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**Article:**

Liu, Q orcid.org/0000-0003-0953-7050, Lucas, K orcid.org/0000-0002-4009-7017, Marsden, G orcid.org/0000-0003-3570-2793 et al. (1 more author) (2019) Egalitarianism and public perception of social inequities: A case study of Beijing congestion charge. *Transport Policy*, 74. pp. 47-62. ISSN 0967-070X

<https://doi.org/10.1016/j.tranpol.2018.11.012>

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# **Egalitarianism and Public Perception of Social Inequities: A Case Study of Beijing Congestion Charge**

## **Abstract**

Egalitarian thought has a long tradition in Chinese history. Synthesized with the socialist ideology, it was practiced nationwide in the first decades of Communist China. Alongside the well-reported quality of life improvements that the recent economic liberalisation reforms have brought about, Chinese people are experiencing an increasingly serious polarization between the rich and the poor. Consequently, an egalitarian tendency has represented itself within contemporary policy and popular discourse.

This paper aims to explore how egalitarian thought has influenced public awareness of social inequities by using the case of public attitudes towards the Beijing congestion charge, which is currently still at its planning stage. Nine focus groups, with a total of 73 participants, were undertaken with residents living in different areas of the city. Results show that the perceptions of social inequities are significantly different between low-income and high-income people. Due to egalitarian thinking, low-income people expect the privileges of the rich to be abolished, however, they do not pay much attention to a wider redistribution of wealth and other social resources. By contrast, richer people tend to deny to a wider population the privileges they themselves received, and, to some extent, they are reluctant to accept policy outcomes that may favour those who are in lower social positions. The resentment against the rich, as another by-product of egalitarianism, considerably exaggerates actual social inequalities, thereby intensifying the feelings of being unequally treated.

Key words: Egalitarian thought; congestion charge; social equity, transport, Beijing

## **1. Introduction**

Several restraint measures have been implemented in Beijing to alleviate traffic congestion in the past ten years, such as end-number license plate policy, which restricts automobiles inside the 5th ring road of Beijing to enter urban roads based on the last digit number of license plates, and a license plate lottery, which requires individual purchasers waiting for the monthly license plate lottery to have passenger cars registered. The Government announced, and experts in the transport field endorsed, that these policies have been effective in alleviating traffic congestion (Beijing Municipal Commission of Transport, 2011). However, according to a survey conducted by the Municipal Commission of Transport, around 80% of Beijing residents did not perceive these measures as effective (The Beijing News, 2011).

Therefore, congestion charge was highlighted as the next policy to be implemented by official documents and official cadres since 2011. In September 2011, it was first indicated that research on congestion charge in big cities should be carried out in an official document (Ministry of Public Security, et al., 2011). Later, an official disclosed the information that congestion charging would be implemented in some big cities by the end of 2012 (Caijing, 2012). In 2013, Beijing Municipal Environmental Protection Bureau issued a document mentioning Beijing congestion charge would be set out in the near future (China Daily, 2013).

Although the idea of congestion charge has been discussed by scholars in China since 2011, the municipal authorities did not give an unequivocal signal that the charge is going to be implemented until December, 2015. Massive smog had prompted the Chinese government to issue its first ever air pollution red alert in Beijing. The Government announced that a pilot congestion charge would be studied in 2016 (The Guardian, 2015). Online debate has been heating up again recently in Beijing with the public concern about

the effects of the policy. Hence, the study that forms the focus of this paper was designed to pick up on public acceptability of the congestion charge in Beijing.

This paper is set in the context of a wider set of social issues, all with equality issues at their core. Chinese egalitarianism and its impact on public perceptions of transport related social inequities will be discussed in this paper. Unexpectedly for the researcher, the issues of equality, equity and fairness (used synonymously throughout the paper, as they are all the same word in Chinese), which are the main focus of this paper, of the congestion charge policy came up in an evolutionary way from the data, which consisted of interviews with expert stakeholders and focus groups with lay citizens. It was unexpected because Chinese society is increasingly being described as materialistic since the Economic Reform in 1978 (e.g. Podoshen, et al., 2011), and the Chinese government has placed great emphasis on material well-being. Social equity has always been subordinated to a loftier goal: revolution in the Mao era and economic growth in the post-Mao era. Although all of the three main topics in focus group discussions were about costs and benefits, perceived effectiveness of the congestion charge, and people's expectations of the outcome of the policy, social equity issues overflowed into all of these topics. However, the issue is understood in a different way in China than in the Western world, and this is largely due to its egalitarian thought processes and practices throughout history.

It is both timely and appropriate to conduct research into the public acceptability of transport policies in the Chinese context because it has not previously been systematically examined within the academic or policy literature. Firstly, it is still questionable to what extent public acceptability of a transport policy is related to social equity in the Chinese context. Secondly, although transport-related social inequality issues have aroused some scholars' attention in China, the discussions are very much based on Western interpretations of equity.

The paper starts with review of the Chinese traditional notion of equity in section 2.1, and a review of congestion charging as related to social equity issues in the Western context in section 2.2. Section 3 describe the methodology. In section 4, we identify four types of social inequity is influencing the public acceptability of congestion charge in China. Furthermore, we find evidence suggesting that Chinese egalitarian thought exaggerates actually measured levels of social inequalities, and prompts feelings of being oppressed by the privileged classes. In section 5, we discuss how Chinese egalitarianism has influence people's perceptions of transport-related social equity issues, and how it further influences public acceptability of transport policies. This study, therefore, provides some new insights into a discussion of transport equity in this previously underexplored Chinese context.

## 2. Literature Review

### 2.1 Chinese Egalitarianism

The most far-reaching aphorism of the Chinese idea of social equality is Confucius's theory of "Bu Huan Gua Er Huan Bu Jun" (translated as "we are not troubled with fears of poverty but are troubled with fears of a lack of equality of wealth" by Dawson, 1915) (Legge, 2009; Chu & Gardner, 1990). Not only did Confucius focus on instrumental aspects of business ethics, but also correlated moral cultivation with distributive justice (e.g.: Ip, 2009). It is noticeable that the Confucian idea of equality inclines to egalitarianism, advocating abolishment of *relative* poverty. Apart from the philosophical foundation of the Chinese understanding of equality, it is at least of equal importance to look at public perceptions of social equity because, arguably, it is the *perception*, rather than actual experiences of social inequality, that directly influence public acceptability of a policy.

What history exhibits is that the ideal distribution modal of wealth for society is an *absolutely equal distribution* (e.g.: Riskin, et al., 2001; Vermeer, 2004). There is a clear historical evolutionary process of Chinese egalitarianism at play here amongst contemporary public attitudes. At first, peasants' desires were confined only to an equal distribution of wealth since they believed the fundamental cause of inequality was the land system. Next, they appealed against unequal political rights. In later period of ancient China, this egalitarian tradition expanded to an institutional level into peasants' opposition to landowners, their land system, and autocracy (see. Zhao, 1986; Wilkinson, 2000; Rawski & Li, 1992). Major examples from peasant revolts in Chinese history show that egalitarianism has always been adopted as the most powerful slogan to call out for public support for the uprising (e.g.: Little, 1989; Christiansen & Rai, 2014). Unlike the ruling and scholar-bureaucrat classes<sup>1</sup>, who based their understanding of equality on Confucian theory, peasant revolts in China were always tinged with elements of religion and mysticism, especially religious Taoism (e.g.: Ping, 2001). With these religious interpretations, the egalitarian concept was further strengthened, rising from a pragmatic expectation of acquiring proper wealth and political rights to a spiritual sustenance of a utopian society.

However, although egalitarianism could be a lethal weapon to undermine the base regime of feudal dynasties, it has never established as a practical administrative system. Those who held the slogan of egalitarianism were always alienated after gaining power and became privileged classes after they won a partial victory (e.g.: Spence, 1996; Reilly, 2004). In other words, peasants' egalitarianism might be good for destroying an unequal system, but it has never established a more equal one.

After Chinese people overthrew the imperial autocracy in the Revolution of 1911, political, social, cultural, and economical turmoil continued until the establishment of the People's Republic of China. Even though the Communist Party has formed a set of new systems and orders in China, these orders were unstable over time, and have been constantly transforming. Perhaps the best example of egalitarianism in the Communist China is the Great Leap Forward (see. Bachman, 2006; MacFarquhar & Mao, 1989). This was an economic and social campaign led by Chairman Mao, which aimed to rapidly transform the country from a traditional agricultural society to a socialist society through industrialization (e.g. Yang, 2008). It ended in catastrophe and caused the Great Chinese Famine between the years 1959 to 1962, whose victims are estimated to be between 18 million to 46 million (Yang, 2008; Ó Gráda, 2011; Kung & Lin, 2003; Dikötter, 2010; Yang, 2012).

Although Chairman Mao had previously criticized egalitarianism, it is evident that the idea of the Great Leap Forward is significantly influenced by egalitarian thought (e.g. Bian, 2002). In 1958, people's communes were decided to be the new form of fundamental organization throughout rural China, which had governmental, political and economic functions (e.g. Zweig, 1983). In the communes, everything originally owned by individuals or households such as private animals, stored grains and items in the private kitchen was contributed to the commune, and everything was shared by its members (Dikötter, 2010; Shen & Xia, 2011). This 'absolute equal' distribution of wealth severely discouraged the enthusiasm of production and finally resulted in a nationwide economic recession (e.g. Chen & Zhou, 2007).

However, contrary to equal distribution at grassroots level, the special treatment and domineering behaviours of cadres were also a common phenomenon. All rural resources were controlled and managed by the communes; all productive activities were also assigned by commune cadres (e.g. Domes, 1982; Zhang et al., 2004). It strongly exacerbated public dissatisfaction with cadres when millions of people were suffering

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<sup>1</sup> also known as Literati, were civil servants appointed by the emperor of China to perform day-to-day governance from the Han dynasty to the end of the Qing dynasty in 1912

starvation. Thus, the egalitarian thoughts precipitated an unavoidable conflict between cadres and peasants, and finally became an essential factor that supported and aggravated the Cultural Revolution (e.g.: MacFarquhar, 1997; Lieberthal, 1995; Barnouin & Yu, 1993).

