

ANALYZING FACTORS IMPACTING BICYCLE CHOICE IN CIVIC AREA'S – A CASE OF PCMC

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ABSTRACT

Cycling is a crucial mode of travel for education purpose, work and alternative leisure journeys. it's an important mode for poor individuals and of nice advantage for shorter journeys. Greater use of bicycles for every day travel provides wider edges, together with reductions in carbon emissions, pollution and hold up. cycling will facilitate a personal live a protracted and healthy life .In India, bicycle usage is decreasing year by year though Asian nation is that the second largest producer of bicycle within the world. Bicycles area unit the foremost economical mode of transportation for shorter commutes.

Keyword : - Factors affecting on bicycle track, Cycle track, bicycle, and survey etc...

1. INTRODUCTION

This paper describes an experimental investigation of the influence of various factors on bicycle use in PCMC. Particular interest here are the roles and influences of different types of bicycle facility, different forms of cycling-related amenities at the destination, level of experience and degree of comfort with cycling in mixed traffic. This reflects a desire to appreciate how public policy alternatives regarding elements of cycling infrastructure might influence the attractiveness of non-recreational cycling for different segments of the travelling public.

Road transport today contributes to several problems, such as air and noise pollution, safety issues and social problem, such as the marginalization of certain road users from public space Cycling is an important mode of travel for education purpose, work and other leisure trips. It is an indispensable mode for poor people and of great advantage for shorter trips.[7] Greater use of bicycles for day-to-day travel provides wider benefits, including reductions in carbon emissions, air pollution and traffic congestion. Bicycling is a healthy mode of transportation that promotes physical activity, the health benefits of which have been widely recognized Extensive evidence suggests that physical activity reduces the risk of cardiovascular diseases, diabetes, and

colon, breast, and endometrial cancer. Bicycling can also enhance aerobic lung function and has been proven to be able to facilitate the achievement of the recommended lung function levels. Bicycling can help an individual live a long and healthy life. In India, bicycle usage is decreasing year by year, although India is the second largest producer of bicycles in the world. [8] Bicycles are the most efficient mode of transportation for shorter commutes (<5km). We will create a report using people's approach towards cycle tracks using a questionnaire that includes road surveys and household surveys.

1.1 Objective

- To collect opinions from current bicycle users regarding the existing road infrastructure facilities for the bicycle track.
- To develop questionnaires for bicycle users and non-users to capture their bicycle-related preferences, choices, ways of using options, frequencies, etc.
- To identify the factors influencing mode choice in the study area from the results of the user survey.

1.2 Scope and Purpose of plan

- The Chinchwad Cycle Plan (Preliminary Draft) has proposals for:
- 1) Creation of a city-wide cycle track network and cycle-safe streets
 - 2) A city-wide Public Bicycle Scheme with a detailed project report for phase 1 area.
 - 3) Bicycle Parking Facilities
 - 4) Integration with Public Transit
 - 5) Adoption and use of Design Guidelines for planning and implementing cycle-friendly infrastructure
 - 6) Awareness and Education Campaigns, and Cycling Promotion

2. Pilot Survey and Questionnaire development

Survey: Piloting is that the testing, refining, and re-testing of survey instruments within the field to create them prepared for your full survey. It's an important step to make sure that you just perceive how your survey works within the field, that you just square measure assembling correct, acceptable knowledge. It additionally helps within the method of planning workers coaching for the ultimate launch. This section focuses on piloting the form, however field protocols should even be piloted to make sure knowledge assortment runs as planned.

- There ought to be a pilot survey before enterprise a full scale survey
- Questionnaires ought to be short, clear and solely cowl key queries.
- Only factual queries ought to be asked and it ought to be doable to answer as several of the queries as doable by merely ticking or crossing a box on the shape.
- This question helps you to grasp if the survey queries were simply understood by respondents or if they have to be simplified.
- This question provides you a good plan of your survey response time; from completely different views. you'll mixture the information you get and interpret the knowledge to assist you recognize if you wish to shorten your survey or embody additional queries.



Fig -1: Flatted zone (Location : The Nook Society)

2.1 Pilot survey Details

1. Deciding the sample size for pilot survey

2. Categorizing the area
3. Development of questionnaire
4. Checking the questionnaire

A pilot survey had been carried out to have a better understanding of the overall procedure and also for a further improvement of the steps involved in the survey so that the main survey becomes easier. The site chosen was The Nook Society.

3. Main Survey And Analysis



Fig 2: Old city



Fig 3 : Flatted



Fig 4: Plotted



Fig 5: Illegal

3.1 Method of Analysis

For each target group, the study has been divided into four parts. One part of study depicts the socio-economic profile, second one is related to the basic travel characteristics of users and non users, third part is about the perception of the community about the bicycles and problems and barriers to the use of bicycles (latent demand) and the last part is related to the land use effect / neighbourhood details.

For this purpose, sets of questions have been identified for each category of people and for all parts. Responses to these questions have been analyzed for bicycle users and potential users separately, and for each zone.

During analysis, first, the distributions of all the persons of each target groups among several categories of different aspects (such as age, income, distance traveled, etc.) have been looked into and secondly, the proportion of cyclists in these categories have been compared. Taking as an example the age of the respondent – first, all 302 respondents (or all respondents in a zone) are divided in several categories (such as under 8 years of age, 9-18 years and so on) and then proportion of cyclists in each of these categories is found out and compared with other proportions in other

categories and proportion overall. This way, the comparison is normalized from the disparities in sampling among different groups of people.



Fig-6: Data from Users

Data says that, the major users had given importance to the infrastructure than the physical safety.

4. CONCLUSIONS

The whole exercise helped me understanding the “Factors” which influences Bicycle as a commuting mode in urban area and how efficiently we can measure it.

5. REFERENCES

- [1]. May 2009 - Ms. SHRUTI LOMTE-ESTIMATING FACTORS INFLUENCING BICYCLE CHOICE IN URBAN AREAS – A CASE OF PUNE, INDIA”
- [2]. 2013 - Samyajit Basua, Vinod Vasudevanb - Effect of bicycle friendly roadway infrastructure on bicycling activities in urban India..
- [3]. November 2012 - Abhijit Datey, Vishal Darji, Tejas Patel, Darshini Mahadevia. - Walking and Cycling in Indian Cities: A Struggle for Reclaiming Road Edges.
- [4]. 2008 -Tiwari, G., Jain, - Bicycles in Urban India, Urban Transport Journal, Volume-7, No. 2, Institute of Urban Transport, India, p-59-68.
- [5]. Tiwari, G., Jain, H. (2008) Bicycles in Urban India, Urban Transport Journal, Volume-7, No. 2, Institute of Urban Transport, India, p-59-68.

[6]. 7 August 2018 - Shu Shen , Zhao-Qing Wei , Li-Juan Sun , Yang-Qing Su , Ru-Chuan Wang 1,2 and Han-Ming Jiang - The Shared Bicycle and Its Network—Internet of Shared Bicycle (IoSB): A Review and Survey.

[7]. 28 June 2016 - William Riggs and Elissa McDade - Moving from planning to action: Exploring best practice policy in the finance of local bicycling and pedestrian improvements.

[8]. 2014 - Ana Beatriz Pereira Segadilhaa, Suely da Penha Sanchesb - Identification of factors that influence cyclists' route choice.

