Chapter-5

Discussion
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Discussion

The results of the study presented in Chapter-5 are discussed here under the following sub-heads:

5.1. General Characteristics of sample respondents.

5.2. Studies on the influence of Consumer attribute impinging on the purchase behavior of consumer durables.

5.3. Studies the Demand for Consumer durables over the years.

5.4. Studies on the brands perception of the respondents for the purchase of Consumer durables.

5.5. The brand preferences of consumers with respect to durables.

5.6. Perceptual Mapping.

5.1. General Characteristics of Sample Respondents

5.1.1. Categories of Respondents

The sample was post stratified into three segments viz., low, medium and high. The variables considered for cluster analysis were age, education and income. This was done using Cluster Analysis. The sample was subject to k-mean clusters where three groups were specified. Accordingly three groups were
formed. The area under study comes under the Bangalore city the capital of Karnataka State is a cosmopolitan area with a diverse population, cutting across different socio economic and cultural groups which gives it the rich diversity to undertake consumer studies. Bangalore exemplifies every aspect of the Indian milieu with economic progress, the demand for consumer durables increase for a variety of reasons that gives rise to a retail Revolution.

5.1.2. Age-wise Classification of Respondents

Age of the respondent is one of the important factors that influence the purchase of consumer durables. It is generally believed that aged respondents do not adopt innovations and they are risk averters. However, in the present study, majority of the respondents belonging to the middle age group (34-35 years) and were responsive to new innovations of technology. Hence, it can be concluded that it would be easy to introduce any new technology of brands along with it will increase the purchase of the new consumer durables to this segment.

5.1.3. Income-wise Classification of Respondents

The income of the respondent is an important decisive factor that determines the purchase of consumer durables. It was found that the average monthly income spent by the low, medium and high groups were (Rs. 13535), (Rs. 25603) and (Rs. 47344), respectively, for the purchase of the consumer durables and it concludes how much income they spend on the purchase of consumer durables.
5.1.4. Education Level of the Sample Respondents

Education is one of the important factors that influence the purchase of the consumer durables by the respondents. It was found that nearly all the respondents are educated above the secondary education level, under this education level were implying the scope and demand for purchase of consumer durables in the study area.

5.1.5. Ownership of House

Ownership of house increased with economic status. About 49 per cent of high income households had their own house, this proportion among low income households 26 per cent and medium income households are 40 per cent. The rest stayed in rented houses.

5.1.6. White Goods Value

The average amount spent on selected consumer durables like Television, Computer, Refrigerator, Washing Machines, Mobile Phones and Air-Conditioner. The high group respondents were observed to be spending more money i.e., Average (Rs. 32823) as compared to Medium (Rs. 17555) and low (Rs. 12040) on Television. The medium group respondents spend (Rs. 34425) on Air-Conditioner as compared to high group who spent (Rs. 32167) and the low group (Rs. 19250).
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The high income groups were observed to be spending more on most of the consumer durables. Expenditure on Computer purchased by the high income group on an average was (Rs. 36929) as compared to Medium (Rs. 35721) and low group (Rs. 32047). Here the differences were not significant as the cost of a desk top computer was more of less standard.

The Medium income group respondents spend more on Refrigerator with an average per monthly expenditure (Rs. 13208) when compared to High (13000) and low group (Rs. 11900). On Washing machine, the high group respondents spend on an average (Rs.15965) as compared to Medium (Rs. 14781) and low (Rs. 13000).

The high income group respondents spend more on Mobile phones was on an average (Rs.9889) when compared to Medium (Rs. 9346) and low (Rs. 5564).

5.1.7. Occupation-wise Average Monthly Expenditure (in Rupees) by Low, Medium and High Groups

The average expenditure by occupation wise such as officers spend more on consumer durables purchase in high income group on an average spending of (Rs. 49500) as compared to medium group Accountants spend more money on an average of (Rs. 30833) compared to other professions and in low income group, Professional persons spend more money as compare to the other professions i.e., (Rs. 14651).
5.1.8. Occupation-wise Average Monthly Expenditure (in Rupees) on Consumer Durables

