



# punjab geographer

A JOURNAL OF THE ASSOCIATION OF  
PUNJAB GEOGRAPHERS, INDIA

VOLUME 8

OCTOBER 2012



## ANALYSIS OF HIGHWAY USERS' SATISFACTION LEVEL ABOUT WAYSIDE FACILITIES LOCATED ALONG SELECTED NATIONAL HIGHWAYS IN HARYANA

Karam Singh  
S. P. Kaushik

### Abstract

*Present paper analyzes the attitude of the highway users towards wayside facilities such as hotels, restaurants, dhabas, fuel-filling stations and traffic police stations located along the selected national highways in Haryana. The study is based on sample survey of 13 hotels, 17 restaurants, 82 dhabas, 33 fuel-filling stations and 13 traffic police stations. These are evaluated on the basis of the satisfaction level expressed by 52, 68, 164, 132 and 100 highway users about the above mentioned wayside facilities respectively. The paper is summed up by grouping the Satisfaction Index (Awotana's Index S.I.) of all the 516 highway users' to know the overall satisfaction level for all the wayside facilities. It is found that medium level of satisfaction is dominating in respect of overall wayside facilities. High level of satisfaction is attained only in case of those national highways on which traffic is very busy, as a result of which the number of highway users is very large which affects the quantity and quality of wayside facilities. The competition among the facility providers along these roads also improves the quality of a facility. On the contrary, on less busy roads the number of users is low that leads to low number of facilities and hence low competition which results in lowering of quality and consequently low level of satisfaction.*

### Introduction

Provision of passenger oriented wayside amenities along national highways is essential since both the passengers and drivers need certain minimum wayside facilities to make their travel safe, comfortable and convenient in order to reduce fatigue in a long distance journey. The Ministry of Road Transport and Highways (MORTH) had launched schemes for provision of basic wayside facilities both by public and private sectors. Considering vast road network, concerted efforts are required to develop such

road side facilities along the national highways. The state Public Works Department has already been directed vide MORTH's letter no. R.W./NH-11052/3/97-DOI dated December 31, 1997 that henceforth in all national highway projects being funded through the aid from the multilateral agencies or being developed through the private sector, provision must be made for passenger oriented wayside amenities at every 50 kilometer of national highways. Under this scheme of joint financing by government sector and private sector, the facilities like parking lots, snack bar/restaurant,

toilets and rest rooms for short stay, first aid, telephone booths, petrol pump, minor repair shop and kiosks for sale of miscellaneous or sundry items and landscaping are to be developed (Government of India, 1998). Satisfaction level is a state of mind and there is no universally accepted tool to measure it (Chandrayudu, et al., 2010). Attempts have been made to know the consumer satisfaction in the marketing literature. Some studies have been undertaken for tourist satisfaction assessment (Chol, 1998). Are the tourists satisfied with the quality of service at reasonable rate provided by the roadside facilitators? This question can conveniently be answered by the method of studying the level of satisfaction. The satisfaction of the users is also useful for service providers in making certain modifications in their set up (Adavitot and Gatade, 2007; Chandrayudu, et al., 2010).

### Study Area

The state of Haryana came into existence on November 1, 1966. It shares boundary with Himachal Pradesh in the north, Delhi and Uttar Pradesh in the east, Rajasthan in the south and Punjab in the west. It is located between 27°39'0" to 30° 55' 5" North latitudes and 74° 27' 8" and 77° 36' 5" East longitude. The state has an area of 42, 212 sq. km. The height above mean sea level varies from the lowest of 250 metre to highest of 1500 metre. It is mostly a plain area except the Siwalik hills in the north and the Aravalli hills in the south. The population of the state was 2, 53, 53, 081 persons in 2011 which is 2.09 per cent of India with a density of 573 persons per square kilometre (Census of India, 2011).

### National Highways in Haryana

In Haryana, railways and roadways are the major means of transport. On November 1, 1966 when the new state of Haryana came into

being the total length of national highways was 767 km (GOI, 2009). Presently, 15 national highways namely 1, 2, 8, 10, 21A, 22, 64, 65, 71, 71A, 71B, 72, 73, 73A, NE2 with a length of 1512 km pass through different parts of the State (NHAI, 2012).

However, the present study is aimed at analyzing the satisfaction level of highway users with respect to wayside facilities located along selected national highways in Haryana. These are: i) NH-1 from Singhu (Kundli) border (Delhi) to Sambhu border (Punjab) covering a distance of 180 km; ii) NH-2 the stretch of 74 km from Badarpur border (Delhi) to Karwan border (U.P.); iii) NH-8 a stretch of 101 km, from Kapushera (Gurgaon) to Jai Singh Pur Khera (Rajasthan) and iv) NH-10 from Tikri border (Delhi) to Mandi Dabwali border (Punjab) covering a stretch of 313 km long (NHAI, 2012, Fig. 1).

