An Analysis of Shoppers Perspective on Shopping Malls in Bangalore City

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Abstract
In India, retail sector is an important contributor to the GDP. This sector has undergone many changes over years. It is observed that the organized retail market in the country is raisiSng with the Compound Growth Rate of 20-25 percent per annum. The major portion of organized retail is observed in cities. In this study the efforts are made to understand the perception of customers towards the maintenance of shopping malls, average individual footfall and time spend in the shopping malls, to understand the relation between age wise time spend in shopping malls and also the relation between age group and frequency of mall visits in Bangalore. The primary data is collected through a questionnaire. The collected data was analyzed accordingly. In this study, the researcher adopted pie – diagrams, t- test for means and correlation, Chi – square tests. The outcome of the study will facilitate the customers through the betterment of shopping malls.

KEY WORDS: *footfall, perception, customer, maintenance.*
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I. INTRODUCTION

In the preliminary stages, India was just restricted to plaza culture. Post 2003, mall culture started expanding in the metro and urban regions, and India started transforming into the focal point of organized retail culture. The forefront Indian retail industry has encountered a lot of changes to achieve the stature that it has now.

The organised retail in India was started in 1999 with the opening of Ansal Plaza in Delhi, which was trailed by Crossroads in Mumbai and Spencer Plaza in Chennai. Until the completion of 2002, only three strip malls existed in India. Post 2003, mall culture brought up in metros. Urban areas like Mumbai, Bangalore, Kolkata, Chennai speedily recognized the strip mall culture along these lines began a pattern that was to jump on incredibly brisk.

In 2007-08 there was more growth in shopping mall space all over the country. The shopping mall culture was slowdown in 2008 due to the impact of recession. This situation had turned for retailers and builders who had simply bounced into the shopping centre business without understanding the demand. The shopping centre culture that was shaped from 2011 onwards was something that India had never experienced before. Organized retail sector has begun seeing an uptrend in metros from 2012 onwards. Consumer viewpoint towards the shopping centre changed in 10 years – from simply seeing it as a diversion community to considering it to be a fulfilled shopping experience.

In 2017, organised retail got 9% of the market. India has high growth potential. According BCG report, India is expected to reach third position among the largest consumer economies reaching$400 billion-

mark consumption by the end of 2025. India is going to get 65 million sq. ft of new shopping centre spaces before the start of 2023. Of this absolute new flexibly, the top 7 urban areas include 72% offer and the staying 28% or 18.2 million sq. ft is scheduled to come up in tier 2 and tire 3 urban areas, said Ana rock Property Consultants report.

II. LITERATURE REVIEW

Pooja Khanna and Suresh Seth Study (2018) found that the shopping centre in India is experiencing a big change. This study endeavoured to analyse the variables that affected customers shopping in shopping centres in a tire II city. The analysis with the regression further uncovered that Excitement, Promotional Offers, Enjoyment, Hedonic Factors and Stress Relieving shows a level influence perception of a customer towards shopping mall in tier II city.

Sandeep Bhanot (2017) Study showed that female visitors are spending more time in shopping centres than male visitors, yet there is no noteworthy contrast among male and female customers in regards to repeated visits to the shopping malls and the amount spend by them at the shopping centre. Shopping centres appear to be well known places to buy garments, footwear and accessories for both.

Shelja Jose Kuruvilla and J Ganguli (2008) study attempted to comprehend the scientific and money related advances that are embraced before setting up a shopping centre, sources of financing a shopping centres and the wellsprings of income and consumption and found through outcomes that a sound connection between the shopping centre management and the tenants, client management and activity by the shopping mall management. It is anticipated that the greater part of the nation's retail business will move into shopping centres inside a couple of years and more Indians are beginning to purchase at shopping centres as retailers show signs of improvement at pitching products.

Sashikala R and Dr. Suresh A.M. (2013) study tried to explore the chance of building customer loyalty through successful utilization of ambience in a shopping centre to pull in and hold genuine purchasers. Study found that the growth of competition among shopping centres urges supervisors to assess customer involvement with the shopping condition as a potential device of separation and fitting utilization of ambience in by and huge retail procedure can support them in drawing in buyers as well as hold them by giving good purchase feeling.

