The Impact of Cost Effectiveness and Stress on Daily Passengers' Behaviour: A Case Study of 'Aligarh to Delhi' Daily Passengers

* Matloob Ullah Khan

** Mohd. Saleem

*** Dr. N. Ravichandran

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E-mail : effulgence@rdias.ac.in, Website : www.rdias.ac.in

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Abstract

The main Objectives of this case study are to analyse the impact of cost effectiveness and stress on daily passengers' behaviours. In this case study, we have provided empirical evidence on the basis of cost calculation tabulations which shows that daily travel from Aligarh to Delhi is more cost efficient than to stay in Delhi. This case study also analyses the impact of cost and stress on human behaviour which was also felt by the first author of this paper during his three year regular journey from Aligarh to Delhi as a daily passenger. We also tried to develop inverse relation between 'Quality of Life and Money Saving Concept' on the basis of cost analysis table, which gives core indication that the cost effectiveness plays a significant role in various aspects for human beings' life. The half of this case study is related to financial management-concept of cost effectiveness which is followed universally by every individual and organization and remaining part deals with the impact of cost on human behaviour.

Key Words: Behaviour, Cost and stress.

INTRODUCTION

This paper is developed on the basis of personal experience, which was gained by the first author of this paper during the journey from Aligarh to Delhi for last three years as a daily passenger by daily passenger trains. This paper also highlighted various factors related to basic requirements due to which human physiology changes and the most important is the cost factor. Most of the people are cost conscious and be ready to face physical problem in travelling, because there is a very strong factor behind it i.e. saving of money which induces the people to save for other tasks in future planning. This paper was developed while keeping in mind to highlight the problem of middle class working people, who travel daily more than 100 km by passenger trains. First author of this paper also had to travel daily from Aligarh to Delhi for last three years and on the basis of his personal experience, he decided to do a research work on these daily travel passengers while keeping in mind to study the impact of cost effectiveness on human nature.

Change in Human Nature Due To Cost Effectiveness and Stress

We described the changing behaviour in human being due to daily travel's effect which was happened on the basis of cost effectiveness. The whole story related to the change in human behaviour was described in the words of first author, so we used 'I' instead of 'we' because the first author of this paper himself had written the story, 'how does behaviour of human being change due to daily travelling effect in passenger trains?'

When I were studying in Aligarh Muslim University (A.M.U), due to some occasions or reasons related to entrance test for job or for higher education I used to reach Delhi by daily passenger trains. During that time I really felt uncomfortable to be among all these daily passengers, who behave just like more than an animal. That is not only my problem but everyone's, who travel occasionally by these trains and they felt same kind of problems which I had faced. After completing my Post Graduation from A.M.U., I got admission in Jamia Hamdard University in research program. During my

* Research Scholar, Department of Management, Jamia Hamdard University, New Delhi, India

** Lecturer, VAG Management Services, DDE Sikkim Manipal University, New Delhi, India

*** Professor and Head, Department of Management, Jamia Hamdard University, New Delhi, India

initial phase of research program, I could not receive any financial assistance from any other source than of mine and due to that reason I decided to travel daily from Aligarh to Delhi by daily passenger trains. From that point of time, my real life experience was started as a daily passenger. In the beginning phase of one month I travelled by the trains like a well behaved and educated type of person. During that time I also used to give space on my seat to women and senior citizens who travelled in the same train but after one month I realised that everybody used me without giving me any moral support. From next day I tried to change myself a little bit to a rude, arrogant and aggressive personality and as a result I got seat in train and came back to home with more comfort instead of standing all the way of my journey and having pain in my legs and whole body, next day again I behaved in the same manner and got a seat again. Within two month I had interaction with many people in passenger train who were travelling by these trains for more than 10 years. These people said that in the initial phase of their journey, they also used to behave just like me but due to regular and continuous travel, stress arose and their behaviour was also changed. Then after six month I also became one of the worst animals of these trains.

Those people who travel occasionally they can't be able to analyse and identify me that I am so much educated because of such behaviour. Basically most of the people who travel occasionally in these passenger trains, feel that all the passengers who travel daily in these trains are hardly 10th or 12th class pass or belong to rural area but that is not a reality, even so many bank managers, class one officers and scientist rank people also travel by these trains but due to their travelling stress, their behaviour was changed and these people behave just like a rude, arrogant and aggressive person in these passenger trains. Daily passengers most probably travel in the same compartment of the passenger trains and by this they regularly maintain the position of their identity in that particular compartment. This simple technique helps these people to capture the same seat from both side of travel (Aligarh to Delhi and Delhi to Aligarh).

