are relevant considerations. Hamari et al. (2016) claim that using gamification and the trust theory can enforce the desire of consumption in different economic fields. Growing environmental consciousness also leads consumers to rent or borrow (Botsman & Rogers, 2010). A sharing economy might not only relieve environmental burdens and reduce traffic problems, but it can also save resources.

The relationship between the owner, buyer, and service provider is dynamic. Botsman and Rogers (2010) point out the relationship between collaborative consumption and people who are engaging, "not asking people to share nicely in the sandbox," but putting a system in place "where people can share resources without forfeiting cherished personal freedoms or sacrificing their lifestyle" (p. 31). Therefore, to improve the sharing economy, a number of considerations are proposed: building service platforms, which guides customers to participate; promoting product

services to support customers, such as insurance and maintenance services; taking advantages of the market to align with more potential customers; and forming sharing lifestyles (Matzler et al., 2015; Botsman & Rogers, 2010). To provide better experiences, Uber, for example, focuses on reducing risk through ratings and comments, reducing costs and traffic problems via technological algorithms, and creating more services based on ride sharing (Schor, 2016).

Sharing economy today is entering a new stage with a lot of debates. Data privacy and security, price discrimination, racial discrimination, and the relationship with traditional business and new competitors should be paid attention to (Schor, 2016; Yaraghi & Ravi, 2016; Botsman & Capelin, 2016). Schor (2015) explains that today technological ecommerce firms are facilitating sharing experiences in the physical world among people who do not know each other, called "stranger sharing". They share cars and homes, which produce a high level of risk. Airbnb hosts, for instance, have experienced bookings from guests who used falsified identities and stolen credit card information, which had a bad impact on hosts' safety (Botsman & Capelin,2016). Botsman and Capelin (2016) explain that Airbnb has decided to protect the rights of guests by giving 24-hour customer service, a guarantee to repair damage, as well as a three-step identity verification for online users. However, they are still facing different safety and security issues.

Moreover, the sharing economy makes the market more fluid. A compelling alternative for consumers and participants is to share without the limit of time and space, which has broken the market balance (Botsman & Capelin, 2016). In recent years, since sharing economy giants have received a large amount of investments from capitalists and impressive profits from users, regulators and politicians, locally and nationally, they are becoming more contested against the expansion of sharing economy (Schor, 2015). Meanwhile, it is acknowledged that the more integrated the large companies are, the more monopolized the market will be and the less benefit

the consumers will get. Therefore, Schor (2015) encourages them to diversify the markets, and at the same time, establish standards for a healthier global economy. The closer connection and added complexity of consumer-market relations within this new technologically mediated economic model has created a number of new social and ethical concerns to address.

2.5 Theoretical Perspective

This case study is informed by Technoethical Inquiry (TEI) a social systems approach designed to highlight the social and ethical complexity emerging from socio-technical system relations (Luppicini, 2010). Technoethics is generally defined as "an interdisciplinary field concerned with all ethical aspects of technology within a society shaped by technology" and it also "deals with human processes and practices connected to technology which are embedded within social, political, and moral spheres of life" and it "examines social policies and interventions occurring in response to issues generated by technology development and use" (Luppicini, 2008, p. 4). Luppicini (2008) highlights the social responsibility of the proper use of technology in society by deeply understanding the accompanied outcomes and impacts. Technoethical Inquiry (TEI) provides a conceptual grounding to help understand ethical and social problems merging from technological activities (Luppicini, 2010). Specifically, the researcher in this study focused on the ethical and social aspects of Uber's expanding process and failure in China in relation to communication, information, technology, and ecommerce. Based on the multiple sources of data, the researcher reviewed the technoethical issues of Uber's localization in China and encompassed a deep and comprehensive understanding of the outcomes from the data analysis. A series of technoethical perspectives were involved including the theoretical perspective, the historical perspective, the political perspective, the economic perspective, the socio-cultural perspective, etc.

2.6 Research Questions

In this study, based on the systematic review of selected literature, three primary questions were developed:

- What were the social and ethical issues connected to Uber's localization in China?
- From a technoethical perspective, how is the Uber failure understood with respect to human concerns, ethical issues, and social implications?
- How did the recent Uber failure influence the current sharing economy in China?

Chapter 3: Research Methodology

3.1 Research Design

This research design is a case study, which is "the study of the particularity and complexity of a single case" (Stake, 1995, p. xi) and "a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information" (Creswell & Poth, 2018, p. 96). According to Creswell and Poth (2018), the key features of a case study include identifying a specific case, the intent of conducting the case study, an in-depth understanding of the case, the selection of how to approach the data analysis and case themes identification. Yin (2003) explains that the case study approach arises out of the desire to understand complex social phenomena since it allows investigators to retain the holistic and meaningful characteristics of the real-life events, such as organizational and managerial processes. It is frequently questioned by researchers about "how can you generalize from a single case". According to Yin (2003), the case studies are "generalizable to theoretical propositions and not to populations or universes which means a case study does not represent a 'sample', and in doing a case study, the research goal is to expand and generalize theories and not to enumerate frequencies (statistical generalization)" (p. 10). Guided by a technoethical approach, this case study uses a systematic literature review of relevant scholarly and non-scholarly documents to explore the complexity of social and ethical concerns associated with Uber's failure in China.

3.2 The Role of the Researcher

The role of the researcher was as an inside observer. Firstly, instead of creating new situations, observation is a powerful weapon for researchers to positioning themselves (Stake, 1995). This researcher is from China and has firsthand experience of Uber's ecommerce

localization in China. Besides studying Communication, the researcher also has professional experience working at two large technology-based Internet companies (Baidu and Shopify) for a couple of years in China and Canada. Just as Creswell and Poth (2018) indicate, the researcher reflexively identified the value, knowledge, experiences, and personal background, which shaped the findings and interpretations during the study. To guard against possible bias in data interpretation, the researcher kept a research journal.

3.3 Data Collection

The researcher used a systematic review to search for the literature on the use of Uber from the social and ethical perspectives. Hox and Boeije (2005) explain that a systematic review using existing data can "answer the newly formulated research question, smooth the pilot stage of a project, or provide the researcher with a wider sample base for testing interpretations at far less cost and with greater speed" (p. 594). Documents enable a researcher to obtain the unobtrusive source of information and investigate and represent data (Creswell & Poth, 2018). According to Yin (2011), one important principle is that the researcher needs to use multiple sources of evidence, not a single one, to ensure the validity of the research. In this study, the data collection processed primarily through four databases: Web of Science, ABI/INFORM Global (ABI), Academic Search Complete (ASC), and Scopus. The analytical review not only included scholarly peer reviewed publications, but also non-scholarly articles from authoritative media websites, newspapers, and magazines. Scholarly publications provided a broader academic and grounded view on the developments of the sharing economy, Uber in China, and Uber globally. Non-scholarly publications presented news coverage and current debates concerning Uber's localization in China. Therefore, the two different layers from both scholarly and non-scholarly

publications provide a thorough knowledge of Uber's developments as well as its social and ethical issues.