Given that the spiritual foundation of the Great Leap Forward was merely a stratified, economic egalitarianism, the egalitarian thoughts reflected in the Cultural Revolution were generalized to political egalitarianism, to some extent (See. Jin, 1999; Lee, 1980). Since the implementation of Reform and Open policy, it has been a social and economic transition period all along (See. Howell, 1993; Wu, 2010). Egalitarianism then presents itself in public discourses on social hotspot issues, such as the congestion charge.

In summary, due to the persistence of egalitarian thought within Chinese cultural history, Chinese people may have a feeling of being oppressed, thereupon expressing a desire for the egalitarian redistribution of resources. Egalitarian thoughts may prompt people to take emotional reactions to the proposed congestion scheme which could adversely influence the effectiveness of the policy. Since egalitarian thoughts are deeply rooted in Chinese people's mind, attempts at eliminating the impact of egalitarianism is infeasible in short term. It is, thus, important for policy-makers to consider the impact of egalitarianism on public perception of social inequities in the transport domain. This suggests that the influence of egalitarian thoughts could influence other political affairs which may, in turn, indirectly influence the effectiveness of proposed transport policies in ways that might not ordinarily be expected in terms of their public unacceptability.

## *2.2 Transport Related Social Inequities in the Western Context*

Many studies have shown that rapid economic growth and urbanization process in developing countries in Asia and the global south almost always come along with social inequalities (e.g. Kanbur & Zhang, 2005; Shatkin, 2007). Since "giving priority to efficiency with due consideration to equity" was adopted as the principle of resource allocation at the 3rd Plenary Session of the 14th CPC Central Committee in 1993, social equity has been subordinated to development and economic growth. Few Chinese transport policymakers have really considered the issue of social equity in policy-making process and neither has it been a topic of research within the Chinese academic literature, but it is increasingly the focus of Western literature. As such, we must turn to these Western literature to determine whether or not they can be a useful basis for understanding issues of equity in the Chinese context.

There is a large body of literature on transport related social equity in the last decade. The discussions about transport related social equity mainly focus on four aspects: (a) philosophical theorisation of social equity in the transport domain (e.g. Martens, 2012; Martens, 2017; Lucas, et al. 2015, Hananel & Berechman, 2016); (b) accessibility (e.g. Martens & Ciommo, 2017; Pereira, et al., 2017; Neutens, et al., 2012); (c) the distribution of cost and benefits (e.g. Murray & Davis, 2001; Ogilvie & Goodman, 2012; Martens 2017); and (d) transport related social exclusion (e.g. Lucas, 2006, 2012; Schwanen, et al., 2015; Currie, et al., 2009).

The equity issue has also been more specifically identified as one of the key elements of the public acceptability of road pricing, regarding the distribution of its costs and benefits (e.g. Schlag and Teubel, 1997; Schade, & Schlag, 2003; Jaensirisak, 2005). For example, Metz (2002) identified equity as one of the main problems of road pricing because it is less equitable than the relatively egalitarian transport system at present. Similarly, Viegas (2001) looked at the reasons for political hostility towards road pricing schemes, the author found there is an inescapable trend that some kind of resources need to be *reallocated* during the process of achieving equity. This corroborates the relationship between revenue allocation and equity, which are common within Western congestion pricing policies.

Schlag and Teubel (1997) argued that the interpersonal (social) and interregional (spatial) aspects should both be included when considering equity issues in public acceptability of road pricing measures. Equity issues were also extensively discussed by Raux and Souche (2004). Based on Rawl's theory of social justice. The authors identified three types of equity which should be considered in a road pricing scheme, namely spatial equity, horizontal equity, and vertical equity. Kim et al. (2013) substantiated and enriched these previous studies on the relationship between equity and public acceptability by investigating the determinants of acceptability of environmental taxation. Their results revealed that fairness was the most direct determinant of public acceptability of pricing measures.

However, it has rarely been discussed how real and perceived inequity is different. Levinson (2010) revealed that the perceived inequity is highly subjective. A policy which is considered to be equitable to researchers or policy makers may not be recognised as equitable to an individual affected by the policy. Fujii et al., (2004) showed that perceived fairness is the most significant factor influencing public acceptance of road pricing. Furthermore, although public acceptability of congestion charge has been widely discussed in the Western context, it cannot be automatically assumed that this concept is transferable to the Chinese context given its entirely different underpinning philosophical cultures for understanding the meanings of equity (Marsden & Stead, 2011).

In this paper, we, therefore, argue that different cultures will have different understandings of notions such as distribution, fairness, and accountability. The literature on Chinese egalitarianism suggests that Chinese people expect for a deprival of privileges rather than an absolutely equal distribution of wealth. Besides, their equity concerns are not about cost-and-benefits of the proposed scheme but the differences of the living conditions between the perceived privileged groups and themselves. Therefore, there is a gap in the literature where we need to understand the perception of social inequities in the unique Chinese context, shrouded in the traditions of egalitarianism, and its impact on public acceptability on road pricing scheme from these perspectives.

### **3. Methodology**

Since the political system, as well as culture, in the Chinese context is far different from that of the Western context, it is doubtful that a Western-based methodological framework could be used for assessing the role of egalitarianism in the public acceptability of policies in China. Therefore, an exploratory qualitative study was first required in order to gain an in-depth understanding of the issues and to test assumptions prior to designing a larger quantitative study (King, 1994). By using qualitative research, the researcher could develop a systematic exploratory understanding of public acceptability issues based on the Chinese context, rather than merely adopting the Western framework with some fragmentary Chinese characteristics.

At first, interviews were conducted with 12 expert stakeholders including policy-makers, scholars and former officials to explore whether and why public acceptability might be an issue for Chinese policy makers. Nine focus groups, with a total of 73 participants, were then conducted with a range of different groups of lay citizens (see table 1 below) to explore which factors influence public acceptability of the policy and to what extent they think congestion charge is acceptable. The paper concentrates only on focus groups data.

#### *3.1 Hypothetical Cordon-based Charging Scheme*

Since the policy was still at the planning stage at the time of our study, participants might be aware of the general idea of a congestion charge but did not have a shared understanding of the policy. Therefore, we

provided them with different kinds of charging schemes in the participant information sheet and a hypothetical cordon-based charging scheme was introduced as the basis for the discussion.

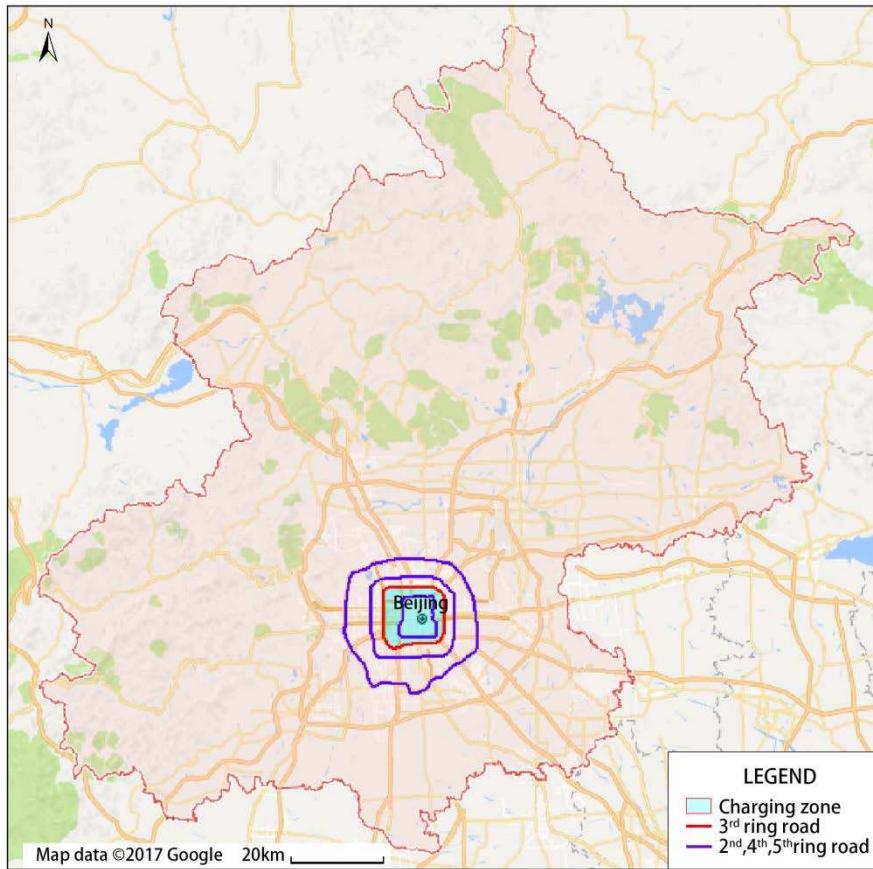


Figure 1 The Hypothetical Charging zone within the Metropolitan Area of Beijing

The urban road network of Beijing could be categorized into: ring roads (the 2nd to 6th ring road), toll expressway connecting central and suburban areas, and other local roads (see Figure 1). The 5th ring road roughly delimits the boundary between the urban and suburban areas. The area inside the 3rd ring road was selected as the charging zone (shown in Figure 1(a)) because area between the 2nd and 3rd ring roads is the most congested in Beijing (TPI, Beijing Transport Research Centre, 2011). We adopted a simple hypothetical charging policy that 50 yuan will be charged for driving a car within the charging zone between 7:00 and 18:00, as complex charging methods (e.g. Wu, et al., 2017) because it could be difficult for participants to understand and the research does not focus on the charging strategy. We also provided different charging schemes in the participant information sheet including different charges (10 CNY, 20CNY, 50CNY) and highlighted that the price and charging zones are hypothetical and is open for discussion.