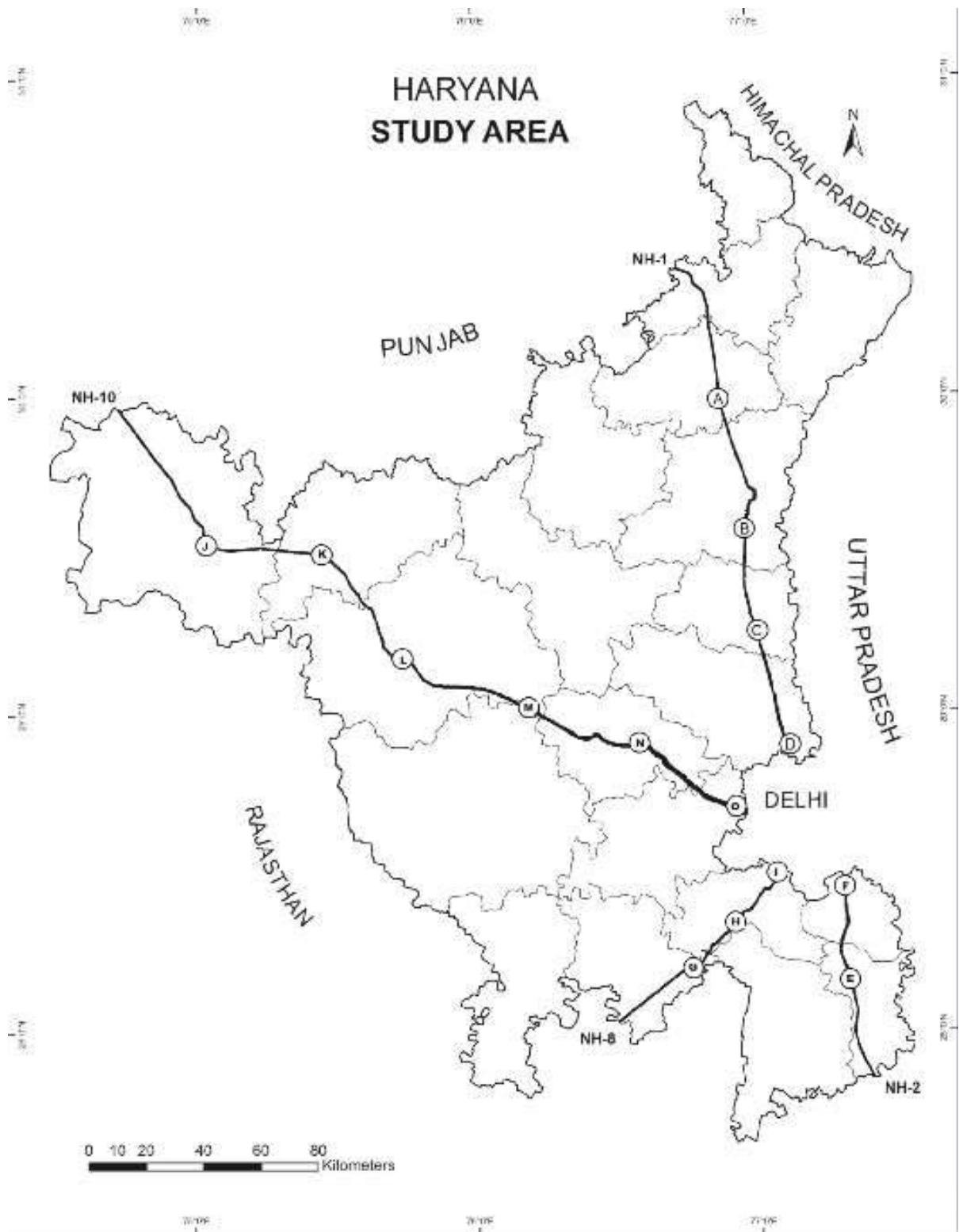
### Objective

The present study aims at analyzing the satisfaction level of highway users with respect to wayside facilities available along selected national highways in Haryana.

### DATA BASE AND METHDOLOGY

#### Data Base

Present study relied on both primary and secondary sources of data. The relevant secondary data have been collected from Ministry of Road Transport and Highways; National Highway Authority of India; Central Road Research Institute; School of Planning and Architecture; Indian Road Congress; Town and Country Planning Department, Haryana, and AIG of Police, Traffic & Highways, Haryana. Apart from data available from such sources, to meet the objectives of the present study, primary data were also collected through the field survey conducted in 2007-2008. Wayside facilities located along selected



Source: State Natural Resources Data Management System (NRDMS) Centre, HSCST, Chandigarh, 2010

Fig. 1

national highways are divided into following segments for the collection and interpretation of data:

**National Highway-1 (Segment A to D)**

- **A** - includes area from Sambhu to Pipli (Kurukshetra) including Ambala City, Ambala Cantt and Shahabad (Markanda) covering a distance of 50 km.
- **B** - comprises of Pipli (Kurukshetra), Nilokheri, Trawari and Karnal up to Gharaunda with a distance of 45 km.
- **C** - includes Gharaunda and Panipat upto Samalkha with a distance of 42 km.
- **D** - spread over a stretch of 43 km from Samalkha to Singhu Border including Ganaur, Murthal, Bahalgarh Chowk and Kundli Border.

**National Highway-2 (Segment E to F)**

- **E** - from Karwan (Hodel) border to Palwal City (including) is 38 km.
- **F** - from Palwal City (excluded) to Badarpur border, is 36 km in length.

**National Highway-8 (Segment G to I)**

- **G** - from Jai Singh Pur Khera border (Rajasthan) to Dharuhera industrial complex limit with a length of 39 km.
- **H** - from Dharuhera industrial complex limit to the end of Manesar with a length of 27 km.
- **I** - from Manesar to Kapushera border (Gurgaon) with a length of 35 km.

**National Highway-10 (Segment J to O)**

- **J** - Mandi Dabwali border (Punjab) to Sirsa city (excluded) covering a distance of 59 km.
- **K** - Sirsa City (included) to Fatehabad (excluding) covering a

distance of 48 km.

- **L** - Fatehabad (Including) to Hisar City (excluded) covering a distance of 50 km.
- **M** - Hissar City (included) Mundhal *mor* covering a length of 52 km.
- **N** - Mundhal *mor* to Rohtak City (excluded) covering a length of 50 Kms.
- **O** - Rohtak City (including) to Tikri border (Delhi) to with a length of 54 km.

