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## QUALITY AND AVAILABILITY OF PASSENGER FACILITIES ALONG SELECTED HIGHWAYS IN HARYANA AND ITS IMPACT ON HIGHWAY USERS AND SURROUNDING COMMUNITIES

### Doctoral Dissertation Abstract (2013)

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#### National Highways

The national highways are the backbone of the road infrastructure. These constitute about 2 per cent of entire road system in India, but carry about 40 per cent of the total road traffic. On November 1, 1966 when the new state of Haryana was carved out of the Punjab a total length of national highways was 767 km which has increased to 1512 km in 2011.

#### Passenger Facilities

Facilities like shady trees, provision of drinking water, *sarais* for night shelter etc along roads were provided by various rulers from time to time in India. Recently, in view of the Open Door Policy a new Road Development Plan: Vision 2021 was prepared in 2001 by the Indian Road Congress with the full involvement of highway professional. It recommended that, wayside passenger amenities like parking lots, drinking water, toilet, snack bars, *dhabas*, restaurants, rest rooms, petrol pumps and communication facilities should become

integral part of roads modernization.

#### Objectives

The main objectives of the present study are:

1. To analyze the spatial pattern and process of the development of passengers facilities along selected national highways in Haryana
2. To describe the functional characteristics of passengers facilities
3. To assess the satisfaction level of highway users
4. To examine the impact of passenger facilities on local communities and surrounding areas

#### Methodology

The satisfaction level of highway users about the quality of wayside facilities and impacts of these facilities on surrounding communities were studied by conducting field surveys in the year, 2007-08 and 2010-11. The survey was conducted with the help of a self

prepared questionnaire primarily based on a pilot survey of the study area.

### Data Base

The present study is primarily based on field survey. A total of 112 food joints including 13 hotels, 17 restaurants and 82 *dhabas* and 33 fuel-filling stations were selected. One traffic police station from each district was selected. So, a total of 14 traffic police stations including 5 on NH-1, 2 on NH-2, 2 on NH-8 and 5 on NH-10 have been selected. A total of 516 passengers including 52 from 13 hotels, 68 from 17 restaurants 164 from 82 *dhabas*, 132 from 33 fuel filling stations and 100 from 14 traffic police stations were selected for collection of data.

### Impact on Surrounding Communities

Fifteen respondents have been surveyed from each cluster of passenger facilities. So, a total of 330 persons including 135 from NH-1, 45 from NH-2, 60 from NH-8 and 90 from NH-10 were selected for the study.

### Satisfaction Level

The satisfaction level of facilities users has been determined by using Awotona's index of Satisfaction Level. Satisfaction index level of a passenger or highway user on 1-5 scale is noted in the light of the grading i.e. 1= Poor, 2= Average, 3= Good, 4= Very Good and 5= Excellent.

### Computation of Indices of Satisfaction (SI)

$$SI = \frac{\text{sum of respondent's actual score}}{\text{sum of respondent's maximum possible score}} \times 100$$

Based on the above given method SI's for all the respondents using a particular facility is thus calculated. With the help of mean and standard deviation all the respondents of each facility were divided into three high, medium and low levels.

### Growth Process and Spatial Pattern of Passenger Oriented Wayside Facilities

The study reveals that the concentration of facilities was very low in first phase when the state of Haryana came into being. Out of 14,994 passenger facilities only 4.15 per cent facilities were available prior to 1966. Second phase (1967-1991) constitute 21.56 per cent of all facilities. The third phase (1992-2007) witnessed remarkable development in the expansion of passenger facilities which accounted for about 74.29 per cent of total. It is also evident that before 1991 these facilities were mainly concentrated in towns and cities, but after 1991 there was a wide dispersal of these facilities along NHs.

It is also found that about 39.06 per cent of total facilities are temporary while 60.94 per cent are permanent. The study shows that the highest number (6362) of facilities are on NH-10 and the lowest on NH-8 (1838), while NH-1 and NH-2 have 3974 and 2820 facilities, respectively. The fuel-filling stations are widely distributed along NHs. The security posts and health services are concentrated in

cities and towns. While the communication facilities like STD and PCO etc. have decreased due the massive use of mobile phones.

### **Level of Satisfaction**

The present study quite evidently reveals that more than fifty seven per cent users of national highways fall in the category of medium level of satisfaction whereas the remaining are equally distributed between low and high level of satisfaction in respect of all way side facilities. It has been found that more the number of users, the more is the concentration of facilities and the better are the quality of service due to the stiff competition among the service providers. Thus, the concentration of facilities and quality of facilities are directly linked to the number of users on a NH.

### **Impact of Passenger Facilities on Surrounding Communities**

The present study also reveals how and to what extent the surrounding communities are directly or indirectly influenced by the highway and roadside passenger facilities.

### **Physical Impacts**

Surrounding communities found hardly any impact of wayside facilities on ground water table though the people residing alongside NH-1 in villages like Murthal, Jhanjhari, Dhantori, Tyora-Tyori, Rattangarh and Mohra in the area where these facilities are highly concentrated feel that there is a lot of

wastage of water. There is no significant role of these facilities in causing land pollution.

### **Economic Impact**

These facilities have hardly generated employment opportunities for the surrounding communities. There is hardly any contribution of these facilities in augmenting the income of surrounding communities.

### **Social Impacts**

All the respondents opined that the vices of drinking and smoking are on increase due to these facilities mainly of food-joints. The overwhelming majority of surrounding communities blames these food-joints for drug trafficking. Immoral activities are also observed along national highways. Higher the status of the highway the more are immoral activities.

### **Observations**

- Bylaws stating facilities should be located in clusters after a distance of 50 km is not being followed.
- Proper permission is not obtained before the establishment of a facility.
- Encroachment of govt. land.
- Direct entry and exit on the main road is dangerous.
- Adequate drinking water facilities are not available.
- Hygienic and sanitary conditions in resting areas, mainly in case of *dhabas* except along those on NH-I D

(Samalkha to Kundli border), are very poor.

- Toilet facility is not available in most of the *dhabas*.
- Haryana Highway Patrol for Road Safety has not been properly equipped

for the work assigned to it. It is frequently deployed on extraneous work or on VIPs duty. It should be allowed to do assigned work.

- The behaviour of safety police personnel is not proper and up to mark.