### *3.2 Recruiting and Grouping Process*

The recruiting process was complex because most of Chinese citizens are not familiar with focus groups and they are generally unwilling to participate in activities which involve face-to-face open discussions. Therefore, the researchers first organised three online discussions with people who had expressed their ideas about the congestion charge policy on social media. After online discussions, we asked the participants to explain details of the research to their acquaintances in Beijing and invite them to participate in face to face

focus groups. These online discussions were used for recruiting only because around half of the participants did not live in Beijing and so were not in scope for the main study, which focused only on Beijing residents.

Although 58 Beijing residents introduced through online discussion participants were willing to participate, most of them were young people and lived within the third ring road. In order to control for sample selection bias, therefore, these 58 people were asked to deliberately invite people who were more difficult for researchers to access, such as the elderly. We received another 77 positive responses after this additional recruitment process.

An additional focus group with taxi and bus drivers was conducted after finishing all the other eight focus groups. It was unexpected that most professional drivers who talked with us wanted the congestion charge to happen, while the majority of people in the initial 8 groups held a negative opinion about the policy. In order to figure out what causes this expectation, the researcher invited three taxi drivers, two bus drivers and one member of staff in a subway station to run another focus group.

Finally, a total of 73 Beijing residents participated in the focus group discussions. The participants were then clustered into eight groups (shown in Table 1). The distribution of focus group participants is shown in Figure 2. The rule of the grouping process guaranteed that participants in one group did not meet each other beforehand. Initially, we planned to have around ten people per group. Since there were too many young volunteers, they were randomly selected to participate in discussions.

. Table 1 Cluster of Participants

	Old To Beijing				New Settlers				Additional
	Inner City 3rd ring road)	(inside the 3rd ring road)	Outer City 3rd ring road)	Inner City	Outer City	Outer City	Bus & Taxi Drivers		
	Young (<45)	Elder (>45)	Young	Elder	Young	Elder	Young	Elder	
Sample Size	9	8	6	6	10	9	11	8	6
					Former Rural Hukou Holders				
					1	2	4	3	

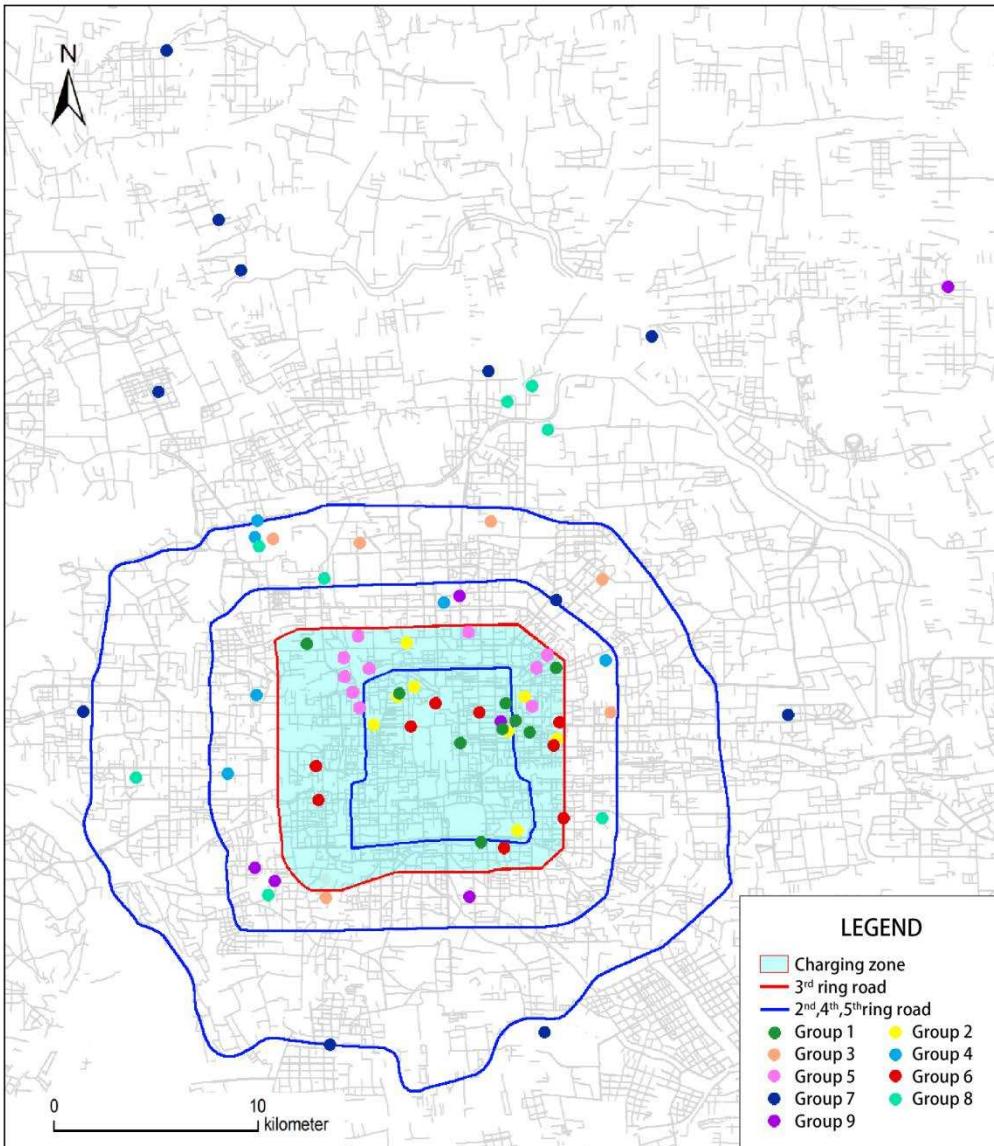


Figure 2 The Distribution of Focus Group Participants

### 3.3 Focus-group Discussions

The biggest barriers to conducting a focus group in China is that participants prefer listening to talking when they are sitting in a room with strangers. Also, it is highly likely that either someone dominates the whole discussion, or everyone awkwardly looks at each other and says nothing. In either case, we cannot adequately gather information and ideas from across different perspectives and attitudinal positions. In order to encourage people to express their own idea and to really debate with other participants, the moderator carried on a short conversation (15-30 min, online or face-to-face chat) with every participant before focus group discussion. The purposes of the short interviews were: (a) first and foremost, to make the participants feel comfortable and confident to talk about the issues at hand because many participants felt they were incapable of expressing their opinions about the policy because they were not an expert in transport field; and more importantly, (b) to give the moderator an opportunity to have an initial impression of the participants and their ability to contribute to a group discussion. Those who held relatively extreme views were noted and

then encouraged to express their ideas at the beginning of the focus groups, which stimulated people holding similar or opposite views to express their own ideas and debate with each other. This 'stimulator' strategy was very effective, as all of the participants actively joined in the subsequent discussions.

In order to avoid asking biased questions, the moderator only posed very general questions, for example, "what do you think about the policy, what benefits and problems might it bring?" A question about revenue allocation was asked at the end of discussions if the participants did not mention anything about revenue since revenue allocation was identified as one of the most important determinants of public acceptability in the Western literature (e.g. Eliasson & Mattsson, 2006; Hensher & Puckett, 2007).

Each discussion lasted average 104 min, ranging from 86 to 145 min. All conversations were recorded and transcribed. All the transcripts were translated into English by the researcher in preparation for subsequent analysis. Since we intend to explore what is underlying the public acceptability issue in the Chinese context, an inductive category development approach was adopted (Thomas, 2006). We did two rounds of manual coding in which Liu and Liu independently completed the coding process. The Chinese version of transcripts were used in the first round and the translated version were used in the second round. The aim of the exercise was to minimise the extent to which the meaning of content was changed through translation. After coding, we clustered the codes into different categories. Then the list of categories was used to go through the transcripts again to confirm that the categories could accurately represent the participants' ideas and to explore the interactions between different categories. Themes were discussed in meetings with co-authors and other experts in this field.

To more systematically analyse the data, the software package NVivo 11 was used to organise, code, categorise, and visualise the data. The research team generated a list of 1074 codes ('nodes' in NVivo), and then categorised them into 23 themes ('parent nodes' in NVivo). After coding, several rounds of analyses were carried out, including linking themes, selecting representative quotations, and generating theories that were grounded in the data. Four key themes about equity emerged from this deep analysis: i) Government & lay citizens, ii) income equality, iii) equity between Pekingese and migrants, and iv) differences between Beijing and other cities. While 'privilege' is at the core of all themes about equity. Some codes which could not fit into a hierarchical tree ('free nodes' in NVivo) were included as the links between two themes, for example the code 'cause more social problems' is the link between 'perceived effectiveness of congestion charge' and 'privilege'. The coding and thematising process were visualised in a thematic map. (shown in Figure 3).

#### **4. Results and Discussions**

Appendix 1 offers a detailed overview of all the key themes and issues that emerged across all the focus groups and confirms social equity as a dominant concern. Although the research was primarily designed and conducted for a more general study of the public acceptability issues of congestion charge in Beijing, social equity issues became overwhelmingly important in the interviews with policymakers, and even more so in the focus group discussions with lay citizens. It was totally unexpected that most participants identified equity as one of the major concerns of the policy. Other core themes besides issues of equity also emerged, as shown in Appendix 2, but as these were largely exogenous to the topic of this paper, and also were not the focus of this Special Issue, they will be explored elsewhere.

Most participants seemed to think that the congestion policy is unacceptable because they believe it will be in some way unfair, and/or it may worsen current social inequity problems in the City. Participants discussed this issue from various perspectives, from which we will first go through four types of perceived

inequities and then we can sketch a clear narrative of how Chinese egalitarian thoughts have influence people's perceptions of social inequities.