**Methods of Study**

The present study is primarily based on field survey. Initially a pilot survey was carried out to mark the locations of wayside facilities along Haryana part of the national highways mentioned above. The information relating to the satisfaction level (Adenrele Awotona's Index of Satisfaction Level) with respect to wayside facilities was collected through personal interviews of the passengers using wayside facilities of the national highways with the help of structured questionnaire. Highways wayside facilities users' level of satisfaction with respect to a particular facility was evaluated by asking them a number of specific questions or variables delimited for each facility (Table 1). The respondents were requested to identify their degree of satisfaction with each of the variables on a five point scale ranging from 1 to 5. Satisfaction index level of a passenger or highway user (respondent) on 1-5 scale is noted down according to following grading:

Scales	Level of Satisfaction
1	: Poor
2	: Average
3	: Good
4	: Very Good
5	: Excellent

**Table 1**  
**Haryana: Facility-wise Variables used to Collect Data**

Sr No	Hotels, Restaurants, Dhabas	Fuel Filling Stations	Sr No	Traffic Police Stations
1	Parking	Parking	1	Number of Traffic Police Stations
2	Toilet	Toilet& Bathroom	2	Did you get help at the time of technical fault in your vehicle yes / no
3	Bathroom	Water Facility	2a	If yes then:- their cooperation level
4	Cleanliness Level	Air Filling Facilities	2b	Time taken to aswer the request
5	Quality of Food	Customer Service	3	Did you get any help at the time of accident(s) yes / no
6	Quality of Utensils	Employees Behaviour	3a	If yes then:-their cooperation level
7	First Aid Facilities	First Aid Facilities	3b	Time taken to answer the request
8	Water Purification	Cleanliness	3c	Ambulance
9	Sitting Arrangement	Quality of fuel	3d	First Aid
10	Cuisine / Menu	Availability of fuel	3e	Others
11	Meal Rate		4	At the time of robbery did you get any help yes / no
12	Security		4a	If yes then: - their cooperation level
13	Privacy		4b	Time taken to answer the request
14	Employees Behaviour		4c	Recovery level of lost items
15	Utensil Cleanliness		5	In case of accident/ robbery the legal procedure adopted: - a) time taken and time taken to provide the services
16	Entertainment Facilities		6	Traffic signs & marking system on National Highways
17	Esthetic Environment		7	The overall cooperation level of traffic police
18	Interior Decoration			

### Computation of Satisfaction Indices (SI)

The scores of each respondent given to all variables are added up to calculate the total actual score. The result is then divided by maximum possible score depending on the number of variables i.e. if the variables are 10 then maximum possible score will be  $10 \times 5 = 50$ . The result is then multiplied by 100 to obtain index of satisfaction (SI) of respondent as a percentage. Thus:

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

Thus, based on the above given method SIs for all the respondents using a particular facility are calculated. Now the respondents using different wayside facilities are added up and all the facilities were integrated to know the overall satisfaction level index using the same method as used for separate facilities.

**Table 2**  
**Haryana: Number of Wayside Facilities along Selected National Highways**

NH	Hotel	Restaurant	<i>Dhaba</i>	Fuel Filling Station	Traffic Police Station
NH -1	4	4	28	10	5
NH -2	2	3	13	4	2
NH -8	3	3	13	8	2
NH -10	4	7	28	11	5
<b>Total Surveyed</b>	<b>13</b>	<b>17</b>	<b>82</b>	<b>33</b>	<b>14</b>

Source: Field Survey, 2007-2008.

#### Variables Used in the Study

To calculate the satisfaction index, the response of each respondent was evaluated for a set of questions specific to the particular facility. The hotels, *dhabas* and restaurants were covered in 18 common variables while the variables selected for fuel filling station and for traffic police station are 10 and 14 respectively. The list of variables used to study the satisfaction level for these facilities is given in Table 1.

#### Grouping of Indices of Satisfaction Index Based on Standard Deviation Method

In order to group the SIs on the basis of standard deviation method, first the mean and standard deviations are calculated for all the SIs of respondents for each facility separately. Then with the help of mean and standard deviation all the respondents of each facility were grouped into three levels of satisfaction by using the following formula:

Category	Level of Satisfaction
$> \overline{SI} (\bar{x}) + SD$	High
$\overline{SI} (\bar{x}) - SD$ and $\leq \overline{SI} (\bar{x}) SD$	Medium
$< \overline{SI} (\bar{x}) - SD$	Low

#### Selection of Samples

The present study is primarily based on field survey. Initially a pilot survey was carried out to mark the locations of wayside facilities located along Haryana part of the National Highways mentioned above. The samples of the wayside facilities were randomly selected from each section of National Highway corridors for purpose of seeking above mentioned information. A total of 167 wayside facilities including 13 hotels, 17 restaurants, 82 *dhabas*, 33 fuel-filling stations and 14 traffic police stations were selected from different National Highways (Table 2).

As many as 4 samples from each hotel; 4 from each restaurant; 2 from each *dhaba*; 4 from each fuel filling station and 7 from each traffic police station (8 in case of NH 8) were selected from each national highway corridor for comparative analysis of their level of satisfaction.

A total of 516 highway users including 52 from 13 hotels, 68 from 17 restaurants 164 from 82 *dhabas*, 132 from 33 fuel filling stations and 100 from 14 traffic stations were interviewed from different national highways (Table 3).