With regard to Air conditioner on an average respondent spent Rs. 29643 on Air conditioners. This is evident in all the categories and the expenditure was more or less the same for each category. With regard to computers on an average respondent spent Rs. 31599 on computer. This is evident in all the categories and the expenditure was more or less the same for each category. Most households had Mobile. It is considered as a necessity nowadays. On an average low income households spent Rs.13991 on Mobile which was higher in medium income group at Rs. 25679 and highest in the high income group at Rs.46356. Most households had refrigerator. It is no longer considered a luxury rather a necessity. On an average low income households spent Rs.15600 on refrigerators which was higher in medium income group at Rs. 26861 and highest in the high income group at Rs.47311. With regard to Television on an average respondent spent Rs. 26366. On an average low income households spent Rs. 13804 on Television which was higher in medium income group at Rs.25851 and highest in the high income group at Rs. 47398. There are many expensive televisions these days like flat screen and plasma TV’s which are very expensive. With regard to Washing Machine on an average respondent spent Rs. 33605.
5.1.9. Age-wise Average Monthly Expenditure (in Rupees) on Consumer Durables

People of the younger age group were found to be spending more on Televisions averaging Rs. 49412. In general, the higher income group spent Rs. 46743 on Television. As compared to this the Medium and small group spent Rs. 26510 and 13827 respectively.

People of the younger age group were found to be spending more on Refrigerator averaging Rs. 50833. In general, the higher income group spent Rs. 47000 on Refrigerator. As compared to this the Medium and small group spent Rs. 27472 and 15889, respectively. People of the High income group were found to be spending more on Air-conditioner averaging Rs. 40000. In general, the medium income group spent Rs. 26400 on Air-conditioner. And there is no income spent on Air-conditioned by the small income group. People of the younger age group (25-35) were found to be spending more on Computers averaging Rs. 49000. In general the medium income group spent Rs. 27674 on Computer and there is no income spent on computers by the small income group. People of the younger age group (25-35) were found to be spending more on Mobile phones averaging Rs. 50,000. In general, the higher income group spent Rs. 46632 on mobile phones. As compared to this, the medium and small group spent Rs. 26886 and 14453 respectively.
People of the younger age group (25-35) were found to be spending more on Washing Machines averaging Rs. 50833. In general, the higher income group spent Rs. 47900 on Washing machine. As compared to this the medium and small group spent Rs. 28241 and 13600 respectively.

5.2. Brand-wise Possession of Consumer Durables

Among Air-conditioner the dominant brands among the respondents were Blue Star and LG accounting for 53 per cent and 25 per cent respectively. The moderate brands were Godrej and Summer Cool with a market share of 10 per cent each. Among refrigerators, the dominant brands among the respondents were Godrej and LG accounting for 34 per cent and 32 per cent, respectively. The moderate brands were Whirlpool with a market share of 7.5 per cent and Samsung with a market share of 9.77 per cent and the other important brands were Videocon, BPL, Kelvinator and IFB and Sony had a very small market share. Among computer, the dominant brands among the respondents were HP and Dell accounting for 42 per cent and 12 per cent, respectively. The moderate brands were Acer with a market share of 10 per cent and HCL with a market share of 6.88 per cent and the other important brands were Lenovo, LG, Philips. Assembled and Philips and AMD had a very small market share. Among Television, the dominant brands among the respondents were LG and Onida accounting for 28.72 per cent and 14.05 per cent, respectively. The moderate brands were BPL with a market share of 14.05 per cent and Philips with a market share of 10.90 per cent and the
other important brands were Sony, Samsung, Videocon, Sansui, TCL, Toshiba, Crown and Daewoo had a very small market share.

Among Washing machines, the dominant brands among the respondents were LG and Samsung accounting for 46.78 per cent and 16.96 per cent, respectively. The moderate brands were IFB with a market share of 11.70 per cent and Godrej with a market share of 9.94 per cent and the other important brands were Whirlpool, Videocon, TVS and Sony had a very small market share.

5.3. The Demand for Consumer Durables over the Years

Air Conditioners

Air conditioners have become a necessity these days and the prices have come down to affordable levels. The growth of air conditioners in the country has witnessed a significant increase from 100 million in 1990-91 to 560 million in a span of 10 years recording a compound annual rate of growth of 21.74 per cent per annum, which is indeed phenomenal. Given the state of the weather in the country and the rising incomes these numbers are likely to grow much further in the coming years. The strong drivers of air conditioners would be rising incomes, changing weather patterns, growth of the tertiary and the rise in office culture, improved power supply and the desire for comfort.
The structure of demand can be seen in the table. Examination of the table reveals that domestic demand is on par with office demand accounting each for 20 per cent.

Turning to the zone wise demand for Air-conditioner presented in the Table, it can be seen that the northern parts of India are the major demand centers influenced by the business demand, weather, affluence. Western is following closely for the same reason. Interesting the east has the lowers density of AC’s perhaps due the affordability factor.