#### *4.1 Inequity: The Government and the Public*

Most of the participants thought that the congestion charge could be inequitable because government car users will possibly be the only winners. None of the participants believed Government car users themselves will need to pay the charge, thus, non-Government car users will sacrifice their personal interests to deliver a better service for the elite cadres. As one of the participants said:

*There are still a lot of Government cars, especially in Beijing. If, ideally, they could be scrupulous in separating public from private interests, in other words, they don't charge government cars, it is absolutely unfair. However, if they also charge Government cars, then who pays for that? Of course, the Government, that is to say, tax payers pay for that. So, in other words, we pay for them. That is a little unreasonable. [Female, Younger than 45, Pekingese, Outer Beijing]*

Some participants thought that Government cars are the actual cause of congestion in Beijing. For example:

*Maybe we should try to ban 90% government vehicles, and then we see whether the problem is solved. If the problem is not yet solved by a government vehicle ban, we could sit down and reasonably discuss implementing congestion charge. [Male, Younger than 45, Pekingese, Outer Beijing]*

Most of the participants thought that the policy would assign a disguised privilege to Government car users, which means corrupt cadres would benefit from the policy. Even though some of them acknowledge that and apparently feel unsatisfied with the situation, they are inclined to accept the fact. As one of the participants explained:

*I'm not that idealistic. I know you can't expect they are going to charge themselves [...]. So, I think we have to leave it alone, we should not think about government vehicles when we think about this policy, otherwise we will get very resentful. For me, if every car needs to pay the same amount of money, I think that's fine. [Male, Younger than 45, Pekingese, Inner Beijing]*

Even though the Chinese socialist ideology places emphasis on class conflict, the conflict between officials and lay citizens remains the prevailing social conflict after the Qin Dynasty. With the increasing exposure of corruption after economic reform, the public has been filled with deep resentment against corrupt cadres. Some behaviours, as they are considered to be some sort of privilege, could arouse a sense of social inequity, such as Government cars for general use.

It was evident that participants reached a consensus on what should be considered as a social inequity issue in this context. In their opinion, social inequity is about inequalities of treatment between different groups of lay citizens, while inequalities between cadres and lay citizens were considered as irresistible and inevitable. The public wrest the slogan of "Bu Huan Gua Er Huan Bu Jun" from Confucianism and turn it into a request for egalitarian distribution of wealth. However, this so-called egalitarian distribution is built on admitting the fact that cadres do have political and economic privileges.

This notion of equity is far different from egalitarianism in the Western context since lay citizens do not expect an absolutely equal distribution but an equal distribution between lay citizens. Cadres at all levels, meanwhile, are regarded as representatives of the highest authority who implement the guidelines of the central committee.<sup>2</sup> Thus, lay citizens do not dare to officially criticize cadres, albeit with a growing antipathy towards government corruption. Nevertheless, the antipathy does not vanish, but transfer to antipathies towards other groups of lay citizens.

#### 4.2 Inequity: The Rich and the Poor

A high degree of income inequality remains to be one of the most noticeable consequence of China's economic reform. Han et al. (2016) argued that China can hardly call itself a socialist country since the huge inequality in all aspects is way more serious than in European countries, including those typical capitalist countries. However, Chinese people always expect a 'socialist distribution', as the Government has effectively propagated.

To achieve the Socialist Ideal, policies were implemented to maintain an equal income distribution in the Mao era. However, the Gini coefficient has climbed from 0.3 to 0.55 from the beginning of the Economic Reform to 2012 (Xie & Zhou, 2014). The great disparity in income equality before and after the Economic Reform has arguably exaggerated public perceptions of the polarization between the rich and poor. Many Chinese people, especially those who have experienced a series of socialist movements in 50s and 60s, exude nostalgia for the egalitarian past when they are thinking about the rich-poor gap at present. For example, one of the participants said:

*Back to 80s, or 90s we don't have such serious, such intense social contradictions. Not like nowadays, we blame each other, I think it's because the society is becoming more and more unequal, and that's what makes us feel nervous. [...] I don't have a car, I also want to have a car, but I can't afford it. So, because of this [congestion charge] policy, I know it's more unlikely for me to own a car now. But on the other side, I become glad secretly that some people who are just a little richer than me cannot use their cars. So, they will not laugh at me, because you know those who have a similar economic status with you would laugh at you most. [Male, Older than 45, New Migrant, Outer Beijing]*

A notion of egalitarianism is clearly embodied in this quote. On the one hand, the participant worried about the situation that people around him have something that he does not have, rather than car use itself, on the other hand, depriving other people of that car was regarded as favourable and equal, even though he himself cannot derive any benefit from the deprival.

The majority of the participants, especially poor people, suspected that driving would become another privilege of the rich again.

*I think the policy makes public owned urban roads a scarce commodity, which means rich people can use it, but poor people cannot use it. [Female, Younger than 45, Pekingese, Outer city]*

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<sup>2</sup> This could be deemed as a legacy of Legalism and Confucianism. In short, this combines an absolute loyalty to the highest authority from Legalism and the clannish ethical principles from Confucianism.

Whilst a few rich people think it is equitable to make driving a privilege. They considered the policy as an inevitable trend because roads, as one kind of limited resources, should not be free of charge.

*We are born to be unequal. So, I don't think the policy is something that oppress people.*

*[...] Rich people could drive not because they are rich, it is because they pay for that. If they don't pay, they also cannot drive. I don't think it's something unfair. [Male, Younger than 45, new migrant, Inner Beijing]*

It implies that rich people regard driving as a public service, whereas poorer people regard it as a right that every resident should have. Thus, despite the fact that the majority of the participants are not satisfied with the policy, the underlying causes are different. The rich wanted to buy comfort and convenience, hesitating whether the policy could reach their expectations for this, whilst the majority of the participants realized that the policy could widen the social inequity. Because of the increasing social inequities, poorer people appear to be unwilling to cooperate in reinforcing privileges of the rich. It could also be reflected in their expectations of how to charge and who should be charged.

*If you are going to charge us, please charge those rich people more, you should charge those luxury cars more. Right? They should pay more than us. I think the policy should have the same constraint on those rich people. For example, if half of people, I mean people like us, are affected by this policy, then half of rich people should be affected as well. If we drive 30% less than before, those rich people should also drive 30% less, at least 20%. [Female, Younger than 45, Pekingese, Inner Beijing]*

After the Economic Reform, the egalitarian distribution of wealth had been phased out but egalitarianism has been deeply imprinted on Chinese people's mind. An absolutely equal charge seems not enough for the public. Most of the participants usually considered themselves as people who should pay the lowest charge and suggested that richer people should pay more to avoid the privilege of the rich, but they never mentioned poorer people should pay less. However, it is an extremely subjective criterion for assessing whether an individual is rich or poor. It is interesting that the majority of the participants did not perceive themselves as rich people, including those who own more than two cars, a few properties in Beijing and even a man who owns a company which had some forty employees. Also, because of egalitarianism, solving congestion or smog problem is low on their list of priorities – everyone suffers from these problems, but some may suffer more from solving the problems.

Therefore, it is doubtful that an absolutely equal distribution is exactly what people desire. It could be more accurate to describe the so-called egalitarian distribution as to *equally not have* something rather than equally to have it. People with egalitarian thoughts urge the policy-maker to take more from the rich but they don't really request for anything that the rich have. Therefore, the most probable consequence of egalitarianism is making the rich poorer rather than making the poor richer.

However, people's expectation of the egalitarian distribution of wealth may not be as emotional as it appears. There are indications that when participants were indignant with richer people, they actually implied the connection between wealth and power-for-money deals. In other words, they are infuriated by a dishonest way to be wealthy rather than wealth itself, forasmuch as there is a faint possibility that lay citizens could have the same access to resources and information as corrupt cadres do. Hence, the rich are regarded as the embodiment of social inequity.

#### *4.3 Inequity: Residents of Beijing and Other Cities*

Unlike income inequality, spatial inequalities have always existed since the beginning of Communist China. Although rural areas had been the high ground of Socialist ideology in 60s and 70s, urban-biased policies had been implemented to achieve rapid industrialisation (e.g. Li & Yang, 2005; Meisner, 1999). Post-reform policies have further contributed to the expanding urban-rural inequalities (Lu & Chen, 2006). Besides, preferential policies have brought about significant regional disparity between coastal and interior provinces (Démurger, et al., 2002b).

*Many people want to stay in Beijing even though they could have ten times better quality of life if they live in some other cities. You see those people who do the dirtiest, hardest job, many of them are actually educated. They could do many other things if they went back to their hometown, but they insist on staying here. [...] When I was young I couldn't feel a great difference between Beijing and a capital city of a province. [...] But after the Reform and Opening up, several cities develop way faster than others, so there are more problems in those cities. Not only transport. [Female, Older than 45, Pekingese, Outer Beijing]*

Transport facilities are identified to be one of the major factors differentiating regional development (Démurger, 2001). However, transport-related spatial inequalities are not limited to transport facilities. Transport policies can also be spatially unequal, such as the Beijing congestion charge. Most participants, including new migrants originally from surrounding area of Beijing, considered it is inequitable that only Beijing residents need to pay. Since the authority has announced that a pilot congestion charge will be studied after the red alert of air pollution, the policy is widely regarded as a solution to the smog problem. Accordingly, it was deemed unequal that only Beijing residents need to pay extra money for air pollution.

*I think the policy could be implemented in other cities as well, at least those cities around Beijing, for example Tianjin, Shijiazhuang. [...] It's more equal for us, because the smog problem is a nationwide problem, it's not only our problem. We are responsible for that and they should be responsible for that too. So, I think they should pay too. [Male, Older than 45, Pekingese, Outer Beijing]*

Participants, on the one hand, doubted the effectiveness of congestion charge, on the other hand, do not want to be the only victims of a policy which aimed at alleviating the nationwide smog problem. Thus, Beijing residents thought it could be more equitable if the policy is not only implemented in Beijing. It is clearly influenced by egalitarianism that participants expect to take something away from others in order to achieve an egalitarian distribution. It verifies that taking things owned by others could ingratiate the public because of the egalitarian thought.

However, when most of Pekingese complained about the charge, they did not mention any distinct advantages over other regions that Beijing has enjoyed because of the urban-biased policy and the special political position of Beijing.

