Abstract

Motorcycle usage in Indonesia’s big cities has been increasing rapidly for the past few years. Increased ownership of private vehicles, including motorcycle, can indeed cause many transportation problems. On the other hand, with the limited public transport services, the lack of private vehicles can cause a person to experience social exclusion. In the field of transportation, the issue of social exclusion arises from the understanding that the provision of transportation services could cause different social impact on certain individuals and groups (Banister and Hall, 1981). Individuals and groups, who are not served by existing transportation systems, can experience social exclusion due to lack of access to opportunities (Preston and Raje, 2007). So far, theories explaining transport-related social exclusion and vehicle ownership are mostly come from the research in well-developed countries. In those countries, motorcycle usage is very rare, so that the research mostly focuses on automobile. This paper is aimed to formulate a conceptual framework of the motorcycle ownership as part of the transport-related social exclusion theory. The framework is developed based on literature review. This framework will be used as the methodology in conducting further study of the role and implication of motorcycle ownership in relation with transport-related social exclusion.

Keywords: motorcycle, transport-related social exclusion, vehicle ownership.

1. Introduction

Urban sprawl experienced by big cities in Indonesia, such as Jakarta, Bandung (Kustiwan, 2010) and Yogyakarta (Yunus, 2008) resulted in the rapid development of the suburbs without the decentralisation of jobs and public facilities. As a result, resident’s mobility patterns become inefficient. Residents who live in the suburbs may experience difficulties in accessing employment centre and other public facilities because of the available facilities in the suburbs does not suit their needs, for example, educational facilities (Herwangi, 2002). This is compounded by the lack of public transport services that reaches out to the suburbs.

Most of low-income people can only afford to live in the suburbs because land prices are cheap. As stated by Glaeser and Kahn (2003), sprawling metropolitan area makes low-income residents left behind because

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they cannot afford to have a car that is required by the sprawling urban form to travel freely. This condition poses potential social exclusion for low-income people who live in the suburbs. It is believed that one of the strategies pursued by the group to reduce social exclusion is by having a motorcycle. As a mode of transportation, motorcycle is relatively more affordable than a car that resulted in a rapid increase of motorcycle ownership.

Meanwhile, theories derived from research on the relationship between social exclusion and vehicle ownership in developed countries, cannot explain the phenomenon that occurs in developing countries. Therefore, this paper aims to develop a conceptual framework to measure the role of motorcycle ownership on reducing social exclusion in Indonesia. The rest of the paper is structured as follows. The second section provides literature review on transport-related social exclusion, and vehicle ownership. The third section explains the contribution of research on motorcycle ownership to transport-related exclusion theory; and framework to measure the role of motorcycle ownership in reducing social exclusion. The paper is finally concluded with short conclusion and further work.

2. Transport-related Social Exclusion and Vehicle Ownership

Social exclusion is a concept that was first emerged in France by Rene Lenoir through his writings, entitled Les Exclus (Estivill, 2003). Lenoir purpose at the time was to raise the attention at some marginalized groups that emerged in the ongoing economic expansion. These groups include people who experience disabilities in a state of physical, mental or social (Estivill, 2003: 5). This concept later evolved, not only includes people who have physical limitations, mental, or social, but includes all people or groups of people who experience lack of resources that causes inability to totally participate in normal activities that can be accessed by the majority of population (Levitas et al., in Lucas, 2012; Social Exclusion Task Force, 2001; Philo, 2000; Foley, 1999; Burchardt et al, 1999). According to Burchardt, normal activities include:

1. Consumption activity: being able to consume at least up to some minimum level of goods and services which are considered normal for the society;
2. Savings activity: accumulating savings, pension entitlements, or owning property.
3. Production activity: engaging in an economically or socially valued activity, such as paid work, education or training, retirement if over state pension age, or looking after a family.
4. Political activity: engaging in some collective efforts to improve or protect the immediate or wider social or physical environment.
5. Social activity: engaging in significant social interaction with family or friends and identifying with a cultural group or community

Sometime after its emergence, the concept of social exclusion began to be applied in transport field. However, at the time the application of this concept in transport is still unpopular, because the focus of transportation planning at that time is still on engineering aspect. In this case the emphasis is on technical solutions of problems associated with the mobility, but less attention to the process as well as the social impact arising from the mobility performed. The social impact of transport is a topic that received less attention than the economic and environmental impact (Jones and Lucas, 2012; Geurs, Boon & Van Wee, 2009). Yet to achieve a sustainable city, the social aspect is just as important to the economic and environmental aspects.

In the field of transportation, the issue of social exclusion arises from the understanding that the provision of transportation services could cause different social impact on certain individuals and groups (Banister and Hall, 1981). Individuals and groups, who are not served by existing transportation systems, can experience social exclusion due to lack of access to opportunities (Preston and Raje, 2007). Lack of access to transport
can cause: 1) difficulty getting a job (SEU, 2001); 2) difficulty accessing educational facilities (Currie, 2009; SEU, 2001); 3) difficulty accessing health facilities (SEU, 2001); 4) trouble participating in arts and cultural activities (Johnson, Currie and Stanley, 2011).

