

Demand Planning Fore-Rickshaw Inlpu

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ABSTRACT

In a University which is known as the India's Largest Private University, the transportation from main gate to school blocks is quite distant. These campuses are in a constant need to provide transportation to its students, faculty and staff. It now creates a huge gap to be filled by employing an inter campus transportation method.

One of the most important aspects in employing the E-Rickshaw transport method is to know how much demand there is and what content of gap is to be filled. There are several models which can be used to forecast travel shifts and use of the transport system. They are to be calculated in response to socio-demographic situations, affordability, lead time between each trip and no of trips required. This paper researches about the amount of demand that is present in Lovely Professional University for the E-Rickshaw transport method.

A Multi Nominal Logit Model is used to observe and calculate the demand and know how many trips are being made per day. This model shows the cost to school, no of trips and E-Rick stops, location, income of the student and faculty or staff who intend to use the transport. This MNL model showed the waiting time at the E-Rick stops, No of trips required, cost of trip, availability of the E-Rick are significant variables. This type of research paper can be implemented in transport planning and also in policy decision.

1. INTRODUCTION

Many universities have a large distance in inter university roads which must be covered by all its students and staff or even faculty to reach their respective classes and lecture halls.

All these trips will make up a most major chunk of the trips that will be made by E-Ricks in LPU during morning and evening which are the hotspot regions in LPU. In LPU, King Hills travels are the only startup which is boosted by the campus itself which is providing intra university transportation.

Since transportation is the most important aspect for the students and faculties to reach to their respective destinations in university, a must to filled gap is created. Many a times, the universities employ themselves with a mode of transportation in the campus itself to enable the students and staff to travel in the university. All these universities recognize that the intra campus transportation facility is a must to be met criteria.

Deep studies in this field in LPU will enable us to recognize and prioritize the most demanded travel routes and this will help us to employ more and more E-Ricks wherever required. Such quantification is only to be related in the case of demand planning and forecasting.

Although the above mentioned methods will explain the basic movement of people in the university and also an analysis on where and when the E-ricks will be required will be explained by the methods which is beneficial to the students as well as the company so that there are sound profits and no lost time of quality battery and man hours.

Lovely Professional University, Punjab is located in Jalandhar, Punjab, established as one of the largest private Universities in India. Presently, there are over 3000 students who travel using E-Rick every day. Recently LPU has seen a super spike in the growth in campus in terms of members and facility development.

The observed spike in the growth of members in university is due to: (1) The growth in the admissions (2) Improved campus infrastructure in LPU. Since the growth in the campus must be met with adequate transport resources it has become quite a challenge to the authorities to employ such huge number of E-ricks.

When during examinations and during summer or winter season, There must be a supply to demand prospect which can be understood and developed by implementing the methods in our research paper.

2. METHODOLOGY

A. Data Collection

In the data collection model, a quantified statistical table will be created where all the observations at different times and at different places in the campus will be jot down. This will enable us to take a record of the student masses and requirements of the people of the university and the commuters of the intra campus transit.

The students will be asked in how many times they will be using the E-Rick facility, how much income they have, frequency of the campus visits, routes through which they will transport. A further section will be created on the ergonomics in the E-Rick and the safety standards that are employed in the vehicles. A different section will also be made to understand the age groups, climatic conditions, vacation days and Sundays.

The alternative for travelling in the campus has been observed as the by walk mode, Hexi cycles or even personal commute. Special Software for Social Scientist (SPSS) can be employed for the research analysis

$$P_{ik} = \sum_e V_{k/e} / V_{jk}$$

3. DATA COLLECTION AND ANALYSIS

The requirements for the project to be carried out are:

1. Data collection regarding where and when the demands more
2. Quantification of observations and data
3. Looking at the rush hour concept to understand
4. Permissions from concerned authorities
5. Software support

These are the basic requisites for the project paper to be carried out in Lovely Professional University.

4. CONCLUSION

4.1. Multinomial Logit Model

This model result will show the amount of trips taken by the university students, the income that they can procure, their comfort level in the vehicle and the safety standards followed in the vehicle.

This method shows that the students that stay outside the campus in Law gate, Meheru, Rama Mandi use the E-Rick facility more and more frequently. This will depict that the majority of the students who are the customers of E-Rick in LPU are outsiders and local Punjab students.

Data Collection Model

This model calculates the amount of E-Ricks that must be considered while keeping in mind about the demand that is being created. The most important variable that are considered while designing and developing the model are income of the student, where he comes from, which day, climatic conditions, availability of E-Ricks and also the number of students present in university at that particular time.

References

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