With regards to the ethical and social issues, four databases were searched with the same search strategies. The researcher first focused on the technoethical issues of Uber's localization in China. The search strategies used included "Uber AND China AND ethic* OR moral* OR safe* OR privacy OR legal" and they were narrowed within the title, abstract, and subject terms. Since Uber first introduced the sharing economy to China, to better understand the Uber's failure in China, the research extended the search strategy to "sharing economy AND China AND ethic* OR moral* OR safe* OR privacy OR legal" with the title, abstract, and subject terms. However, the results showed few studies on this topic. Therefore, the researcher continuously expanded to the search strategies of "Uber AND ethic* OR moral* OR safe* OR privacy OR legal" because the nature of Uber's ethical and social issues has a lot in common between the local and global. Specifically, collected data covered technoethical issues of Uber or Uber China, including the governmental response related to regulation and legislation, discussions that reflected social impact and human concerns, and analysis of ethical issues that covers privacy, security, and the environment. The same search terms were applied to four different databases. Table 1 (see Appendix A) shows the number of hits searched from the databases. Also, in order to focus on the recent growth and new challenges of Uber, the scope of this analytical review was limited to the last five years, from 2013 to 2017.

3.4 Data Analysis

The data analysis and interpretation were ongoing processes that involved "continual reflection about the data, constantly asking analytic questions, and writing memos throughout the study" (Creswell, 2018, p. 184). In total, 31 articles (see Appendix B) that had sufficient

information were selected from the four databases by eliminating irrelevant content and removing duplicated data. Interpretations of the research findings were not simply accomplished by only analyzing data. Following Yin (2003), the data analysis in this study was composed of examining, categorizing, tabulating, testing, and merging different sources of evidence to illustrate initial thoughts or new research findings.

Since this case study was based on secondary documents, re-using data might produce the risk of exaggerating certain impacts in ethics or it may produce new ethical concerns (Thome, 1998). Therefore, the researcher carefully read the sources systematically to uncover key themes. Key themes in relation to social and ethical perspectives of each article were cautiously extracted.

3.5 Trustworthiness

To follow Creswell's (2018) suggestions, a number of procedures were implemented to ensure the validity of this case study. Creswell and Poth (2018) suggest researchers to corroborate evidence by using multiple and different sources, discovering negative case analysis, and clarifying research bias or engaging in reflexivity. In this case study, firstly, a variety of reliable sources that include scholarly and non-scholarly literature were selected. The researcher gathered multiple kinds of data from magazine publications, newspapers, and online reports and articles from professional media platforms to ensure adequate data triangulation. Secondly, the same rigorous data collection and analysis procedures were followed throughout the study to ensure the richness of data. Thirdly, as is common in qualitative research, data collection and data analysis were iterative and performed throughout the research. This helped get a better understanding of the Uber's case and interpret findings critically. Moreover, Yin (2003) encourages researchers to set up a detailed case study database and document their research findings as well. Therefore, "a database with notes, documents, tabular materials and narratives must be stored" (Yin, 2003, p.

102). In this research, the data collection and data analysis were well organized by carefully recording the key themes of each article (See Appendix C). The findings are presented not only by context, but also with diagrams (See Appendix D).

Chapter 4: Findings

The general findings of this research presented multiple social and ethical concerns that were gathered from 31 reviewed articles. They include safety, privacy, environment, ethics and moral, urban plan, legal issues, labor fairness, and labor identity concerns. Table 2 indicates (see Appendix C) the number of times, in terms of frequency and percentage, that a concern is discussed by articles. In addition, Figure 1 (see Appendix D) graphically reveals the percentages of the concerns in terms of occurrence. It is shown that safety (20.0%), legal issues (32.5%), labor fairness (13.8%), and labor identity (13.8%) are the top concerns according to the reviewed literature. Safety refers to a number of security issues raised by the Uber business model, the information storage, and the unprofessional driving. Ethics and moral issues include a multilayered discussion of social freedom, anxiety and frustration, racial discrimination, disability discrimination, and stranger trust. Legal issues refer to the eagerness and necessity to establish new laws and regulations for Uber's operations globally and locally. Labor fairness refers to the social concerns of labor wages, working opportunities, and labor rights produced between the traditional industry and new sharing economy or between similar sharing-economy corporations. Moreover, ethics and moral (11.3%), privacy (2.5%), urban plan (5.0%), and environment (1.3%) are also presented for a more comprehensive understanding.

Table 2 and Figure 1 establish that safety and legislation are the two biggest concerns for the ride sharing economy. It is reasonable to think of safety as a primary public concern. When Uber was introduced in China, passengers were riding in vehicles driven by strangers for the first time, excluding taxi drivers. This may have increased the perception of stranger danger. Leighton (2016) highlights the high risks of road accidents, threats and assaults, racist and homophobic behaviors, poor driving skills, and unstable navigation. Additionally, ridesharing incidents happen

often, but passengers have no clear idea of what has happened when something goes wrong (Cao, 2016). Cao (2016) explains that, statistically, there have been "58 alleged assaults by drivers, 225 alleged sexual assaults, 10 alleged kidnappings, 50 imposters, and 24 deaths" to date (p. 1105). According to Uber though, it is explicitly stated in the terms, that for registration, users need to agree that Uber, as a service provider, "does not guarantee the quality, suitability, safety or ability of third party providers. You agree that the entire risk arising out of your use of the services...remains solely with you" (Terms of Uber Use, para. 39).

The concerns in relation to safety have raised a number of issues. Leighton (2016) states that "there is no obvious means of redress for passengers if things go wrong (some have been attacked, abused and robbed)" (p. 869). Thus, she argues that the safety of the public and passengers cannot be guaranteed because Uber drivers are not required to have a special commercial driving license or take appropriate training for qualification. Meanwhile, Kortum (2016) indicates that the lack of information about vehicles and drivers is another concern. Passengers lack the ability to choose the Uber drivers, so they have no foreseeability of service quality and can only know the driver's basic information after hailing the car (Kortum, 2016). Unlike Uber, Didi Chuxing and other local ride sharing firms in China give priority to the passengers who can see the driver's information before ordering the ride and they can choose the driver. Moreover, Elliott (2015) argues that driver ratings on the App can help Uber monitor drivers but ratings cannot reflect a driver's responsibility of public safety and a car's current condition in terms of engine function, brakes quality, and steering fluid levels. Furthermore, Cao (2016) argues that Uber's background check does not meet industry standards and people with criminal records are found to be drivers. On that note, Cao (2016) suggests Uber to meet drivers in person and do a fingerprint and identification test rather than only checking the social security

number to avoid submission of false information. Harding et al. (2016) argue that it is necessary to do more thorough background checks by Uber and public regulators which could help predict a driver's behavior thus detecting potential risks, such as Uber crime issues, including sexual rape, sexual harassment, and murder.

As safety is a principal mission for public transportation, the reviewed literature centered on the concern of legislation and regulation. Cao (2016) argues that the novelty of Uber's business model has challenged established social rules and has disrupted the existing marketplace. Witt et al. (2015) explain that "entry to the taxi industry is heavily constrained through licensing requirements, unlike most other customer service industries" (p. 176). Uber drivers, passengers, ride sharing companies, and even nations were all involved in the technological innovation. At the same time, it shared risks in terms of safety, privacy, and fairness to drivers and consumers which forced governments and regulators to reform the norms and rules of the riding industry. Therefore, the key question is whether ride sharing companies should follow the same rules as taxi companies or they should have different rules. Another question that must be asked is whether ride sharing companies should be banned before related regulations are fully established (Leighton, 2016). Uber currently claims that it is not a taxi service provider but a technology company (Uber, 2017). In other words, Uber carefully positions itself as technology centered, and it aims to provide flexible working time and accurate algorithms to match consumers and Uber drivers. It is this flexibility that threatens established industries, especially the industries with high entry level and regulatory restrictions. Through a historical lens, Posen (2015) introduces the development of the taxi industry and reveals that the licenses volume and qualification may highly influence the quality of market services, driver incomes, license values, and the ability of administration. To be specific, Motala (2016) indicates that detailed implications of the Uber platform have touched a

number of public laws, including crimes, labor, contract, tort, corporate tax, and transnational monopoly.