Ahmad Hami, Fazilah Fazle, Farzin Emami (2016) study focused on socio segment factors towards inclination for inside scene of shopping centre. The outcomes indicated no noteworthy between gender group gatherings. Different factors, for example, age, pay, ethnicity, house types, and invested energy bunches had huge distinctive impact on individuals' inclinations towards the three measurements in shopping centre. The discoveries appeared as the age and salary level go up individuals lean toward green measurement more. Moreover, outcomes depicted that green highlights got the most elevated inclination from those invest a lot of time in shopping centres.

Sivakumar R Sharma (2012) study evaluated the customer loyalty, reaction of customers as to the accessibility and type of services and variety of products present at shopping centres and the comfort of the respondents in shopping in malls in Mumbai. This study discovered that shopping centres make perfect condition for social cooperation for individuals everything being equal and furthermore shopping centres offer amazing stopping offices, make an incentive for cash, credit/ debit card offices, etc. Subsequently, higher client traffic is pulled in towards shopping centres.

Deepika Jhamb, Dr (Ms) Ravi Kiran (2012) attempted to comprehend the development in retail division in India, particularly the advanced retail organizes, its property, sort of products and effect of shoppers' demography on decision of rising retail arranges. The discoveries of the paper uncovered that purchasers lean toward present retail designs because of value, variety of brands, good parking, prepared deals faculty and for security reason. Buyers' lean toward shopping centres and forte store to buy different shopping products like dress, Footwear and Jewellery more when contrasted with comfort merchandise. The paper further investigated that higher salary buyers and more youthful age visit

present day retail organizes more when contrasted with more established once with low pay.

Rajagopal (2008) study made an attempt to understand the effect of developing congestion of shopping centres in urban areas on shopping accommodations and shopping behaviour. It is found that urban customers visit shopping centres relaxation focuses to loosen up spending extended periods and will in general shop in light of different deals advancements utilized by various stores.

III. PROBLEM STATEMENT

There are number of studies on mall management (i.e. consumer loyalty, customer perception, customer satisfaction, CRM) but these studies are confined to some limited samples in a single mall. Most of the researchers are not considering more than one mall for their research in a selected location. The results of their studies are not generalized in the particular area. So, it is better to select more respondents who visited multiple malls. Hence, results obtained from selected samples are very near to the reality. So, in this context, the present study is proposed to study average consumer footfall, perception, relation between age and time spend, frequency of mall visits and also with time spend. The results of the present study are an addition to the existing literature in the organized retail sector. This study may support the earlier studies and gives a path for further research. With the above discussion following objectives are framed.

IV. OBJECTIVES

- To study the customer perception towards maintenance of shopping malls.
- To know the average individual footfall and average hours spent in shopping malls.
- To study the relation between age group and time spent at shopping malls.
- To establish the relation between age and frequency of mall visits.

V. HYPOTHESIS

Based on the above objectives, following null hypothesis may be formulated.

1. H_0 = The customer perception towards maintenance is not appreciable.
2. H_0 = The average footfall and average time spend in the malls is not significant.

3. H_0 = The relation between ages and time spend is not significant.
4. H_0 = The relation between ages and visits is not significant.

VI. METHODOLOGY

The present research work "An Analysis of Shoppers Perspective in Shopping Malls (A Close Examination on Bangalore City)" is entirely based on primary data which was gathered from various individuals who entered in the malls through a pre tested questionnaire. Totally 120 samples were collected out of which 10 samples were identified as defective samples. Therefore 110 samples were considered from 120 samples collected from different malls in the study area, Bangalore. All these malls are located in the city of Bangalore. The data was collected in the period of 7 days. Here the researcher collected data according to his convenience. There is no equal distribution of samples to all shopping malls but each shopping mall is involved in the sample.

The first objective of the study, customer perception towards maintenance of shopping malls was analyzed through the diagrams. The second objective, the average individual foot fall in shopping malls, we calculated average footfall was calculated ($\bar{x}$). Average individual foot fall per month was tested for its significance, the researcher adopted t-test statistic.

$$t = \frac{\bar{x} - \mu}{\sqrt{s^2/n}}$$

Where $\bar{x}$ = Average individual foot fall;
μ=Population mean
s = standard deviation ;
n = sample size

To fulfil our 3rd and 4th objectives the study utilised the correlation coefficient and its testing, chi-square test statistic was utilised. For testing the correlation between age group and time spent, the following formula was used.

$$r_{xy} = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}}$$

To test the significance of correlation coefficient, t – test statistic is used.

$$t = \frac{r_{xy}\sqrt{n-2}}{\sqrt{1-r_{xy}^2}}$$

The above test statistic follows (n – 1) degrees of freedom at 5% probability level. In the same objective, the significant difference between age group and time spent in shopping mall also tested through Chi – square test statistic. The corresponding formula is

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

It follows (n-1) (r-1) degrees of freedom at 5% probability level.

