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Role of Non -Motorized Transport in Distribution of Goods in the Metropolitan City of Delhi

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Abstract

Freight transport plays a vital role in metropolitan economy of Delhi. The goods traffic moving in and out of Delhi is increasing at an average annual growth rate of 10.97%. While LCV forms the backbone of goods movement along with goods auto rickshaws in Delhi for longer leads the non-motorized modes are increasingly becoming important for shorter leads for distributing goods particularly in wholesale markets located in the Walled city besides selected wholesale markets located outside the walled city. This present paper is an attempt to highlight the role of NMT modes such as cycle rickshaws, handcarts, animal carts, cycle rickshaw and head loads in five case wholesale markets located in walled city of Delhi dealing in foodgrains, textiles, autoparts, electrical and hardware respectively besides two wholesale markets of timber and fruits & vegetable market at Kotla and Okhla in South Delhi respectively.

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1. Introduction

The movement of goods within urban areas is vital since cities are the center of economic and social life. As economic activities in cities expand and city population grows, a substantial amount of freight traffic is generated. The timely and smooth movement of such freight is crucial to the well-being of the people and the viability of the economic activities they undertake. The explicit consideration of urban goods movement has the potential to contribute towards

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achieving the goals of urban transport. Goods traffic represents a considerable proportion of urban traffic volume. Although in most cities on average 15-20% of the vehicle kilometres (four wheel or more) travelled can be attributed to commercial vehicles, it is estimated that they take up roughly 20 to 40% of motorized road space occupation and cause 20 to 40% of CO₂ emission (GTZ 2010). Further according to Dablanc (2010) on the level of a typical metropolitan area in a developing country, on average 40-to 50% of commercial vehicle freight volume is incoming, 20-25% is outgoing and the remaining 25-40% are intra metropolitan runs. According to Dablanc (2006) urban goods transport (including transiting heavy goods vehicles) accounts for 18% of vehicle km, 31% of the energy use and 31% of the CO₂ emissions respectively. While goods vehicles with their large size, low maneuverability, noisiness, and high pollution output make their presence particularly objectionable in urban areas, however at the same time the goods vehicles are vital to the economy and wellbeing of society. The objectives of city planning, in particular, and city transport system planning, in particular, is to enable goods movement at desired levels of efficiency of goods movement.

Urban areas in India are on the move witnessing good economic growth and notably a momentum set in. While there has been significant efforts made in discussing and solving urban passenger transport issues in various cities of India it is imperative to understand the vital role of urban freight transport which is often neglected in our planning and policy making process. In particular there is very little importance attached to understanding the characteristics, problems and potentials of goods movement to, from and within urban areas. One of the major issues associated with urban freight movement is its impact on the environment. In view of the growing importance of goods movement and the major impact it has on the urban economy and environment, it is important that a more in-depth appreciation of the characteristics of non-motorized transport (NMT) systems characteristics needs to be done to assess its potential and issues in order to evolve meaningful policies.

2. Overview of NMT role in urban freight distribution – Global Experiences

The La Petite Reine business model in Paris is based on providing last mile deliveries by “Cargo cycle” from two urban logistics spaces. Weighing only 80 kg (as opposed to a tonne or more for most delivery vans), each cargo-cycle can carry about 180 kg of merchandise in its 1,400 liter cargo space. The company operates such delivery services in Paris, Bordeaux, Rouen, Dijon and Lyon with a franchised service in Geneva. The goods are of low volume and light weight which cannot be transported over long distances and the services are likely to be most viable in densely populated urban areas. The goods transported are generally related to home delivery services for local shops, business to business deliveries within the city (effectively intra Paris courier service) and home deliveries for express courier services and internet retail companies where goods are transferred from larger road vehicles to the Cargo cycles at the urban logistics space. The company now makes some 2,500 deliveries every day for clients including DHL, ColiPoste, Monoprix, Dannon and more. La Petite Reine also maintains a fleet of about 75 cargo-cycles for hire on demand by businesses that need to make small to medium-sized urban deliveries over a distance up to 30 km (Verkehr, et. al., 2000)

The Green link (TGL) is business of parcel deliveries and pickups in Central Paris with fleet of 100% battery electric vehicles. It started operation in 2009 and is now operating three urban delivery centres in Paris. It operates three Green Hubs and fleet of electricity assisted cargo bikes and electric vans. The three hubs are supplied outside rush hours by trucks or customers. The parcels are consolidated in hubs before delivered exclusively with clean vehicles (The Green link, 2014).

In Denostia, Spain cargo bike called ‘Cargo Txita’ were introduced in 2009 to provide last mile delivery of cargo. In 2010 selling and renting of cargo trike bikes picked up. The company started in 2007 with promotion of its product through unconventional outdoor advertisement medium (Linazisoro et.al, 2014).

In Berlin city centre efforts were made to introduce electric cargo bikes in courier business which had car and bike messengers in direct competition. It was felt that there was a large potential for cargo bikes to substitute small scale trips (Grubber, 2014). Similarly as part of Pro-e bike project in the city centre of Ljubljana, Koper and Celje the deliveries are made through 41 e- cargo bikes, 20 e- scooters besides 3 e-vans (Jorna, 2014).

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