**Table 3**  
**Haryana: The Numbers of Respondents Interviewed to Collect Data**

NH	Hotel	Restaurant	Dhaba	Fuel Filling Station	Traffic Police Station	Total Respondents
NH 1	16	16	56	40	35	163
NH 2	8	12	26	16	14	76
NH 8	12	12	26	32	16	98
NH 10	16	28	56	44	35	179
<b>Total</b>	<b>52</b>	<b>68</b>	<b>164</b>	<b>132</b>	<b>100</b>	<b>516</b>

Source: Field Survey, 2007-2008.

**Table 4**  
**Haryana: Wayside Facilities by Average Number of Customers Visiting Daily**

NH	Hotel	Restaurant	Dhaba	Fuel Filling Station
NH 1	825	480	355	675
NH 2	800	308	181	715
NH 8	658	463	189	663
NH 10	575	143	134	372

Source: Field Survey, 2007-2008.

### Results and Discussion

Many types of facilities are available on both sides of national highways for both the highway users and people living in surrounding areas. The wayside facilities are enough on national highways which are usually used by passengers and the crew of transport vehicles destined to travel long distances (Table 4). The vehicles usually ply on these roads day and night. Therefore, national highways need more provisions to fulfill their required needs. The basic necessities required for vehicles are fuel, mechanics, spare parts, air, water parking etc. People traveling in such vehicles also need various amenities like restrooms, washroom, food, entertainment, refreshment, beverages of various kinds and communication facilities. In

some special circumstances like accident, bad weather and illness, the provision of doctors, medicine, police and crane etc. is also required. These are available at a regular distance along the roads under study (Field Survey, 2007-2008). An attempt has been made to know the satisfaction of users with respect to the following roadside facilities:

#### Hotels

Table 5 illustrates the satisfaction level of highway users with respect to hotels located along selected national highways in study area. It is found that 32.69 per cent respondents expressed high level of satisfaction, whereas 53.84 per cent and 13.46 per cent respondents expressed medium and low level of satisfaction respectively about the services provided by the



**Table 5**  
**Haryana: Satisfaction Levels of Highway Users with Respect to Hotel**

NH Segment	Respondents' Level of Satisfaction						Total Respondents Surveyed	
	Low		Medium		High			
	No.	%	No.	%	No.	%	No.	%
<b>National Highway -1</b>								
A	0	0.00	3	75.00	1	25.00	4	100
B	0	0.00	4	100	0	0.00	4	100
C	0	0.00	3	75.00	1	25.00	4	100
D	0	0.00	2	50.00	2	50.00	4	100
<b>Total</b>	<b>0</b>	<b>0.00</b>	<b>12</b>	<b>75.00</b>	<b>4</b>	<b>25.00</b>	<b>16</b>	<b>100</b>
<b>National Highway -2</b>								
E	0	0.00	3	75.00	1	25.00	4	100
F	0	0.00	2	50.00	2	50.00	4	100
<b>Total</b>	<b>0</b>	<b>0.00</b>	<b>5</b>	<b>62.50</b>	<b>3</b>	<b>37.50</b>	<b>8</b>	<b>100</b>
<b>National Highway -8</b>								
G	0	0.00	3	75.00	1	25.00	4	100
H	4	100	0	0.00	0	0.00	4	100
I	0	0.00	0	0.00	4	100	4	100
<b>Total</b>	<b>4</b>	<b>33.33</b>	<b>3</b>	<b>25.00</b>	<b>5</b>	<b>41.67</b>	<b>12</b>	<b>100</b>
<b>National Highway -10</b>								
J	—	—	-	-	-	-	-	-
K	0	0.00	2	50.00	2	50.00	4	100
L	3	75.00	1	25.00	0	0.00	4	100
M	0	0.00	3	75.00	1	25.00	4	100
N	—	—	-	-	-	-	-	-
O	0	0.00	2	50.00	2	50.00	4	100
<b>Total</b>	<b>3</b>	<b>18.75</b>	<b>8</b>	<b>50.00</b>	<b>5</b>	<b>31.25</b>	<b>16</b>	<b>100</b>
<b>G. Total</b>	<b>7</b>	<b>13.46</b>	<b>28</b>	<b>53.84</b>	<b>17</b>	<b>32.69</b>	<b>52</b>	<b>100</b>

Source: Field Survey, 2007-2008.

hotels. Most of the respondents are not satisfied with the facilities like first-aid, security of passengers and vehicles, parking arrangements and entertainment available in the hotels.

Table 5 also compares the satisfaction level of hotel users of different highways. Hotels users of NH-1 and NH-2 record only medium and high level of satisfaction, while

hotel users of NH-8 and NH-10 fall in all the three categories i.e. low, medium and high level of satisfaction. However, the maximum high level of satisfaction i.e. 41.67 per cent of respondents in the entire study area was recorded in case of hotels located along NH-8. Thus, it is quite clear from the table 5 that respondents of both low and high level of