Refrigerators

Nowadays, Refrigerators have become a necessity consumer durable good in all the households and the reason behind this are these days is the lack of manpower has prevented households to visit the market often. Thus, storage of food articles has become important. The growth of Refrigerators in the country has witnessed a significant increase from 1.24 million in 1990-91 to 2.62 million in a span of 10 years recording a compound annual rate of growth of 10.18 per cent per annum, which is indeed phenomenal. Given the state of the weather in the country and the rising incomes these numbers are likely to grow much further in the coming years. The strong drivers of Refrigerator would be raising incomes, changing life style, affordability, growth of the city culture and improved power supply and the desire for comfort.
The structure of demand can be seen in the table. Examination of the table reveals that urban population (78 per cent) demand’s more as compared to rural population (22 per cent). As compared to Household (85 per cent) the institutional demand’s less percentage of 15 per cent.

Turning to the zone wise demand for Refrigerator presented in the Table, it can be seen that the Southern parts of India are the major demand centers influenced by the business demand, weather, and affluence. Western followed closely for the same reason. Interesting the East has lower density of Refrigerator’s perhaps due the affordability factor. As compared to the type of Refrigerator’s the direct cool has major share of 83 per cent as compared to frost free of about 17 per cent as presented in the table.

Washing Machine

Washing machines have become a necessity for the urban people when compared to rural people due to non availability of servants and working wives in the city place. The growth of washing machine in the country has witnessed a significant increase from 220 thousands in 1990-91 to 880 thousands in a span of 10 years recording a compound annual rate of growth of 16.77 per cent per annum, which is indeed phenomenal. And the rising incomes these numbers are likely to grow much further in the coming years. The strong drivers of washing machines would be rising incomes, necessity, changing life styles, patterns, affordability,
urbanization and the rise in office culture, improved power supply and the desire for comfort. Turning to the zone-wise demand for washing machines presented in the Table, it can be seen the Northern parts of India are the major demand centers influenced by the business demand, affluence. Western and southern is following closely for the same reason. Interesting the east has the lowers density of Washing machines perhaps due to the affordability factor. When compared to the urban population, which share 82 per cent the rural population percentage share is very less that is about 18 per cent. As compared to the type of Washing machines the Semi-automatic type has major share of 85 per cent as compared to Automatic of about 15 per cent. As compared to Washing machine brands the IFB India as the major share of 65 per cent.

**Television (Colour)**

Television has become a necessity in recent days and the prices have come down to affordable levels. The growth of Television in the country has witnessed a significant increase from 1.2 million in 1990-91 to 5.8 million in a span of 10 years recording a compound annual rate of growth of 23.74 per cent per annum, which is indeed phenomenal. And the rising incomes these numbers are likely to grow much further in the coming years. The strong drivers of Television would be raising incomes, changing life styles, patterns, affordability and the desire for comfort.
Turning to the zone wise demand for Television presented in the Table, it can be seen that the all the Western, Northern and Southern parts of India are in the same range of 29, 28 and 26 per cent respectively. The major demand centers influenced by the business demand, affluence. Interesting the east has the lowers density of Television perhaps due the affordability factor.

When compared to the urban population which share 60 per cent the rural population percentage share is very less that is about 40 per cent. When compared to the type of Television presented in the table, the 21'' type has major share of 42 per cent as compared to 20'' and 14'' both of them having a share of 30 and 22 per cent respectively. And remaining type of 29'' and 25'' inches Television are having very less share of 4 and 2 per cent respectively. The leading brands of Television presented in table, the percentage share are Samsung, Sony and LG are in the same range of 25, 24 and 22 per cent respectively and remaining brands like Onida and Philips have very less percentage share of 8 and 6 per cent.

**Television (Black and White)**

Television (black and white) was more in demand in the past, when the non availability of colour Television and nowadays the demand Television (black and white) has comes down or stagnant and also the prices have come down to affordable levels. The growth of Television in the country has witnessed a significant increase from 3.5 million in 1990-91 to 5.4 million in a span of 10
years recording a compound annual rate of growth of 7.51 per cent per annum, which is indeed phenomenal. And the rising incomes these numbers are likely to grow much further in the coming years. The strong drivers of Television would be changing life styles, affordability, growth of the tertiary, improved power supply and the desire for comfort.

