

CHAPTER 4

CONCLUSIONS AND DISCUSSIONS

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4.0 Conclusions and policy implications.

There are much efforts put forward by the government as well as local authorities to overcome the increasing problems caused by the increasing demand for travel in private transportation. However, the actual effectiveness of the proposed travel demand management policies are not known. The study of road users' sensitivity with respect to price or services of transportation modes are crucially important to make the assessment. This study estimated the price as well as service elasticities of both private and public transportation demand in the Klang Valley region.

The elasticity of passenger car travel with respect to fuel price was inelastic. The demand for public transportation with respect to fare charges was also found to be inelastic. These findings imply that any price-based policy such as fare subsidy or increasing the fuel subsidy will tend to be ineffective. Any price-based policy to reduce demand for travel in private transport will appear to have marginal effects on the overall travel demand for private vehicles. Thus, in order for any price-based policy to be successful, a substantial percent of change of fuel tax or fare subsidy should take place.

In-vehicle time variable recorded the highest elasticity value. Apparently, the most important factor determining attractiveness and thereby controlling the demand for transportation is the speed of traveling (Pfleider and Dieterich 1995). This imply that any

policy to increase the time travel will be more effective compared to price-based policy, and the same characteristic was observed in the Klang Valley case. One example of such policy is by reducing the maximum speed level of private vehicle. By doing so, it will affect the private vehicle users' travel time which will reduce the demand for travel in private transportation. To implement such policy, the impact of the reduction in maximum speed level on average travel time needs to be studied.

On the other hand, demand for public transportation will be affected by the level of the comfort associated with the public transport services. That the inelastic in-vehicle and out-vehicle time of the public transportation tend to be inelastic reflect that road users take into consideration factors reflecting the quality service of public transportation together. This means that the respondents will response to change in time factors if there is also upgrade in comfort.

4.1 Limitations of the study

The study however is subject to certain restrictions. First is that the cross-elasticity estimation between private and public mode is not possible to be estimated since the responses given by the respondents were made independently for each mode. The cross elasticity estimate is important in a transportation demand model to assess which of the two, fuel or fare, price-based policy will be more responsive.

Secondly, the elasticity estimated are point estimates where arc elasticity would be more useful in policy analysis because demand elasticity of transportation normally differs with different price levels (Lee, 2001). Arc elasticity allows for the calculation of elasticity over a wider range of price levels.

Thirdly, the elasticity estimates reflect the socio-economic characteristics of the respondents who travel within or into the Klang Valley area. Thus, the elasticity values may be different for different geographical area. It is also valuable noting the importance of income level of the respondents.

Finally, the elasticity estimates with respect to fuel and fare prices need further analysis since the response towards any changes in both will show different magnitudes in very high level of price or fare changes.

4.2 Suggestions for future study.

The study of price and service elasticity of urban transportation demand can be replicated in several ways to improve the validity and reliability of the results.

The study needs larger sample in order to increase the validity of the elasticity estimates. The larger sample size means the sample represents the population better. The heterogeneity of the population should also be taken into consideration. The study sample should cover a wider range of different respondents from different income levels and other socio-economics characteristics.

It is important for future research to estimate the income elasticity of demand for private transport since car users with different income levels will react differently to a similar change in price. Further more, the changes of demand for private vehicle was observed to be different between the increase in income and the reduction in income. This might explain further the difficulty of reducing car dependence.

In order to ensure the reliability of the elasticity estimation, future research is encouraged to design the questionnaire using Stated Preference (SP) technique. This method will allow the researcher to make arc elasticity estimates. The design of the questionnaire should be given a considerable attention since it will reflect the findings.