While travelling from Aligarh to Delhi as figure 1 shows that the daily passengers spend almost seven hours

during travelling in train on this route because as per the statistic of Indian Railway, time taken by passenger trains from Aligarh to Delhi is three hours and in case of express trains it is two hours but due to conjunctions or heavy traffic of trains on this route, the passenger train consumes almost three and half hours from one side and three and half hours from other side. Daily passenger does travel approximately eight hours per day (see figure 1 related to time consumption.)

(REFER FIGURE 1 HERE)

On the basis of time consumption figure 1, the daily travel passenger spends almost 17 hours in a day for his routine work and it is well known that a day contains only 24 hours so if someone spends 17 hours daily on travel and other routine works, only seven hours are left for family and rest so how one will cope? All these above time based calculations are dependent on the conditions in which daily passenger did not face any problem in travel process. If this mechanism of travel is interrupted by some external factors such as delay in trains, break-down of trains or lines, non-availability of local transport etc. If it is happened, travelling time also increases up to one hour or more. As per the report of 'National Sleep Foundation', the human being should have to sleep at least seven to eight hours per day if they are not doing any type of high efficiency work. If they do high efficiency work, they have to sleep at least nine to 10 hours completely. Other wise, they may suffer from various medical and physiological problems such as stress, anxiety, depression, tension, rude behaviour and stomach related problem etc. This all happens due to the concept of money saving and its tendency of daily travel passengers. If daily travel person changes his mentality and tries to stay in Delhi, most probably he will receive physical as well as mental relaxation but this is not possible because cost management effectively plays a very important and significant role in every aspect of human life because of uncertainties in future and betterment of tomorrow. It is very difficult to travel beyond this distance because travel time also has some impacts on the job if someone is not able to reach on time.

Research Methodology and Sampling Technique

Research methodology used in this case study is based on the combination of “*Qualitative and Quantitative*” types of research. In qualitative type of research we made personal interaction with those people who travel regularly from Aligarh to Delhi and in quantitative type of research we get small questioner filled by those people who travel daily by passenger train (from Aligarh to Delhi and Delhi to Aligarh) for more than three years. In this questioner we only asked two questions from daily passengers, first question is measured on the basis of ranking scale and second question is measured on the basis of nominal and interval scale. These questioners are filled on the basis of “*Convenience Sampling Technique*” in which we get 20 questioners filled from each compartment, so the sample size will reached to the level of 200 respondents because passenger train contain 12 compartments in which two compartments are reserved for women passengers. Generally women candidates do not travel regularly as a daily passenger. It means sample size become 200 [$20 \times 10 = 200 = N$], that is why we take sample only from male compartments. These two questions are given blow:

Q1: Why am I travelling every day by passenger train instead of staying in Delhi? (Use ranking scale from 1 to 6, where 1 for top priority and 6 for least priority)

- Due to cost effectiveness;
- Due to my family problems;
- My family does not feel comfortable in Delhi;
- I feel happy in travelling daily;
- Just only for enjoyment;
- Environment of Delhi is not good for health;

Q2: My behaviour changed due to travelling stress?

- No;
- Yes (If yes Go for next option)
- My behaviour was changed:
(a) 10%, (b) 20%, (c) 30%, (d) 40%, (e) 50%, (f) 60%,
(g) Above 60%

Analysis phase of Question One

In this phase of analysis we are not using any statistical test because we are not testing any hypothesis or correlation. Our intention was only to analyse why people travel daily from Aligarh to Delhi and Delhi to

Aligarh. On the basis of question no.1, we found that most of the people give first rank to “Due to cost effectiveness” option. Statistical ranking table of question no.1 is given blow:

(REFER TABLE 1 HERE)

As per the statistical table 1 we found that 63 percent respondent gave first rank to “Due to cost effectiveness” option. On the basis of that outcome we tried in-depth analysis to check weather this option is significantly correct or not.

Real Case Analysis for Option 1 of Question No.1

In this case, we analyse cost of daily journey and monthly journey from Aligarh to Delhi and Delhi to Aligarh to justify why people have given first rank to cost effectiveness factor. For further understanding one can see figure 2 and table 2. In figure 2 we used double arrows which indicate that movements took place at both the side because in the morning starting point is Aligarh and in the evening the ending point is also Aligarh. Similarly in morning the ending point is Delhi/New Delhi and in the evening starting point is Delhi/ New Delhi. This process indicates that expenses are made from both the sides but almost in similar way and because most of the time daily passengers use same kind of conveyance so the cost of travelling is almost same during the days.