**Table 6**  
**Haryana: Satisfaction Levels of Highway Users with Respect to Restaurants**

NH Segment	Respondents' Level of Satisfaction						Total Respondents Surveyed	
	Low		Medium		High			
	No.	%	No.	%	No.	%	No.	%
<b>National Highway -1</b>								
A	0	0.00	3	75.00	1	25.00	4	100
B	0	0.00	0	0.00	4	100	4	100
C	3	75.00	1	25.00	0	0.00	4	100
D	1	25.00	2	50.00	1	25.00	4	100
<b>Total</b>	<b>4</b>	<b>25.00</b>	<b>6</b>	<b>37.50</b>	<b>6</b>	<b>37.50</b>	<b>16</b>	<b>100</b>
<b>National Highway -2</b>								
E	1	25.00	3	75.00	0	0.00	4	100
F	3	37.50	5	62.50	0	0.00	8	100
<b>Total</b>	<b>4</b>	<b>33.33</b>	<b>8</b>	<b>66.67</b>	<b>0</b>	<b>0.00</b>	<b>12</b>	<b>100</b>
<b>National Highway -8</b>								
G	0	0.00	3	75.00	1	25.00	4	100
H	0	0.00	2	50.00	2	50.00	4	100
I	0	0.00	0	0.00	4	100	4	100
<b>Total</b>	<b>0</b>	<b>0.00</b>	<b>5</b>	<b>41.67</b>	<b>7</b>	<b>58.33</b>	<b>12</b>	<b>100</b>
<b>National Highway -10</b>								
J	0	0.00	3	75.00	1	25.00	4	100
K	3	75.00	1	25.50	0	0.00	4	100
L	3	75.00	1	25.00	0	0.00	4	100
M	0	0.00	3	75.00	1	50.00	4	100
N	0	0.00	2	50.00	2	50.00	4	100
O	2	25.00	5	62.50	1	12.50	8	100
<b>Total</b>	<b>8</b>	<b>28.57</b>	<b>15</b>	<b>53.57</b>	<b>5</b>	<b>17.86</b>	<b>28</b>	<b>100</b>
<b>G. Total</b>	<b>16</b>	<b>23.53</b>	<b>34</b>	<b>50</b>	<b>18</b>	<b>26.47</b>	<b>68</b>	<b>100</b>

Source: Field Survey, 2007-2008.

satisfaction were found in case of hotel located along NH-8. The main reason of this drastic difference is due to the presence of Air Port or *Apna Ghar* Hotel and The Residency in section 'I' and 'G' respectively which are having all kind of facilities in best condition, while 'The residency (Manesar)' hotel in section 'H' provides negligible facilities to the users. It is also found that the highest i.e. 75.00 per cent

respondents expressed low level of satisfaction with respect to hotel 'Green Apple Fatehabad' located on segment 'L' (NH-10), because it has neither parking space nor lawns etc.

#### Restaurants

Table 6 shows satisfaction level of the highway users with respect to restaurants located along the selected national highways in

study area. The study indicates that 23.53 per cent and 50.00 per cent respondents fall in the low and medium levels of satisfaction respectively, due to absence of parking facility, negligible toilet and bathroom facilities, absence of first-aid, security, privacy, entertainment facilities and over all aesthetic environments of establishments including ventilation, cleanliness, sanitary, interior and exterior decoration of buildings, while 26.47 per cent respondents fall in the high level category of satisfaction.

Table 6 also reveals that the restaurants situated along NH 2 provide low level of facilities, because 33.33 per cent respondents fall in low level of satisfaction, while not even a single restaurant provides high satisfaction to the users. The reason of respondents' low level of satisfaction in case of restaurants along NH 2 is that these are located in congested urban areas where there is shortage of space so they are unable to provide good facilities for parking, toilet and bathroom, privacy, first-aid, entertainment etc.

On the contrary, 58.33 and 41.67 per cent respondents from NH-8 expressed high and medium level of satisfaction, while none expressed low level of satisfaction as most of the restaurants provide good facilities being located outside the *abadi deh* area. Apart from this there is one restaurant, along segment I, namely CPRL; MacDonald run by a multinational company provides facilities of international level.

It is also found that 100 per cent respondents expressed high level of satisfaction with respect to facilities provided by restaurants located along NH-1 in segment 'B' and along NH-8 segment I. While, 50 per cent respondents express high level of satisfaction about the restaurants located in 'M' and 'N' segments of NH 10 and H segment of NH 8 because, these restaurants are situated in

open area outside the cities and provide maximum services as there is no constraint of space.

### ***Dhabas***

Throughout India highways are dotted with local food-joints popularly known as *dhabas*. These generally serve local cuisine, therefore are very popular among truck drivers. In India these are most commonly found close to petrol stations, and most of them remain open round the clock.

It is evident from Table 7 that 56.10 per cent and 18.29 per cent respondents, respectively expressed medium and low level of satisfaction with respect to *dhabas* located along selected national highways in Haryana. The respondents are not satisfied with the parking facility, toilet and bathroom facilities, absence of first-aid, water purification, security, privacy and overall aesthetic environment i.e. construction material used in building, ventilation, cleanliness, sanitary, interior and exterior decoration of buildings. Table 7 also shows that 28.57 per cent and 26.92 per cent respondents fall in category of low level of satisfaction with respect to *dhabas* located along NH-10 and NH-2, respectively.

It is also apparent from Table 7 that only 25.61 per cent respondents fall in high level of satisfaction category. These respondents are found satisfied with meal rate, menu, employees' behaviour, sitting and sleeping arrangement on cot, utensils condition and cleanliness etc.