Migrants' perceptions of inequities between residents of Beijing and other cities were more complex than Pekingese's. Some inclined to identify themselves as Beijing residents and, to a large extent, agreed with the statement that congestion charge is more equitable if it would be implemented in other cities around Beijing.

These migrants behaved more like some Pekingese; they considered residents of other cities are taking advantages of Beijing congestion charge if only Beijing residents need to pay. It is interesting that almost all of migrants who held this opinion were former rural hukou holders. The others, on the contrary, have a strong impression of spatial differences between Beijing and their hometown. It further influences their attitude towards Beijing and Pekingese, thereby gradually forming their egalitarian expectations.

#### 4.4 Inequity: Pekingese and New Migrants

Pekingese and new migrants hold different views on equity issues of the road pricing scheme. Most Pekingese participants think the congestion charge could be good to the society as a whole. They recalled the good environment and blue sky from their childhoods.

*Most of the new riches are outsiders, Beijing is not their hometown, they are just passing by. They don't care how our air is polluted. When I was a child I could sit in my home and saw the Jingshan Park, now I cannot even see a guy twenty meters away from me.*  
[Female, Younger than 45, Pekingese, Inner Beijing]

Some Pekingese blamed new migrants for air pollution and other social problems.

*Because you know the problem in Beijing is mainly caused by them. Of course, we contribute to these problems as well, but you know it's different. For example, I think the policy could be good because I think we need such a policy to regulate those new migrants. Maybe not all of them, those new riches. [...] Of course, they are rich they can go wherever they want, but I think they are parasites of this city.* [Male, Younger than 45, Pekingese, Outer Beijing]

While others have sympathy for Beijing drifter because they think Beijing drifters have experienced different types of social inequities.

*As a person who are born in Beijing and grow up in Beijing, sometimes I cannot refrain from supporting the theory that 'only in the Spring Festival, Beijing is Pekingese's Beijing'. [...] A few cars on roads, no congestion, amazing. But I think we can't repel new migrants because of this. [...] those people from other cities work hard to get what they want. They have the ability to live in this city, why Pekingese could ask them to leave this city? For what? Your hukou?* [Female, Younger than 45, Pekingese, Outer Beijing]

New migrants, however, expressed strong discontent with the policy. They believe that as newcomers to this city, they have already been unequally treated in every aspect before and after they came to the city. Moreover, the policy itself is unequal, not to speak of leading to greater social inequities.

*At the end of autumn, farmers burn those straws and there is very heavy smoke everywhere. [...] We have that experience for twenty years. So now, I think it is just because there is the same problem in cities now, big cities like Beijing. So, they now think it is a problem, it should be solved. We have that experience for twenty years. Who care about those farmers? Well not only farmers, people who live in those areas actually, like me. And now we come to Beijing, and we need to use our money to improve their air quality?* [Male, Younger than 45, New migrant, Outer Beijing]

The participant thought that smog has attracted attention because urban residents are now suffering from this problem too. However, people who grew up in rural areas have already suffered smog for a much longer time. Thus, the participant found it inequitable that rural and urban residents are differently treated. It implies the result of urban-biased policies in China and a great urban-rural inequality. It is indubitable that Beijing, as the capital city of China, is one of the main beneficiaries of these policies and has the most intense social contradictions hidden behind a harmonious appearance. For example, participants indicated that Beijing plunders many resources from the rest of the country, especially provinces around Beijing such as Hebei province.

*I feel that Beijing has bled my hometown, the whole province. It is almost the worst province in this country. Bad economy, worst environment, very bad. The only reason is, it's near Beijing, the capital city [...] I realize our young people have already contribute to this city, but they (Pekingese) are grabbing everything from our hometown. I can't feel happy. I know it's not related to this policy, but I just think it's ridiculous to let those contributors to pay this money, you know many of them don't have a Beijing hukou. They get no benefit from staying here. [Male, Older than 45, new migrant, Inner Beijing]*

New migrants think Pekingese are born with privileges. Pekingese may not even notice that they are sharing resources that new migrants may need decades of hard work to gain access to.

*I know this policy has been implemented in many foreign cities, but you know their societies are quite equal. You know, they don't have that privilege of Beijing hukou. You know when we moved to here, my child was not allowed to register in a normal secondary high school in Beijing because we don't have a Beijing hukou. So our children can only study in schools for migrant workers. The educational resources are extremely poor. You know, teachers, campus. It's like they intentionally segregate us from them. It's like apartheid. [Female, Older than 45, new migrant, Outer Beijing]*

Hukou, a system of population registration which provides the principle basis of establishing identity, citizenship, and every aspect of people's daily life (Cheng & Seldon, 1994), remains to be one of the legacies of planned economic system, obstructing urbanization and labour mobility (Liang, 2015). Even if new migrants could find productive employment, they will be treated as second-class citizens without a Beijing Hukou. New migrants do not have the equal access to a series of social resources, such as social security, housing subsidies, and education in public schools (Tao & Xu, 2007). Thus, obtaining the Beijing Hukou is one of the most prioritised tasks for most new migrants.

Despite the fact that the congestion charge has no direct relation with the Hukou system, most new migrant participants spontaneously categorized the policy as benefits of being Pekingese and exploitation of migrant workers. For new migrants, the policy seems to be another privilege of Beijing hukou holders because they, as migrants, pay for Pekingese's quality of life. It is evident that new migrant participants do not regard Beijing as their home. Therefore, they always have a sense of alienation from Beijing. Although new migrants may get the same benefits as Pekingese do, they feel they are unequally treated. This sense of inequity is derived from a variety of privileges that the Beijing hukou grants, as well as from the great disparity between the development of Beijing and their hometown.

Egalitarianism has formed Pekingese's and new migrants' views about each other. For Pekingese, people who live in Beijing should all have the same responsibility to solve problems in Beijing. In such

circumstances, Pekingese sometimes feel it's reasonable to blame new migrants since they consider new migrants cause these problems. For new migrants, Pekingese residents should not have privileges over people from other places. People who have different background would have different perceptions of Pekingese's privileges, thereby having different senses of being deprived. Both Pekingese and new migrants are expecting an egalitarian distribution, of social responsibilities for Pekingese, whilst of social resources for new migrants.

#### *4.5 Resentment against the Privileged Groups*

Privilege featured at the centre of discourses of social inequities. The privileged class was recognised as another symbolic effect of market-oriented economic reform. Some particular groups of people who have reaped the benefits of the reforms were identified as the privileged class, while others, perceived a strong feeling of being oppressed and exploited. For low income people and new migrants, it is clear that rich people and Pekingese are the privileged groups. However, Pekingese and the majority of rich people criticised the privileged groups as well. Few of them identified themselves as the privileged ones; richer people also saw themselves as oppressed and exploited. Since the congestion charge are expected to reduce car use, poorer car users indicated that the policy would exacerbate social contradictions between the privileged class and others.

*I think this policy would make prejudice between people more visible. For example, those who are still using cars every day may regard themselves head and shoulders above others, because they can still use cars. [Female, Young than 45, Pekingese, Inner Beijing]*

The feeling of being oppressed causes a simmering resentment against the rich, which has been a widespread social phenomenon in China for decades. It is derived from the negative emotions of relatively disadvantaged groups when they actively or passively compare themselves to richer people. People tend to take irrational actions to express their resentment against richer people.

*I don't have a private place for parking, so I park my car outdoors. My car got punctures for more than four times, scratched for many times, I cannot even remember. [...] They did it intentionally. [...] I'm not a rich man alright? I don't even buy a place to park my car because it's too expensive. These people just hate whoever is richer than themselves. And they don't think about how to work harder, how to make money by their own hands, they just hate you because they think you are richer. [Male, Older than 45, new migrant, Inner Beijing]*

Public acceptability of congestion charge is very much influenced by this resentment, insomuch as car users are regarded as relatively richer people. Due to egalitarianism, the charge is regarded as a proper way to alleviate the differences between car users and non-car users to some extent.

*They (supporters of the policy) don't really care about whether this policy meet their expectation, they don't care. They just find that this is a good way to let rich people pay more. I heard someone said "great, you bought a car then you think you are rich? You need to pay for the charge now." Many people support this policy because of this. [Male, Older than 45, Pekingese, Inner Beijing]*

It is evident that economic development has very little impact on alleviating discontent about social inequities (Lü, 2014). The resentment against the rich, an inevitable consequence of egalitarianism, will remain to be one of the most intractable barriers to promoting social equity. Although it is originally caused

by social inequities and immoral behaviours of the so-called privileged class, people considerably generalise the resentment to a wider population, namely anyone who is richer than themselves.

Another probable cause of the resentment against the rich is that they are considered to be absolutely connected with corruption. This is the reason why most of relatively rich participants did not identify themselves as privileged. "The rich" regard to those who use their privileges to make money but not those who actually have a lot of money in this context. For relatively richer people, it is clear that they earned their money by the sweat of their brows. However, it is difficult for poorer people and migrants to distinguish them from "the privileged".

Most lay citizens have an intimate knowledge about how violent and dishonest the primitive capital accumulation was during the early stage of the Economic Reform (e.g. Ngai, 2005; Tanner & Feder, 1993). Thus, inappropriate behaviours of the rich morally justify lay citizens' resentment against the rich. Although some people are merely indignant at using dishonest ways to become rich, resentment against the rich has been notably generalised and extremised (e.g. Yan, 2009; Holmstrom & Smith, 2000). According to the participants, it is likely that people would attempt to take emotional and violent reactions to richer people. Under these circumstances, those who became a little richer than others by their ability and hard work would be the victim of the resentment. It is not uncommon that their hard-earned quality of life may be crushed by a group of emotional people with the resentment against the rich (e.g. Huang, 1995; Moise, 2017).

