BICYCLE FACILITIES INITIATIVE IN JAKARTA

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Abstract: This paper described a first step of transportation sector policy research and advocacy efforts by PELANGI on UNEP-GEF Project with title Bus Rapid Transit and Pedestrian Improvement in Jakarta. The objective of this study is to foster a more sustainable transportation sector by increasingly utilizes non motorized transportation modes as an integrate part of the transportation system. This initiative aims to decrease air pollution, pays careful attention to the affected communities, and to create locally transportation option especially for the urban poor. Therefore, data was collected through in depth interview and focus group discussion to member of Bike to Work community in Jakarta. Result of the analysis shows that by utilized bicycle it can save their transportation cost, in term of money and travel time, respectively 90%, 60% and 50% reduction compare with private car, motorbike and combination of private vehicle and bus/BRT.

Key Words: Bicycle, Facilities, Accessibility, Jakarta

1. INTRODUCTION

Jakarta has been being an attractive object of study, especially on urban transportation system studies. The history of the urban transportation system in Jakarta is divided into three periods: the walking period existed for many years (1527-1870) before the beginning of the transport modernization period (1870-1950), which brought Jakarta to the motorization period (1950-present) (Sumabrata, 2001).

Since the beginning of motorization period, transportation policies in Jakarta have tended to be biased towards accommodating private car mobility. These policies are prejudicial against the poor and the modes of transportation most used by the poor. Present day policies fail not only to assess impacts on the poor and other disadvantaged groups, but to the citizen who habitually uses a non motorized mode of transportation.

During this period of motorization, there have been no transportation studies and policies that acknowledged the existence of non motorized mode of transportation as a part of the transportation system in Jakarta. Because the lack of information concerning potential usage of non motorized vehicles, no transportation studies has recommended facilitating the use of non motorized mode of transportation even though bicycle has proven as the most efficient of the urban transport modes in both economic terms (maintenance and operating costs) and in engineering terms (on the base of energy inputs/output).
2. METHODS OF DATA COLLECTION

The first step of data collection was conducted through in-depth interviews to the Bike to Work community consisting of mainly: transport choice characteristics (transport modes, travel chain of the utilization of the transport modes, frequency of its utilization per week); route assignment (road wide; surface condition; pedestrian facilities and identification of black spot area (accident risk), and the existing demand); operating characteristics (travel time, travel cost, travel distance). Respondent was selected by the board of Bike to Work communities based on the origin of the communities. The survey was conducted in several weeks in March up to April 2007. The interviews with the respondents were conducted while they took lunch break. This opportunity was only available at about 12:00-13:00 daily.

3. DATA ANALYSIS

3.1. Transport Choice Characteristics

Typically, most respondents are choice riders. They have option to utilize their private car or private motor vehicle as well as the option to utilized bicycle and any means of public transportation modes. The option to utilize the transport modes is depend on the day which is related with the activities of their work. The transport choice and frequency of its utilization is described on figure 1 below.

![Frequency Utilization of Transportation Mode](image)

Figure 1 Frequency of the Transportation Mode Utilization per week.

Most of respondent utilize their bicycle once a week due to travel length reasons. Some respondents who takes 10 to 20 minutes by bicycle to their workplace prefer to usage the bicycle 3 to 7 times a week.
3.2. Route Assignment
Respondent’s route assignment while utilize their bicycle to the workplace would be based information for identification the route as potential bicycle facility in Jakarta. Since for the first step of collecting data, the respondents come from southern of Jakarta, therefore this paper only described the route which connecting CBD area at Central of Jakarta to southern and eastern area in Jakarta.

Table 1 Varian of Route Assignment by Bicycle

<table>
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<tr>
<th>Route #</th>
<th>Route Description</th>
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The selection of route by bicycle based on accessibility and shortest path reasons which is different with the route when the respondents utilize the private car or bus. Even though most of the them got feeling un safety and threat by others road users during their trip by bicycle, they stated that they always meet with other 10 to 20 cyclists on the same route. It means that route is preference for the cyclist and has potential demand if it get some physical improvement. These routes have similar characteristic such as road wide from 6 to 24 meters, having good road surface, traffic volume relatively moderate to high, and lower accident rate.

3.3. Operating Characteristics
Either in term of travel cost and travel time, bicycle has proven as the most efficient transportation modes as shown on figure 2 and figure 3. The respondents stated that by bicycle, they can reduce the travel cost 90%, 60%, 50% respectively compare to utilized private car, motorcycle and public transport. It appear that by utilize the bicycle, the cyclist can move faster that they utilized private car or public transport. Data shows that the travel time by bicycle 50% less than utilized the private car and 60% less than utilized bus as public transport.
Figure 2 Daily Travel Cost.

Figure 3 Travel Time
4. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the analysis, these last sections present some conclusions and recommendations regarding the first step of research regarding to bicycle facilities initiative in Jakarta.

4.1. Conclusions
The advantage value of utilization the bicycle in term of travel cost and accessibility has influenced the cyclist to utilize it regularly for work trip in Jakarta. The deficiency of bicycle facilities in Jakarta has made the cyclist feel unsafe and being threaten by other road user along the route to their destination.

4.2. Recommendations
Providing the bicycle facilities in Jakarta is financially beneficial that the government as regulator should have some policy and strategies to protect the public interest. Regarding the issue of the safety aspect which is directly related to the cyclist convenience and safety, some regulations needs to be applied either by limiting vehicle speed on local streets or by putting special bicycle's lane on pedestrian facilities along the main road which has enough space to share between pedestrian and the cyclist..

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REFERENCES

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Answer Sheet