Table 7 also shows that the highest i.e. 44.64 per cent respondents have expressed high level of satisfaction with respect to *dhabas* located along NH 1. The main reason of providing high level of satisfaction by *dhabas* along NH 1 is because of good services these provide. This highway links New Delhi, the capital of India with Haryana, Punjab,

**Table 7**  
**Haryana: Satisfaction Levels of Highway Users with Respect to *Dhabas***

NH Segment	Respondents' Level of Satisfaction						Total Respondents Surveyed	
	Low		Medium		High			
	No.	%	No.	%	No.	%	No.	%
<b>National Highway -1</b>								
A	1	7.14	8	57.14	5	35.71	14	100
B	0	0.00	8	66.67	4	33.333	12	100
C	1	8.33	9	75.00	2	16.67	12	100
D	0	0.00	4	22.22	14	77.78	18	100
<b>Total</b>	<b>2</b>	<b>3.57</b>	<b>29</b>	<b>51.79</b>	<b>25</b>	<b>44.64</b>	<b>56</b>	<b>100</b>
<b>National Highway -2</b>								
E	3	25.00	7	58.33	2	16.67	12	100
F	4	28.57	8	57.14	2	14.29	14	100
<b>Total</b>	<b>7</b>	<b>26.92</b>	<b>15</b>	<b>59.69</b>	<b>4</b>	<b>15.39</b>	<b>26</b>	<b>100</b>
<b>National Highway -8</b>								
G	2	20.00	7	70.00	1	10.00	10	100
H	1	10.00	6	60.00	3	30.00	10	100
I	2	33.33	4	66.67	0	0.00	6	100
<b>Total</b>	<b>5</b>	<b>19.23</b>	<b>17</b>	<b>65.39</b>	<b>4</b>	<b>15.39</b>	<b>26</b>	<b>100</b>
<b>National Highway -10</b>								
J	1	12.50	5	62.50	2	25.00	8	100
K	1	12.50	4	50.00	3	37.50	8	100
L	2	33.33	3	50.00	1	16.67	6	100
M	5	50.00	4	40.00	1	10.00	10	100
N	4	50.00	4	50.00	0	0.00	8	100
O	3	18.75	11	68.75	2	12.50	16	100
<b>Total</b>	<b>16</b>	<b>28.57</b>	<b>31</b>	<b>55.36</b>	<b>9</b>	<b>16.07</b>	<b>56</b>	<b>100</b>
<b>G. Total</b>	<b>30</b>	<b>18.29</b>	<b>92</b>	<b>56.10</b>	<b>42</b>	<b>25.61</b>	<b>164</b>	<b>100</b>

Source: Field Survey, 2007-2008.

Himachal Pradesh and Jammu and Kashmir. So, the volume of traffic and number of passengers are very high (Table 4).

It is pertinent to mention that the highest 77.78 per cent respondents fall in high level of satisfaction category only in segment 'D' of NH-1 which includes a distance of 43 km running between Samalkha and Kundli. In this

part of the road dhabas are mainly concentrated in a village Murthal which is situated in Haryana on the outskirts of national capital, Delhi. This is due to the strategic position of this village that all traffic coming to Delhi and going from Delhi to all northern states i.e. Haryana, Punjab, Himachal Pradesh, Jammu & Kashmir take a halt resulting in coming up of

**Table 8**  
**Haryana: Satisfaction Levels of Highway Users**  
**with Respect to Fuel Filling Stations**

NH Segment	Respondents' Level of Satisfaction						Total Respondents Surveyed	
	Low		Medium		High		No.	%
	No.	%	No.	%	No.	%		
<b>National Highway -1</b>								
A	0	0.00	5	62.50	3	37.50	8	100
B	2	16.67	9	75.00	1	8.33	12	100
C	3	25.00	7	58.33	2	16.67	12	100
D	2	25.00	5	62.50	1	12.50	8	100
<b>Total</b>	<b>7</b>	<b>17.50</b>	<b>26</b>	<b>65.00</b>	<b>7</b>	<b>17.50</b>	<b>40</b>	<b>100</b>
<b>National Highway -2</b>								
E	1	12.50	5	62.50	2	25.00	8	100
F	2	25.00	4	50.00	2	25.00	8	100
<b>Total</b>	<b>3</b>	<b>18.75</b>	<b>9</b>	<b>56.25</b>	<b>4</b>	<b>25.00</b>	<b>16</b>	<b>100</b>
<b>National Highway -8</b>								
G	0	0.00	7	43.75	9	56.25	16	100
H	0	0.00	3	37.50	5	62.50	8	100
I	2	25.00	5	62.50	1	12.50	8	100
<b>Total</b>	<b>2</b>	<b>6.25</b>	<b>15</b>	<b>46.88</b>	<b>15</b>	<b>46.88</b>	<b>32</b>	<b>100</b>
<b>National Highway -10</b>								
J	1	12.50	5	62.50	2	25.00	8	100
K	0	0.00	3	75.00	1	25.00	4	100
L	2	25.00	5	62.50	1	12.50	8	100
M	6	75.00	2	25.00	0	0.00	8	100
N	4	50.00	4	50.00	0	0.00	8	100
O	1	12.50	5	62.50	2	25.00	8	100
<b>Total</b>	<b>14</b>	<b>31.19</b>	<b>24</b>	<b>54.55</b>	<b>6</b>	<b>13.64</b>	<b>44</b>	<b>100</b>
<b>G. Total</b>	<b>26</b>	<b>19.70</b>	<b>74</b>	<b>56.06</b>	<b>32</b>	<b>24.24</b>	<b>132</b>	<b>100</b>

Source: Field Survey, 2007-2008.

several *dhabas* along the road. As a result a competition is set to provide maximum facilities to attract the highway users. Contrarily, low level of satisfaction was expressed by 50 per cent users of *dhabas* on segments 'N' and 'M' of NH-10. The reason of low level of satisfactions in this case is that the number of users is very low as compared to NH-1 (Table 4). As the number of users is very

low so, the number of *dhabas* is also less along this road. There is not much competition, therefore the quality of services is also poor and hence low level of satisfaction is expressed by the users.