Turning to the zone wise demand for Television (black and white) presented in the table, it can be seen that both Eastern and Southern parts of India are in the same range of 30 and 29 per cent, respectively, the major demand centers influenced by the low income group and affluence. Interesting the West and North has the lower density of Television (black and white) perhaps due the high income group and availability of new technology. The percentage share of Television (black and white) is more in rural population that is 75 per cent as compared to urban population that is about 25 per cent.

Computer

Nowadays the computer has become a necessity these days for urban or city people as compared to rural people and also the prices have come down to affordable levels. The growth of Computer in the country has witnessed a significant increase from 0.07 million in 1990-91 to 1.5 million in a span of 10 years recording a compound annual rate of growth of 4.38 per cent per annum, which is indeed phenomenal. And the rising incomes these numbers are likely to
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grow much further in the coming years. The strong drivers of computer would be improving education level, rising incomes, changing life styles, affordability, growth of city culture and improved power supply and the desire for comfort.

The percentage share of the type of computer presented in the table usage by the individuals are Branded is having an total share percentage of 72 per cent as compare to assembled 28 per cent.

The percentage share of the market size of the buyers presented in the table include large group members having the share percentage of 52 per cent when compared to medium and small 25 and 22 per cent respectively.

The market segmentation of the Computer by users, institutions, regions and producers wise are depicted in the table. By user wise the office has the major share of 58 per cent as compared to small business and households of percentage of 22 and 20 per cent respectively. And by institutions wise the private business offices has the major share of 74 per cent when compared to public sector and government offices of having the percentage of 15 and 11 per cent respectively. And by regions wise the western part of the country having the major share of 34 per cent followed by southern region of about 30 per cent and remaining northern and eastern regions having the percentage share of 25 and 11 per cent respectively. And by producers wise MNC Brands are having the major share of 52 per cent as compared to Assembled and Indian (branded) of having of the percentage share of 28 and 20 per cent respectively.
Laptop

Laptop has become a major demand as compared to computer these days and the prices have come down to affordable levels. The growth of Laptop in the country has witnessed a significant increase from 15 million in 1995-96 to 300 million in a span of 14 years recording a compound annual rate of growth of 26.07 per cent per annum, which is indeed phenomenal. And the rising incomes these numbers are likely to grow much further in the coming years. The strong drivers of Laptop would be improving education level, rising incomes, changing life styles, patterns, affordability and the rise in office culture and the desire for comfort. The market segmentation of the Laptop in corporate sector is having the major share of 52 per cent as compared to small entrepreneurs of having the percentage share of 20 per cent and Government or public organizations and householders are having the percentage share of 16 and 12 per cent respectively. As compared to Laptop users wise large group contribute major share of 43 percentages as compare to medium and small group 30 and 27 percentage respectively. The leading brands of Laptop in the market are depicted like Compaq, IBM, Toshiba, Acer, LG, HP and Dell.

Mobile

Mobile has become an item of daily use for all kind of people due to non usage of landline phone people are using mobile phones extensively and demand also increased dramatically in the recent past and the prices have come down to
affordable levels. The growth of Mobile in the country has witnessed a significant increase from 0.15 million in 1995-96 to 73.5 million in a span of 14 years recording a compound annual rate of growth of 60.87 per cent per annum, which is indeed phenomenal. And the raising incomes these numbers are likely to grow much further in the coming years. The strong drivers of mobile would be raising incomes, changing life styles, patterns, Status, affordability, growth of the tertiary and the rise in office culture and the desire for comfort. The market segmentation of the mobile market share in region wise is that the Northern, Western and southern are having almost same percentage of share that is about 29, 27 and 26 per cent respectively and Eastern part have the share of about 18 per cent only.

The percentage share of the Mobile Company or brands in Indian market are the leading brands like Nokia and Motorola have the same market share of about 19.6 and 19.5 percentage and the other brands who contribute to the mobile market are Samsung, Philips, Siemens and it's share percentage of about 15.7, 15.5 and 11.2 respectively and other brands have very less share in the market are Alcatel and Sony have 2 per cent each. And other brands will contribute 14.4 per cent in the existing mobile market.

Factors Influencing the Demand for Consumer Durables

Computer

A logistic regression was fitted to the data of buyers and non buyers of computers. The results presented reveal the overall fit to the data adequate as
evidenced by per cent of concordant of 72.1 per cent which indicated the model
could predict the buyers and non buyers fairly accurately, to the extent of 72 per
cent.

The results of the logistic regression reveals the obvious truth that
Educational level of the respondents, was the single important factor influencing
the purchase of computers. Income had a positive influence and so did the price.
Brand was also a strong determinant as it plays an important role in a White good
purchase. It appears people when it comes to computers prefer expensive ones as it
is a durable asset and they would like to maintain it for a long time.