Where O_i = Observed frequency
E_i = Expected frequency
n = Number of rows
r = Number of columns in frequency table

To satisfy the 4th objective, relation between age groups and frequency of mall visits, we adopted the same methodology as in the 3rd objective. The analysis and result of the present study was drawn accordingly.

VII. ANALYSIS

To study the customer perception towards the maintenance of shopping malls, four questions were asked to the customers who visited shopping malls in Bangalore. The questions are related to maintenance of cleanliness, staff courteous behaviour, security measures and product availability and arrangement in the malls. For the above questions 5-point Likert scale was used to collect the answers. For each question, respondents' opinions are shown in each pie diagram. From this pie diagram, it is possible to say how much percentage of respondents gives their preferences in each scale point.

1) Shopping malls in Bangalore maintains cleanliness
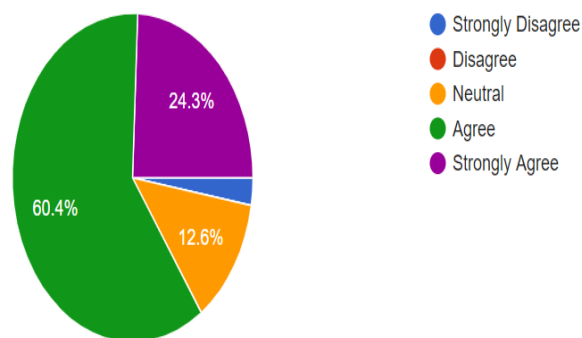
Out of 110 respondents 60.4% of samples give their preference to agree that the shopping malls in Bangalore are maintaining cleanliness. 24.3% customers are agreed strongly that the malls are maintaining cleanliness. Only 12.6% respondents answer is neutral with respect to cleanliness of the malls. The least percentage of customer (i.e. 2.7%) respondents feels that the malls are not maintaining cleanliness. These customers strongly disagreed with the cleanliness of malls.

2) Staff in the shopping malls are courteous
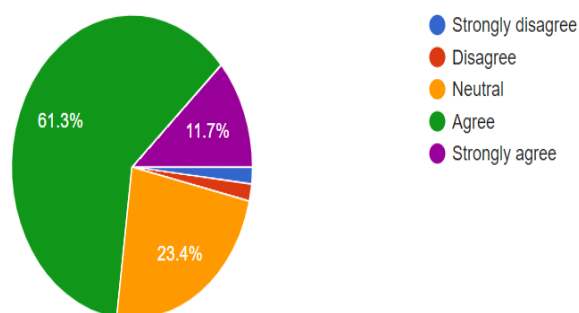
The response of the customers towards the courteous behaviour of staff in shopping malls is shown in the above pie diagram. From the diagram, it is fact that 61.3% of sample customers are agreed that the staff in the malls are possessing courteous behaviour towards visitors. About 23.4% of samples responded neutrally towards the courteous behaviour of staff in malls. 11.7% sample individuals strongly agreed that staff behaviour is courteous. Disagree and strongly opinions were expressed by only 1.8% each.

3) I am satisfied with the security measures taken in the shopping malls.
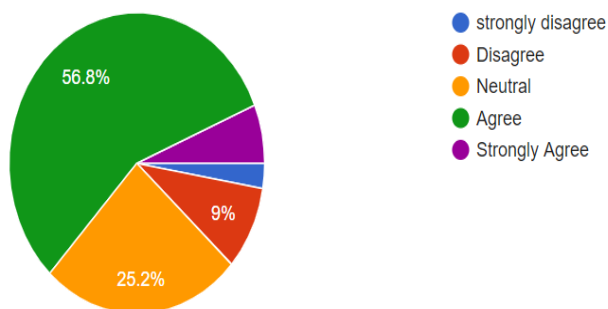
With respect to the security measures taken in the malls, 56.8% samples are agreed that they are satisfied. The neutral behaviour regarding the satisfaction with the security measures taken is 25.2%. Only 9% of respondents did not agreed with the statement. 6.3% respondents strongly agreed with the statement. 2.7% respondents strongly disagreed with the security measures taken in the shopping malls.