#### **Fuel Filling Stations**

Table 8 reveals the satisfaction level of highway users with respect to fuel-filling

**Table 9**  
**Haryana: Satisfaction Levels of Highway Users**  
**with Respect to Traffic Police Stations**

District	Respondents' Level of Satisfaction						Total Respondents Surveyed	
	Low		Medium		High		No.	%
	No.	%	No.	%	No.	%		
<b>National Highway -1</b>								
Ambala	1	14.29	4	57.14	2	28.57	7	100
Kurukshetra	2	28.57	3	42.86	2	28.57	7	100
Karnal	1	14.29	5	71.43	1	14.29	7	100
Panipat	2	28.57	2	28.57	3	42.86	7	100
Sonepat	2	28.57	4	57.14	1	14.29	7	100
<b>Total</b>	<b>8</b>	<b>22.86</b>	<b>18</b>	<b>51.43</b>	<b>9</b>	<b>25.71</b>	<b>35</b>	<b>100</b>
<b>National Highway -2</b>								
Palwal	2	28.57	4	57.14	1	14.29	7	100
Faridabad	1	14.29	5	71.43	1	14.29	7	100
<b>Total</b>	<b>3</b>	<b>21.43</b>	<b>9</b>	<b>64.29</b>	<b>2</b>	<b>14.29</b>	<b>14</b>	<b>100</b>
<b>National Highway -8</b>								
Rewari	3	37.50	4	50.00	1	12.50	8	100
Gurgaon	2	25.00	4	50.00	2	25.00	8	100
<b>Total</b>	<b>5</b>	<b>31.25</b>	<b>8</b>	<b>50.00</b>	<b>3</b>	<b>18.75</b>	<b>16</b>	<b>100</b>
<b>National Highway -10</b>								
Jhhajhar	4	57.14	3	42.86	0	0.00	7	100
Rohtak	4	57.14	3	42.86	0	0.00	7	100
Hisar	3	42.86	4	57.14	0	0.00	7	100
Fatehabad	3	42.86	4	57.14	0	0.00	7	100
Sirsa	5	71.43	2	28.57	0	0.00	7	100
<b>Total</b>	<b>19</b>	<b>54.29</b>	<b>16</b>	<b>45.71</b>	<b>0</b>	<b>0.00</b>	<b>35</b>	<b>100</b>
<b>G. Total</b>	<b>35</b>	<b>35.00</b>	<b>51</b>	<b>51.00</b>	<b>14</b>	<b>14.00</b>	<b>100</b>	<b>100</b>

Source: Field Survey, 2007-2008.

stations located along selected national highways in Haryana. It is found that 19.79 per cent and 56.06 per cent respondents fall in the low and medium level of satisfaction categories, respectively. The respondents are not satisfied with the low availability of air-filling facility, non availability of first-aid, parking and refreshment facilities and bad condition of toilets and bathrooms.

Table 8 also reveals that highest 31.19 per cent respondents have expressed low level of satisfaction with respect to fuel-filling stations located along NH-10 mainly in segments 'N' and 'M', the reason can be attributed to a fewer number of fuel-filing station, so there is not much competition and hence the owners don't bother about the allied facilities purported to be provided to the users.

**Table 10**  
**Haryana: Satisfaction Levels of Highway Users**  
**with Respect to Wayside Facilities**

NH Segment	Respondents' Level of Satisfaction						Total Respondents Surveyed	
	Low		Medium		High		No.	%
	No.	%	No.	%	No.	%		
<b>National Highway -1</b>								
A	5	12.82	26	66.67	8	30.77	39	100
B	7	17.07	22	53.66	12	29.27	41	100
C	6	14.63	27	65.85	8	19.51	41	100
D	6	14.29	18	42.86	18	42.86	42	100
<b>Total</b>	<b>24</b>	<b>14.72</b>	<b>93</b>	<b>57.06</b>	<b>46</b>	<b>28.22</b>	<b>163</b>	<b>100</b>
<b>National Highway -2</b>								
E	8	22.86	22	62.86	5	14.29	35	100
F	11	26.83	24	58.54	6	14.63	41	100
<b>Total</b>	<b>19</b>	<b>25.00</b>	<b>46</b>	<b>60.53</b>	<b>11</b>	<b>14.47</b>	<b>76</b>	<b>100</b>
<b>National Highway -8</b>								
G	8	30.77	21	53.85	10	25.64	39	100
H	6	19.35	17	54.84	8	25.81	31	100
I	8	28.57	10	35.71	10	35.71	28	100
<b>Total</b>	<b>22</b>	<b>22.85</b>	<b>48</b>	<b>48.98</b>	<b>28</b>	<b>28.17</b>	<b>98</b>	<b>100</b>
<b>National Highway -10</b>								
J	6	24.00	15	60.00	4	16.00	25	100
K	4	51.39	17	65.38	5	19.23	26	100
L	7	25.00	19	67.86	2	7.14	28	100
M	12	37.50	16	50.00	4	12.50	32	100
N	8	30.77	16	61.54	2	7.69	26	100
O	10	23.81	24	57.14	8	19.05	42	100
<b>Total</b>	<b>47</b>	<b>26.26</b>	<b>107</b>	<b>59.78</b>	<b>25</b>	<b>13.97</b>	<b>179</b>	<b>100</b>
<b>G. Total</b>	<b>112</b>	<b>21.72</b>	<b>294</b>	<b>56.98</b>	<b>110</b>	<b>21.32</b>	<b>516</b>	<b>100</b>

Source: Field Survey, 2007-2008.

Table 8 also points out that 24.24 per cent respondents have expressed high level of satisfaction with respect to fuel-filling stations located along selected national highways in Haryana. High level of satisfaction is found due to employee's behavior, good customer service, availability of fuel, better facilities of drinking water.