Figure 3 demonstrates some of the deeper dynamic interactions between the four core topics about equity issues identified above. It clearly shows that privilege is the core of perceived inequities. Poorer people thought the congestion charge policy was inequitable to them because it would deprive them the right to use cars and make it a privilege of the rich. Migrants' perception of privilege was highly correlated with uneven regional development. Beijing, the capital city, enjoys unaccountable privileges which are unattainable for residents of other regions. Migrants then identified Pekingese as the main beneficiaries of the policy because people originally from other regions again pay for improving Pekingese's hometown. Equity issues between Government and lay citizens was highly correlated with 'trust in the Government' which was another main determinants of public acceptability to emerge from the analysis. Moreover, perceived inequity might undermine the effectiveness of congestion charge because an ineffective policy was perceived as inequitable by some participants. This is because an effective congestion charge would effectively make private car use a new privilege of the rich while an ineffective policy would not confer any privilege to other population groups.

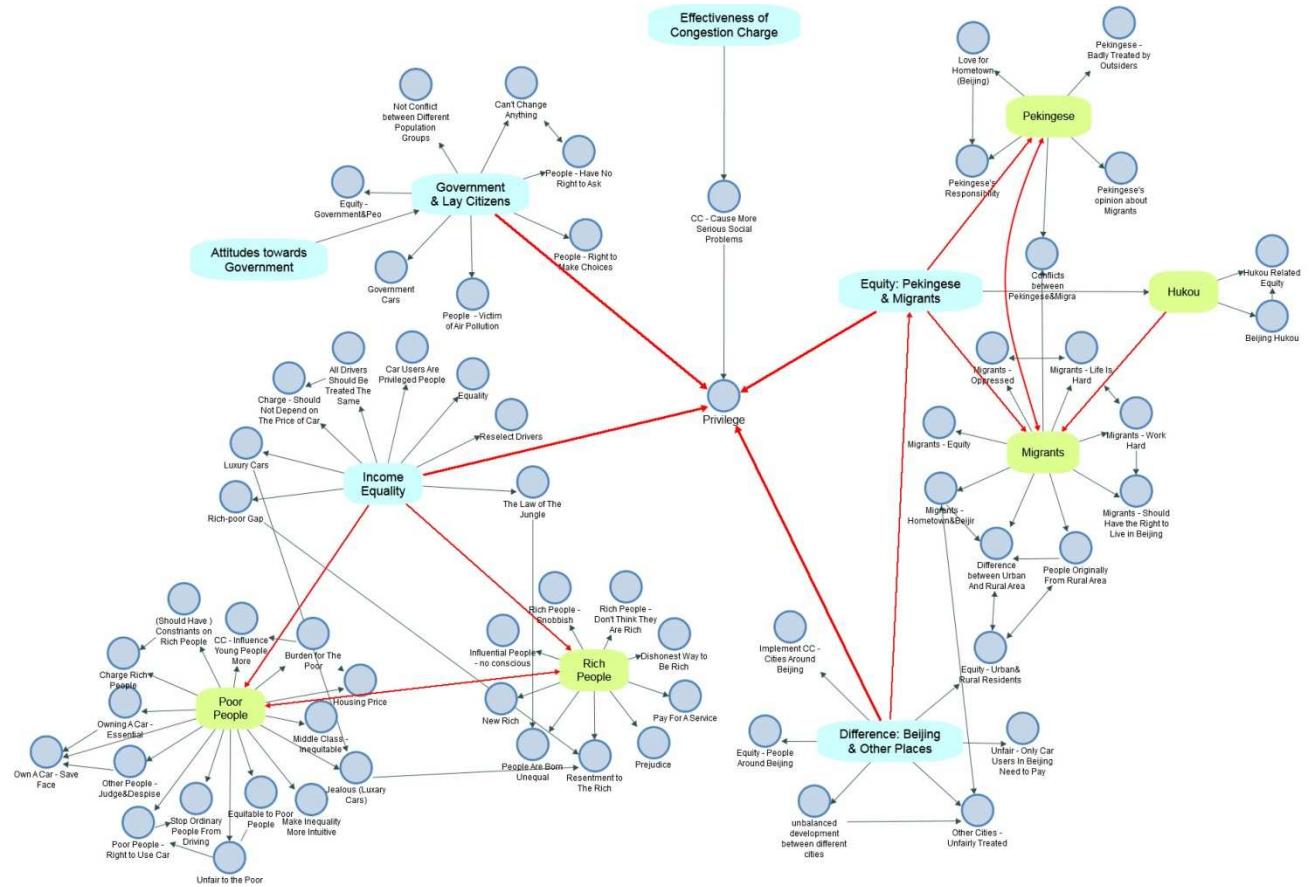


Figure 3 Dynamic Interactions between Core Topics

## **5. Conclusions and Policy Applications**

The narratives presented above demonstrate how perception of social inequities have led to a generalized antipathy towards the Beijing congestion charge, and how egalitarianism thought has shaped these perceived social inequities. Figure 4 offer a schematic overview of the key mechanisms that are driving this discontent.

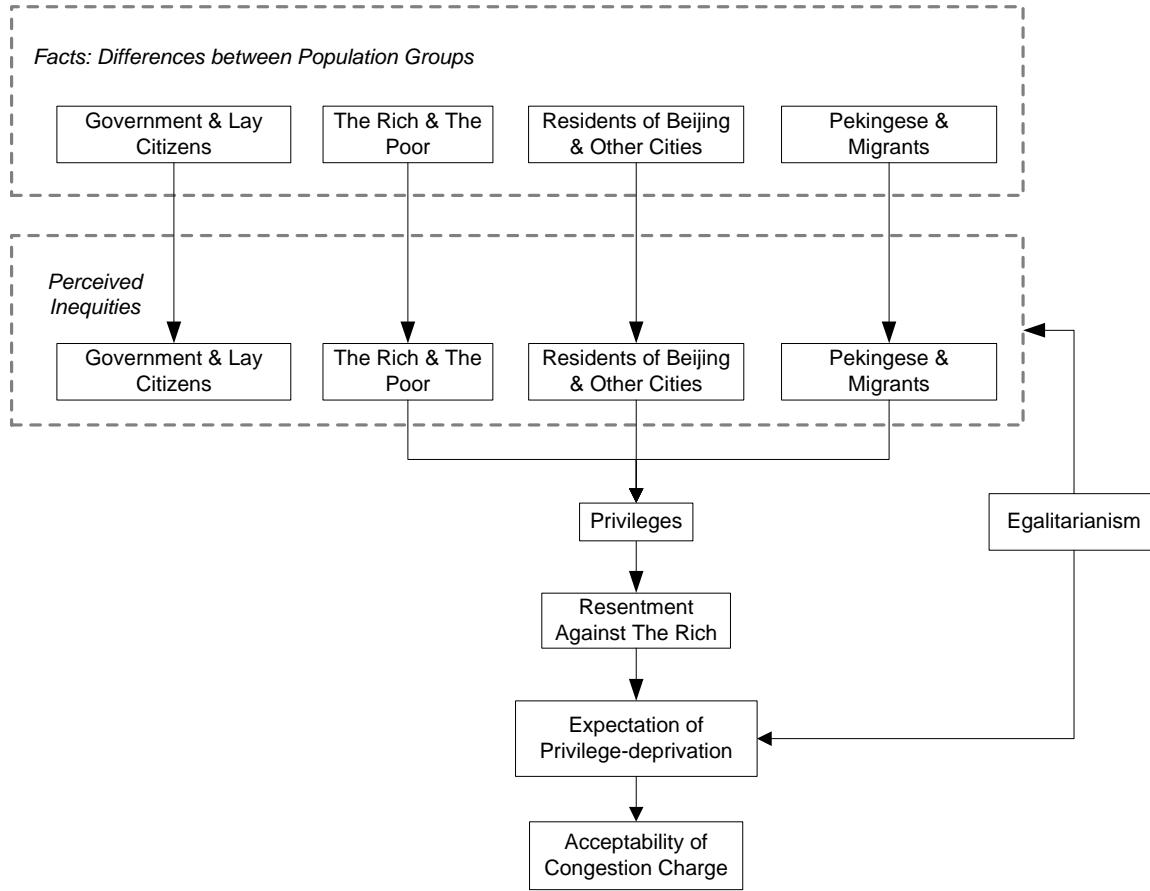


Figure 4 Mechanism of Shaping Perceived Transport Related Social Inequities

Although Whyte (2010) suggested that Chinese people think the current income inequality is acceptable and Chinese people are rather optimistic about inequity issues, he cannot deny the public expectation for more policy effort on social equity issues. It would seem that Chinese policy-makers are now paying increasing attention to transport related social equity issues, however, it could still be dangerous for policy-makers to ignore public perception of social equities under the influence of egalitarianism.

In summary, participants identified four main types of perceived inequities related to the Beijing congestion charge.

Firstly, government car users were perceived as the biggest winner of the policy because even if government cars are not free from the charge, tax payer need to cover their cost. Private use of government cars is a common phenomenon in China (Li, 1998; Zhang & Chan, 2013), however, public concern for Government car use is ambivalent. On the one hand, most of the participants complained that congestion charge would confer a new privilege to cadres, on the other hand, they permitted this new privilege on the grounds that criticism of the Government is forbidden. They thereafter transferred their previous discontent towards the Government to "the privileged" lay citizens. Privileges or the privileged class, repeatedly mentioned by almost all of the participants, are the most intuitive perception of social equity issues. In order to alleviate the feeling of being oppressed, long-term efforts should be made to increase the transparency of revenue reallocation and to encourage public engagement when the policy is still at the planning stage. Also, intensifying a clampdown on corruption could effectively decrease these perceptions.

Secondly, it is unavoidable that the market-oriented reform has been widening the disparity between the rich and the poor. Western countries promote social equity via redistribution (e.g. Dahlgren, 1991; Kvist, 2012), however, it is debatable whether redistributive policies in China promote or reduce social equity. China's welfare system seems to materialise privileges rather than helping disadvantaged groups (see. Wong, 2005; Leung & Nann, 1995; Frazier, 2010). The rich, such as cadres and employees of state-owned enterprise, receive a lot of benefits from the system, while the poor get few. Long-term social welfare reform is essential to deal with this issue since relatively poorer people can hardly ignore social inequity as long as 'the privileged group' gets more from the welfare system.