To protect the benefits of public and traditional industries, Uber should cooperate with the government and legislators to apply new regulations and policies for operation since self-regulation by Uber and its drivers is not feasible. Kortum (2016) appeals that policymakers and regulators should "formulate public policies and regulations designed to steer the development of innovative services to improve mobility, safety, and sustainability" (p. 5) and "seek to integrate the features of TNCs and other innovative shared mobility services into transportation systems and services in ways that leverage the new services' strengths and features" (p. 6). Firstly, Leighton (2016) suggests that national and local policy makers should improve the current professional standards of safety driving, including mandatory training and vehicle safety management. Safety concerns refer to the passenger's safety and the Uber driver's safety as well. Secondly, fare calculation should meet the industry standards locally to avoid price discrimination (Motala, 2016). Uber's low fares have won over a large number of consumers looking for a cheaper ride service. Therefore, by setting industry standards on fares, it will build a healthier industry in the long term. Thirdly, Elliott (2015) stresses the need to open up more licenses for regional taxi drivers and modify the wage regulatory and tax burdens on taxi drivers which build a larger and more diverse scale for social consistency and uniformity. Additionally, Boland (2015) emphasizes on the insurance gap between drivers and passengers due to the lack of awareness of driving insurance. Unlike taxi companies, Uber considers itself as a third-party service provider with no obligation to provide driving insurance. Uber (2017) officially claims that

> "state and local laws set minimum coverage requirements and insurance types. Be sure to learn more about insurance requirements once you choose a driving job or job alternative

like Uber. If you choose to drive with Uber, you will drive a personal vehicle. That means you will at least need to have personal auto insurance that meets your state's minimum financial responsibility requirements" ("Driving jobs vs driving with Uber", para. 5)

Obviously, Uber excludes the coverage of safety insurance for both passengers and drivers. However, according to Kirby et al. (2016), it is mandatory for ride sharing companies in China to buy insurance for passengers and vehicles, and this makes Uber unqualified in China. In fact, not everyone is qualified to provide riding services. Leighton (2016) highlights the necessity of driver professionalism for commercial driving and argues that the lack of professional training causes drivers to get lost, spend time on routes, and be unable to handle emergencies. As Posen (2015) explains, the advancement of technology has lowered the market barriers so the line between personal and professional blurs. Furthermore, although legislation and regulation is the most frequent concern among the reviewed literature, most researchers are willing to make the ride sharing economy more competitive and more productive. It is also a consensus that regulators and Uber should work together on the new norms and regulations in terms of vehicle safety management, fare calculations, driver professionalism, and licensing and insurance requirements.

Labor identity and labor fairness are the next biggest constructs in the reviewed articles. Labor identity in the reviewed literature is primarily concerned with the consequential decision of whether Uber drivers should be identified as employees or independent contractors. Stafford (2016) defines the employee as economically dependent on the employer and the independent contractor as doing business for himself or herself. Additionally, Stafford (2016) explains that a relatively short-term work duration indicates the identity of an independent contractor and working long-term indicates the identity of an employee. Being an employee means obtaining more labor

protection and most labor and employment laws are designed for a long term or a certain term work duration with health insurance and pension (Stafford, 2016).

Nowadays, global technological firms have been gradually transferring from traditional employment relationships to contractual and temporary relationships in order to have lighter burdens on management and have lower costs of operation (Zwick, 2017). In fact, Uber defines the relationship with drivers in an unclear way. On the official website, Uber claims that it is a "technology company that has developed an app that connects users (passengers) with third party transportation providers" which greatly weakens the line of employment relationship. Moreover, Todolí-Signes (2017) argues that less labor dependency means less subordination and more freedom in terms of schedules and working hours, flexible choices of working on more than one platform, and less wages or benefits. At the same time, a lack of legal dependency might lead to the lack of responsibility in the case of accidents or damages. However, accidents could cause damage to drivers and passengers, and harm the company's reputation. The ride sharing economy has dramatically changed the labor identity and the employment relationship, but it has also brought forth a discussion on new employment laws. Zwick (2017) claims that half of Uber drivers consider it as a full-time job and almost one quarter of them are students. Statistically, it shows the weak contractual relationship of Uber employments and presents insufficient restrictions and unsustainable control. In the Chinese context, Zou (2017) notes the unwillingness of Uber or other ride-sharing companies to deal with labor regulatory issues. Zou (2017) describes Uber's success in entering the Chinese market but elaborates on Uber's failure to impose duties and responsibilities on Uber drivers.

Labor fairness is another primary concern in the reviewed articles. Stafford (2016) highlights the irrationality of how easy it is to be an Uber driver that needs a valid driver license,

a personal car less than a couple of years old, a knowledge test, and a simple background check. The ability to easily become an Uber driver and flexible working conditions have raised a number of inequality issues. Moreover, Farren (2016) points out that the anti-competitive behaviors of Uber's business model produce many negative influences on traditional taxi drivers. Watanabe et al. (2017) present the argument that ride sharing has broken the social balance in terms of unfair competition, poor working standards, and its potential of being a monopoly. It is well known that Uber builds its own fare system without following the rules of regional taxi fare calculations and a lower farer might result in a riding monopoly. However, this does not mean that it benefits Uber drivers. In contrast, they get a relatively poor compensation compared with taxi drivers in some areas and they do not have the right to choose their passengers.

Uber drivers also face Inequality. As previously mentioned, Uber drivers have no additional insurance, therefore it is problematic that Uber drivers can be deactivated on the mobile app at any time due to "a large corpus of systematically biased consumer ratings" (Rosenblat et al., 2017, p. 265). Watanabe et al. (2017) appeal to build a fairer labor environment to protect the rights of both Uber drivers and taxi drivers. Moreover, Edelman (2015) argues that "competition reflects unusual incentives" which means Uber competes in part to break the law "rather than competing on lawful activities permitted under the applicable regulatory environment" (p. 5). That is also why the unfairness is getting increasingly intensified. To relieve the problem of labor fairness, Edelman (2015) encourages Uber to assist policymakers to gather interior information of infractions, adjust requirements in a smart way, and dynamically maintain a fair environment for competition. Kirby et al. (2016) state that the legislators in China explicitly state and relate the ride-sharing policies to fairness:

> "Online ridesharing platform companies must not disrupt fair market competition, and must not violate the legal rights of passengers and public interest. Online ridesharing platform companies cannot take actions that exclude competitors and monopolizes the market, use price that's below operating cost to disrupt market order, conduct other pricing activities that damages the national interest or the legal rights of other service provider, or violate pricing laws" (Section IV Operating Behaviors of Online Ridesharing Services).