Refrigerator

A logistic regression was fitted to the data of buyers and non buyers of
Refrigerators. The results reveal the overall fit to the data adequate as evidenced
by per cent of concordant of 99.3 per cent which indicated that the model could
predict the buyers and non buyers fairly accurately, to the extent of 99 per cent.

The results of the logistic regression reveals the obvious truth that
Durability level of the respondents, was the single important factor influencing the
purchase of Refrigerators. Income had a positive influence and so did the price.
Education was also a strong determinant as it plays an important role in a White
good purchase. It appears people when it comes to refrigerator prefer expensive
ones as it is a durable asset and they would like to maintain it for a long time.
**Washing Machine**

The regression fitted to the data of buyers and non buyers of Washing machines in the logistic regression framework revealed the overall fit to the data is adequate as evidenced by per cent of concordant of 80.4 per cent which indicated the model could predict the buyers and non buyers fairly accurately, to the extent of 80 per cent.

The results of the logistic regression reveals the obvious truth that Education level of the respondents, was the single important factor influencing the purchase of Washing machines. Income had a positive influence and so did the price. Durability was also a strong determinant as it plays an important role in a White good purchase. It appears people when it comes to refrigerator prefer expensive ones as it is a durable asset and they would like to maintain it for a long time.

**Mobile**

The results of logistic regression presented reveal the overall fit to the data is adequate as evidenced by per cent of concordant of 99.8 per cent which indicated the model could predict the buyers and non buyers fairly accurately, to the extent of 99.8 per cent.

The Age level of the respondents was the single important factor influencing the purchase of Mobile. Income had a positive influence and so did the
price. Education was also a strong determinant as it plays an important role in a white good purchase. It appears people when it comes to mobile prefer any type of model depending upon the availability of money and prefer to change the model whenever there is availability of new brand.

**Television**

The results presented in table of the logistic regression revealed the overall fit to the data is adequate as evidenced by per cent of concordant of 77.9 per cent which indicated the model could predict the buyers and non buyers fairly accurately, to the extent of 78 per cent.

The results of the logistic regression reveals that Service quality level of the respondents was the single important factor influencing the purchase of Television. Income had a positive influence and so did the price. Durability was also a strong determinant as it plays an important role in a white good purchase. It appears people when it comes to Television prefer model according to there income status and as it is a durable asset and they would like to maintain it for a long time.

**5.6. Perceptual Mapping**

**5.6.1 Multidimensional Scaling of Refrigerator**

Multidimensional scaling was done in order to see how consumers perceive brands of refrigerators. The scatter plot shows a linear fit indicating a two
dimensional figure best fitted to the model. Accordingly the two dimensional figure shows that Samsung is unique as also LG. Consumers perceive BPL, Whirlpool, Kelivinator similar. IFB, Videocon and Sony are perceived as similar.

5.6.2. Multidimensional Scaling of Television

Multidimensional scaling was done in order to see how consumers perceive brands for televisions. The scatter plot shows a linear fit indicating a two dimensional figure best fitted to the model. Accordingly the two dimensional figure shows that LG is unique as also Sony. Consumers perceive Samsung, Philips similar. Videocon, Akai and TCL are perceived as similar.

5.6.3. Multi Dimensional Scaling of High Income Group

Multidimensional scaling was done in order to see how consumers perceive brands for High income group. The scatter plot shows a linear fit indicating a two dimensional figure is the best fit to the model. Accordingly the two dimensional figure shows that Refrigerator is unique as also Television. Consumers perceive Computer and Washing machine similar. Mobile and Air-conditioner are perceived as similar.

5.6.4. Multi Dimensional Scaling of Medium Income Group

Multidimensional scaling was done in order to see how consumers perceive brands for Medium income group. The scatter plot shows a linear fit indicating a
two dimensional figure best fitted to the model. Accordingly the two dimensional figure shows that Computer is unique as also Television. Consumers perceive Refrigerator, Mobile and Washing machine perceived as similar.

5.6.5. Multi Dimensional Scaling of Low Income Group

Multidimensional scaling was done in order to see how consumers perceive brands for Low income group. The scatter plot shows a linear fit indicating a two dimensional figure best fitted to the model. Accordingly the two dimensional figure shows that Television, Refrigerator is unique as also Air-conditioner. Consumers perceive Computer, Mobile and Washing machine as similar.