4) I am satisfied with the product availability and arrangement in the shopping malls.
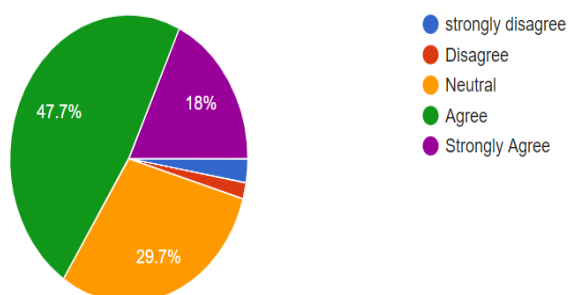
Regarding the product availability and arrangement, 47.7% of individuals agreed that they are satisfied with statement. About 29.7% of the respondents are neutral towards the statement. 18% individuals strongly agreed the above statement. The statement was simply agreed by 2.7% individuals. 1.8% respondents disagreed with the statement.

Finally, it is observed from the above pie diagram's, 60.4% of samples accepted the maintenance of cleanliness. The courteous behaviour of staff in the malls are agreed by 61.3%. Similarly, a maximum percentage of respondents (i.e. 56.8%) expressed their satisfaction regarding the security measures. 47.7% of respondents are agreed with the product availability and arrangement.

In case of mall maintenance, on an average 56.5% of samples are accepted that the mall maintenance is

good various aspects. 22.7% samples are neutral regarding the maintenance. Only 15.1% respondents are strongly agreed that the mall maintenance is good in all aspects. A negligible percentage of respondents (i.e. 2.8%) are disagreed with the statement. Hence, it is concluded that our hypothesis is rejected.

To study the average individual footfall in shopping malls, the average visits per individual is calculated. It is also proposing that this average is significant or not, according to our hypothesis. In this connection the methodology and statistical tools used in the study was explained under the head methodology.

Regarding the average individual footfall for 110 samples is identified as, $\bar{x} = 3.290$. Its variance (s^2) is 6.666. For the significance of average footfall, the statistic t-test was estimated. The observed/calculated value of t. t = 54.39. The expected / critical value of t (t_e) = 1.96 (from t – tables).

$$54.39 > 1.96, (\text{i.e. } t_0 > t_e)$$

Hence, it is concluded that the average footfall in shopping malls is significant.

According to the present study, it is inferred that on an average, the visitors / individuals visiting to the mall is significant. It is also proposed to study the significance of average time spent by the individual in a period of one month is significant or not. In this context, the required data was collected from the individuals who visited the malls in Bangalore city during the period of one month. With the help of collected data, the following values are calculated.

Sample size (n) = 110
Total time spent ($\sum x$) = 557 hours
Mean time spent ($\bar{x}$) = 5.0636 hours
Variance (s^2) = 3.01

With the help of above statistics, we calculated the t – test statistic (t_0) = 30.61. This value is known as observed value of t. The expected value of t was recorded from statistical tables, for large samples is 1.96. Therefore 30.6 > 1.96.

Therefore, it is noticed, if observed value of t is greater than the expected value of t, the average time

spend in shopping mall by the individuals in Bangalore is significant.

Finally, it is observed that individual footfall and average time spend in shopping malls of Bangalore is significantly running.

To satisfy the 3rd objective (i.e. the relation between average age group and time spend in malls, the correlation coefficient was estimated. The estimated correlation between these two concepts is negative (r = -0.046). It expresses that there exists a negative relationship between age group and time spend at malls in Bangalore. It is observed that as age increases the time spent in shopping mall is decreasing. The rate of decrease is 4.6%. It exhibits the reality in spending of time. To test the correlation coefficient for its significance, t – test statistic was adopted. After calculating the t value, Observed value of t = 0.48. The expected value of t is 1.96. Comparing the t values, observed value of t is less than the expected value of t. Hence there is no significant relation. It is concluded that the relation between average age group and time spent is not significant.