Morality and ethics is another perspective under discussion in the selected articles. It includes both positive and negative views. Uber and other ride sharing companies do not provide accessibility services for people with disabilities in terms of wheelchairs, crutches, or a cane while regulated taxis can offer accessible, friendly, and normative transportation services (Kortum, 2016). Kortum (2016) argues that the increase of ride sharing drivers might lead to fewer special taxi services for vulnerable people with disabilities in the society. Another moral issue analyzed by Kortum (2016) is the social divide caused by going digital. Technically, ride sharing services have a greater potential to enhance mobility for disadvantaged populations due to lower cost compared with taxi services. However, the app-based service might block the way for non-smartphones owners to gain benefits. Moreover, Calo and Rosenblat (2017) point out the presence of discrimination that "both service providers and service consumers in the sharing economy face racial or other discrimination" (p. 1647). Calo and Rosenblat (2017) give the example that a person of color waits for a longer time period when hailing an Uber in Seattle and Boston. Verschoor (2017) also presents the occurrence of bullying and harassment to the public or Uber drivers in terms of culture, racial discrimination, and social values. Furthermore, Uber's rating system is the main method for drivers' performance evaluations but Uber ignores the ethical problems in rating (Rosenblat, et al., 2017). Rosenblat, et al. (2017) stress on the imposed psychological frustration

and anxiety due to the comments of the rating system. Additionally, they explain that drivers feel the need to apologize for customer dissatisfaction with the music style, the temperature, or even the conversation going on between them. Uber passengers are not well educated to use the rating system which also increases workplace discrimination. On the other side, Ranchordás (2017) critically illustrates the advantages of ride sharing by stating that it "has created new and apolitical spaces of discussion and deliberation" and it "has the potential to promote faster and broader civic engagement and include citizens that would otherwise not participate in the law-making procedure" (p. 33). Ranchordás (2017) supports open legislators and crowdsourcing that might trigger democratic participation of individuals and interest groups. In other words, the public and advanced technologies play an active role in democratic consciousness and the regulation establishment. In addition, Brescia (2016) states that "consumers will not trust a platform or its providers if there is no oversight to ensure consumer protection" (p. 753). The flourishing of Uber has the potential of generating trust since trust building is one of the central principles to sharing economy. The relationship between Uber drivers and passengers based on trust can help consumers overcome the stranger fear and improve social trust.

The least discussed constructs are urban plan (5.0%), privacy (2.5%), and environment (1.3%). However, they play a detrimental role as well. The urban plan construct involves both active and negative perspectives. On the one hand, Gao and Zhang (2016) describe how the use of Uber data could practically optimize urban traffic planning and reduce clog. It will progress urbanization by helping to "understand private transport flows, manage urban growth and public transport, and eventually reduce greenhouse gas emissions" (p. 12). Sumantran et al. (2016) argue that this efficient city, also known as a smart city, can increase its GDP by more than 10 percent compared to a regular city. On the other hand, Sumantran et al. (2016) point out that Uber could

face more difficulties during the process of localization if it does not understand local needs and urban plans. When Uber challenges cities in terms of the local culture, services, social orders, and regulations, cities would undoubtedly challenge Uber in return (Posen, 2015).

Privacy concerns often occur because of the need to connect with passengers and drivers through location-based networks. Hallgren et al. (2017) argue that ride matching can be based on strategies of location proximity and homomorphic encryption and it is necessary to design a new protocol for "threshold private set intersection" (p. 2). The technology of location proximity has been tested to be useful and efficient. Another privacy issue is collecting user information that poses a potential threat to data privacy (Calo & Rosenblat, 2017). Calo and Rosenblat (2017) explain that Uber has an enormous amount data collection on drivers (names, driver licenses, telephone numbers), consumer information (location, credit cards, telephone numbers), and consumer behaviors. Although the private information helps Uber improve the riding services, data might be improperly used or leaked out because of inadequate security strategies. The lack of emphasis on privacy concerns (2.5%) in the reviewed articles indicates an overlook on an important matter that requires more attention. Environment is not studied that much but it can become complicated when the sharing economy becomes more developed. Smith and McCormick (2016) emphasize on the easy access to all kinds of products and services in light of the sharing economy and pollution can be reduced if people share cars instead of buying new ones, particularly when riders use UberPOOL. However, there can be a dilemma if sharing resources are over produced.

Chapter 5: Interpretation and Discussion

To further understand the social and ethical issues of Uber as well as Uber's failure in China, this research applied Technoethical Inquiry (TEI). Technoethical Inquiry is a social system theory for "assessing the ethical use of technology, guarding against the misuse of technology, and formulating common principles to guide new advances in technological development and application to benefit society" (Luppicini, 2008, p. ix). Based on the general findings from literature review, Technoethical Inquiry was applied to explore social and ethical concerns along with the ways that new technology shapes and influences society and communities. Table 3 (see Appendix E) provides a breakdown of technoethical perspectives applied, namely, theoretical, historical, socio-cultural, political, economic, stakeholders, levels of influence, intended ends and possible side effects, compared means and intended ends, overall assessments in terms of efficiency and fairness. Through the technoethical lens, the analysis provided a holistic picture of Uber China from an ethical standpoint.

5.1 Theoretical perspectives

As indicated by May (2012), a particular theoretical perspective can become the foundation to help people see the world and it is not just a way of looking at the world but it guides people to design a blueprint of the living or transforming world. One theoretical perspective that is related to the Uber case is the utility ethical theory. Bentham (1996) explained that utility is the principle that "approves or disapproves of every action whatsoever; according to the tendency it appears to have to augment or diminish the happiness of the party whose interest is in question, or, what is the same thing in other words to promote or to oppose that happiness" (p. 14). According to Bentham (1996), by means of utility, the outcomes explicitly decide the ethics of actions, maximizing the overall benefits, happiness, advantages, and positive consequences of members

that compose it. In the case of Uber China, it broke the long-term stable riding market built by different regional taxi companies. In other words, the interest of the communities started to be by private car owners as well as the Uber platform. Firstly, since taxi companies are partly operated by the local governments, Uber's localization in China not only affected traditional taxi drivers' income but also the profits of some local organizations. Secondly, although individuals got economic benefits due to the lower cost of shared riding, the safety, privacy, and service quality were not guaranteed. Moreover, based on the general findings from selected articles, the problems of labor fairness and labor rights were not well regulated by policymakers and legislators as well. Therefore, the entire interest was not holistically improved during those two years.

A second ethical perspective is the right perspective. In *A Theory of Justice*, Rawl (2009) highlights human rights as ethical standards of actions. The code of Universal Declaration of Human Rights (1948) also defined human rights in terms of education, fairness, equality, and moral protection. When Uber was expanding its global strategy in China, one ethical dilemma was how to protect both Uber drivers' and riders' safety. As discussed before, Uber has faced continuous data breaches and improper uses of user data that damaged consumers' and drivers' rights and benefits. More importantly, the government of China requires all ride sharing companies to open the permission of riding data (Ministry of Industry and Information Technology in China, 2016). The strict censorship also raised further moral dilemmas related to the right perspective. Therefore, human rights protection highly calls for the establishment of new laws and policies for the new sharing economy trend.

Another theoretical perspective is the duty perspective. According to Kant (1785), "act only according to that maxim whereby you can at the same time will that it should become a universal law" which focuses on the individual's obligations and beliefs of other people rather than

personal inclination. It is encouraged to consider individual ethics in relation to actions and outcomes as well as to readjust ethics of communities and organizations for integration with individual ethics. The haring economy, especially at the beginning, cannot work without the engagement of the public, who have the duty to maintain social harmony. Even as bike sharing has become popular and widespread today, the public in China needs to build a sense of duty for protecting public facilities.