Thirdly, some Beijing residents thought congestion charge is unfair because residents of other cities do not need to pay given the policy was proposed as one part of smog alleviation plan. This is consistent with evidence from Shanghai that Shanghai residents considered the car license auction policy unfair because residents of other cities do not need to pay (Chen & Zhao, 2013). Although most of the participants had a high level of smog awareness, their willingness-to-pay for smog problem was low. It is because smog is a nationwide problem which is not only caused by car users in Beijing. Therefore, some participants expected that the congestion charge could also be implemented in other cities around Beijing.

Fourthly, China has been facing serious spatial differences in its development after the market-oriented reform, especially urban-rural and coastal-interior differences (Li & Yang, 2005; Démurger, et al., 2002b). However, at least at the early stage of the reform, these differences are mainly influenced by preferential policies instead of market (Démurger, et al., 2002a). The huge spatial inequalities intensify social conflicts between different population groups (Ho, 2005; see also. Watson, 2010). Regional discrimination is a common phenomenon in China (Lu, 2013), those who are originally from rich areas such as Beijing, a strong regional identity has formed because of the increasing localism after the reform (Li & Bachman, 1989). Besides, the conflict between Pekingese and new migrants is an inevitable outcome of the hukou system (Liang, 2015). Even though the significance of Hukou has been considerably diminished, Beijing Hukou is still a symbolic privilege, which prevent new migrants from getting benefits that Beijing Hukou holders enjoy (Lague, 2003). To mitigate the influence of perceived inequity, long-term efforts are needed to narrow the gap between the rich and the poor, coastal and inland area, and agricultural and non-agricultural hukou holders.

Government car use was rarely discussed in the Western literature on transport equity issues, but it was one of the key concerns of the participants. Moreover, some categories can fit into the Western literature, but they have to be interpreted in different ways. For example, although 'inequalities between the rich and the poor' and 'inequalities between Pekingese and new migrants' are closely related to accessibility opportunities, the participants rarely talked about whether they have the access to jobs, goods, and services. They focused on whether other population groups have a more convenient access to those opportunities. Many participants, especially new migrants, mentioned social exclusions, but it is different from that in the Western literature. It is more of a hukou related than a transport related social exclusion. Most of them are not aware of transport poverty, but they put themselves into a wider society when they thought about the policy.

Contrary to the Western literature, there is strong evidence that revenue reallocation was not a public concern in the Chinese context. Only two people in one group mentioned revenue reallocation spontaneously, while the majority of the participants were confused when they were directly asked to discuss this. It shows another distinguishing feature of Chinese egalitarianism, that participants only thought about abolishing other people's privileges, but they never talked about what they personally want to derive from this abolition. In other words, Chinese egalitarianism focuses on denial rather than redistribution. Policymakers could also make use of features of Chinese egalitarianism to achieve a higher level of acceptability by convincing

disadvantaged groups that other population groups, especially richer people, need to sacrifice their personal interests, thereby fulfilling expectations of their privilege-deprivation. However, this can only have short-term effect.

Further, egalitarianism aggravates the perception of social inequities and causes resentment against the rich because it inclines to eliminate the difference between individuals, so that social inequities are more generalised and extremist. According to some of the participants, instead of the really privileged people, those who become richer by hard work and through their own abilities are usually the main victims of resentment. Therefore, egalitarian thought lead to a further social rift between different populations groups. On the one hand, advantaged groups are reluctant to sympathise with disadvantaged groups because they suffer from resentment, on the other hand, egalitarianism connives at a "reaping without sowing" illusion. Consequently, it causes an atmosphere of distrust and disrespect between different population groups.

There are some limitations to this study. Firstly, there was no clearly proposed scheme at hand for congestion charging in Beijing, only reports that it would happen when the focus groups were conducted, so the policy which was used for discussion had to be hypothetical. Secondly, since participants were selected after online discussions, this group of people may be more sensitive to the congestion charging policy. Thirdly, although the 'stimulator' strategy effectively encouraged participants to share their ideas, it is likely that more moderate opinions were difficult to be heard when people with extreme views were debating. Fourthly, poor migrants inclined to go along with other people's ideas during group discussions, so it is questionable whether they expressed their true opinions. Lastly and most importantly, this was a qualitative study, so whilst being extremely useful for gaining a deep understanding of how different sectors of the Beijing population might respond to the introduction a congestion charge in their city, it could never be representative all the views of all citizens. This will be the task for further research of this issues, which proposes to conduct a randomly sampled survey with 1104 Beijing residents, and will be reported in subsequent papers.

## Acknowledgement

The authors gratefully acknowledge financial support from China Scholarship Council.

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## Appendix 1 Key concerns about the Acceptability of Congestion Charge by Focus Groups

<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>	<b>Group 5</b>	<b>Group 6</b>	<b>Group 7</b>	<b>Group 8</b>	<b>Group 9</b>
The effectiveness of road pricing on smog and congestion alleviation (8 out of 9)	Care of posterity (6 out of 8)	Lose trust in experts (5 out of 6)	Social equality issues in general (6 out of 6)	Social equality issues in general (10 out of 10)	The government do not concern about social inequalities (7 out of 9)	Local government don't care about new migrants and low income people (6 out of 11)	New migrants are unequally treated in Beijing (7 out of 8)	Social equality issues in general (6 out of 6)
Lose trust in experts (7 out of 9)	Emigration because of environmental problems (6 out of 8)	GDP supreme and political achievement (4 out of 6)	The effectiveness of previous transport policies (5 out of 6)	The effectiveness of road pricing on smog and congestion alleviation (5 out of 10)	Lose trust in government (6 out of 9)	Lack of transparency in revenue allocation (6 out of 11)	The purpose of the policy: to grab money (5 out of 8)	Government car use (4 out of 6)
Lack of transparency in revenue allocation (6 out of 9)	People need to obey (5 out of 8)	People need to obey (4 out of 6)	Chinese people do not have a sense of responsibility (4 out of 6)	Policies implemented in foreign countries (4 out of 10)	Family members' impacts (5 out of 9)	Social equality issues in general (6 out of 11)	Beijing hukou and hukou related equality issues (4 out of 8)	The congestion charge is equitable to every car users (4 out of 6)
The effectiveness of previous transport policies (5 out of 9)	Government car use (4 out of 8)	The government should compare congestion charge with other possible solutions (4 out of 6)	Heavy pollution industry and their contribution to smog (4 out of 6)	Middle class people: anxiousness (4 out of 10)	It is government's responsibility to solve congestion and smog problem (5 out of 9)	Increasing burden for young working people (6 out of 11)	It is government's responsibility to solve congestion and smog problem (4 out of 8)	Private car users are not responsible for smog (3 out of 6)
Driving will become a privilege again (5 out of 9)	Family members' impacts (4 out of 8)	Inconvenient and uncomfortable public transport (4 out of 6)	Love for hometown Beijing (4 out of 6)	Lack of transparency in revenue allocation (4 out of 10)	The effectiveness of road pricing on smog and congestion alleviation (4 out of 9)	It is government's responsibility to solve congestion and smog problem (6 out of 11)	Privileges, especially privileges related to hukou and danwei (organisation) (4 out of 8)	The effectiveness of road pricing on smog and congestion alleviation (3 out of 6)
The purpose of the policy: to grab money (5 out of 9)	Memories of blue sky and fresh air (4 out of 8)	The purpose of the policy: to grab money (4 out of 6)	Passenger capacity of public transport should be increased (4 out of 6)	Lose trust in experts (4 out of 10)	Living cost in Beijing and housing price (4 out of 9)	The purpose of the policy: to grab money (5 out of 11)	Beijing drifters' quality of life (4 out of 8)	Lose trust in government (2 out of 6)
Bad behaviours of new migrants (5 out of 9)	Love for hometown Beijing (4 out of 8)	Lose trust in government (3 out of 6)	Lose trust in government (3 out of 6)	Middle class people: identity (3 out of 10)	Political corruption in general (4 out of 9)	Lose trust in government (5 out of 11)	Social equality issues in general (4 out of 8)	Resentment against the rich (2 out of 6)

