



Title	Transportation Policy for the Reduction of Social Exclusion of Low-Income and Elderly People in Bangkok [an abstract of dissertation and a summary of dissertation review]
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学 位 論 文 内 容 の 要 旨

博士の専攻分野の名称 博士（工学） 氏名 Tansawat Tithiwach

学 位 論 文 題 名

Transportation Policy for the Reduction of Social Exclusion of Low-Income and Elderly People in Bangkok

(バンコクにおける低所得者や高齢者の社会的疎外を減少させるための交通政策に関する研究)

Transport disadvantage of low-mobility people, such as disability, elderly and low income, caused the lack of mobility to travel to access social activities and service places in the city, leading to the feeling socially excluded from their society. Although Thai government has created various transport policies to support low-mobility persons, the evaluation of transport policy in the aspect of the reduction of social exclusion caused by transport difficulty of low-income and elderly has been rarely focused in Bangkok. Therefore, this study focused on the evaluation of transport policy in terms of the reduction of social exclusion of Bangkok low income and elderly. The aim of this study is to clarify the current situation of social exclusion caused by transport difficulty of those people and to propose the transport policy implication to reduce their feeling of social exclusion. The content of this dissertation is organized in 9 chapters.

Chapter 1 presents the general background, objective and dissertation overview. The necessary of solution to solve the problem of social exclusion caused by transport difficulty of low-mobility people and the importance of this study the are defined. In chapter 2, the definition social exclusion, dimension, and policy in global to reduce social exclusion are explained. In chapter 3, the existing studies of transport-related social exclusion and how to interpret the degree of social exclusion are reviewed, especially the previous studies related to low income and elderly. Chapter 4 describes the current situation of transportation of Bangkok, the focused area of this study. Chapter 5 shows the framework of the study. According to the review of the previous studies and the definition of social exclusion of this study, the frameworks of the analyses are shown from Chapter 6.

In chapter 6, free train policy was evaluated in terms of the reduction of social exclusion of Bangkok low income. After the interviews with 392 free train users, 32.65 percent of them travel made more trip to participate in more non-fixed-schedule activities. The binary logit models clarified that low-income users tended to make more trip and feel less degree of social exclusion rather than non-low income did. However, 40.31 percent of free train users was non-low income. To encourage low income people to receive more benefit of this subsidy policy, the registration of the specific identification card given to only low-income persons, which must be shown at the ticket booth to get free ticket, was suggested. Chapter 7 clarified the relationship between degree of satisfaction with daily transportation and degree of feeling social exclusion of Bangkok elderly, by logistic regression analysis and structural equation modelling. Based on the interview with elderly, the data indicated that non-duty activities had more influence on the feeling of social inclusion of Bangkok elderly rather than duty activities, such as going to hospital. In the other word, low level of transport services was the social obstacle demotivating

elderly people from going out to participate in social activities and services.

In Chapter 8, to reduce the social barrier of Bangkok elderly, elderly carpool support program by neighborhood drivers was proposed. Based on the data collection in the area with poor access public transport access, 35.92 and 48.54 percent of elderly were interested in using this carpool service on weekday and weekend, respectively. On the other hand, 48.11 and 31.13 percent of neighborhoods were interested to support elderly as carpool drivers on along their commuting route, and even non-commuting route, respectively. This study also clarified the appropriate service price paid for compensating extra travel cost of neighborhoods. By applying Kishi's Logit PSM method, the amount that elderly were willing to pay was 24.55 JPY but the amount of service price that could persuade enough number of neighborhood to support those elderly was 28.00 JPY per kilometer. Thus, this difference should be subsidized from the government.

Chapter 9 expresses the total conclusion of study result and summary, as well as the proposed transportation policy implications for the reduction of social exclusion. This study provided the new finding of clarifying the situation of social exclusion problem caused by transport difficulty of Bangkok low income and elderly. While developing countries are heading towards mature societies, this study would greatly contribute to the solution to combat social exclusion by transport policy in the future.