5.2 Historical perspectives

The digitalization of the Chinese economy cannot flourish without the advancement of information and communication technology (Zou, 2017). Zou (2017) explains that "the phenomenon is taking place as the country shifts from an export reliant, manufacturing-based economy to a service-led economy driven by domestic consumption" (p. 269). Posen (2015) states that "technology has given rise to networks and cloud services that allow people to access resources only when they need them, connecting people to resources through the simple click of a button." To better understand Uber in China, it is necessary to look at the ride sharing process in China from a historical lens. The ride sharing economy of China did not directly start from private car hailing. Didi Chuxing, Uber's biggest competitor in the Chinese market launched in 2012, two years before Uber came to the market in China. Instead of targeting private car services, Didi Chuxing first launched a taxi-hailing platform. Apparently, the strategy was extremely successful, as Didi Chuxing received a huge welcome and tremendous profits with few social disputes. With the help of the ride-hailing platform, taxi drivers can find passengers more easily and more efficiently. Therefore, dozens of ride-hailing applications were built to fight for the future market, and the apps copied the successful ecommerce model of Didi Chuxing. Before Uber, the market in China did not reach to an ideal state of sharing economy and car-hailing services were still

focused on the taxi market. In 2014, Uber changed the newly established sharing economy in China, and it transformed the market from taxi sharing to private car sharing. After a year, Didi and other local ride hailing firms began to include private car hailing services. Although Uber China was operated for only two years, the idea of sharing has expanded to bike sharing, home sharing, and even portable charger sharing. The most influential business model of the sharing economy in China is bike sharing. For instance, Mobike, is now operating in more than fifty cities in China and it has built 100,000 bike stations in Shanghai (Wu & Xue, 2017). It is the second revolution of ride sharing in China and it has changed the public commuting behaviors, especially for those riding for short distances.

5.3 Political perspectives

The digitalization of riding services in the sharing economy involving the public engagement has caused political concerns. For instance, taxi drivers and companies place great pressure on the national and local government. Like Rosenblat et al. (2017) illustrate: "as uber-like models continue to multiply, employment discrimination may become hotly contested political ground, joining existing debates over whether or not workers should be classified as employees or contractors" (p. 275). Also, the social debates in terms of legislation, labor fairness, and urban plan have transformed to a more political level. Blevins (2017) argues that more and more credible social and legal threats brought by the ride sharing economy are generating political pressure to reform and to facilitate a social transformation in return. The arising risks and problems, including safety, privacy, and other social concerns, are supposed to be solved by political measures. Meanwhile, Blevins (2017) encourages the reform-minded politicians to voluntarily take on challenges and the existing or potential vulnerability by supporting leverage and enacting reforms. For instance, laws of the commercial licensing along with any relevant social conflicts

can be enforced by municipal governments and state agencies to build a more well-established law system. But Todolí-Signes (2017) also points out that the legal implications of employment issues have implied the need for legal construction but, in fact, they are not fully taken into consideration under the political context. Another political purpose is that technology and open discussion give a chance to "close the gap between citizens and politics, increase citizen participation in the legislative process, and respond to the perceived crisis in representative democracy" (Ranchordás, 2017, p. 32). Collective participation is a typical feature of ride sharing. Ranchordás (2017) claims that Uber riders often feel that they are actively participating in social reformation, so they are more likely to stand for their rights and engage in the law-making process. Furthermore, Calo and Rosenblat (2017) highlight the importance of minimizing government intervention and attracting more funding and participants. Likewise, Calo and Rosenblat (2017) explain that "the concern was that large monopolies were engaging in predatory pricing and other unfair practices as well as exercising political power to harm new entrants" (p. 1672). In China, there remain political limitations and institutional policies that need to carefully be taken into account when building the ride sharing economy in terms of price bargaining, labor fairness, and censorship (Zou, 2017). During the two years of Uber's localization, the government of China did not officially announce any proceeding of reorganization or prohibition on ride sharing. Zou (2017) explains that the government in China did not to announce anything because it was that it was also studying the new economic model and seeking to guide the transport industry at the right time.

5.4 Socio-cultural perspectives

A notable perspective in publications is the socio-cultural perspective. Luppicini (2008) indicates that information and communication technologies have powerfully shaped or reshaped society and the culture in terms of social structures and processes, individual behaviors, and

cultural forms and practices. Stafford (2016) argues that Uber, as a sharing-economy company, is facing an incapacity to maintain the employment relationship socially and culturally. He explains that as Uber drivers are able to use different similar platforms at the same time, they are not likely to restrain themselves as traditional employers with the lack of social and company responsibilities. Furthermore, as a self-employed driver, it is hard to deal with unfair treatment or resist the arbitrary policy (Stafford, 2016). Therefore, a social tension occurs due to the new employment relationship. There was a data report made in 2015, Uber China's second year, and it said that nearly seventy percent of private ride sharing drivers were working part time rather than full time (Caixin, 2015). Drivers who use ride hailing apps are primarily aiming to make money or work with less responsibilities and loyalty. Likewise, Leighton (2016) says that the greater autonomy brought by Uber has created a more complex work relationship in society in terms of power, information, and communication. According to Leighton (2016), the myriad of disputes involve issues of accountability and work quality, safety, and deregulation, along with new social changes, bias, and new roles. But Leighton (2016) believes that social developments will undoubtedly continue, and some social risks can be work on with policies, including "road accidents, assaults and threats". Elliott (2015) provides multiple great socio-cultural implications of Uber by highlighting the necessity of social evolution and responsibility for new social changes, reducing the risks of crimes and injuries as well as creating new laws for new working environments.

Without a doubt, Uber's localization created a new ecommerce pattern. For the first time, people in China had a chance to share private cars and have part-time salaries. Meanwhile, riders spent lower cost but enjoyed easier rides. Before Uber, only taxi drivers who owned commercial driving licenses had the rights for riding operations. Therefore, people were skeptical and they did not accept it easily. For Uber drivers, enjoyment and additional incomes attracted them to use the

ridesharing app but they sacrificed their time for rest; for Uber passengers, they enjoyed the riding convenience and lower riding fees but had to face the risk of injuries, crimes, or privacy disclosures (Leighton, 2016). Culture acceptance is another obstacle in China. Different from the Western world, the number of global ecommerce companies in China are far less than other countries. According to Asmi et al. (2016), although people in China are using mobile applications a lot, the citizens who were using Uber China were holding mixed opinions about the foreign service providers. The research data pointed out that almost half of the surveyed users were having "neutral or undefined satisfaction level towards Uber in China" because of the unsure reputation, trust, and unfamiliar communication interaction when having ride sharing experiences (Asmi et al., 2016, p. 308).

5.5 Economic perspectives

As analyzed before, Uber brings considerable economic value globally and locally. Calo and Rosenblat (2017) illustrate that "by making it easy and cheap to connect to others, we can 'share' this excess capacity with the world...Sharing economy firms also create new ways to earn income, especially for those who cannot—or do not—wish to work a traditional shift or otherwise face impediments to entering the mainstream workforce" (p. 1626). In China, the government released an "Internet Plus" strategy that highly encouraged citizens to start their own business with the passion to create, and the individual contribution to the entire national economic development would be understood in the light of "broader macroeconomic goal of creating millions of new jobs" (Zou, 2017, p. 270). Gao and Zhang (2016) claim that China started a five-year plan from 2011 to 2015, focusing on the process of economic rebalancing by consumption growth, and in 2015 domestic consumption of products and services accounted for more than half for the first time. Additionally, Gao and Zhang (2016) state that the sharing economy, as a new model of

consumption, plays a vital role in "decoupling economic growth from resource use and in promoting material efficiency" (p. 4).