To overcome this, several approaches were made, i.e by reducing personal constraints, location constraints, and mobility constraints. Reducing barriers related to personal circumstances is done through the provision of social assistance (Westwood, 2004). Reducing location barriers are done by land use planning (Dodson, 2007) which may reduce the need for travel. The latter, which is to reduce barriers to mobility, is done through improving mobility options (Preston, 2004; Jones, 2004) and mobility substitution (Kenyon, 2002). In terms of improving mobility options, public transportation is often used as a solution, for example, by adjusting and increasing public transport routes (Preston, 2004). However, public transport with fixed route such as buses and trains, does not fully address the problem (Grant, 2004). Even in certain areas, such as in rural or suburban areas, public transport services are often limited or unavailable. Another solution to reduce transport difficulties experienced by the residents is to increase vehicles ownership, including motorcycle. As a mode of transportation, motorcycle is relatively more affordable than a car that resulted in a rapid increase of motorcycle ownership. As an illustration, the number of motorcycles in Yogyakarta from 2003 to 2012 is almost doubled (see Figure 1.1).

On the other hand, various studies have revealed that vehicle ownership on low income people can also cause a heavy financial burden (Froud et al., 2002 in Currie and Delbosc, 2009; Currie and Sendsberg, 2007), which is known as the transport poverty (Gleeson and Randolph, 2002 in Currie and Delbosc, 2009) or forced car ownership (Jones 1987; Banister 1994 in Currie and Delbosc 2009). This refers to the condition of low-income people in the suburbs who are forced to pay high cost of vehicle ownership due to lack of other options. From the research conducted in Denpasar (Erli H, 2006) and Bandung (Adriyana, 2011; Aritonang, 2007), it is found that most of the motorcycle users are people with a low to middle income, which is between Rp. 500.000, - to Rp. 2.500.000 per month. So that, forced motorcycle ownership is possibly occurred. This situation is potential to cause vulnerability to low-income families. Little change in transport costs can affect other family needs. As a result, the family could experience social exclusion.

To overcome the problem, low-income families pursue coping strategies to address the high cost of transportation by organizing trips and family budget, especially in the form of reducing the discretionary expenditure, such as entertainment budget (research in San Jose, USA by Agrawal et al., 2011). Research on
coping strategies is important but rarely done, both in developed countries (Agrawal et al., 2011) as well as in developing countries. Whereas, this kind of research will be useful in complementing the theoretical gap between the approaches of transportation model and social dimensions of transport.

3. Contribution and conceptual framework of the study of motorcycle in transport-related social exclusion theory

Based on theories derived from research on the relationship between social exclusion and vehicle ownership in developed countries, it appears that these theories cannot fully explain the phenomena occurring in developing countries. Firstly, when talking about social exclusion and vehicle ownership in developed countries, the object of the study is automobile. There are different characteristics between automobile and motorcycle in term of its usage pattern and cost that influence family behaviour in conducting its participation. Secondly, these kinds of studies are still rarely discussed in the context of developing countries where the non-discretionary needs such as health and education are not guaranteed by the state. This has become an important phenomenon to be studied in the context of Indonesia considering sprawling phenomenon is still persist, while on the other hand the number of low-income people is also not reduced. From the literature described in the previous sections, position of the study of motorcycle in social exclusion theory can be summarized in Figure 2

Fig.2 Contribution of the study of motorcycle ownership to the transport-related social exclusion theory

The conceptual framework of this study, modified from the diagram of factors affecting accessibility as proposed by Lucas (2004). According to Lucas, there are three factors that influence an individual's decision relating to his/her accessibility which are: activity factors, human factors and transportation factors. The level of accessibility is then affects the occurrence or reduction of social exclusion. In terms of transportation factors, previous studies have discussed the link between the availability of vehicles such as public transportation (bus, train), non-motorized vehicles, and cars, with other factors, namely the activity factors and human factors in improving accessibility and reducing social exclusion. Some of the studies discussed further to decisions and strategies taken by individuals and families regarding the mode being used, particularly with respect to car ownership in low-income families. But until now, no one has discussed the motorcycle about how its relation with human and activity factors and how it is influencing decisions and strategies of individuals and families in fulfilling their needs and improving social inclusion, particularly for
low-income people. For that the conceptual framework of this study will be based on a model created by Lucas, with additions and modifications to the context and purpose of the study. Developed further from Lucas’ diagram, this study will also develop further into the strategy by individuals and families in improving accessibility, as seen in Figure 3.

![Figure 3: Motorcycle ownership and transport related social exclusion: A conceptual framework](image)

4. Conclusion and Further Study

This paper has developed a conceptual framework to analyze the role and impact of motorcycle ownership to transport-related social exclusion. Motorcycle creates more mobility option, so that increasing accessibility and participation, and as a result decreasing social exclusion. Based on the Lucas’ work (2004) of factor affecting accessibility, this model is modified by adding the process of adaptation (coping strategies) done by low income family. It is assumed that there are two kinds of coping strategies, which are managing travel
pattern and transport cost; and managing households resources and expenditure. These strategies would influence the degree of social exclusion of a person. Further study is needed to test the framework by using primary data of low income people living in a sprawling urbanized area.

References


