

Travelling Viewed Statistically

Nileema Bhalerao

Assistant Professor, Department of Statistics, DES, FCP, District Pune, Maharashtra, India

Abstract: *The aim was to study the people's views about travelling on the basis of very much growing sector, Tours and Travels. As travelling is the only thing that you buy, makes you richer!! A 25-item Self designed questionnaire was used to collect data regarding tour, people have ever experienced in India and Abroad with travel companies or without travel companies and their views about travel companies. A total of 468 people were surveyed as a sample of this study. The survey was conducted in various sectors of Pune, and the method to study the data characteristics and its analysis was decided and worked upon. Tours in India as well as Abroad, both have been fairly analyzed using various Statistical Tools like Exploratory Data Analysis, Chi-square Tests and tests for proportion. I have fairly concluded the reasons behind their views. My Study showed that Frequency of travelling is independent of the Annual Income of a person, the season of travelling and the place of travel chosen by people associated to each other. The way of travelling (with travel companies or without travel companies) and view about safety are dependent. The proportion of people who have travelled with travel companies in India and with travel companies to abroad is not same.*

Keywords: Test for Proportion, Level of Significance, Chi – square tests for Independence of Attributes, Chi – square test for Goodness of fit.

1. Introduction

In this fast growing world and longing needs to survive, travelling to different places to explore the growing and changing world is becoming a drastic greed and moreover need of many in today's world. Different people have different views about various ways of travelling. Understanding today's needs and future demands, the travel companies are growing their business vast. The characteristics of interest is studying the various factors of travel [4] and tourism like factors that attract people towards travel company at the same time that lead people to travel without travel company and people's perception about travelling who have experienced tours through travel companies and without travel companies. To bridge people's views about travelling and perceptions of travel companies business, I felt the need to study the topic in detail.[11] Realizing this fact, I have made an attempt to understand study and get an insight into the travelling world.

2. Methodology

The questionnaire was prepared after reasonable consideration was given to the importance of each question. This questionnaire facilitated in the collection of data over a period of certain days. The questionnaire was briefly divided into two sections- travelling in India and travelling in Abroad. These sections were further sub-divided into two sections each – travelling through travel companies and travelling without travel companies. The people who have experienced both ways of travelling i.e. with travel companies and without travel companies were allowed to fill both the sections. These included questions on personal information, the tour they have ever experienced, views about travel companies and so on. A total of 468 people were surveyed and the data collected was analyzed for this study.[2] Once the survey had been conducted the method to study the data characteristics and its analysis was decided and worked upon.[3] The 'filter' function in Microsoft Excel [7] and the software 'R Deducer' were used to get appropriate data tables.[6] To this data tables, various Statistical Tools like Exploratory Data Analysis,[1] various

types of Graphical Representation, [5], Chi-square Tests[8] and Tests for Proportion have been applied.[13] The sample was drawn using purposive random sampling technique.[9]

3. Results (Data Analysis and Interpretation)

The classified data based on various characteristics is given below. [Based on sample]

Table 1: Number of People travelling: Total Population

| Gender | Male | Female |
|---------------|--------|--------|
| No of people | 217 | 251 |
| In percentage | 46.36% | 53.63% |

The number of females travelling in is greater than that of males.

Table 2: Number of People travelling abroad.

| Gender | Male | Female |
|---------------|--------|--------|
| No of people | 84 | 94 |
| In percentage | 47.36% | 52.80% |

The number of females travelling to abroad is greater than that of males

Table 3: Way of travelling: Total Population

| | With Travel Companies | Without Travel Companies | Both |
|---------------|-----------------------|--------------------------|--------|
| No of persons | 67 | 272 | 129 |
| In % | 14.31% | 58.11% | 27.56% |

The number of people travelling without approaching travel companies is greater.

Table 4: Way of travelling [In Abroad]: Total Population

| | With Travel Companies | Without Travel Companies | Both |
|---------------|-----------------------|--------------------------|--------|
| No of persons | 60 | 93 | 25 |
| In Percentage | 33.70% | 52.24% | 14.0 % |

The percentage of people travelling abroad without approaching travel companies is greater.

Table 5: Frequency of people who have experienced tour by travel companies in India

| Company | Kesari | Veena World | Girikand | Country Club | Cox And Kings | Local Companies |
|---------------|--------|-------------|----------|--------------|---------------|-----------------|
| No of persons | 30 | 16 | 29 | 19 | 17 | 85 |
| In percentage | 15.30% | 8.16% | 14.79% | 9.69% | 8.67% | 43.36% |

For travelling in India, people prefer local companies more than the well-known companies.