The study also shows that highest 46.88 per cent respondents have expressed high level of satisfaction with respect to fuel-filling stations located along NH-8 mainly in segments 'G' and 'H'. The number of fuel-filling stations in these segments is very high, therefore due to competition these filling stations provide better facilities to the users.

### Traffic Police Stations

Table 9 indicates that only 14.00 per cent respondents fall in category of high level of satisfaction. Besides 35.00 per cent and 51.00 per cent respondents fall in the low and medium level of satisfaction categories, respectively.

The main factors responsible for low level of satisfaction are indifferent attitude of the traffic police at the time of technical fault in vehicle and at the time of an accident, shortage of ambulances, non-availability of first aid facilities and time lag in providing necessary services. The rude behavior, extortion of money and unnecessary harassment of the users by the officials of the traffic police even for a minor fault do contribute heavily to the low level of satisfaction. Table 9 also reveals that the highest i.e. 25.71 per cent high satisfaction level of users is found in case of NH-1, while not a single respondent falls in high level of satisfaction with respect to police stations located along NH-10. This is mainly because, the NH-1 is very old and highly developed highway where number of security posts and the availability of ambulances and allied facilities is adequate and highway patrolling services are well developed, while NH 10 is still developing, therefore the above mentioned facilities are yet to be developed.

### Overall Satisfaction Level of Wayside Facilities

Table 10 indicates the overall satisfaction level of highway users with respect to overall wayside facilities. There are only 21 per cent highway users who are highly satisfied with the available wayside facility along the NHs passing through Haryana. Almost equal percentage of highway users expressed low level of satisfaction (22 per cent respondents). Rest of users (57 per cent respondents) expressed the medium level of satisfaction

about the wayside facilities. Thus, majority of respondents fall in medium and low level of satisfaction categories with respect to over all wayside facilities and therefore, need a relook at them to make highway travelling safe and comfortable as per the growing needs and requirements of the users.

There are wide gaps in availability and quality of facilities available along different highways. The respondents' level of overall satisfaction is high in case of wayside facilities along NH1; here about 28 per cent respondents are highly satisfied and about 57 per cent recorded medium satisfaction level.

On the other hand, it is rather lowest in case of NH 10, where only 13.97 per cent respondents have shown the high level of satisfaction. The major reason of this difference appears to be the low level of development of this highway and less number of highway users (Table 4).

Table 10 also highlights that highest 42.86 per cent respondents fall in high level of satisfaction category with respect to wayside facilities located along segment 'D' of NH-1, because of its food-joints i.e. hotels, restaurants and *dhabas*. These food-joints are providing best level of facilities to the highway users mainly in the village Murthal. The high level of satisfaction is also found along NH-8 in segment I (35.71 per cent respondents) and NH 1 in segment 'A' (30.77 per cent respondents). On the other hand highest 51.39 per cent and 37.50 per cent respondents fall in low level of satisfaction category with respect to wayside facilities located along segments 'K' and 'M' of NH-10, respectively. Likewise, segment 'G' of NH 8 also witnessed low level of satisfaction (30.77 per cent respondent).

### Conclusion

It is evident from the foregoing discussion that only 21.32 per cent respondents



fall in high level of satisfaction category, while 56.98 per cent and 21.72 per cent of respondents respectively fall in medium and low level of satisfaction categories with respect to overall wayside facilities located along selected national highways in Haryana. It has been found that there is no uniform distribution of facilities along the National Highways. These facilities are concentrated at some strategic points of roads or mainly situated in the urban areas through which a National Highway passes. The facilities in terms of both quality and quantity depend upon the volume of traffic on a particular National Highway. The more the number of users, the more is the number of facilities and the better is 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 of a national highway. There are wide gaps in availability and quality of facilities along different highways. The level of overall satisfaction is high in case of facilities along NH1 and low in case of NH 10. The major cause of this difference appears to be the level of development of these highways and number of highway users.

### References

Adavitot, S.C. (2007): "The Study of Behavioral Pattern of Pilgrim Tourists", *Journal of the Deccan Geographer*, Volume 45, pp. 23-28.

Awotona, A. (1990): "Nigerian Government Participation in Housing: 1970-1980", *Habitat International Journal*, Great Britain, Vol. 14, No. 1, pp.17-40.

Census of India (2011): Haryana Provisional Population Tables, Director of Census Operations Haryana.

<http://www.census2011.co.in/census/state/haryana.html>

Chandrayudu, N., Saibabu, K., Krishnaiah, K., and Reddy, C. S. (2010): 'Satisfaction Level of Pilgrim Tourists at Srinivas Mangapuram in Tirupati, Andhra Pradesh', *Indian Journal of Regional Science*, Volume-XXXXII (No.-2), pp. 152-155.

Chol, B.H. (1998): "Assessing Tourist Satisfaction-An Exploratory Study of Korean Youth Tourist in Australia", *Tourism Recreation Research*, Vol. 23(1), pp. 47-54.

Government of India (2009): *Haryana Development Report*, Academic Foundation, Planning Commission, India, New Delhi, p.75.

Ministry of Surface Transport (Road Wing) dated 3rd April, 1998, Letter No R.W./NH-34032/4/91-DO III, Transport Bhawan, 1, Parliament Street, New Delhi India.

National Highways Authority of India (2012), Indian road network, National Highways of India, Ministry of Road Transport and Highways, Government of India, New Delhi. [www.nhai.org](http://www.nhai.org); <http://www.nhai.org/roadnetwork.hmt>

**Karam Singh**, Research Scholar  
**Dr. S.P. Kaushik**, Professor  
**Department of Geography,**  
**Kurukshetra University,**  
**Kurukshetra, Haryana**