To establish the significance of relationship between the age groups and groups of time spending in the malls, we adopted the chi – square test statistic for the table 4 X 4. The contingency table is given below

Table 1: CONTINGENCY TABLE-AGE GROUP AND GROUP OF HOURS SPENT

AGE GROUP	TIME SPENT (IN HOURS)				
	2 - 4	5 - 7	8 - 10	11 - 13	Total
15 – 25	17	5	3	2	27
25 – 35	33	6	8	7	54
35 – 45	17	4	2	0	23
45 – 55	2	2	2	0	6
Total	69	17	15	9	110

H_0: There is no significant difference between age groups and groups of hours spent
Observed value of Chi - square = 9.63
Expected value of Chi – square = 16.92
Degrees of freedom = (4 – 1) (4 – 1) = 3 X 3 = 9
The probability level is 5%

It is also proposed to study the differences between age groups and time (in hours) spent in the shopping

malls. To prove the above concept, chi-square test statistic was adopted. The information with respect to this concept, will be arranged in the above table. After calculations the observed value of Chi-square is estimated as 9.63. The corresponding expected value of chi-square, from statistical tables, with the given degrees of freedom at 5% probability is recorded as 16.92. Comparing these two chi-square values, it is observed that the computed value is less than table value. Hence it is noticed that there is no significant difference between the age groups of individuals and time spend in the shopping malls. This result support the relation between age and time spend in the shopping malls, proved by correlation coefficient.

To study the relationship between age group and frequency of mall visits, we established a simple relationship between these two concepts. The relationship was measured through correlation coefficient. The estimated relation between age and mall visits is negative (r = -0.084). A negative relation was established between average age group and frequency of mall visits in Bangalore. On an average 8.4% visits were decreased in Bangalore malls as age increases. This decrease was tested for its significance. t-test statistic formula was used. The calculated value of t = 0.875. It is known as observed value of t. From statistical tables, the expected value of t is 1.96. Comparing t values, observed value of t is less than the expected value of t. Hence, the difference is not significant. Finally, it is concluded that the relation between age group and frequency of mall visits is not significant. The results of Chi – square test is supporting the validity od relationship, i.e. the correlation between the concepts. It is also observed that the above results are very nearer to the reality, as age increases the frequency of mall visits may be decreased.

Table 2: CONTINGENCY TABLE – AGE GROUPS AND GROUPS OF MALL VISITS

AGE GROUP	MALL VISIT GROUPS				
	1 - 2	3 - 4	5 - 6	7 - 10	Total
15 – 25	16	6	3	2	27
25 – 35	19	21	4	10	54
35 – 45	19	3	0	1	23
45 - 55	2	3	1	0	6
Total	56	33	8	13	110

H_0: There is no significant difference between age groups and groups of mall visits.

Observed value of Chi - square = 20.11

Expected value of Chi – square = 16.92

Degrees of freedom = (4 – 1) (4 – 1) = 3 X 3 = 9; The probability level is 5%

It is also proposed to study the differences between age groups and groups of visits in shopping malls. To prove the above concept, chi-square test statistic was carried out. The information with respect to this concept will be arranged in the above table. After calculations the observed value of Chi-square is estimated as 20.11. The corresponding expected value of chi-square, from statistical tables, with the given degrees of freedom at 5% probability is recorded as 16.92. Comparing these two chi-square values, it is observed that the calculated value is greater than table value. Hence it is clearly showing that there is a significant difference between the age groups of individuals and groups of mall visits in the shopping malls. Hence, it is concluded that the null hypothesis is rejected. Therefore, there is some significant difference between age groups and groups of mall visits.

VIII. CONCLUSION

The present study "An Analysis of Shoppers Perspective in Shopping Malls (A Close Examination On Bangalore City)", focused mainly on four aspects (i.e. mall maintenance, average individual footfall and average time spent in malls, relation between age group and time spent and relation between age group and frequency of mall visits). In case of shopping mall maintenance in Bangalore city 71.6% of respondents are satisfied with the maintenance of malls in all aspects. This suggests the mall maintenance is good. The average individual footfall and average time spent in the shopping malls are significant. In case of third objective, relation between age and time spent in the mall is negative. It shows a negative relationship was established between age and time spend. As age increases time spend in malls is decreasing, the rate of decrease is 4.6%. This rate of decrease was tested for its significance. It concludes the relation is not significant. The Chi-square test statistic was tested between age group and group of hours spent in malls. The results say there is no significant difference between age groups and groups of hours

spent. Similarly, a negative relationship was observed between age group and mall visits. On average 8.4% visits are decreasing in malls as age increases. But this decrease is not a significant decrease, proved by t – test statistic. From the Chi-square test statistic, between age group and mall visits groups, a significant difference was observed.

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