Table 6: Frequency of people who have experienced tour by travel companies for Abroad

| Company | Kesari | Veena World | Girikand | Country club | Cox And Kings | Local Companies |
|---------------|--------|-------------|----------|--------------|---------------|-----------------|
| No of persons | 22 | 9 | 7 | 5 | 7 | 36 |
| In percentage | 25.88% | 10.58% | 8.23% | 5.88% | 8.23% | 42.35% |

For Abroad tours, people prefer local companies more than the well known companies.

Table 7: Reasons of choosing travel company by people who have travelled through travel companies in India.

| Reason | Packages are less | Mouth publicity | Past experience | Advertisement |
|---------------|-------------------|-----------------|-----------------|---------------|
| No of people | 53 | 61 | 54 | 28 |
| In percentage | 27.04% | 31.12% | 27.55% | 14.28% |

Maximum number of people gets attracted to the travel companies because of mouth publicity.

Reasons for choosing travel company (for those who have travelled through travel Company)



Figure 1

People do travel by travel companies because of the experience they had with the company in the past.

Reasons for travelling through travel companies (in India and Abroad)

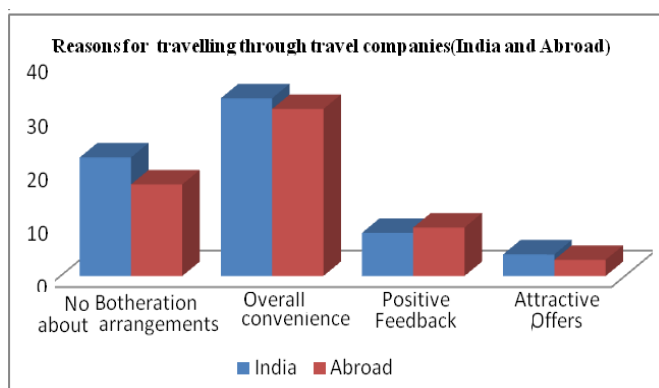


Figure 2

People, who travel only by travel companies, prefer to do so because of the overall convenience of the tour.

Way of travelling in India (with travel companies, without travel companies and experienced both ways of travelling)

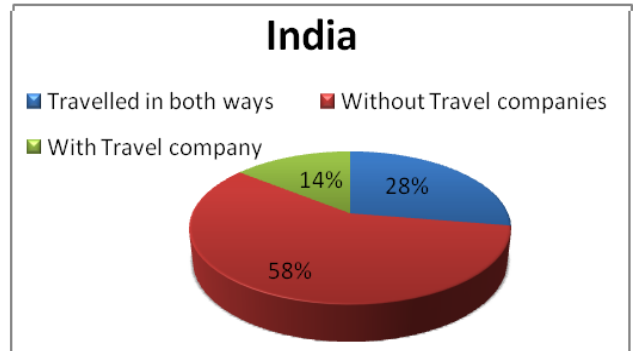


Figure 3

Percentage of people, who travelled in India, without Travel companies, is 58.

Preferred mode of transport in India (with travel companies and without travel companies)

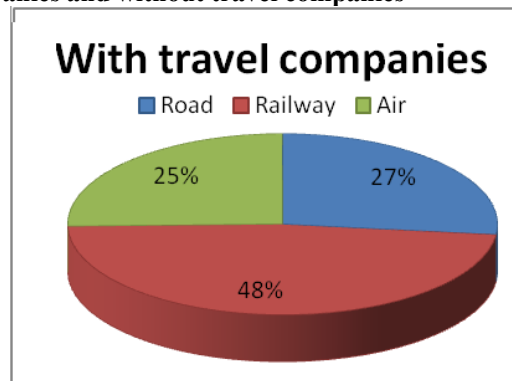


Figure 4

Maximum people preferred railway for their tours while going by travel companies.

General comparison of overall ratings given by people who have travelled without travel companies and with travel companies in India



Figure 5

Not much difference is observed in the overall ratings given by people (who have experienced both ways) for their tour through travel Company and without travel companies.