(REFER FIGURE 2 HERE)

On the basis of figure 2 (Travel Model directions) we prepared cost of travelling table 2, which shows daily and monthly expenses of daily passengers from both side as per direction given in figure 2. In travel expenses table, we considered only 26 working days per month for calculation purpose but train fair is considered on the basis of monthly pass, which we say in local language “MST”. This monthly pass gives the facility to travel by any passenger or local or express train (Not in Superfast Train) daily for one month from the date of issue to the expiration of it with a restriction that the passenger should only travel in unreserved compartments with it. If any monthly pass holder travels in reserved compartment, he/she will have to pay penalty as per Indian Railway Law.

(REFER TABLE 2 HERE)

This monthly expenses are maximum or minimum depending upon the habits and conditions of daily passengers. As per the table 2, you may easily understand that maximum expenses are of Rs. 3,167 at maximum level and at minimum level of Rs. 1,685. This minimum level may go further down, if we eliminate miscellaneous expenses from calculation's table which shows minimum expenses in S. No.: 13 item and after elimination of S. No.:7 from S. No.: 13 it become only Rs. 385. From the above analysis it will be easily understood that cost of travelling from Aligarh to Delhi is much less than staying or living in Delhi. For more elaboration and justification about this real perception we go for the analysis of cost of staying and living in Delhi in next heading.

Cost of Living in Delhi for an Individual

As per the experience of first author of this paper after travelling from Aligarh to Delhi as a daily passenger for more than three years, he felt stress and pain to travel daily and decided to stay in Delhi instead of going to Aligarh and coming back from Aligarh daily. So on the basis of our personal experience as a middle class living standard people, we analyse the cost of living in Delhi on the basis of various alternative seen in table 3

(REFER TABLE 3 HERE)

On the basis of table 3, it would be easily understood the minimum and maximum level of expenses which would be bear by the individual if he or she is interested to reside or live in Delhi. According to the above table, maximum expenses are reached at the level of Rs. 18,860/- or Rs. 16,940/ for a month. This amount of monthly expenses may be reduce further if a person takes more care of his/her expenses and minimum expenses may reached at the level of Rs. 8,720/- or Rs. 7,880/- for a month and similarly this amount may also be decreased up to 10% to15% while taking high level of precaution in his or her daily expenses.. In most of the cases, Monthly and daily expenses of one person are almost different from other person because expenses of individual vary from person to person depending upon the habits, life style and culture and on the basis of this

perception, values in above table are changing from person to person.

Comparative analysis between Daily Traveller and Dweller in Delhi on the basis of cost

As per the table 2 and 3 you will easily understand the differences between daily passenger and the individual living in Delhi in term of cost. With the help of these cost tables, we prepared a master diagram which shows the power of money and also justify the answer of people who opted the option one (Due to cost effectiveness), while filing small questioner. For more understanding see figure 3.

(REFER FIGURE 3 HERE)

From the above figure, it will be easily understood that the cost of travelling approximately 80% lower than the cost of staying and living in Delhi. If you compare all the alternative cost of travelling and living on the basis of ascending and descending order you will find the difference between ranges of expenses varies from 75% to 83%. So, on an average it was approximately 80% which we mention in above line.

Relationship between Quality of Life and Money Saving

On the basis of above discussion we may conclude that there is an inverse relation between 'Quality of Life' and 'Money Saving'. We interacted personally with the various people who travelled from Aligarh to Delhi on daily basis, they always gave one conclusion that they travelled daily due to cost factor. When people want to upgrade their life standard, they have to take some steps. They have to pay some extra or more amount of money for acquiring well-furnished room or flat, food of good quality, branded attire, electronic home appliances and many more luxurious items. All these activities increase the cost of living and lead to zero or less savings of money. On the other hand if we go for reverse, the cost of living will be reduced. According to this discussion we make a relation which is given in equation (1). For more understanding see figure 4;

$$QOL \propto 1/SM \quad \dots(1)$$

$QOL = \text{Quality of Life; and}$
 $SM = \text{Sving Money}$

(REFER FIGURE 4 HERE)

Analysis Phase of Question Number Two

This question is related to the study of 'change in behaviour of daily passengers' which was already discussed in the beginning of this paper in the words of first author who was also the part of daily travelling for last three years. Due to daily and hectic schedule of journey, he found some drastic changes in his behaviour. He tried to justify his feeling by filling small questioner in which he was asked about 'the change in behaviour' in the form of interval scale.

