

Assessment of Delay on Artrial Corridor for Mixed Vehicle - A Case Study of Rajkot West Zone

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Abstract— Cities play a vital role in promoting economic growth and prosperity. The development of cities largely depends upon their physical, social, and institutional infrastructure. Urbanization is now a day is major developing tool for any city. As population increases the travel demand is also increases. Mostly the road related facilities are not going to change much with the change in travel demand. Increase in the travel demand will increase the traffic but the facilities associated with this are not going to change very frequently so it results in the traffic congestion and it will create the traffic hazards, so to overcome of this issues there is a need to study the impact of change in the travel behavior on qualities of the traffic facilities and service qualities. The all work is carried out at micro level so that the clear perception can be made how the travel is actually impacting on the qualities on the service corridors. The Travel behavior is very much affected by the adjoining land use and socio-economic characteristics.

Key words: Travel Behavior, Economic Growth, Traffic Congestion, Service Corridors, Urbanization

I. INTRODUCTION

This study reflects that the sample survey technique with statistics base will help the urban planner to represent the sample data as overall city characteristics. The trip is highly depends on trips, no. mode uses, no. of school going member and no. of vehicle per house hold factors. The Surrounding land use play vital role in Trip Generation. This all above factors which impacts on the trip generation and this generated trips will create certain amount of traffic. This research focus on the travel behavior on service qualities at transport corridor of west zone of Rajkot city and the behavior of impact of trips on the service qualities of Transport corridors.

II. NEED OF STUDY

Rajkot is one of the fastest developing cities located at in the center of Saurashtra region of Gujarat State situated on western part of India. The city has geographical area of 104.86 sq. km and has a population of 1.3 million plus (Census, 2011)

- To find out the travel impact on the Corridors.
- To check the qualities of service corridors.

III. OBJECTIVES OF STUDY

- The objectives of study based on problems at location.
- To assess the impact of travel behavior of the selected corridor of the west zone of Rajkot city.

IV. METHODOLOGY

The study will follows following steps.

- 1) The first step is to study and identification of study area location.
- 2) Various literature research paper, book, thesis report, related to study are referred.
- 3) Study area profile give existing situation of Rajkot west zone.
- 4) Conduct road side interview survey.
- 5) Collected data has been analyzed.
- 6) Conclusion

V. DATA COLLECTION

Analysis of road interview survey of Raiya to Mavdi Circle (morning & evening)

	Morning	Evening
Categories		
2W	55	61
3W	8	3
4W	31	30
Bicycle	6	6

Table 1: Mode of Travel

	Morning	Evening
Categories	Number of Trip (%)	Number of Trip (%)
Work	52	0
Educational	41	0
Recreational	0	17
Home	4	54
Others	3	29

Table 2: Purpose of Trip

	Morning	Evening
Interval	Number of Trip	Number of Trip
<3	23	27
3 to 6	50	38
6 to 9	16	44
>9	2	0

Table 3: Trip Distance

	Morning	Evening
Interval	Number of Trip	Number of Trip
5 to 10	35	23
10 to 20	42	42
20 to 30	10	44
30 to 40	3	0
40 to 50	1	0

Table 4: Trip Duration

	Morning	Evening
Origin Time (Frequency)	89	109
Destination Time (Frequency)	87	109

Table 5: Origin and Destination Frequency

	Morning	Evening
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Categories	Number of Trip	Number of Trip
<5	47	31
5 to 10	36	55
>10	8	23

Table 6: Delay Time

Analysis of road interview survey of Mavdi to Raiya Circle (morning & evening)

Categories	Morning	Evening
2W	63	99
3W	12	5
4W	4	7
Bicycle	5	5

Table 7: Mode of Travel

	Morning	Evening
Categories	Number of Trip (%)	Number of Trip (%)
Work	48	1
Educational	15	0
Recreational	5	21
Home	0	52
Others	16	42

Table 8: Purpose of Trip

	Morning	Evening
Interval	Number of Trip	Number of Trip
<3	32	32
3 to 6	40	55
6 to 9	8	26
>9	3	3

Table 9: Trip Distance

	Morning	Evening
Interval	Number of Trip	Number of Trip
5 to 10	35	23
10 to 20	42	42
20 to 30	10	44
30 to 40	3	0
40 to 50	1	0

Table 10: Trip Duration

	Morning	Evening
Origin Time (Frequency)	83	109 Delay Time
Destination Time (Frequency)	81	109

Table 11: Origin and Destination Frequency

	Morning	Evening
Categories	Number of Trip	Number of Trip
<5	47	70
5 to 10	33	38
>10	6	8

Table 12: Delay Time

VI. CONCLUSION

- By analyses of data it is seen that purpose of trip in the morning is for work and educational and in evening most of trip is home based.
- Trip is generally for 3 to 6 km in morning while in evening it is observed 6 to 9 km.
- Trip duration is 10 to 20 min in morning and 20 to 30 min in evening.

- Delay time in the morning is less than 5 minutes. while in evening 5 to 10 minutes.

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