Chi – Square test for independence of attributes

| Table value | Calculated value | p- value | Result |
|-------------|------------------|-----------|-----------|
| 21.026 | 18.56542 | 0.0995698 | Accept Ho |

Conclusion: Frequency of travelling is independent of the Annual Income of a person.

| table value | calculated value | p – value | Result |
|-------------|------------------|-----------|-----------|
| 7.815 | 17.70333 | 0.000506 | Reject Ho |

Conclusion: The season of travelling and the place of travel chosen by people are associated to each other.

| table value | calculated value | p – value | Result |
|-------------|------------------|-----------|-----------|
| 3.841 | 7.968289 | 0.004760 | Reject Ho |

Conclusion: The way of travelling (with travel companies or without travel companies) and view about safety are with travel companies depend on each other.

Tests for Equality of Two Population Proportion

For people travelling only with travel companies (India and Abroad);

Ho: Proportion of people who have travelled with travel companies in India = Proportion of people who have travelled with travel companies to Abroad.

| P – Value | Z – value | Result |
|-----------|---------------|-----------|
| 5.540869 | 3.00676e – 08 | Reject Ho |

Conclusion: The proportion of people who have travelled with travel companies in India and with travel companies to abroad is not same.

4. Discussion

- The number of people travelling without approaching travel companies is greater.
- The percentage of people travelling abroad without approaching travel companies is greater.
- For travelling in India, people prefer local companies more than the well-known companies.
- For Abroad tours, people prefer local companies more than the well known companies.
- Maximum number of people gets attracted to the travel companies because of mouth publicity.
- People do travel by travel companies because of the experience they had with the company in past.
- People, who travel only by travel companies, prefer to do so because of the overall convenience of the tour.
- Not much difference is observed in the overall ratings given by people (who have experienced both ways) for their tour through travel company and without travel companies.

5. Conclusion

The percentage of people travelling without approaching travel companies is greater but, people who travel only by travel companies; prefer to do so because of the overall convenience of the tour. Frequency of travelling is independent of the Annual Income of a person. The season of travelling and the place of travel chosen by people associated to each other. The way of travelling (with travel companies or without travel companies) and view about safety are dependent. The proportion of people who have

travelled with travel companies in India and with travel companies to abroad is not same.

6. Future Scope

Travelling is such a vast topic with lot of factors that can be considered for studying and exploring the travelling subject statistically. With lot of additional questions that can be added to the questionnaire, various new factors and attributes can be studied which can further be analyzed to understand common man's mindset and the mindset of travel companies .this paper may be just a part of the vast diversity of the topic and there remains a lot more to explore statistically.

References

- [1] Agarwal, B. L. (2003). Programmed Statistics, Second Edition, New Age International Publishers, New Delhi.
- [2] Goon, A. M., Gupta, M. K. and Dasgupta, B. (1983). Fundamentals of Statistics, Vol. 1, Sixth Revised Edition, The World Press Pvt. Ltd., Calcutta.
- [3] Gupta, S. C. and Kapoor, V. K. (1983). Fundamentals of Mathematical Statistic. Eighth Edition, Sultan Chand and Sons Publishers, New Delhi.
- [4] Gupta, S. C. and Kapoor, V. K. (1997). Fundamentals of Applied Statistics, Third Edition, Sultan Chand and Sons Publishers, New Delhi.
- [5] Freund, J. E. (1977). Modern Elementary Statistics. Fourth Edition, Prentice Hall of India Private Limited, New Delhi.
- [6] Purohit, S.G. Gore, S.D. Deshmukh S. R. (2008). Statistics Using R, Narosa Publishing House, New Delhi.
- [7] Sarma, K. V. S. (2001). Statistics Made it Simple: Do it yourself on PC Prentce Hall of India, New Delhi.
- [8] Snedecor G. W. and Cochran W. G. (1989). Statistical Methods, Eighth Ed. East- West Press.
- [9] Mood, A. M. and Graybill, F. A. and Boes D.C. (1974). Introduction to the Theory of Statistics, Ed. 3, McGraw Hill Book Company.
- [10] Lindgren, B.W.: Statistical Theory (third edition) collier Macmillan International Edition, Macmillan publishing Co., Inc. New York.
- [11] Kendall and Stuart: The advanced Theory of Statistics, Vol 1, Charles and company Ltd., London.
- [12] Dudewitz and Mishra: Modern Mathematical Statistic, John Wiley and Sons, Inc., New York.
- [13] Sanjay Arora and Bansi Lal: New Mathematical Statistics (Ist Edition), Satya Prakashan 16/17698, New Market, New Delhi, 5(1989).

Author Profile

Nileema Bhalerao is Assistant Professor, Department Of Statistics at DES FCP, Pune, Maharashtra, India. She received her M.Sc. (Statistics) degree from University of Pune in the year 2000. Her area of interest is Statistics.