Uber provides a fast and easy way for locals to realize the economic goal, bringing more working opportunities for non-professionals. Zou (2017) statistically explains the huge benefit brought by the sharing economy at around RMB 1.956 trillion (around USD 300 billion) in 2015 with 500 million users and it is expected to exceed 10% of the total GDP by 2020. However, research also indicates that the lower entry might bring other economic risks. Leighton (2016) points out that "the likely increased competition faced by individual Uber drivers, as there is no limit on the number of drivers, no requirement for registration and qualifications, will almost inevitably reduce incomes" (p. 871). Likewise, Blevins (2017) explains the issue of income that no licensing barrier "imposes excessive and anticompetitive barriers to entry to certain professions" (p. 855). Therefore, even if Uber increases job opportunities and creates economic value, the lower eligibility requirements will potentially lead to an unhealthy and problematic economic system. In addition, global expansion is not an unprofitable operation. A considerable amount of service fare instantly goes to Uber's pocket but local administrations are facing enormous pressure, conflicts between taxi industries and new sharing economy, as well as the losses of local transit services (Sumantran et al., 2017). The profits of economic liberty should be built with the guarantee of individual protection, such as the possibility of having driving insurance (Blevins, 2017). Furthermore, Calo and Rosenblat (2017) also point out the economic impacts on related industries:

> "The sharing economy facilitates more transactions with greater efficiency between users through technology but it can also have economic impact on related industry actors and consumer populations. Broadly accessible services can prompt industry specialization for legacy businesses (for example, business travelers who want reliable experiences or

families with kids who might prefer to stay in a hotel rather than in a stranger's home) which presents users with a greater variety of options, and the chauffeur industry can cater to specialized, niche, or luxury services for high-end consumers" (p. 1642).

5.6 Stakeholders perspectives

Uber, as a technology-based ride sharing company, has connected different stakeholders and social entities in new ways. Stakeholders perspectives can help to better understand the stakeholder relationship by identifying what is more important, what should be protected, and what seems less vital on deep inspection (Boshuijzen-van Burken & Haftor, 2016). Boshuijzen-van Burken and Haftor (2016) indicate that different stakeholders, including the Uber company, investors, regulators, taxi companies and drivers, credit card companies, and passengers, have more complex relationships because of the development of digital technologies. In 2016, Uber exited the market in China by merging with Didi Chuxing, its biggest local rival, selling its operation in China for $35 billion (Kirby et al., 2016). In return, Uber got a 20% stake in Didi Chuxing which means that Uber is paying close attention to the market in China and participating in the future growth of the ride sharing economy as a stakeholder (Kirby et al., 2016). Therefore, figuring out the complex relationship of stakeholders help researchers better understand the interests between them. Boshuijzen-van Burken & Haftor (2016) also explain that the relationship between the state and business could not dominate one another:

"A state should remain a state (juridically qualified, protecting and enabling justice) and a business should remain a business (economically qualified, aimed at the continuation of the business through frugal allocation of means); Uber cannot be forced by legal authorities to adopt a certain way of doing business (for example, authorities should not tell Uber

where to invest) and Uber cannot force the government to implement a new transportation law" (p. 9).

However, the state and Uber have some common goals, like economic benefits or social flourishment. As Gao and Zhang (2016) indicate, the government should have an ongoing conversation for more effective enforcement with all the key stakeholders, from policymakers to companies and citizens, so that governance becomes more flexible and more adaptable to the fast changing technology. To be more specific, Motala (2016) argues that for labor interests, regulators ought to identify the negative economic influence and the communities that are suffering; for consumers, policymakers need to consider how to enforce norms to protect consumers as well as balance social justice. Motala (2016) stresses that it is necessary to not only map out different stakeholders and their interest but also articulate a balance between competing stakeholders.

5.7 Levels of influence

As discussed before, Uber's expansion in China not only brought about a new business model, the sharing economy based on technology and digitalization, it also enlightened the public's awareness of sharing. Psychologically, the awareness of sharing and the involvement in the sharing economy has generated more trust and increased more interaction in society (Brescia, 2016). It inspires a variety of sharing models in China: the sharing umbrella, the sharing basketballs, the sharing gyms, etc. From an environmental lens, Smith and McCormick (2016) point out the positive influence that "if using ride-hailing apps means consumers no longer have to own a car or if they make it easier for people to go out at night and leave their cars at home, that could help ease the difficulty of providing parking places and mean that fewer cars are manufactured" (p. 9). However, if Uber rides produce extra miles and increase road burdens, the environmental effect is negative (Smith & McCormick, 2016).

5.8 Intended ends and possible side effects

The intended ends include two parts: Uber China and the ride sharing economy in China. Unlike four years ago, the acceptance of the sharing concept in China is not an obstacle anymore. With its previous knowledge of the business, good global reputation, and the deeper understanding of morals and culture, Uber China should plan to come back. Uber's return can promote market variety and the healthy competition can facilitate the innovation of technology. For the ride sharing economy in China, national and regional regulators can establish an encouraging environment for social transformation and create more space for democratic participation of laws and policy making. In fact, the government in China today welcomes the scientific and technological revolution, and it highly respects the capital market. Various riding services in China are developing fast with no immediate prohibitions. The government is making efforts to support the development of the ride sharing economy. However, the shared regulation can involve all the stakeholders and communities in the enforcement of laws and policy. A positive effect is to mitigate the problems of the taxi industry. In China, commercial riding licensing fares are much heavier than fares of the ride sharing economy. The development of ride sharing can stimulate lighter monthly operating fares and taxes, more competitive standards and welfare, as well as integrated management of the entire driving market. Another positive effect is to multiply other services and increase social efficiency based on the ride sharing economy, such as food delivery and package delivery.

On the contrary, a possible negative effect might be that the ride sharing market is facing the risk monopoly. Dozens of ride sharing companies were competing in the last five years and now most of them like Uber and Kuaidi failed or merged with Didi Chuxing. A monopoly would lead to a trend of higher prices and lower outputs. Meanwhile, less competition cannot fully

stimulate technological innovation and willingly improve the service quality. The other negative effect is the increasing risk of safety and privacy. As more consumers use ride sharing in everyday life, threats in terms of safety and privacy might be intensified if drivers are not well trained or user data is not well protected. As mentioned before, Uber and other technology firms are facing continuous data breaches by hackers. Thus, a permanent solution is needed as user information substantially increases.

5.9 Compare means and intended ends

It is possible to argue the opposite: Uber is considered as a transport company instead of a technology company providing digital services which means that Uber needs to comply with much stricter licensing, insurance and safety rules, which significantly lifts the riding costs (The Economist, 2017). In fact, the Ministry of Industry and Information Technology in China (2016) discussed the possible strategies of long-term management and monitoring. As discussed before, it is mandatory to pay insurance for every passenger, and private cars are only allowed to be used after installing a GPS and security alarm system. Safety and privacy issues also arise from the expansion of the sharing business model. Since Uber is expanding to food delivery for local restaurants and package delivery cooperating with ecommerce companies, more detailed personal information, such as home address, has to be included. Moreover, stranger threats must be considered when Uber drivers have access to riders' homes. Additionally, Uber and other ride sharing companies might be banned in China due to the intensified fairness issues as well as unsolved regulatory dilemmas in terms of safety, privacy, and data breach and misuse. Watanabe (2017) explains that despite ride sharing being an effective way to tackle traffic clog and enhance road usage, several countries have already deemed Uber illegal: Thailand has completely banned Uber while, Germany, France, Italy, Belgium, Netherland, Finland, and Brazil have banned certain

services. If ride sharing companies are banned in China, more than one third of Internet users in China will be affected, and the number of Internet users will go down to 40% by 2019 (Doyle, 2018). Therefore, in order to stand against the intended ends, legal standards and norms need to be addressed for side effects mitigation. Furthermore, the Economist (2017) also points out that if Uber goes from human drivers to autonomous driving, it will cause more uncertainties of ride fare calculation and tax policy, and guaranteeing the consumer's safety will be a hot topic for discussion.