Love for hometown Beijing (4 out of 9)	Environmental problems in general (4 out of 8)	Public transport: difficult to improve (3 out of 6)	The effectiveness of road pricing on smog and congestion alleviation (3 out of 6)	Lose trust in government (3 out of 10)	Comparison between their own hometown and Beijing & resentment to Beijing (4 out of 9)	Resentment against the rich (5 out of 11)	The effectiveness of road pricing on smog and congestion alleviation (4 out of 8)	Political corruption in general (2 out of 6)
The special position of Beijing: the face of China (4 out of 9)	Privileges (4 out of 8)	The effectiveness of previous transport policies (3 out of 6)	Lack of transparency in revenue allocation (3 out of 6)	Government car use (3 out of 10)	Congestion charge is a kind of corruption (3 out of 9)	Fabricated news by the government (4 out of 11)	Comparison between their own hometown and Beijing & resentment to Beijing (3 out of 8)	The passenger capacity of subway system should be increased (2 out of 6)
Luxury cars in Beijing (4 out of 9)	Lose trust in official media (4 out of 8)	Government car use (3 out of 6)	Care of posterity (3 out of 6)	Environmental problems (3 out of 10)	New migrants feel inferior to others (2 out of 9)	Living cost in Beijing and housing price (4 out of 11)	Crowded public transport, especially subway (3 out of 8)	Car users should balance cost and benefits (2 out of 6)
Political corruption in general (4 out of 9)	Resentment against the rich (4 out of 8)	New riches: bad behaviour and others (3 out of 6)	New migrants and problems caused by them (3 out of 6)	Beijing drifters' quality of life (2 out of 10)	The effectiveness of previous transport policies (2 out of 9)	Political corruption in general (4 out of 11)	Care of posterity (3 out of 8)	Taxi and buses should be free of charge (2 out of 6)
People need to obey (4 out of 9)	Nationalism makes foreign experience less convincing (4 out of 8)	A Chinese way to solve problems: oversimplified and crude (3 out of 6)	Beijing culture (2 out of 6)	Inconvenient and uncomfortable public transport (2 out of 10)	Beijing hukou and hukou related equality issues (2 out of 9)	Pollution source: private car or heavy industry (4 out of 11)	Love for hometown Beijing (2 out of 8)	Charging something free of charge before is not acceptable (2 out of 6)
Lose trust in government (4 out of 9)	The effectiveness of road pricing on smog and congestion alleviation (3 out of 8)	Lack of transparency in revenue allocation (3 out of 6)	The special position of Beijing makes it very attractive to other Chinese people (2 out of 6)	Uneven regional development (2 out of 10)	It is embarrassing to use public transport sometimes (2 out of 9)	The relationship between private car use and smog is not clear (3 out of 11)	The effectiveness of previous transport policies (2 out of 8)	Beijing drifters' quality of life (1 out of 6)
Policies implemented in foreign countries (3 out of 9)	Increasing burden for young working people (3 out of 8)	Lack of legal basis and a concrete action plan (3 out of 6)	Uneven regional development (2 out of 6)	Privileges (2 out of 10)	Pollution source: private car or heavy industry (2 out of 9)	People need to obey (3 out of 11)	Policies implemented in foreign countries (2 out of 8)	Traffic restrictions based on the last digit of license plate: not effective at all (1 out of 6)
Beijing culture (3 out of 9)	Limited access to information (3 out of 8)	People don't have the right to choose (3 out of 6)	Bad urban planning (2 out of 6)	Limited access to information (2 out of 10)	Resentment against the rich (2 out of 9)	New migrants are unequally treated in Beijing (3 out of 11)	Political corruption in general (2 out of 8)	Environmental problems (1 out of 6)
Should have different charging standard based on	Memories of blue sky and fresh air (2	The effectiveness of road pricing is unimportant (2 out	The policy should have the same constraints to the	The gap between the ruling class and ordinary people (2	Limited access to information (2 out of 10)	People originally from rural area may have different travel	Chinese people are familiar with taking advantage of	The relationship between private car use and smog is not

household income (3 out of 9)	out of 8)	of 6)	rich & the poor (2 out of 6)	out of 10)	9)	behaviour (2 out of 11)	loopholes (2 out of 8)	clear (1 out of 6)
Memories of blue sky and fresh air (2 out of 9)	Lose trust in government (2 out of 8)	Social equality issues in general (2 out of 6)	A Chinese way to solve problems: oversimplified and crude (2 out of 6)	Lose trust in official media (2 out of 10)	Uneven regional development (2 out of 9)	A better public transport system in necessary (2 out of 11)	Retired people will not be affected by the policy (2 out of 8)	New riches: bad behaviour and others (1 out of 6)
Chinese propaganda: the Western way is not suitable for China (2 out of 9)	The policy should have the same constraints to the rich & the poor (2 out of 8)	Negative attitude towards new migrants (2 out of 6)	Memories of blue sky and fresh air (1 out of 6)	It is ridiculous to talk about externality of congestion charge (2 out of 10)	Transport and environment protection department do not have real power (2 out of 9)	Heavy pollution industry and their contribution to smog (2 out of 11)	Living cost in Beijing and housing price (1 out of 8)	People should be aware of long-term benefit of the policy (1 out of 6)
The increasing gap between the rich and the poor (2 out of 9)	Fabricating & spreading rumours (2 out of 8)	Policy-makers are indolent, sloppy, and neglectful of their duties (2 out of 6)	The purpose of the policy: to grab money (1 out of 6)	Living cost, housing price in Beijing (2 out of 10)	Increasing burden for young working people (2 out of 9)	This policy is especially unequal to new migrants (2 out of 11)	Trust in government and cadres (1 out of 8)	Powerless public (1 out of 6)
Resentment against the rich (2 out of 9)	Lack of transparency in revenue allocation (2 out of 8)	Political corruption in general (2 out of 6)	Lose trust in experts (1 out of 6)	New migrants are unequally treated in Beijing (2 out of 10)	Other options could be more effective (2 out of 9)	Privileges (2 out of 11)	Environmental problems (1 out of 8)	Congestion makes public transport worse (1 out of 6)
The policy should have the same constraints to the rich & the poor (2 out of 9)	Chinese people are indifferent about public affairs (2 out of 8)	The cadre appointment system (2 out of 6)	Environmental problems (1 out of 6)	Need to own a car even though they don't really use it (2 out of 10)	Lay citizens are victims of smog and congestion, should not charge them (2 out of 9)	Family members' impacts (2 out of 11)	Poorer people should pay less than richer people (1 out of 8)	A strong policy is necessary to alleviate congestion and smog problem (1 out of 6)
Chinese people are indifferent about public affairs (2 out of 9)	Policies implemented in foreign countries (2 out of 8)	Obscurantism (2 out of 6)	Privileges (1 out of 6)	The purpose of the policy: to grab money (1 out of 10)	Smog problem on foreign media (1 out of 9)	Lose trust in official media (2 out of 11)	Resentment against the rich (1 out of 8)	Taxi drivers could get direct benefit from the policy (1 out of 6)
A better public transport system in necessary (2 out of 9)	Problems in public transport system (1 out of 8)	Chinese people do not have a sense of responsibility (2 out of 6)	The government intentionally conceal negative information (1 out of 6)	Regional inequalities are inevitable (1 out of 10)	A better public transport system in necessary (1 out of 9)	Beijing hukou and hukou related equality issues (2 out of 11)	Powerless public (1 out of 9)	People are unwilling to pay for smog (1 out of 6)
Powerless public (2 out of 9)	The government intentionally conceal negative information (1 out of 8)	Bad urban planning (2 out of 6)	Social media: a new source of information (1 out of 6)	Social media: a new source of information (1 out of 6)	Policies implemented in foreign countries (1 out of 9)	Uneven regional development (2 out of 11)	A Chinese way to solve problems: oversimplified and crude (1 out of 9)	

The special position of Beijing makes it very attractive to other Chinese people (2 out of 9)	Social media: a new source of information (1 out of 8)	Beijing: concentration of high quality resources (2 out of 6)	Political corruption in general (1 out of 6)	A Chinese way to solve problems: oversimplified and crude (1 out of 10)	The purpose of the policy: to grab money (1 out of 9)	New migrants feel inferior to others (1 out of 11)	Lack of transparency in revenue allocation (1 out of 9)
Smog problem cannot be solved because of heavy industry (1 out of 9)	Transport and environment protection department do not have real power (1 out of 8)	Love for hometown Beijing (1 out of 6)	Chinese people are indifferent about public affairs (1 out of 6)	The relationship between private car use and smog is not clear (1 out of 10)	Lose trust in experts (1 out of 9)	Comparison between their own hometown and Beijing & resentment to Beijing (1 out of 11)	Chinese people are indifferent about public affairs (1 out of 9)
People should not pay because they are victims of smog (1 out of 9)	Chinese people do not have a sense of responsibility (1 out of 8)	Manpower and material resources to implement the policy (1 out of 6)	The government should subsidise poorer drivers (1 out of 6)	GDP supreme and political achievement (1 out of 10)	Social equality issues in general (1 out of 9)	The special position of Beijing: the face of China (1 out of 11)	People need to obey (1 out of 9)
Environmental problems in general (1 out of 9)	Car dependency (1 out of 8)	Inner city shops and small business: logistic cost (1 out of 6)	Policies implemented in foreign countries (1 out of 6)	Political corruption in general (1 out of 6)	The relationship between private car use and smog is not clear (1 out of 9)	Smog problem on foreign media (1 out of 11)	The gap between the ruling class and ordinary people (1 out of 9)
New migrants don't have a sense of responsibility (1 out of 9)	Bad urban planning (1 out of 8)	Privileges (1 out of 6)		People need to obey (1 out of 10)	Powerless public (1 out of 9)	Environmental problems (1 out of 11)	Safety issues for bike users (1 out of 8)
The government intentionally conceal negative information (1 out of 9)	Low public involvement (1 out of 8)	Uneven regional development (1 out of 6)		Unequal allocation of social resources (1 out of 10)	Fabricating & spreading rumours (1 out of 9)	Policies implemented in foreign countries (1 out of 11)	Family members' impacts (1 out of 9)
		Transport and environment protection department do not have real power (1 out of 6)		Chinese people are indifferent about public affairs (1 out of 10)	A Chinese way to solve problems: oversimplified and crude (1 out of 9)	The special position of Beijing makes it very attractive to other Chinese people (1 out of 11)	Social pressure from relatives, friends and colleagues because of not having a car (1 out of 9)
		Cadres have no responsibility for unsuccessful policies		Cars are important in marriage and dating (1 out of 10)	This policy is especially unequal to new migrants (1 out	The government intentionally conceal negative information	China: a populous nation (1 out of 9)

(1 out of 6)	of 9)	(1 out of 11)
Chinese people are indifferent about public affairs (1 out of 6)	Limited parking space (1 out of 10)	GDP supreme and political achievement (1 out of 9)
Increasing burden for young working people (1 out of 6)	EVs could alleviate smog problem (1 out of 10)	Insufficient cooperation between transport & environment sector (1 out of 9)
Safety issues for bike users (1 out of 6)		Lay citizens may get benefits from a policy, but the benefits are just by-product of the policy (1 out of 9)
Powerless public (1 out of 6)		Legal basis of the congestion charge (1 out of 11)
Education about environmental problems (1 out of 6)		People need to obey (1 out of 9)
Use other new technologies to solve smog and congestion problems (1 out of 6)		Bad urban planning (1 out of 9)
New migrant and Pekingese should have the same opportunity to live in Beijing (1 out of 6)		Chinese people are indifferent about public affairs (1 out of 9)
		Heavy pollution industry and their contribution to smog (1 out of 9)

## Appendix 2 Key determinants of public acceptability of congestion charge

