



Study of Para Transit System for Small Cities

Tirth M. Patel¹, Prof. Ashok Patel², Prof. Mauni Modi³

¹Civil Engineering, LDRP-ITR

²Civil Engineering, LDRP-ITR

³Civil Engineering, LDRP-ITR

Abstract — Para transit is urban passenger transportation service operating on public street and highway in mixed traffic provided by private and public operator. In many cities, more than half of public transport demand are carried by them. Paratransit is the backbone of city's non personalized public transport because the contribution of public bus system in city's transportation is negligible because of very high waiting time, inadequacy of passenger buses and at same time availability of para transit. Paratransit system. In the study area mainly jeeps, auto rickshaws, maruti vans, Tata magic. The characteristics of each mode have been established by conducting different survey such as modal split, vehicular occupancy and operator survey. The survey carried out all important road distributed all over the city. The percentage share of paratransit in term of urban passenger movement has been found out with respect all modes. The approach to transportation system is to focus not just increasing vehicles movement, but improving paratransit mode in city.

Keywords- Para Transit System, Mode of Transport, Vehicle Occupancy, Modal spilt traffic assignment

I. INTRODUCTION

Para transit is urban passenger transportation service operating on public streets and highways in mixed traffic provided by private or public operators. It is an alternative mode of flexible passenger transportation. The significant features of Para transit system are their flexibility and door to door service. Moreover, Para transit service offers mobility especially for the trip makers who do not own or have access to private vehicles. These people entirely depend on public transport for their daily movements, but in many occasions public transport are unreliable and inadequate. For reason, they use Para transit services for their daily movements as it provides a bewildering array of transport modes bridging the gap between public transit and private transit. The goal of the Para transit service is to ensure that all people have access to transit to meet basic mobility needs.

II. WHAT IS PARA TRANSIT SYSTEM

The informal public transport modes or para transits in developing countries and encompass a variety of transport modes and services facilities falling in between conventional transport services and private auto mobiles. There are no. of definitions of para transits based on several different criteria. The most logical and pre sized definition of para transits is the functional one, which states Para transit is urban passenger transportation service usually in highway vehicles operated on public streets and highways in mix traffic it is provided by private or public operators and it is available to certain group of users or to the general .Para transit is often used for demand responsive system such as shared rides taxes, dial-a-taxes and subscription buses. In context of developing countries the lower standard of living, high population density, availability of cheap labor force etc., have together provided a bewildering array of transport modes bridging the gap between public bus and private automobiles. The percentage of urban population with respect to total population has been increased. The expansion of the cities also expand the transportation because of this traffic and accidents are very likely take place Para transit system can be very much helpful to outcome that situation. "Para transit is an alternative mode of flexible passenger transportation that does not follow fixed routes or schedules". Typically minibuses are used to provide Para transit service, but share taxes and auto-rickshaw are also important providers. Para transit services may vary considerably on the degree of flexibility they provide their customers. At their simplest they may consist of a taxi or small bus that will run along a more or less defined route and then of the spectrum—fully demand responsive transport—the most flexible Para transit systems offer on-demand call-up door-to-door service from any origin to any destination in a service area. Para transit services are operated by public transit agencies, community groups or not-for-profit organizations, and for profit private companies or operators.