Out of 200 sample size as we have discussed below in table 4, 33 respondents opted 'No' option so they are not eligible for further filling process of questions. Available best samples are i.e. 83.35% only. On the basis of this final sample size, we try to find 'the change in behaviour of daily passengers'. For more understanding of this result see table 4;

(REFER TABLE 4 HERE)

From the table 4, you will easily understand that out of 200 sample 16.5% passengers don't feel any change in his behaviour while travelling daily from Aligarh to Delhi and Delhi to Aligarh but 83.5% passengers feel change in behaviour and these people also accepted this on various interval scale. It means the perception and feeling of first author related to the change in behaviour are correct. If we make a summation of option c, d and e, it reaches to a level of 55% and it means that more than 50% respondents are highly agree or aligned toward the change in Behaviour.

Limitations of Research

This research focuses the impact of cost effectiveness and stress on the behaviours of daily travel passenger who travel from Aligarh to Delhi, so the limitations of this research are area specific and based on personal experience. These limitations are:

- Travelling cost may vary if this research is conducted on other route except Aligarh to Delhi;
- Behaviour of daily travel passengers also vary according to the culture, travelling habits based on facilities and passenger's strength (People crowd). It

may be possible that the result of this study may vary if it is conducted in different environment in which passengers received better facility than Aligarh to Delhi route; and

- This type of study will not be developed without the adequate and long personal experience because without personal experience, one can't be able to develop better contents which should cover all major and minor points, which are covered in this study.

CONCLUSION

This study is developed while keeping in mind how the concept of cost effectiveness works on daily travel passengers and the impact of it on the behaviours of them. The cost, stress and behaviour are correlated with each other according to this study. In this study the concept of cross cutting in cost by travel increases the stress in human body as well as in the brain. This stress in brain, results the change in behaviour which is studied in this case study. If daily travel passengers remove the concept of cost effective from their life, most probably all the above results will not be useful. According to the table 1.1, 21 percent people travels daily due to family problems but these people also felt stress and change in behaviour. It means that change in behaviour of daily travel passengers take place due to travel stress but most of the people accept this stress due to cost effectiveness.

REFERENCES

This case study does not require any reference because it is based on real life experience of people who travel daily from various small cities to Delhi. As per our concern it is one of the real case studies of its kind which is developed first time on such a concept. A very long period of time was required to complete this case study and it took more than three years of time. It includes real and personal experience of first author of this case study. Other authors also contributed in this case study in many ways such as structuring and editing etc.

[Http://www.sleepfoundation.org/article/how-sleep-works/how-much-sleep-do-we-really-need](http://www.sleepfoundation.org/article/how-sleep-works/how-much-sleep-do-we-really-need)

Figure 1 : Time Consume Chard

Figure 2 : Travel Model Direction

Figure 3 : Comparative Analysis Diagram On The Basis of Cost of Daily Travelling and Cost of Living in Delhi

Source: Developed on the basis of table 2 and 3 of this research paper

Figure 4 : Relationship between Quality of Life and Money Saving

Table 1 : Normal Ranking Chart of Question No.1 On The Basis of Responses

Q1: Options	Response	Responses in (%)	Ranking
Due to cost effectiveness;	126	63	1
Due to my family problem;	42	21	2
My family not feel comfortable in Delhi;	16	8	3
I feel happy in travelling Daily;	2	1	5
Just only for enjoyment;	2	1	5
Environment of Delhi is not good for health;	12	6	4
Total	200	100	-----

Table 2 : Daily and Monthly Expenses of Daily Travelling Passenger

S. No.	Travel Mode, ways and direction	Calculation Daily Inward Column	Daily Rs.	Calculation Monthly Inward Column	Monthly Rs.
01	From Home to railway station (Aligarh) and back from Aligarh railway station to Home by public transport.	10 X 2	20	20 X 26	520.00
02	Parking Charges if use own Bike Fuel for Bike- Petrol	7 X 1 10 X 2	7 20	7 X 26 20 X 26	182.00 520.00
03	If reached Home to railway station in Aligarh by walking (Condition: Passenger	00.0	00.0	00.0	00.0