5.10 Overall assessment in terms of efficiency and fairness

The sharing economy has undoubtedly taken a huge step to optimize the efficiency of resource distribution and capital operations in China. As Zou (2017) explains, "digital technologies are being used to near-instantaneously connect an indefinite number of workers/service providers and customers and allow for a wide array of economic activities to be parceled out as discrete tasks and performed by crowdworkers" (p. 270). Uber indirectly helped local competitors more smoothly transform from taxi hailing services to various ride hailing services, including taxi hailing, private car sharing, carpool services, and commuter bus sharing. As analyzed before, Uber and other ride sharing companies produced considerable economic benefits, labor diversity, and a more effective urban structure. In some big cities of China, like Beijing, it is more difficult to drive one's own car. Since the volume of cars in the city is reaching the city's capacity, the government is cutting the number of cars by imposing stricter limitations. Citizens have to use a lottery system that randomly decides who can have tickets to buy a car and it is not rare to find a car buyer waiting for more than three years with no permission to buy a new car. In the two years, Uber China was growing fast and reached more than 150 million orders one month. In the light of convenience, efficiency as well as lower costs, the sharing economy plays a positive role for social transformation. Kirby et al. (2016) argue that although the government in China launched the

operating permission of the ride sharing model, the recommendations call for more innovation within existing transport services: better use of smartphones and technologies to promote online booking, gradual elimination of extra fees, and the merger between ride sharing companies and taxi companies. Brescia (2016) points out the value of the sharing economy: "By taking the marketing and matchmaking functions away from the providers, it can leverage the economies of scale possible through the global marketing platforms of the Internet and mobile technologies" (p. 752). Brescia (2016) also highlights technology-based services that allow companies to spend less and less time and effort looking for customers and building their brand. Instead, companies are able to focus on the service quality, efficiency, and the labor fairness of the workplace. However, the fairness issue becomes a central debate in terms of drivers and passengers' insurances, commercial driving licenses, and price discriminations. In China, tax burdens for taxi drivers are excessively heavy which leads to tough controversies and bias. Therefore, as Elliott (2015) argues, governance needs to conform to the fast changing circumstances of technology, economics, and politics; regulators need to balance multi-layered social conflicts along with different interests from different stakeholders to form a new regulatory framework; Uber and other ride sharing companies should operate under updated laws and regulations for a larger scale of consistency and uniformity.

Chapter 6: Conclusion

This study presents the social and ethical perspectives of Uber's localization in China. Through a technoethical approach, it indicates that Uber, as the first genuine ride-sharing company, raised safety, privacy, ethical and moral, urban plan, and labor fairness concerns. The research shows the necessity and urgency to make new laws and policies for both the taxi industry and the ride sharing economy in aspects of commercial driving licenses, insurance, taxes, riding fare calculation, labor identity, employment relationship, services quality, and data protection. Although Uber failed in China, it grew the awareness of sharing and forcefully facilitated the innovation of the sharing economy not limited to ride sharing in China. However, the negative side effects seen in Chapter 5 and Chapter 6 require close attention. For instance, no efficient and proper control by Uber might lead to an unhealthy environment of commercial driving with the risk of monopoly. It can intensify threats to safety, fairness, and privacy. A well-established legal system can help enhance technology-based innovation, such as autonomous driving.

Ecommerce globalization and localization are still under exploration, especially in terms of China. This research provides detailed and grounded insights on Uber's expansion through an ethical view rather than through the lens of business and marketing strategies. Furthermore, the research touches on the sharing economy of China as well. The researcher calls for the government to bridge the gap between the technological innovation and the legal system, to build the public's ethical sense, and to keep a consistent eye on the ethical risks and consequences of using technology.

The first limitation of this study was the time limit because the qualitative data collection was completed in only a few months by critically reviewing the social and ethical issues based on a number of articles. In the limited time, the search strategy was designer, multiple sources were

reviewed and selected, duplication was removed, and irrelevance was eliminated. A second limitation was the difficulty to find articles on Uber's ethical and social issues in China because most current research focused on the business and marketing fields. Therefore, the researcher explored multiple data from four authoritative databases and enlarged the scope to include the sharing economy and Uber in China and globally. This required the researcher to have a strong sense of integrative competence and a comprehensive understanding of both Uber and China. Moreover, the case study was addressed in a limited time scope. Uber was the case to develop the ecommerce localization as well as the ride sharing economy, and the research was delimited to primarily focus on the time period of Uber's localization in China, from February 2014 to August 2016. In addition, to make the sample size manageable for analysis, a certain number of documents were selected. Articles from interviews, blogs, and company websites with non-techno ethics were excluded.

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Appendix A: Table 1, Search strings and databases used

Year: 2013 to 2017/Databases/Hits	Web of Science	ABI/INFORM Global (ABI)	Academic Search Complete (ASC)	Scopus
Uber AND China AND ethic* OR moral* OR safe* OR privacy OR legal" narrowed within the title, abstract, and subject terms	2	1	1	1
sharing economy AND China AND ethic* OR moral* OR safe* OR privacy OR legal" with the title, abstract, and subject terms	0	0	0	0
Uber AND ethic* OR moral* OR safe* OR privacy OR legal with the title, abstract, and subject terms	11	10	1	14
Total articles selected from the four databases	41			
Duplicate articles removed	10			
Final articles selected	31			

Appendix B: Selection of articles to be reviewed in this study

1. Asmi, F., Zhou, R., He, T., & Han, F. (2016, November). Factors affecting customer satisfaction and intentions to adopt m-service in China. In *e-Business Engineering (ICEBE), 2016 IEEE 13th International Conference on* (pp. 305-310). IEEE.

2. Blevins, J. (2017). License to Uber: Using administrative law to fix occupational licensing. *UCLA L. Rev.*, *64*, 844.

3. Boland, T. (2015). Driving awareness. *Canadian Underwriter*, *82*(10), 32. Retrieved from https://search-proquest-com.proxy.bib.uottawa.ca/docview/1732548301?accountid=14701

4. Boshuijzen-van Burken, C., & Haftor, D. M. (2016). Using Enkapsis theory for unravelling societal complexities: The case of Uber. In *Book of Abstracts* (p. 23).

5. Brescia, R. H. (2016). Uber for lawyers: The transformative potential of a sharing economy approach to the delivery of legal services. *Buff. L. Rev.*, *64*, 745.

6. Calo, R., & Rosenblat, A. (2017). The taking economy: Uber, information, and power. *Columbia Law Review*, 1623-1690.

7. Cao, D. (2016). Regulation through deregulation: Sharing economy companies gaining legitimacy by circumventing traditional frameworks. *Hastings LJ*, *68*, 1085.