III. METHODOLOGY FOR STUDY OF PARA TRANSIT SYSTEM

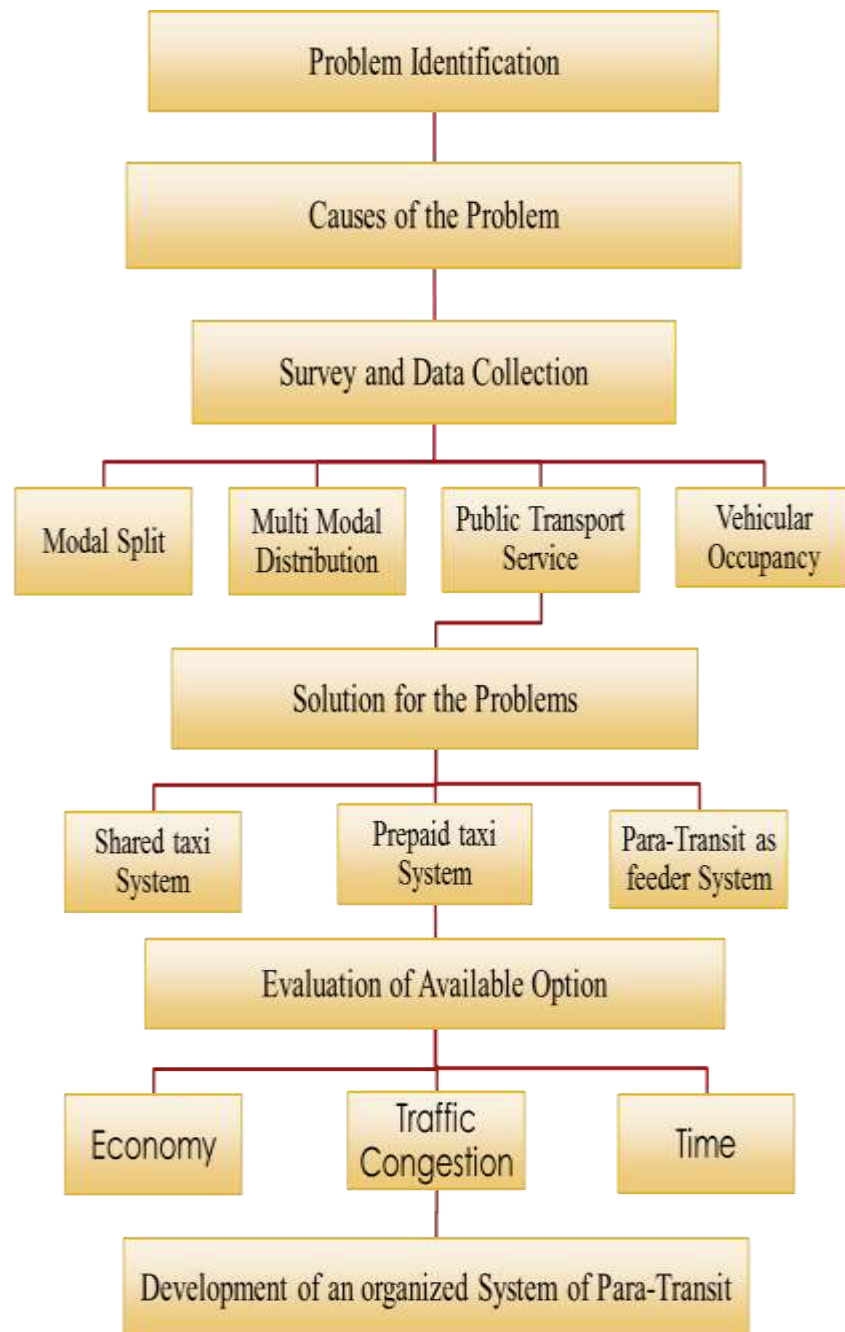


Fig: Methodology for Para Transit System

IV. LITERATURE REVIEW

Several studies and reports have documented the importance of para transit system of any type of city as below,