	reside nearby station)				
04	Train's Monthly Pass from Aligarh to Delhi	12.83 X 1	12.83	385	385.00
05	New Delhi Railway station to office by Bus (Take Maximum fair Non AC Bus)	15 X 2	30	30 X 26	780.00
06	If it reach railway station to office by walking in Delhi (Condition: Passenger working place nearby railway station	00.0	00.0	00.0	00.0
07	Miscellaneous Expenses	50 X 1	50	50 X 26	1300.00
08	Total S. No.: 1+4+5+7 =	-----	114.81	114.81 X 26	2985.00
09	Total S. No.: 2+4+5+7 =	-----	121.81	121 .81 X 26	3167.00
10	Total S. No.: 3+4+5+7 =	-----	94.81	94 .81 X 26	2465.00
11	Total S. No.: 1+4+6+7 =	-----	84.81	84 .81 X 26	2205.00
12	Total S. No.: 2+4+6+7 =	-----	91.81	91 .81 X 26	2387.00
13	Total S. No.: 3+4+6+7 =	-----	64.81	64 .81 X 26	1685.00

Table 3 : Cost of Living in Delhi On The Basis of Daily and Monthly Expenses of Individual

S. No.	Expenses (Rs In Range)	Daily (Rs.)			Monthly (Rs.) (For 30 Days)		
		Minimum Range Rs.	Medium Range Rs.	Maximum Range Rs.	Minimum Range Rs.	Medium Range Rs.	Maximum Range Rs.
01	Rent (Rs. 2000 to Rs. 5000) depending upon locality of middle class people (one room only)	66.66	116.66	166.66	2000	3500	5000
02	Electricity Charges (200 units per month to 600 units per month) depending upon climatic condition ,use of electric home appliances & charge per unit(Rs. 6 to Rs. 8) which varies from area to area	0.66 × 6 =4.00 * or 0.66 × 7 =4.62 ** or 0.66 × 8 =5.28 ***	1.33 × 6 =8.00 * or 1.33 × 7 =9.31 ** or 1.33 × 8 =10.64 ***	2×6=12.00 * or 2×7=14.00 ** or 20×8=160.00 ***	20 × 6 =120.00 * or 20 × 7 =140.00 ** or 20 × 8 =160.00 ***	40 × 6 =240.00 * or 40 × 7 =280.00 ** or 40 × 8 =320.00 ***	60 × 6 = 360.00 * or 60 × 7 = 420.00 ** or 60 × 8 = 480.00 ***
03	Breakfast (Rs. 20 to Rs. 50)	20.00	35.00	50.00	600.00	1050.00	1500.00
04	Lunch (Rs. 50 to Rs. 100)	50.00	75.00	100.00	1500.00	2250.00	3000.00

05	Dinner (Rs. 50 to Rs. 100)	50.00	75.00	100.00	1500.00	2250.00	3000.00
06	Travelling (Rs. 20 to Rs. 50, within this range you have to travel only by bus or Grameen Sava)	30.00	40.00	50.00	900.00	1200.00	1500.00
07	Washing Cloth by yourself (Rs. 20 to Rs. 60, it also includes iron charges on cloth)	2.00	4.00	6.00	60.00	120.00	180.00
08	Washing Cloth by professional (Rs. 10 to 20)	10.00	15.00	20.00	300.00	450.00	600.00
09	Prepare Breakfast, Lunch and Dinner by yourself (Rs. 100 to Rs. 200 per day; only for veg menu)	100.00	150.00	200.00	3000.00	4500.00	6000.00
10	Mobile expenses (Rs.10 to Rs.30, it also include mobile internet charges)	10.00	20.00	30.00	300.00	600.00	900.00
11	Miscellaneous Expenses (Rs.50 to 100)	50	75	100	1500	2250	3000
12	Total of S. No: 1+2*+3+4+5+6+8+10+11	290.66	459.66	628.66	8720.00	13790.00	18860.00
13	Total of S. No. : 1+2*+6+7+9+10+11	262.66	413.66	564.66	7880.00	12410.00	16940.00

Note: *,** and *** are the rate of electricity unit which was charge by the landlord from his tenant (where *= Rs. 6, **= Rs. 7 and ***= Rs. 8);

Table 4 : Analysis of Behaviour Change

Sample Size: 200	Yes: 167;	No: 33	
Final Sample Size Considered For study: 200 - 33 = 167			
Q:2 Change in Behaviour Options	Response	Response in % out of 167	Response in % out of 200
(A) 10%	16	09.58	08.00
(b) 20%	28	16.76	14.00
(c) 30%	35	20.59	17.50
(d) 40%	45	26.94	22.50
(e) 50%	30	17.96	15.00
(f) 60%	08	04.79	04.00
(g) above 60%	05	02.95	2.500
Total	167	100.00	83.50