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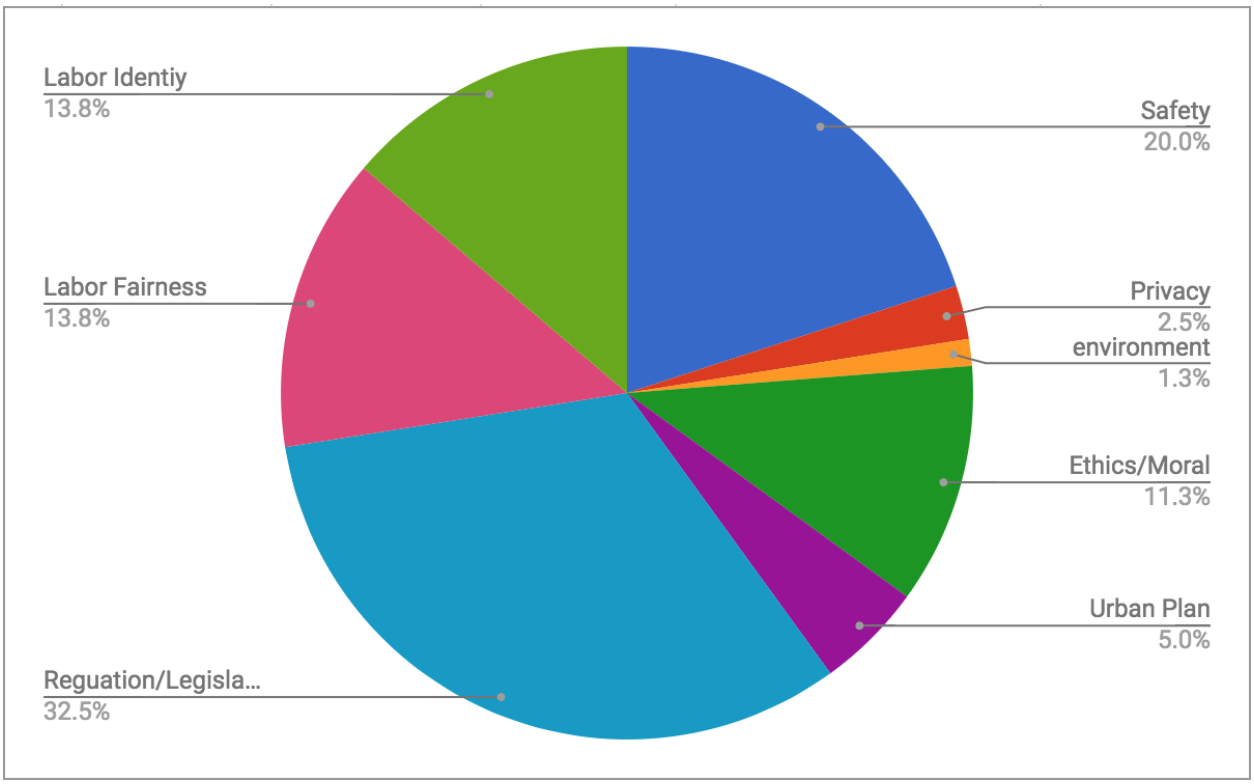
Appendix C: Table 2, Distribution of constructs

Articles	safety	privacy	environment	ethics / moral	urban plan	regulation / legislation	labor fairness	labor identity
1. Asmi, F., Zhou, R., He, T., & Han, F. (2016)				√				
2. Blevins, J. (2017).	√					√		
3. Boland, T. (2015).	√					√		
4. Boshuijzen-van Burken, C., & Haftor, D. M. (2016)								√
5. Brescia, R. H. (2016).				√		√		√
6. Calo, R., & Rosenblat, A. (2017).	√	√		√		√	√	
7. Cao, D. (2016).	√					√	√	
8. Edelman, B. (2015).	√					√	√	
9. Elliott, R. E. (2015).	√				√	√	√	
10. Farren, M. (2016, 02).	√					√	√	
11. Gao, S., & Zhang, X. (2016, September).					√	√		
12. Hallgren, P., Orlandi, C., & Sabelfeld, A. (2017, August).		√						
13. Hard driving; Uber's future. (2017, Mar 25).						√		
14. Harding, S., Kandlikar,	√					√	√	

M., & Gulati, S. (2016).								
15. Kirby, W.C., Wang, Y., Frost, S. L., & Forst, A. K. (2016).						√		
16. Kortum, K. (2016).	√			√		√		√
17. Leighton, P. (2016).	√					√		√
18. Motala, M. (2016).	√			√		√	√	
19. Pfeffer-Gillett, A. (2016).	√					√		√
20. Posen, H. A. (2015).	√				√	√	√	√
21. Ranchordás, S. (2017).				√		√		
22. Rosenblat, A., Levy, K. E., Barocas, S., & Hwang, T. (2017).				√		√	√	
23. Smith, N. C., & McCormick, E. (2019).	√		√			√		√
24. Stafford, B. E. (2016).						√		√
25. Sumantran, V., Fine, C., & Gonsalvez, D. (2016, Dec 18).					√	√		
26. Todolí-Signes, A. (2017).				√		√		√
27. Verschoor, C. C. (2017).				√				
28. Watanabe, C., Naveed, K., Neittaanmäki,						√	√	

P., & Fox, B. (2017).								
29. Witt, A., Suzor, N., & Wikström, P. (2015).	√					√	√	
30. Zou, M. (2017).						√		√
31. Zwick, A. (2017).	√							√
Frequencies	16	2	1	9	4	26	11	11
Percentages	20.0%	2.5%	1.3%	11.3%	5.0%	32.5%	13.8%	13.8%

Appendix D: Figure 1, Graphical percentages of constructs



Appendix E: Table 3, Technoethics of Uber

Theoretical Perspectives: • Necessity to consider individual ethics in relation to action and outcomes (May, 2012) • Utility Theory: need to maximize the overall benefits and positive consequences over harm in society (Bentham, 1996) • Right Theory: call for the establishment of new laws and policies for the new trend of sharing economy to protect human rights. (Rawl, 2009) • Duty Theory: need to build the sense of duty and obligations to other people rather than personal inclination (Kant, 1785)
Historical Perspectives: • Originate from sharing economy or collaborative consumption, from local to global and from offline to online (Yaraghi & Ravi, 2016). • Development from taxi hailing services • New forms of driving services based on technology reforms and smartphones (Posen, 2015) • Using the idea of sharing from taxi cars, private cars to bikes
Political Perspectives: • The need to solve social and ethical risks by political measures (Rosenblat, 2017) • The necessity of new legal construction of taxi industry in terms of tax laws and labor laws (Blevins, 2017) • The necessity of new regulation of sharing economy (Todolí-Signes, 2017) • A good chance to close the gap between citizens and politics as well as increase citizen participation (Ranchordás, 2017)
Socio-cultural Perspectives: • Danger of maintaining the employment relationship (Stafford, 2016) • Danger of data breach, crimes, injures, and murders (Elliott, 2015) • Increase of self-employment workers and working time (Leighton, 2016) • Increase of riding convenience and lower riding fees (Leighton, 2016) • Cultrure acceptance (Asmi et al., 2016)
Economic Perspectives: • Increase of job opportunities (Zou, 2017) • Stimulation of more ecommerce modes based on ridesharing business (Gao & Zhang, 2016) • Stimulation of individual business creation (Calo & Rosenblat, 2017) • More competition and income reducing (Blevins, 2016) • Danger of local services loss (Sumantran et al., 2017)
Stakeholders Perspectives: • Necessity of mapping out the relationship of stakeholders (Kirby et al., 2016) • Necessity for government to maintain an ongoing conversation with all the key stakeholders (Gao & Zhang) • Eagerness for global recognition and expansion (Boshuijzen-van Burken & Haftor, 2016)
Levels of influence • Increase of the awareness of sharing

• Generation of social trust and interaction in society (Brescia, 2016) • Increase of positive or negative environmental influence (Smith & McCormick, 2016)
Intended ends and possible side effects • Uber back to the market in China • Encouragement of democratic participation • Increase of social efficiency • Risk of monopoly • Increasing risk of safety and privacy
Compare means and intended ends • Uber is defined as a transport company (Economist, 2017) • Increase of stranger danger • Ban on Uber (Watanabe, 2017)
Overall assessment in terms of efficiency and fairness • Increase of social and economic efficiency (Brescia, 2016) • Need for more control on the workplace fairness • Need for more balanced governance (Elliott, 2015)