Table: 1: different studies on para transit system

Main Objective	Conclusion	Author
Para transit system Para-transit system is indispensable transport system in medium sized cities of India due to various reasons.	In all compositions the PTS plays its role as a leader or a follower. But it is informal in it planning and operations, which makes it a problem area for the medium sized cities.	Ashwani Luthra
Presented their works on the quality of the Para transit service and its operations in Aba, Abia State, Nigeria, with a view to identifying its challenges and contributions to informal transport and equitable service distribution to the residents of Aba.	Most Para transit system are provided by the private sector and operated on public streets. Para transit services usually fall between private transport and consumptive public transport.	Obioma R. Nwaogbe, C.C. Ibe and S.I. Ukaegbu
User Perceptions of Private Para transit Operation in Indonesia	It can be concluded that the Existence of Para transit in the future is still important, although the need for improvement is an obligation to retain the ridership and attract new users.	Tri Basuki Joewono, Hisashi Kubota
Creative Ways to Manage Para transit Costs,	The transit system is able to utilize excess capacity on their fixed route systems at minimal costs to the agency. With the ability to use the fixed route system, the passenger can access a wider variety of services, does not have to pre-schedule their travel, and usually realizes cost savings.	Jay A. Goodwill, P.E., CCTM Holly Carapella
on Systematic Organization of Para transit System in Context of Public Transport System for surat city.	In the absence of effective public bus system in Surat city, the auto rickshaws are serving very well but not efficiently. It needs to be optimized and should be well coordinated with respect to the public buses in terms of fares, routes and frequencies.	Vaibhav Gaurkar
Physical characteristics of Para transit in developing countries of Asia Para transit modes play a significant role in the urban transport sectors of developing countries.	The significant features of Para-Transit system in the cities of developing countries are their flexibility and door to door service. Their popularity as a public transport cannot be neglected as it is found that they carry two thirds of public	Toshikazu shimazaki and Mukiturrhman

	transport passengers in Metro Manila for example. Certain obvious physical and technical differences have been found in terms of their passenger capacity, modal share and physical characteristics.	
--	--	--

V. OBJECTIVE OF STUDY

- This project is done to find out the characteristics of Para transit system and also for the conjunction between Para transit system & public servicing system.
- The main object of this project is to reduce traffic and accidents problems, and also the safe portion for the organizational behavior of Para transit network in particular city, we must have to know about modes available in particular zone of the city, average number of passengers carried by different modes in different zones. By various survey the total percentage share of Para transit in terms of occupants has been found out.

VI. SCOPE OF STUDY

- Classification of Para transit types and their estimates.
- Determine the physical characteristics of Para transit system.
- Combination between Para transit system and public servicing system.
- Identify problems and issues of Para transit system.
- Main road coverage by Para transit system.
- Suggest a set of improving of Para transit system and future model of management of this system.

REFERENCES

- [1] Madhu.s., 2001, Para transit system in India- A case study of Chennai
- [2] Obioma R. Nwaogbe, C.C. Ibeand, S.I. Ukaegbu, 2012, Quality Of The Para transit Service (Tricycle) And Its Operation.
- [3] AlinaVerseckien, 2013, Analyzing the Aspects of Organizing and Using Para transit Services. M.S. SHETTY "Concrete technology – Theory and Practice"
- [4] Christine Mastrogiannidou, Athanasios Lois and Athanasios K. Ziliaskopoulos, 2006, Design of a Para transit System for Rural Areas, Systems Optimization.
- [5] Tri Basuki Joewono, Hisashi Kubota, 2007, User Perceptions of Private Para transit Operation in Indonesia.
- [6] Jay A. Goodwill, P.E., CCTM Holly Carapella, 2008, Creative Ways to Manage Para transit Costs
- [7] Vaibhav Gaurkar, 2013, Systematic Organization of Para transit System in Context of Public Transport System: A Case Study Of Surat City.
- [8] Toshikazu shimazaki and Mukiturrehman, 2003, physical characteristics of Para transit in developing countries of Asia.
- [9] Jennifer E. Graeff, 2009, The Organization, Issues and the Future Role of the Matatu Industry in Nairobi, Kenya.
- [10] Schalekamp, H.; Behrens, Roger, 2009, lessons for public transport system retionalisation and improvement in South Grava, S., 2003. Urban Transportation Systems: Choices for Communities, United States: McGraw-Hill.
- [11] Government of India, 1980, Report of the National Transport Policy Committee, Planning Commission, New Delhi.
- [12] Vuchic V.R., Para transit and Specialisedmodesl, Urban Public Transportation: System and technology, Prentice Hall, 1979.